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InterScan[™]

Messaging Security Virtual Appliance

Service Pack 1

Administrator's Guide

Hybrid SaaS Email Security

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<http://docs.trendmicro.com/en-us/enterprise/intercan-messaging-security.aspx>

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Preface

About this Manual

Welcome to the Trend Micro™ InterScan™ Messaging Security Virtual Appliance Administrator's Guide. This manual contains information about InterScan Messaging Security Virtual Appliance (IMSVa) features, system requirements, as well as instructions on configuring IMSVa settings.

Refer to the *IMSVa 9.1 SP1 Installation Guide* for information about installing and upgrading IMSVa.

Topics include:

- [What's New on page 2](#)
- [Audience on page 6](#)
- [InterScan Messaging Security Virtual Appliance Documentation on page 6](#)
- [Document Conventions on page 7](#)

What's New

TABLE 1. IMSVA 9.1 SP1 New Features

NEW FEATURE	DESCRIPTION
Trend Vision One integration	Integration with Trend Vision One allows IMSVA to forward policy event logs to Trend Vision One for correlated detection and other advanced analytics.
Operating system upgrade	IMSVA provides a self-contained installation that uses a standard CentOS Linux operating system. This service pack directly upgrades the self-contained operating system of IMSVA from CentOS 6 to CentOS 7.

TABLE 2. IMSVA 9.1 Patch 3 New Features

NEW FEATURE	DESCRIPTION
URL analysis	In addition to suspicious files in email messages, IMSVA submits suspicious URLs included in email messages to Virtual Analyzer for further analysis. To protect you from malicious URLs, IMSVA first compares URLs in email messages with known malicious URLs in the Web reputation database, and then further analyzes URLs at the time of click. However, untested URLs may pass the first two layers of analysis. IMSVA provides enhanced protection by leveraging the URL sandbox available in Virtual Analyzer to perform sandbox simulation and analysis.

TABLE 3. IMSVA 9.1 Patch 2 New Features

NEW FEATURE	DESCRIPTION
Domain-based Message Authentication, Reporting and Conformance (DMARC)	As an email validation system to detect and prevent email spoofing, DMARC is intended to fight against certain techniques used in phishing and spam, such as email messages with forged sender addresses that appear to originate from legitimate organizations. DMARC is designed to fit into the existing email authentication process of IMSVA, allowing you to define DMARC settings, including the actions to take on messages that fail DMARC verification.

TABLE 4. IMSVA 9.1 New Features

NEW FEATURE	DESCRIPTION
Syslog integration	To provide enterprise-class logging capabilities, IMSVA supports sending logs through the syslog protocol to multiple external syslog servers in a structured format. On the IMSVA management console, you can add, delete, import and export syslog servers.
Multiple Virtual Analyzer servers	To achieve better load balancing and failover capabilities, IMSVA allows you to add multiple servers for Virtual Analyzer. You can also enable, disable and delete Virtual Analyzer servers on the IMSVA management console.
SMTP Traffic Throttling	SMTP Traffic Throttling blocks messages from a single IP address or sender for a certain time when the number of connections or messages reaches the specified maximum.
Audit log support	As an enhanced log category of system events, Audit log replaces Admin activity on the IMSVA management console. Audit logs record various administrator operations and provide a way to query activities of specified administrator accounts.

NEW FEATURE	DESCRIPTION
Enhanced queue management	IMSVa uses mail transfer agent (MTA) queues to store messages that just arrived, messages ready to be delivered to the next MTA, messages deferred due to delivery failure, and messages kept on hold for later manual delivery. Specific actions can be taken on the messages in MTA queues.
Enhanced Smart Protection	IMSVa supports both Trend Micro Smart Protection Network and Smart Protection Server as smart protection sources. Smart Protection Servers are supported to localize smart protection services to the corporate network to reduce outbound traffic and optimize efficiency.
External database support	IMSVa allows you to use not only the internal but also external PostgreSQL database as the admin database or the EUQ database.
Time-of-Click Protection	IMSVa provides time-of-click protection against malicious URLs in email messages. If you enable Time-of-Click Protection, IMSVa rewrites URLs in email messages for further analysis. Trend Micro analyzes those URLs at the time of click and will block them if they are malicious.
Connected Threat Defense	Configure IMSVa to subscribe to the suspicious object lists on the Trend Micro Control Manager server. Using the Control Manager console, you can specify customized actions for objects detected by the suspicious object lists to provide custom defense against threats identified by endpoints protected by Trend Micro products specific to your environment. Control Manager facilitates the investigation of targeted attacks and advanced threats using suspicious objects. Files and URLs that have the potential to expose systems to danger or loss will be detected.

NEW FEATURE	DESCRIPTION
DomainKeys Identified Mail (DKIM) signature	IMSVA supports adding DKIM signatures to outgoing email messages. On the IMSVA management console, you can add or delete DKIM signatures and import or export DKIM signature files.
Report delivery through email	IMSVA allows you to send newly generated reports and archived reports through email. Detailed views of reports will be included.
Keyword and expression enhancement	To improve visibility of triggered keywords and expressions, the entity name (where the keyword expression appears in a message) and the matched expressions now appear in the policy event log query details page. Administrators can also add a description to new keyword expressions for better tracking.
Attachment names supported by message tracking logs	Message tracking logs include attachment names as a new attribute. Multiple attachment names can be specified to query message tracking logs.
Logon notice support	Customizable logon notices are available both on the administrator logon page and End-User Quarantine logon page.
Quarantine event summary	IMSVA provides quarantine event logs and reports for users to learn information about quarantine events, for example, the percentage of release events in all the quarantine events.
LDAPS support	IMSVA supports LDAP over SSL (LDAPS) that provides users a secure and encrypted channel to communicate with LDAP servers.
Ransomware detection	IMSVA gives you more visibility on ransomware detected by IMSVA. You can either query ransomware detections in logs or add a widget for ransomware detections on the dashboard.
Virtual Analyzer integration improvement	IMSVA allows you to define rules to send email messages with specified attachment names or extensions to Virtual Analyzer for analysis.

Audience

The IMSVA documentation is written for IT administrators in medium and large enterprises. The documentation assumes that the reader has in-depth knowledge of email messaging networks, including details related to the following:

- SMTP and POP3 protocols
- Message transfer agents (MTAs), such as Postfix or Microsoft™ Exchange
- LDAP
- Database management
- Transport Layer Security

The documentation does not assume that the reader has any knowledge of antivirus or antispam technology.

InterScan Messaging Security Virtual Appliance Documentation

The IMSVA documentation consists of the following:

Administrator's Guide

Helps you get IMSVA up and running with post-installation instructions on how to configure and administer IMSVA.

Installation Guide

Contains introductions to IMSVA features, system requirements, and provides instructions on how to deploy and upgrade IMSVA in various network environments.

Online Help

Provides detailed instructions on each field and how to configure all features through the user interface. To access the online help, open the web management console, then click the help icon.

Readme File

Contain late-breaking product information that might not be found in the other documentation. Topics include a description

of features, installation tips, known issues, and product release history.

The documentation is available at:

<http://docs.trendmicro.com>

Document Conventions

The documentation uses the following conventions:

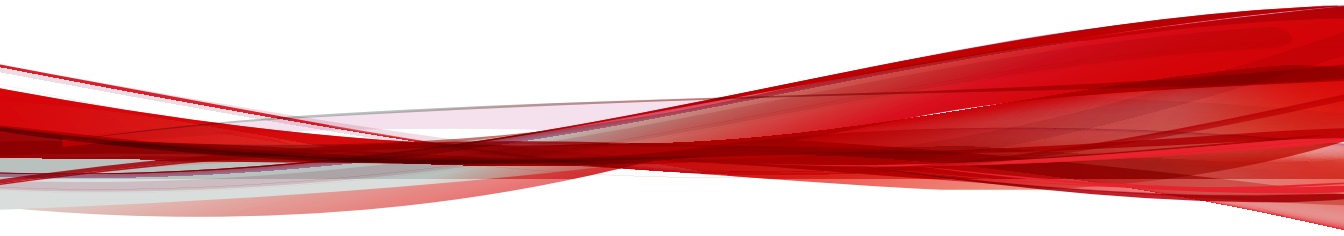
TABLE 5. Document Conventions

CONVENTION	DESCRIPTION
UPPER CASE	Acronyms, abbreviations, and names of certain commands and keys on the keyboard
Bold	Menus and menu commands, command buttons, tabs, and options
<i>Italics</i>	References to other documents
Monospace	Sample command lines, program code, web URLs, file names, and program output
Navigation > Path	The navigation path to reach a particular screen For example, File > Save means, click File and then click Save on the interface
 Note	Configuration notes
 Tip	Recommendations or suggestions
 Important	Information regarding required or default configuration settings and product limitations

CONVENTION	DESCRIPTION
 WARNING!	Critical actions and configuration options

Part I

Getting Started



Chapter 1

Introducing InterScan™ Messaging Security Virtual Appliance

This chapter introduces InterScan™ Messaging Security Virtual Appliance (IMSVa) features, capabilities, and technology, and provides basic information on other Trend Micro products that will enhance your antispam capabilities.

Topics include:

- *About InterScan Messaging Security Virtual Appliance on page 1-2*
- *IMSVa Main Features and Benefits on page 1-2*
- *About Cloud Pre-Filter on page 1-11*
- *About Email Encryption on page 1-11*
- *About Spyware/Grayware on page 1-12*
- *About Web Reputation Services on page 1-14*
- *About Email Reputation on page 1-14*
- *About Trend Micro Control Manager on page 1-17*
- *About Graymail Scanning on page 1-20*
- *About Command & Control (C&C) Contact Alert Services on page 1-21*

About InterScan Messaging Security Virtual Appliance

InterScan Messaging Security Virtual Appliance (IMSVa) integrates multi-tiered spam prevention and anti-phishing with award-winning antivirus and anti-spyware. Content filtering enforces compliance and prevents data leakage. This easy-to-deploy appliance is delivered on a highly scalable platform with centralized management, providing easy administration. Optimized for high performance and continuous security, the appliance provides comprehensive gateway email security.

IMSVa Main Features and Benefits

The following table outlines the main features and benefits that IMSVa can provide to your network.

TABLE 1-1. Main Features and Benefits

FEATURE	DESCRIPTIONS	BENEFITS
Data and system protection		
Cloud-based pre-filtering of messages	Cloud Pre-Filter integrates with IMSVa to scan all email traffic before it reaches your network.	Cloud Pre-Filter can stop significant amounts of spam and malicious messages (up to 90% of your total message traffic) from ever reaching your network.
Email encryption	Trend Micro Email Encryption integrates with IMSVa to encrypt or decrypt all email traffic entering and leaving your network.	Trend Micro Email Encryption provides IMSVa the ability to encrypt all email messages leaving your network. By encrypting all email messages leaving a network administrators can prevent sensitive data from being leaked.

FEATURE	DESCRIPTIONS	BENEFITS
Advanced anti-malware protection	The Advanced Threat Scan Engine (ATSE) uses a combination of pattern-based scanning and aggressive heuristic scanning to detect document exploits and other threats used in targeted attacks.	ATSE identifies both known and unknown advanced threats, protecting your system from new threats that have yet to be added to patterns.
Command & Control (C&C) Contact Alert Services	C&C Contact Alert Services allows IMSVA to inspect the sender, recipients and reply-to addresses in a message's header, as well as URLs in the message body, to see if any of them matches known C&C objects.	C&C Contact Alert Services provides IMSVA with enhanced detection and alert capabilities to mitigate the damage caused by advanced persistent threats and targeted attacks.
Graymail	Graymail refers to solicited bulk email messages that are not spam. IMSVA detects marketing messages and newsletters and social network notifications as graymail.	IMSVa manages graymail separately from common spam to allow administrators to identify graymail messages. IP addresses specified in the graymail exception list bypass scanning.
Regulatory compliance	Administrators can meet government regulatory requirements using the new default policy scanning conditions <i>Compliance templates</i> .	Compliance templates provide administrators with regulatory compliance. For a detailed list of available templates, see http://docs.trendmicro.com/en-us/enterprise/data-protection-reference-documents.aspx .
Smart Scan	Smart Scan facilitates a more efficient scanning process by off-loading a large number of threat signatures previously stored on the IMSVA server to the cloud.	Smart Scan leverages the Smart Protection Network to: • Enable fast, real-time security status lookup capabilities in the cloud • Reduce the time necessary to deliver protection against emerging threats • Lower memory consumption on the server

FEATURE	DESCRIPTIONS	BENEFITS
IntelliTrap	Virus writers often attempt to circumvent virus filtering by using different file compression schemes. IntelliTrap provides heuristic evaluation of these compressed files. Because there is the possibility that IntelliTrap may identify a non-threat file as a security risk, Trend Micro recommends quarantining message attachments that fall into this category when IntelliTrap is enabled. In addition, if your users regularly exchange compressed files, you may want to disable this feature. By default, IntelliTrap is turned on as one of the scanning conditions for an antivirus policy, and is configured to quarantine message attachments that may be classified as security risks.	IntelliTrap helps reduce the risk that a virus compressed using different file compression schemes will enter your network through email.
Content management	IMSVA analyzes email messages and their attachments, traveling to and from your network, for appropriate content.	Content that you deem inappropriate, such as personal communication, large attachments, and so on, can be blocked or deferred effectively using IMSVA.
Real-time Statistics and Monitor	Administrators can monitor the scan performance and Sender Filtering performance of all IMSVA devices (within a group) on the management console.	IMSVA provides administrators with an overview of the system that keeps administrators informed on the first sign of mail processing issues. Detailed logging helps administrators proactively manage issues before they become a problem.
Protection against other email threats		

FEATURE	DESCRIPTIONS	BENEFITS
DoS attacks	By flooding a mail server with large attachments, or sending messages that contain multiple viruses or recursively compressed files, individuals with malicious intent can disrupt mail processing.	IMSVA allows you to configure the characteristics of messages that you want to stop at the SMTP gateway, thus reducing the chances of a DoS attack.
Malicious email content	Many types of file attachments, such as executable programs and documents with embedded macros, can harbor viruses. Messages with HTML script files, HTML links, Java applets, or ActiveX controls can also perform harmful actions.	IMSVA allows you to configure the types of messages that are allowed to pass through the SMTP gateway.
Degradation of services	Non-business-related email traffic has become a problem in many organizations. Spam messages consume network bandwidth and affect employee productivity. Some employees use company messaging systems to send personal messages, transfer large multimedia files, or conduct personal business during working hours.	Most companies have acceptable usage policies for their messaging system—IMSVA provides tools to enforce and ensure compliance with existing policies.
Legal liability and business integrity	Improper use of email can also put a company at risk of legal liability. Employees may engage in sexual or racial harassment, or other illegal activity. Dishonest employees can use a company messaging system to leak confidential information. Inappropriate messages that originate from a company's mail server damage the company's reputation, even if the opinions expressed in the message are not those of the company.	IMSVA provides tools for monitoring and blocking content to help reduce the risk that messages containing inappropriate or confidential material will be allowed through your gateway.

FEATURE	DESCRIPTIONS	BENEFITS
Mass mailing virus containment	Email-borne viruses that may automatically spread bogus messages through a company's messaging system can be expensive to clean up and cause panic among users. When IMSVA detects a mass-mailing virus, the action performed against this virus can be different from the actions against other types of viruses. For example, if IMSVA detects a macro virus in a Microsoft Office document with important information, you can configure the program to quarantine the message instead of deleting the entire message, to ensure that important information will not be lost. However, if IMSVA detects a mass-mailing virus, the program can automatically delete the entire message.	By auto-deleting messages that contain mass-mailing viruses, you avoid using server resources to scan, quarantine, or process messages and files that have no redeeming value. The identities of known mass-mailing viruses are in the Mass Mailing Pattern that is updated using the TrendLabsSM ActiveUpdate Servers. You can save resources, avoid help desk calls from concerned employees and eliminate post-outbreak cleanup work by choosing to automatically delete these types of viruses and their email containers.
Protection from spyware and other types of grayware		
Spyware and other types of grayware	Other than viruses, your clients are at risk from potential threats such as spyware, adware and dialers. For more information, see About Spyware/Grayware on page 1-12.	IMSVA's ability to protect your environment against spyware and other types of grayware enables you to significantly reduce security, confidentiality, and legal risks to your organization.
Integrated antispy features		

FEATURE	DESCRIPTIONS	BENEFITS
Spam Prevention Solution (SPS)	Spam Prevention Solution (SPS) is a licensed product from Trend Micro that provides spam detection services to other Trend Micro products. To use SPS, obtain an SPS Activation Code. For more information, contact your sales representative. SPS works by using a built-in spam filter that automatically becomes active when you register and activate the SPS license.	The detection technology used by Spam Prevention Solution (SPS) is based on sophisticated content processing and statistical analysis. Unlike other approaches to identifying spam, content analysis provides high-performance, real-time detection that is highly adaptable, even as spam senders change their techniques.
Spam Filtering with IP Profiler, Email Reputation and SMTP Traffic Throttling	IP Profiler is a self-learning, fully configurable feature that proactively blocks IP addresses of computers that send spam and other types of potential threats. Email reputation blocks IP addresses of known spam senders that Trend Micro maintains in a central database. SMTP Traffic Throttling blocks messages from a single IP address or sender for a certain time when the number of connections or messages reaches the specified maximum.  Note Activate SPS before you configure IP Profiler and Email Reputation.	With the integration of Sender Filtering, which includes IP Profiler, Email Reputation and SMTP Traffic Throttling, IMSVA can block spammers at the IP level.

FEATURE	DESCRIPTIONS	BENEFITS
Social Engineering Attack Protection	Social Engineering Attack Protection detects suspicious behavior related to social engineering attacks in email messages.	When Social Engineering Attack Protection is enabled, the Trend Micro Antispam Engine scans for suspicious behavior in several parts of each email transmission, including the email header, subject line, body, attachments, and the SMTP protocol information. If the Antispam Engine detects behavior associated with social engineering attacks, the Antispam Engine returns details about the message to IMSVA for further action, policy enforcement, or reporting.
Administration and integration		
LDAP and domain-based policies	You can configure LDAP settings if you are using LDAP directory services such as Lotus Domino™ or Microsoft™ Active Directory™ for user-group definition and administrator privileges.	Using LDAP, you can define multiple rules to enforce your company's email usage guidelines. You can define rules for individuals or groups, based on the sender and recipient addresses.
Web-based management console	The management console allows you to conveniently configure IMSVA policies and settings.	The management console is SSL-compatible. Being SSL-compatible means access to IMSVA is more secure.
End-User Quarantine (EUQ)	IMSVa provides web-based EUQ to improve spam management. The web-based EUQ service allows end-users to manage the spam quarantine of their personal accounts and of distribution lists that they belong to. IMSVA quarantines messages that it determines are spam. The EUQ indexes these messages into a database. The messages are then available for end-users to review, delete, or approve for delivery.	With the web-based EUQ management console, end-users can manage messages that IMSVA quarantines. IMSVa also enables users to apply actions to quarantined messages and to add senders to the Approved Senders list through links in the EUQ digest.

FEATURE	DESCRIPTIONS	BENEFITS
Delegated administration	IMSVa offers the ability to create different access rights to the management console. You can choose which sections of the console are accessible for different administrator logon accounts.	By delegating administrative roles to different employees, you can promote the sharing of administrative duties.
Centralized reporting	Centralized reporting gives you the flexibility of generating one time (on demand) reports or scheduled reports.	Helps you analyze how IMSVa is performing. One time (on demand) reports allow you to specify the type of report content as and when required. Alternatively, you can configure IMSVa to automatically generate reports daily, weekly, and monthly. IMSVa allows you to send both one-time and scheduled reports through email.
System availability monitor	A built-in agent monitors the health of your IMSVa server and delivers notifications through email or SNMP trap when a fault condition threatens to disrupt the mail flow.	Email and SNMP notification on detection of system failure allows you to take immediate corrective actions and minimize downtime.
POP3 scanning	You can choose to enable or disable POP3 scanning from the management console.	In addition to SMTP traffic, IMSVa can also scan POP3 messages at the gateway as messaging clients in your network retrieve them.
Clustered architecture	The current version of IMSVa has been designed to make distributed deployment possible.	You can install the various IMSVa components on different computers, and some components can exist in multiples. For example, if your messaging volume demands, you can install additional IMSVa scanner components on additional servers, all using the same policy services.

FEATURE	DESCRIPTIONS	BENEFITS
Integration with Virtual Analyzer	IMSVa integrates with Virtual Analyzer, which is an isolated virtual environment used to manage and analyze samples in Deep Discovery Advisor and Deep Discovery Analyzer.	IMSVa sends suspicious files and URLs to the Virtual Analyzer sandbox environment for simulation. Virtual Analyzer opens files, including password-protected archives and document files, and accesses URLs to test for exploit code, C&C and botnet connections, and other suspicious behaviors or characteristics.
Integration with Trend Micro Control Manager™	Trend Micro Control Manager™ (TMCM) is a software management solution that gives you the ability to control antivirus and content security programs from a central location regardless of the program's physical location or platform. This application can simplify the administration of a corporate virus and content security policy.	Outbreak Prevention Services delivered through Trend Micro Control Manager™ reduces the risk of outbreaks. When a Trend Micro product detects a new email-borne virus, TrendLabs issues a policy that uses the advanced content filters in IMSVa to block messages by identifying suspicious characteristics in these messages. These rules help minimize the window of opportunity for an infection before the updated pattern file is available.
Integration with syslog servers	IMSVa integrates with syslog servers that use the syslog protocol to receive log messages. Syslog protocol is a network logging standard supported by a wide range of network devices and contains information on network events and errors.	Syslog server integration implements centralized log collection and management for multiple IMSVa servers and consolidates log data from all over the network into a single central repository. Collecting and analyzing syslog messages is essential for maintaining network stability and auditing network security.

FEATURE	DESCRIPTIONS	BENEFITS
Time-of-Click Protection	IMSVA provides time-of-click protection against malicious URLs in email messages.	If you enable Time-of-Click Protection, IMSVA rewrites URLs in email messages for further analysis. Trend Micro analyzes those URLs at the time of click and will block them if they are malicious.

About Cloud Pre-Filter

Cloud Pre-Filter is a cloud security solution that integrates with IMSVA to provide proactive protection in the cloud with the privacy and control of an on-premise virtual appliance.

Cloud Pre-Filter reduces inbound email message volume up to 90% by blocking spam and malware outside your network. Cloud Pre-Filter is integrated with IMSVA at the gateway allowing flexible control over sensitive information. And local quarantines ensure your email message stays private. No email message is stored in the cloud. With Cloud Pre-Filter, you can reduce complexity and overhead to realize significant cost savings.

About Email Encryption

Trend Micro Email Encryption provides IMSVA with the ability to perform encryption and decryption of email messages. With Email Encryption, IMSVA has the ability to encrypt and decrypt email messages regardless of the email client or platform from which it originated. The encryption and decryption of email messages on Trend Micro Email Encryption is controlled by a Policy Manager that enables an administrator to configure policies based on various parameters, such as sender and recipient email addresses, keywords or where the email messages (or attachments) contain credit card numbers. Trend Micro Email Encryption presents itself as a simple mail transfer protocol (SMTP) interface and delivers email messages out over SMTP to a configured outbound mail transport agent (MTA). This enables easy integration with other email server-based products, be them content scanners, mail servers or archiving solutions.

About Spyware/Grayware

Your clients are at risk from potential threats other than viruses/malware. Grayware can negatively affect the performance of the computers on your network and introduce significant security, confidentiality, and legal risks to your organization.

TABLE 1-2. Types of Grayware

TYPE	DESCRIPTION
Spyware	Gathers data, such as account user names and passwords, and transmits them to third parties
Adware	Displays advertisements and gathers data, such as user web surfing preferences, to target advertisements at the user through a web browser
Dialers	Changes computer Internet settings and can force a computer to dial pre-configured phone numbers through a modem
Joke Programs	Causes abnormal computer behavior, such as closing and opening the CD-ROM tray and displaying numerous message boxes
Hacking Tools	Helps hackers enter computers
Remote Access Tools	Helps hackers remotely access and control computers
Password Cracking Applications	Helps hackers decipher account user names and passwords
Other	Other types not covered above

How Spyware/Grayware Gets into Your Network

Spyware/grayware often gets into a corporate network when users download legitimate software that has grayware applications included in the installation package.

Most software programs include an End User License Agreement (EULA), which the user has to accept before downloading. Often the EULA does include information about the application and its intended use to collect

personal data; however, users often overlook this information or do not understand the legal jargon.

Potential Risks and Threats

The existence of spyware/grayware on your network has the potential to introduce the following:

TABLE 1-3. Types of Risks

TYPE	DESCRIPTION
Reduced computer performance	To perform their tasks, spyware/grayware applications often require significant CPU and system memory resources.
Increased web browser-related crashes	Certain types of grayware, such as adware, are often designed to create pop-up windows or display information in a browser frame or window. Depending on how the code in these applications interacts with system processes, grayware can sometimes cause browsers to crash or freeze and may even require a system reboot.
Reduced user efficiency	By needing to close frequently occurring pop-up advertisements and deal with the negative effects of joke programs, users can be unnecessarily distracted from their main tasks.
Degradation of network bandwidth	Spyware/grayware applications often regularly transmit the data they collect to other applications running on your network or to locations outside of your network.
Loss of personal and corporate information	Not all data that spyware/grayware applications collect is as innocuous as a list of websites users visit. Spyware/grayware can also collect the user names and passwords users type to access their personal accounts, such as a bank account, and corporate accounts that access resources on your network.
Higher risk of legal liability	If hackers gain access to the computer resources on your network, they may be able to utilize your client computers to launch attacks or install spyware/grayware on computers outside your network. Having your network resources unwillingly participate in these types of activities could leave your organization legally liable to damages incurred by other parties.

About Web Reputation Services

Trend Micro web reputation technology helps break the infection chain by assigning websites a “reputation” based on an assessment of the trustworthiness of an URL, derived from an analysis of the domain. Web reputation protects against web-based threats including zero-day attacks, before they reach the network. Trend Micro web reputation technology tracks the lifecycle of hundreds of millions of web domains, extending proven Trend Micro antispam protection to the Internet.

About Email Reputation

Trend Micro designed Email reputation to identify and block spam before it enters a computer network by routing Internet Protocol (IP) addresses of incoming mail connections to Trend Micro Smart Protection Network for verification against an extensive Reputation Database.

Types of Email Reputation

There are two types of Email reputation: [Standard on page 1-14](#) and [Advanced on page 1-15](#).

Email Reputation: Standard

This service helps block spam by validating requested IP addresses against the Trend Micro reputation database, powered by the Trend Micro Smart Protection Network. This ever-expanding database currently contains over 1 billion IP addresses with reputation ratings based on spamming activity. Trend Micro spam investigators continuously review and update these ratings to ensure accuracy.

Email reputation: Standard is a DNS single-query-based service. Your designated email server makes a DNS query to the standard reputation database server whenever an incoming email message is received from an unknown host. If the host is listed in the standard reputation database, Email reputation reports that email message as spam.

**Tip**

Trend Micro recommends that you configure IMSVA to block, not receive, any email messages from an IP address that is included on the standard reputation database.

Email Reputation: Advanced

Email reputation: Advanced identifies and stops sources of spam while they are in the process of sending millions of messages.

This is a dynamic, real-time antispam solution. To provide this service, Trend Micro continuously monitors network and traffic patterns and immediately updates the dynamic reputation database as new spam sources emerge, often within minutes of the first sign of spam. As evidence of spam activity ceases, the dynamic reputation database is updated accordingly.

Like Email reputation: Standard, Email reputation: Advanced is a DNS query-based service, but two queries can be made to two different databases: the standard reputation database and the dynamic reputation database (a database updated dynamically in real time). These two databases have distinct entries (no overlapping IP addresses), allowing Trend Micro to maintain a very efficient and effective database that can quickly respond to highly dynamic sources of spam. Email reputation: Advanced has blocked more than 80% of total incoming connections (all were malicious) in customer networks. Results will vary depending on how much of your incoming email stream is spam. The more spam you receive, the higher the percentage of blocked connections you will see.

How Email Reputation Technology Works

Trend Micro Email reputation technology is a Domain Name Service (DNS) query-based service. The following process takes place after IMSVA receives a connection request from a sending mail server:

1. IMSVA records the IP address of the computer requesting the connection.
2. IMSVA forwards the IP address to the Trend Micro Email reputation DNS servers and queries the Reputation Database. If the IP address had

already been reported as a source of spam, a record of the address will already exist in the database at the time of the query.

3. If a record exists, Email reputation instructs IMSVA to permanently or temporarily block the connection request. The decision to block the request depends on the type of spam source, its history, current activity level, and other observed parameters.

The figure below illustrates how Email reputation works.

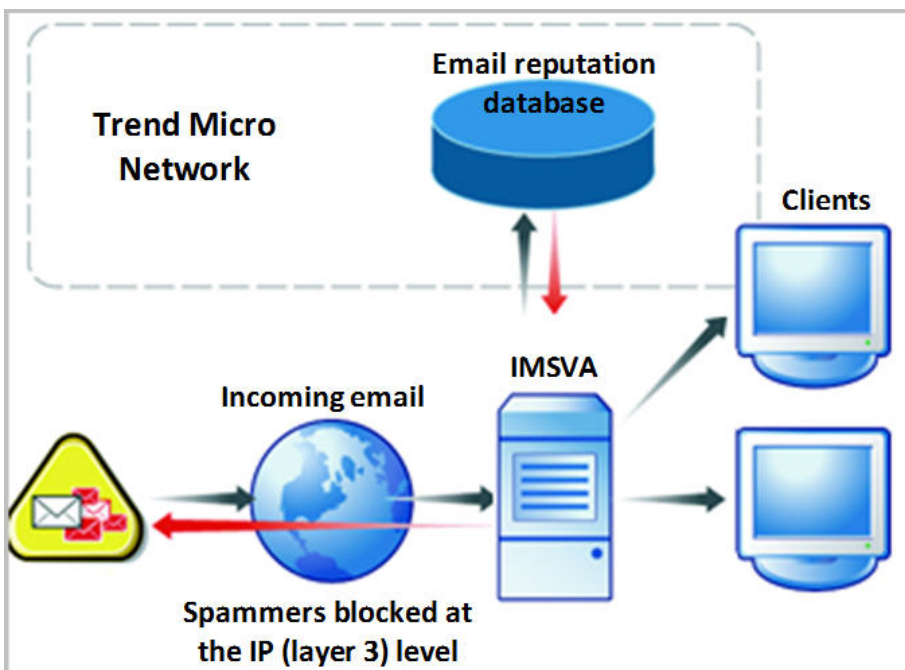


FIGURE 1-1. How Email reputation works

For more information on the operation of Trend Micro Email reputation, visit <https://ers.trendmicro.com/>.

About Trend Micro Control Manager

Trend Micro™ Control Manager™ is a software management solution that gives you the ability to control antivirus and content security programs from a central location—regardless of the program's physical location or platform. This application can simplify the administration of a corporate virus/malware and content security policy.

- **Control Manager server:** The Control Manager server is the machine upon which the Control Manager application is installed. The web-based Control Manager management console is hosted from this server.
- **Agent:** The agent is an application installed on a managed product that allows Control Manager to manage the product. The agent receives commands from the Control Manager server, and then applies them to the managed product. The agent collects logs from the product, and sends them to Control Manager.
- **Entity:** An entity is a representation of a managed product on the Product Directory link. Each entity has an icon in the directory tree. The directory tree displays all managed entities residing on the Control Manager console.

Control Manager Support

The following table shows a list of Control Manager features that IMSVA supports.

TABLE 1-4. Supported Control Manager Features

FEATURE	DESCRIPTION	SUPPORTED?
Two-way communication	Using 2-way communication, either IMSVA or Control Manager may initiate the communication process.	No. Only IMSVA can initiate a communication process with Control Manager.

FEATURE	DESCRIPTION	SUPPORTED?
Outbreak Prevention Policy	The Outbreak Prevention Policy (OPP) is a quick response to an outbreak developed by TrendLabs that contains a list of actions IMSVA should perform to reduce the likelihood of the IMSVA server or its clients from becoming infected. Trend Micro ActiveUpdate Server deploys this policy to IMSVA through Control Manager.	Yes
Log upload for query	Uploads IMSVA virus logs, Content Security logs, and Email reputation logs to Control Manager for query purposes.	Yes
Single Sign-on	Manage IMSVA from Control Manager directly without first logging on to the IMSVA management console.	No. You need to first log on to the IMSVA management console before you can manage IMSVA from Control Manager.
Configuration replication	Replicate configuration settings from an existing IMSVA server to a new IMSVA server from Control Manager.	Yes
Pattern update	Update pattern files used by IMSVA from Control Manager	Yes
Engine update	Update engines used by IMSVA from Control Manager.	Yes
Product component update	Update IMSVA product components such as patches and hot fixes from Control Manager.	No. Refer to the specific patch or hot fix readme file for instructions on how to update the product components.

FEATURE	DESCRIPTION	SUPPORTED?
Configuration by user interface redirect	Configure IMSVA through the IMSVA management console accessible from Control Manager.	Yes
Renew product registration	Renew IMSVA product license from Control Manager.	Yes
Customized reporting from Control Manager	Control Manager provides customized reporting and log queries for email-related data.	Yes
Control Manager agent installation/uninstallation	Install or uninstall IMSVA Control Manager agent from Control Manager.	No. IMSVA Control Manager agent is automatically installed when you install IMSVA. To enable/disable the agent, do the following from the IMSVA management console: 1. Go to Administration > Connections. 2. Click the TMCM Server tab. 3. To enable/disable the agent, select/clear the check box next to Enable MCP Agent.
Event notification	Send IMSVA event notification from Control Manager.	Yes
Command tracking for all commands	Track the status of commands that Control Manager issues to IMSVA.	Yes

About Graymail Scanning

Graymail refers to solicited bulk email messages that are not spam. IMSVA detects marketing messages and newsletters and social network notifications as graymail. IMSVA identifies graymail messages in two ways:

- Email Reputation Services scoring the source IP address
- Trend Micro Antispam Engine identifying message content

**Note**

Note that while IMSVA detects these kinds of email messages, these messages are not tagged as spam.

Administrators define the rule criteria to take an action on those email messages. Every graymail message rule has an exception list containing address objects that bypass message filtering. An address object is a single IP address or address range (IPv4 or IPv6), or the Classless Inter-Domain Routing (CIDR) block.

Administrators have several options to understand graymail message traffic in the network. Reports illustrate the highest senders and recipients of graymail messages from external or internal sources. Administrators can also query detailed log information or view the email quarantine and release messages identified as permitted graymail messages when necessary.

The graymail exception list can be exported and imported.

**Note**

Ensure that IMSVA can query external DNS servers for graymail scanning. If you change any DNS server settings, restart the scanner server to load the new settings.

About Command & Control (C&C) Contact Alert Services

Trend Micro Command & Control (C&C) Contact Alert Services provides IMSVA with enhanced detection and alert capabilities to mitigate the damage caused by advanced persistent threats and targeted attacks. It leverages the Global Intelligence list compiled, tested, and rated by the Trend Micro Smart Protection Network to detect callback addresses.

With C&C Contact Alert Services, IMSVA has the ability to inspect the sender, recipients and reply-to addresses in a message's header, as well as URLs in the message body, to see if any of them matches known C&C objects. Administrators can configure IMSVA to quarantine such messages and send a notification when a message is flagged. IMSVA logs all detected email with C&C objects and the action taken on these messages. IMSVA sends these logs to Control Manager for query purposes.

Chapter 2

Getting Started

This chapter explains how to log on to the management console and provides instructions on what to do immediately after installation to get IMSVA up and running.

Topics include:

- *Opening the IMSVA Management Console on page 2-2*
- *Viewing the Management Console Using Secure Socket Layer on page 2-3*
- *Setting Up a Child Device on page 2-3*
- *Using Smart Search on page 2-6*
- *Configuring Proxy Settings on page 2-6*
- *IMSVA Services on page 2-8*

Opening the IMSVA Management Console

You can view the IMSVA management console using a web browser from the server where you installed the program, or remotely across the network.

Procedure

1. Type the following URL:

`https://<target server IP address>:8445`



Tip

An alternative to using the IP address is to use the target server's fully qualified domain name (FQDN).

2. Type the logon credentials to open the management console.

The default logon credentials are as follows:

- Administrator user name: `admin`
- Password: `imsva`

3. Click **Log On**.



Note

If you are using Internet Explorer to access the management console, Internet Explorer will block the access and display a popup dialog box indicating that the certificate was issued from a different web address. Add the management console IP address to your Trusted sites list (**Internet Options** > **Security** in Internet Explorer) or ignore the message and click **Continue** to this website to proceed.

When you log on for the first time, the **Configuration Wizard** screen appears.

For detailed configurations in the Configuration Wizard, see [Using the Configuration Wizard on page 4-1](#).

What to do next

To prevent unauthorized changes to your policies, Trend Micro recommends that you set a new logon password immediately after deployment and change the password regularly.

Using the Online Help

The IMSVA management console comes with an Online Help that provides a description of each field on the user interface.

To access page-specific Online Help from the IMSVA management console, click the Help (?) icon located at the top right corner of the page.

To access the table of contents for the Online Help, click the Help (?) icon next to the **Log Off** hyperlink on the right of the page header.



FIGURE 2-1. Table of Contents Access for Online Help

Viewing the Management Console Using Secure Socket Layer

The IMSVA management console supports encrypted communication, using Secure Socket Layer (SSL). After installing IMSVA, SSL communication should work because the installation contains a default certificate. Trend Micro suggests that you use your own certificate to increase security.

To use your own certificate, assign the certificate to the management console. For details, see [Assigning a Certificate on page 13-21](#).

To create a certificate, see [Creating a Self-Signed Certificate on page 13-14](#).

Setting Up a Child Device

This section explains how to set up a child device and register it to the parent device.

**Tip**

Trend Micro recommends using an NTP server if you intend to set up child devices. Doing so ensures that the time and date of devices in the IMSVA group are synchronized. For more information, see [Configuring NTP Settings on page 31-19](#).

Procedure

1. Determine the Internal Communication Port IP address of the child device.
-

**WARNING!**

Parent and child devices must use their Internal Communication Port to communicate with each other. If your parent device or your child devices have multiple network interface cards (NIC), add a host-route entry by Command Line Interface (CLI) following the instructions below.

On the parent device in the CLI:

```
configure network route add <IP address of child device's  
Internal Communication Port>/32 <next hop> <Internal  
Communication Port of parent device>
```

On the child device in the CLI:

```
configure network route add <IP address of parent device's  
Internal Communication Port >/32 <next hop> <Internal  
Communication Port of child device>
```

2. After you set up a parent device, do the following:
 - a. Make sure the parent device is operational.
 - b. Log on to the management console. Make sure that you are logging on to the parent device management console.
 - c. Go to **Administration > IMSVA Configuration > Connections > Child IP**.

- d. Under **Add IP Address**, add the IP address for the Internal Communication Port of the child device.
3. On the **child** device, do the following:
 - a. Log on to the management console of the child device. All IMSVA devices have the same management console logon credentials.
 - b. In the Setup Wizard, configure the local system settings and then click **Next>**.
 - c. On the **Deployment Settings** screen, select **Child Device** and specify the IP address, port, logon user name and password for the management console of the parent device.

**Note**

The logon user account that you specified must have full administration rights.

- d. Click **Finish**.
4. On the **parent** device, do the following:
 - a. Go to **System Status**.
 - b. Verify that the child device appears under **Managed Services** and that a green check mark (✓) appears under **Connection**. You can start or stop Scanner Service, Policy Service, or EUQ Management Console.
5. If you want to use EUQ on the child device, redistribute the data across the EUQ databases:
 - a. On the **parent** device, navigate to **Administration > End-User Quarantine**.
 - b. Select **Redistribute all** or **Only redistribute to approved senders**.

**Tip**

Trend Micro recommends choosing **Redistribute all**.

c. Click **Redistribute**.



Note

If you registered an EUQ-enabled child device to its parent device, add senders to the approved senders list, and then re-distribute EUQ data. Some of the newly added approved senders might not appear.

Trend Micro recommends the following:

- After redistributing EUQ, the administrator informs all end users to verify that the newly added approved senders are still available.
 - That the administrator notifies all end users not to add EUQ approved senders list when the administrator is adding a child device and redistributing EUQ.
-

Using Smart Search

Smart Search provides a quick way to navigate to screens on the management console. Specify the name of the screen or the name of a feature in the Smart Search text box and then select an entry from the drop-down list that appears.

Configuring Proxy Settings

If your network uses a proxy server, configure IMSVA proxy settings. Proxy settings affect the following:

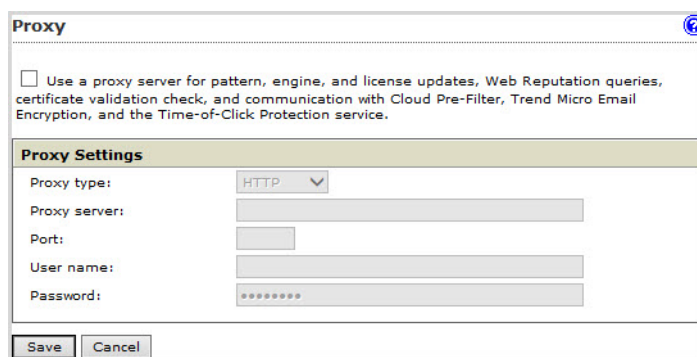
- Component updates (pattern files and scan engines)
- Product license registration
- Web Reputation queries to the Smart Protection Network
- Cloud Pre-Filter service and Smart Feedback
- Trend Micro Email Encryption

- Certificate validation check
- Time-of-Click Protection service

Procedure

1. Go to **Administration > Proxy**.

The **Proxy** screen appears.



2. Select **Use a proxy server for pattern, engine, and license updates, Web Reputation queries, certificate validation check, and communication with Cloud Pre-Filter, Trend Micro Email Encryption, and the Time-of-Click Protection service.**
3. Specify the proxy protocol: **HTTP**, **SOCKS4**, or **SOCKS5**.



Tip

When using Cloud Pre-Filter, Trend Micro recommends using **HTTP** or **SOCKS5**.

Certificate validation check only uses **HTTP**.

4. Specify the host name or IP address of the proxy server.
5. Specify the port the proxy server uses to connect to the Internet.

6. Specify the user name you need for administrative access to the proxy server.
 7. Specify the corresponding password.
 8. Click **Save**.
-

IMSVa Services

The scanner and policy services must be started to start protecting your network using IMSVa. You can, however, choose whether to start the EUQ Management Console.

- **Scanner Service:** Performs scanning of SMTP/POP3 traffic.
- **Policy Service:** Acts as a remote store of rules for the scanner service to enhance rule lookups.
- **EUQ Management Console:** Acts as a web-based management console to enable end users to view, delete and release spam messages addressed to them.

For more information on these services, refer to the *Installation Guide*.

Starting or Stopping Services

After you have successfully installed IMSVa and configured the various settings, start the services to begin scanning for malware and other threats. You may need to stop IMSVa services prior to performing an upgrade or backup function.

Procedure

1. Go to **System Status**.
 2. Under **Managed Services Settings**, click the **Start** or **Stop** button for the service(s) to start or stop.
-

Chapter 3

User Accounts

This chapter explains how to add, configure, and manage user accounts.

Topics include:

- *[Administrator Account Management on page 3-2](#)*
- *[Adding Administrator Accounts on page 3-2](#)*
- *[Editing or Deleting Administrator Accounts on page 3-5](#)*
- *[Changing the Management Console Password on page 3-6](#)*

Administrator Account Management

To reduce bottlenecks in administering IMSVA, you can delegate administrative tasks to other staff by creating new administrator accounts. After creating the accounts, assign the desired permissions to the various areas of the management console. The default "admin" account has access to all IMSVA features.

Adding Administrator Accounts

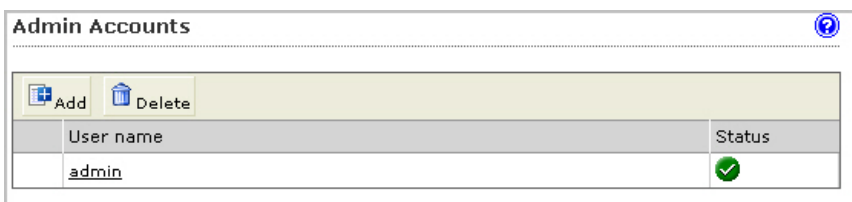
Created accounts have three permission settings for IMSVA features:

- **Full:** Users have complete access to the features and settings contained in the menu item.
- **Read:** Users can view features and settings contained in the menu item, but cannot modify them.
- **None:** Users will not see the menu item, preventing them from viewing or configuring any of the settings in the menu item.

Procedure

1. Go to **Administration > Admin Accounts**.

The **Admin Accounts** screen appears.



2. Click **Add**.

The **Add Administrator Account** screen appears, displaying the **Authentication** tab.

The screenshot shows the 'Add Administrator Account' dialog box with the 'Authentication' tab selected. The 'Enable account' checkbox is checked. Under 'Authentication', 'IMSVA Authentication' is selected with a radio button. Below it are three text input fields for 'User name:', 'New password:', and 'Confirm:'. A note specifies password requirements: 4 to 32 alphanumeric characters and specific special characters. 'LDAP authentication' is unselected. Below it is a text input field for 'LDAP user name:'. At the bottom are 'Save' and 'Cancel' buttons.

3. Specify Authentication settings:

a. Select **Enable account**.

b. Select an authentication type:

- **IMSVA Authentication:** Specify the user name, new password, and the new password confirmation.

Make sure the password consists of 4 to 32 alphanumeric characters and the following special characters: `~!@#\$\$%^&*()[]{}+~|:'<>?/,.=_

- **LDAP authentication:** Specify the LDAP user name.

4. Click the **Permissions** tab.

The **Permissions** screen appears.

Add Administrator Account

Authentication **Permissions**

Access Areas	Full	Read	None	
Dashboard & System Status	☐	☐	☒	
Cloud Pre-Filter	☐	☐	☒	
Policy	☐	☐	☒	
Sender Filtering	☐	☐	☒	
Reports	☐	☐	☒	
Logs	☐	☐	☒	
Mail Areas & Queues	☐	☐	☒	
Administration	☐	☐	☒	
Command Line Interface	☐		☒	

Save Cancel

5. Specify Permissions settings:

- a. Select **Full**, **Read**, or **None** for each of the following access areas that appear on the IMSVA management console menu:

- Dashboard & System Status
- Cloud Pre-Filter
- Policy
- Sender Filtering
- Reports
- Logs
- Mail Areas & Queues
- Administration
- Command Line Interface

- b. Click **Save**.
-

**Note**

- Only the default IMSVA administrator account can add new administrator accounts. Custom administrator accounts cannot do so even if you assign full permission to the Administration area.
 - Custom administrator accounts with full administration rights can only change their own IMSVA passwords. If you forget the default administrator account password, contact Trend Micro technical support to reset the password.
-

Editing or Deleting Administrator Accounts

You can change or delete the permissions of a custom administrator account whenever there is a revision of roles or other organizational changes.

Editing Administrator Accounts

Procedure

1. Go to **Administration > Admin Accounts**.

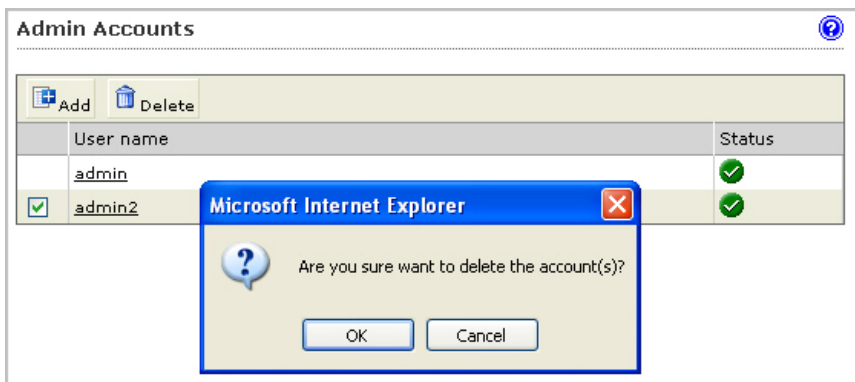
The **Admin Accounts** screen appears.

2. Click the account name hyperlink.
 3. Make the required changes.
 4. Click **Save**.
-

Deleting Administrator Accounts

Procedure

1. Select the check box next to the account to be removed.
2. Click **Delete**.
3. Click **OK**.

**Note**

You can only delete custom administrator accounts, not the default IMSVA administrator account.

Changing the Management Console Password

Trend Micro recommends periodically changing the password you use to access the management console.

**WARNING!**

If you are still using the default password, Trend Micro strongly recommends that you change the password immediately.

Procedure

1. Go to **Administration > Password**.
2. Specify the current password, the new password, and the new password confirmation.

**Note**

A valid password can contain letters, numbers and the following characters: `~!@#\$%^&*()[]{}+~|:'<>?/,.= _.

The password must be between 4 and 32 alphanumeric characters.

3. Click **Save.**

Chapter 4

Using the Configuration Wizard

This chapter explains how to get IMSVA up and running using the configuration wizard.

Topics include:

- *Configuring System Settings on page 4-2*
- *Configuring Deployment Settings on page 4-4*
- *Configuring SMTP Routing on page 4-5*
- *Configuring Notification Settings on page 4-6*
- *Configuring the Update Source on page 4-8*
- *Configuring LDAP Settings on page 4-10*
- *Configuring Internal Addresses on page 4-13*
- *Configuring Control Manager Server Settings on page 4-15*
- *Activating the Product on page 4-17*
- *Verifying Settings Summary on page 4-18*

Configuring IMSVA with the Configuration Wizard

IMSVA provides a configuration wizard to help you configure all the settings you need to get IMSVA up and running.

Procedure

1. On the management computer, open a supported web browser.
2. Type the following URL (accept the security certificate if necessary):

`https://<target server IP address>:8445`

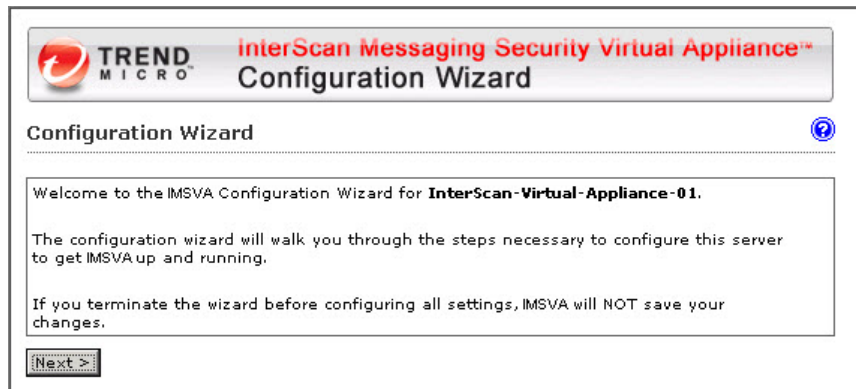
The **Log On** screen appears.

3. Select the **Open Configuration Wizard** check box.
4. Type the following default user name and password:

- User name: `admin`

- Password: `imsva`

The **Configuration Wizard** screen appears.



Configuring System Settings

Procedure

1. Click **Next**.

The **Local System Settings** screen appears.

Configuration Wizard
 Step 1 of 10

Local System Settings ?

The following settings for network and system time will be applied to **local system** immediately when you click the Save/Next button

Network Settings

IPv6 Configuration
☐ Enable IPv6

Network interface configuration

Device name	IP Address and Mask
eth0	IPv4: / IPv6: /

Internal Communication Port
 Device name: eth0

Network subsystem configuration

Host name:*

Default IPv4 gateway:*

Primary IPv4 DNS server:*

Secondary IPv4 DNS server:

Default IPv6 gateway:

Primary IPv6 DNS server:

Secondary IPv6 DNS server:

System Time

You can enable NTP on the Deployment Settings screen. A child device uses the NTP settings of its parent device. If you do not enable NTP on the Deployment Settings screen for the parent device, child devices cannot use NTP.

Local Time Zone:*

Asia

China

Shanghai

Date and time:*

11/26/2012

🕒

09:59:36

mm/dd/yyyy

hh:mm:ss

Steps

1. **System Settings**
2. Deployment Settings
3. SMTP Routing
4. Notification Settings
5. Update Source
6. LDAP Settings
7. Internal Addresses
8. TCMC Settings
9. Product Activation
10. Review Settings

< Back
Skip
Next >

2. Modify the device host name, internal communication port, IP address, and netmask if necessary. Also, configure your network settings and set the device system time.

4-3

**Note**

The local system settings take effect immediately when you click the **Next >** button. If the IP address or time settings are changed, IMSVA will restart. Wait until IMSVA is online and then log on again.

Configuring Deployment Settings

Procedure

1. Click **Next**.

The **Deployment Settings** screen appears.

Configuration Wizard
Step 2 of 10

Deployment Settings

You can deploy two or more IMSVA devices in a group. One device acts as the parent device, which controls the child devices.

test58.imsstest.com deployment type:

☒ **Parent Device**

Import Settings...

☐ Automatically synchronize system time with NTP server: _____

☐ **Child Device**

Parent Management Console Settings:

IP Address: _____

Port: 8445

User name: admin

Password: _____

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Steps

1. System Settings
- 2. Deployment Settings**
3. SMTP Routing
4. Notification Settings
5. Update Source
6. LDAP Settings
7. Internal Addresses
8. TCM Settings
9. Product Activation
10. Review Settings

2. Select **Parent Device** or **Child Device**.

- **Parent Device:** If this is the first device you are setting up, you must select this option. You can configure additional child devices at a later time. Also, decide if you want to use the NTP service.

- **Child Device:** If you select this option, specify the parent management console settings. Make sure the user account you use here has full administration rights.

Configuring SMTP Routing

Procedure

1. Click **Next**.

The **SMTP Routing** screen appears.

Configuration Wizard
Step 3 of 10

SMTP Routing Settings ⓘ

IMSSVA uses the following domain-based settings for receiving and sending messages.

Incoming Message Settings

Diagram illustrating message flow:

- Incoming messages (envelope icon) → IMSVA delivers only incoming messages that are addressed to recipients in specified domains. (text box) → Recipients (people icon) → Specified domain (people icon) → Unspecified domain (person icon with red X).

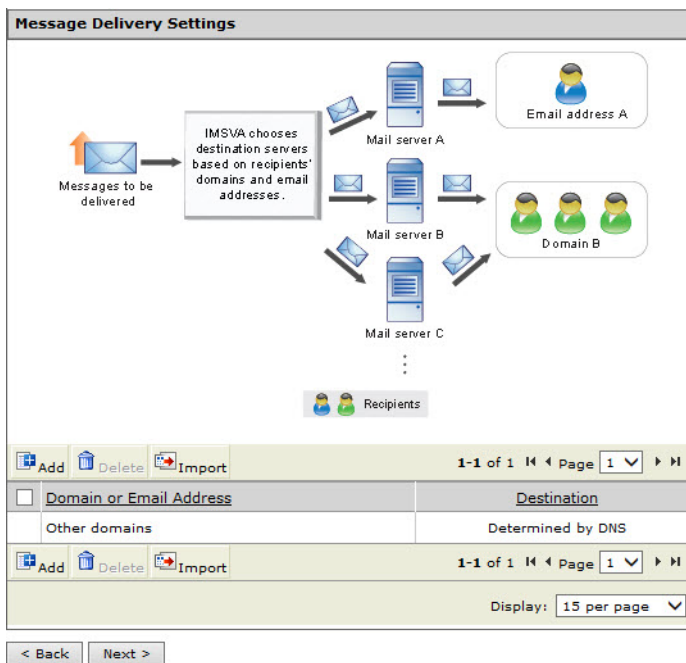
Add Domain

For example: example.com

Import from File

Note: To ensure that IMSSVA receives incoming messages, Trend Micro recommends adding all internal domains in your network.

>> <<



2. Specify the incoming message settings. See [Specifying Message Rules on page 11-7](#).
3. Specify the message delivery settings. See [Specifying Message Delivery Settings on page 11-11](#).

Configuring Notification Settings

Procedure

1. Click **Next**.

The **Notification Settings** screen appears.

Configuration Wizard
Step 4 of 10

Notification Settings [Log Off](#) [?](#) **Steps**

Configure email and SNMP trap notifications for **default system notifications**.

Email Settings

Recipient(s):*
Use a semicolon ";" to separate multiple addresses

Sender's email address:*

SMTP server address:*

SMTP server port:*

Preferred charset:*

Message header:

Message footer:

SNMP Trap

Server name (IP or FQDN):

Community:

SNMP version:

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Steps

1. System Settings
2. Deployment Settings
3. SMTP Routing
- 4. Notification Settings**
5. Update Source
6. LDAP Settings
7. Internal Addresses
8. TCMC Settings
9. Product Activation
10. Review Settings

2. Under **Email Settings**, configure the following:

- **To address(es):** Specify the recipient email addresses.
- **Sender's email address:** Specify the email address to appear as the sender.
- **Server name or IP address:** Specify the Fully Qualified Domain Name (FQDN) or the IP address of the SMTP server that delivers email on the network.
- **SMTP server port:** Specify the port number that IMSVA uses to connect to the SMTP server.
- **Preferred charset:** IMSVA will use this setting to encode the notification messages.
- **Message header:** Specify the text to appear at the top of the notification.

- **Message footer:** Specify the text to appear at the bottom of the notification.

3. Under **SNMP Trap**, configure the following:



Note

SNMP Trap is the notification message sent to the Simple Network Management Protocol (SNMP) server when events that require administrative attention occur.

- **Server name:** Specify the FQDN or IP address of the SNMP server.
 - **Community:** Specify the SNMP server community name.
 - **SNMP version:** Select **SNMPv1** or **SNMPv2c**.
-



Note

Community is the group that computers and management stations running SNMP belong to. To send the alert message to all SNMP management stations, specify “public” as the community name. For more information, refer to the SNMP documentation.

Configuring the Update Source

Procedure

1. Click **Next**.

The **Update Source** screen appears.

Configuration Wizard

Step 5 of 10

Update Source

Log Off

?

Steps

1. System Settings

2. Deployment Settings

3. SMTP Routing

4. Notification Settings

5. Update Source

6. LDAP Settings

7. Internal Addresses

8. TCMC Settings

9. Product Activation

10. Review Settings

Select an update source and configure proxy settings to enable IMSVA to **update components** and **activate product licenses**.

Source

☒ Trend Micro ActiveUpdate server

☐ Other Internet source

Proxy Settings

☐ Use a proxy server for pattern, engine, and license updates, Web Reputation queries, certificate validation check, and communication with Cloud Pre-Filter, Trend Micro Email Encryption, and the Time-of-Click Protection service.

Proxy type:*

HTTP

Proxy server:*

Port:*

User name:

Password:

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Skip

Next >

2. Configure the following update settings, which will determine from where IMSVA will receive its component updates and through which proxy (if any) IMSVA needs to connect to access the Internet:

OPTION	DESCRIPTION
Source	Click Trend Micro ActiveUpdate server to receive updates directly from Trend Micro. Alternatively, click Other Internet source and specify the URL of the update source that will check the Trend Micro ActiveUpdate server for updates. You can specify an update source of your choice or type the URL of your Control Manager server <code>http://<IP address of Control Manager server or CQDN>/ Tvcs Download/ActiveUpdate/,if applicable.</code>
Proxy Settings	Select the Use a proxy server for pattern, engine, and license updates, Web Reputation queries, certificate validation check, and communication with Cloud Pre-Filter, Trend Micro Email Encryption, and the Time-of-Click Protection service check box and configure the proxy type, server name, port, user name, and passwords.

Configuring LDAP Settings

Specify LDAP settings only if you will use LDAP for user-group definition, administrator privileges, or End-User Quarantine authentication.

Procedure

1. Click **Next**.

The **LDAP Settings** screen appears.

Configuration Wizard
Step 6 of 10

[Log Off](#)


LDAP Settings

Enter LDAP settings **only** if you will use LDAP for user-group definition, administrator privileges, or web quarantine authentication. You must enable LDAP to use the web quarantine tool. If you need to define more than one LDAP server, use the: **Administration > Connections > LDAP** screen.

LDAP Description

Description:*

LDAP Settings

LDAP server type:* Microsoft Active Directory

☐ Enable **LDAP1**

LDAP server:*
Example: example.com or 123.123.123.123

Listening port number:*
Note: Use the global catalog port 3268 or 3269 (when encrypted communication enabled) if the LDAP server type is Microsoft Active Directory.

☐ Enable **LDAP2** 

LDAP server:*
Example: example.com or 123.123.123.123

Listening port number:*
Note: Use the global catalog port 3268 or 3269 (when encrypted communication enabled) if the LDAP server type is Microsoft Active Directory.

LDAP cache expiration for policy services and EUQ services

Time to Live in minutes:*

Steps

1. System Settings
2. Deployment Settings
3. SMTP Routing
4. Notification Settings
5. Update Source
- 6. LDAP Settings**
7. Internal Addresses
8. TCM Settings
9. Product Activation
10. Review Settings

LDAP admin

LDAP admin account:*
 Example: Domain_Name\Account_Name or Account_Name@Domain_Name

Password:*
 Example: DC=foo, DC=foonet, DC=org

Base distinguished name:*
 Example: DC=foo, DC=foonet, DC=org

Authentication method:* ☒ Simple
☐ Advanced: using Kerberos authentication for Active Directory

Kerberos authentication default realm:

Default domain:

KDC and admin server:

KDC port number:

☐ Enable encrypted communication between IMSVA and LDAP

CA certificate file:

Note: If you enable encrypted communication between IMSVA and LDAP, set a specific LDAP listening port for encrypted communication, for example, 636.

< Back Skip Next >

2. Specify a meaningful description for the LDAP server.
3. Complete the following to enable LDAP settings:
 - a. For **LDAP server type**, select one of the following:
 - **Domino**
 - **Microsoft Active Directory**
 - **Microsoft AD Global Catalog**
 - **Open LDAP**
 - **Sun iPlanet Directory**
 - b. To enable one or both LDAP servers, select the check boxes next to **Enable LDAP 1** or **Enable LDAP 2**.

- c. Specify the names of the LDAP servers and the port numbers they listen on.
- d. Under **LDAP cache expiration for policy services and EUQ services**, specify a number that represents the time to live next to the **Time to Live in minutes** field.
- e. Under **LDAP admin**, specify the administrator account, its corresponding password, and the base-distinguished name. See the following table for a guide on what to specify for the LDAP admin settings.

TABLE 4-1. LDAP Server Types

LDAP SERVER	LDAP ADMIN ACCOUNT (EXAMPLES)	BASE DISTINGUISHED NAME (EXAMPLES)	AUTHENTICATION METHOD
Active Directory™	Without Kerberos: user1@domain.com (UPN) or domain\user1 With Kerberos: user1@domain.com	dc=domain, dc=com	Simple Advanced (with Kerberos)
Active Directory Global Catalog	Without Kerberos: user1@domain.com (UPN) or domain\user1 With Kerberos: user1@domain.com	dc=domain, dc=com dc=domain1,dc=com (if multiple unique domains exist)	Simple Advanced (with Kerberos)
OpenLDAP	cn=manager, dc=test1, dc=com	dc=test1, dc=com	Simple
Lotus Domino™	user1/domain	Not applicable	Simple

LDAP SERVER	LDAP ADMIN ACCOUNT (EXAMPLES)	BASE DISTINGUISHED NAME (EXAMPLES)	AUTHENTICATION METHOD
Sun™ iPlanet Directory	uid=user1, ou=people, dc=domain, dc=com	uid=user1, ou=people, dc=domain, dc=com	Simple

- f. For **Authentication method**, click **Simple** or **Advanced** authentication. For Active Directory advanced authentication, configure the Kerberos authentication default realm, Default domain, KDC and admin server, and KDC port number.
- g. Select the **Enable encrypted communication between IMSVA and LDAP** check box and click **Browse** to upload a CA certificate file to verify the certificate used by the LDAP server.

Configuring Internal Addresses

IMSVa uses the internal addresses to determine whether a policy or an event is inbound or outbound.

- If you are configuring a rule for outgoing messages, the internal address list applies to the senders.
- If you are configuring a rule for incoming messages, the internal address list applies to the recipients.

Procedure

1. Click **Next**.

The **Internal Addresses** screen appears.

Configuration Wizard
Step 7 of 10

Internal Addresses

Define your internal domains (known users or domains). IMSVA uses these to determine which policies and events are "**Incoming**" and "**Outgoing**" for reporting and rule creation.

Internal domains and usergroups

Enter domain

(For example: domain_name or domain_name.com)

Selected	

2. To define internal domains and user groups, do one of the following:
 - Select **Enter domain** from the drop-down list, specify the domain in the text box, and then click >>.
 - Select **Search for LDAP groups** from the drop-down list. A screen for selecting the LDAP groups appears. Specify an LDAP group name to search in the text box and click **Search**. The search result appears in the list box. To add it to the **Selected** list, click >>.
 - Click the **Import** button to import a text file containing a list of predefined domains.

**Note**

IMSVa can only import a domain list from a text file (.txt). Ensure that the text file contains only one domain per line. You can also use wildcard characters to specify the domain. For example, *.com or *.example.com.

Configuring Control Manager Server Settings

Procedure

1. Click **Next**.

The **TMC Server Settings** screen appears.

Configuration Wizard
Step 8 of 10

TMC Server Settings

Trend Micro™ Control Manager™ (TMC) is a software management solution that gives you the ability to control IMSVA devices and other antivirus and content security programs from a central location.

TMC Server Settings

To manage IMSVA with Control Manager, enable the Control Manager MCP agent and configure all Control Manager server settings.

☐ Enable MCP Agent

Server:*

Communication protocol:*
☐ HTTP Port:
☐ HTTPS Port:

Web server authentication:

User name:

Password:

☐ Enable proxy

Proxy type:*

Proxy server:*

Port:*

User name:

Password:

< Back Skip Next >

2. If you will use Control Manager to manage IMSVA, do the following:
 - a. Enable the agent (installed with IMSVA by default).
 - b. Next to **Server**, specify the Control Manager IP address or FQDN.
 - c. Next to **Communication protocol**, select **HTTP** or **HTTPS** and specify the corresponding port number.

The default port number for HTTP access is 80, and the default port number for HTTPS is 443.

- d. Under **Web server authentication**, specify the user name and password for the web server if it requires authentication.
- e. If a proxy server is between IMSVA and Control Manager, select **Enable proxy**.
- f. Specify the proxy server port number, user name, and password.

Activating the Product

Procedure

1. Click **Next**.

The **Product Activation** screen appears.

Configuration Wizard
Step 9 of 10

Product Activation

To obtain an Activation Code, register the product online using your Registration Key.

[Register Online](#)

Activate

Cloud Pre-Filter:	
Trend Micro Antivirus and Content Filter:	
Spam Prevention Solution:	
Trend Micro Email Encryption:	
Regulatory Compliance:	

[< Back](#) [Next >](#)

2. To obtain an Activation Code, click **Register Online** and follow the directions at the **Trend Micro Registration** website.
3. After obtaining the applicable Activation Codes, specify the Activation Code for each product or service to activate.

Verifying Settings Summary

Procedure

1. Click **Next**.

The **Review Settings** screen appears.

Configuration Wizard
Step 10 of 10

Review Settings [Log Off](#)

You have **finished configuring** the central controller on **test58.imsstest.com**

Review your settings and click **Finish** to save and apply them or click **Back** to make changes.

New Setting:

1. Deployment Settings

Automatically synchronize system time with NTP: no

server: NTP server address:

2. Notification Settings

Recipient(s): test@test.com

Steps

1. System Settings
2. Deployment Settings
3. SMTP Routing
4. Notification Settings
5. Update Source
6. LDAP Settings
7. Internal Addresses
8. TCM Settings
9. Product Activation
- 10. Review Settings**

< Back Finish

2. If the settings are correct, click **Finish**.

To modify any specified setting, click **Back** and make changes.

Chapter 5

Updating Components

This chapter explains how to update IMSVA components.

Topics include:

- *Updating Engine and Pattern Files on page 5-2*
- *Specifying an Update Source on page 5-3*
- *Performing a Manual Update on page 5-4*
- *Rolling Back a Component Update on page 5-5*
- *Scheduled Component Updates on page 5-5*

Updating Engine and Pattern Files

To ensure that your network is constantly protected against the latest malware, update IMSVA components on a regular basis. You can choose to perform manual or scheduled updates.

The following table provides a list of all IMSVA components.

TABLE 5-1. IMSVA Components

COMPONENT	DESCRIPTION
Virus Scan Engine	The Virus Scan Engine detects Internet worms, mass-mailers, Trojans, phishing sites, spyware, network exploits and viruses in messages and attachments.
Advanced Threat Scan Engine	The Advanced Threat Scan Engine (ATSE) uses a combination of pattern-based scanning and heuristic scanning to detect document exploits and other threats used in targeted attacks.
Virus Pattern	The Virus Pattern contains information that helps IMSVA identify the latest viruses/malware and mixed attacks.
Spyware Pattern	The Spyware Pattern identifies spyware/grayware in messages and attachments.
IntelliTrap Pattern	The IntelliTrap Pattern detects real-time compression files packed as executable files.
IntelliTrap Exception Pattern	The IntelliTrap Exceptions Pattern contains a list of "approved" compression files.
Antispam Engine	The Antispam Engine detects spam in messages and attachments.
Antispam Pattern	The Antispam Pattern helps IMSVA identify the latest spam in messages and attachments.
URL Filtering Engine	The URL Filtering Engine facilitates communication between IMSVA and the Trend Micro URL Filtering Service. The URL Filtering Service is a system that rates URLs and provides rating information to IMSVA.
Smart Scan Agent Pattern	The Smart Scan Agent Pattern contains pattern definitions used by IMSVA when in Smart Scan mode. IMSVA downloads this pattern from the update source using the same methods for downloading other components.

Specifying an Update Source

Before you can update the IMSVA scan engine and pattern files, specify the update source. By default, IMSVA downloads components from the Trend Micro ActiveUpdate server, which is the source for up-to-date components. However, if you are using Trend Micro Control Manager to manage IMSVA, you can update the components from the Control Manager server.

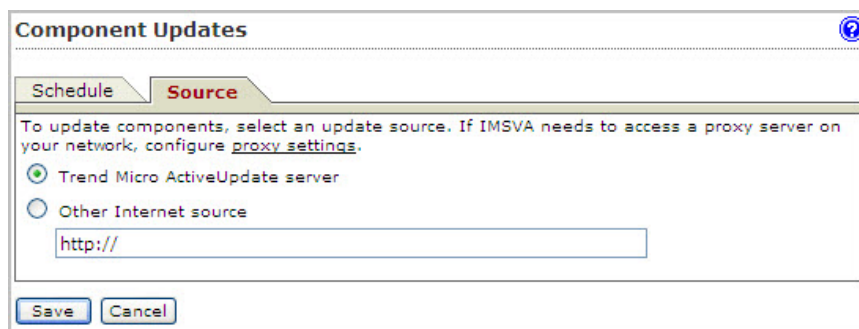
If you did not specify the update source when configuring IMSVA using the Configuration Wizard, provide the update source and/or any proxy settings.

Procedure

1. Go to **Administration > Updates > Components**.

The **Updates screen** appears.

2. Click the **Source** tab.



The screenshot shows the 'Component Updates' dialog box with the 'Source' tab selected. The dialog has a title bar with a question mark icon. Below the title bar are two tabs: 'Schedule' and 'Source'. The 'Source' tab is active, showing instructions: 'To update components, select an update source. If IMSVA needs to access a proxy server on your network, configure [proxy settings](#).' There are two radio button options: 'Trend Micro ActiveUpdate server' (which is selected) and 'Other Internet source'. Below the 'Other Internet source' option is a text input field containing 'http://'. At the bottom of the dialog are 'Save' and 'Cancel' buttons.

3. Under **Source**, select one of the following:
 - **Trend Micro ActiveUpdate server:** The default source for up-to-date components.
 - **Other Internet source:** Specify the URL or IP address of the Control Manager server or other update source.
4. Click **Save**.

If you are using the Configuration Wizard, click **Next**.

Performing a Manual Update

Perform a manual update of IMSVA components under the following circumstances:

- If you have just installed, deployed, or upgraded IMSVA.
- If you suspect that your network's security is compromised by new malware and would like to update the components immediately.

Procedure

1. Go to the **System Status** screen.

System Status


Enable Connections

☒ Accept SMTP connections
 ☐ Accept POP3 connections
 Save

Components
Last refresh: Aug 8, 2017 4:10:40 PM
Refresh

Update
Rollback

☐	Name	Current Version	Availability	Update Schedule
☐	Virus Scan Engine	9.950.1006	9.950.1006	
☐	Advanced Threat Scan Engine	9.867.1029	9.867.1029	
☐	Virus Pattern	13.573.00	13.581.00	
☐	Spyware Pattern	1.861.00	1.861.00	
☐	IntelliTrap Pattern	0.233.00	0.233.00	
☐	IntelliTrap Exception Pattern	1.423.00	1.425.00	
☐	Antispam Engine	8.100.1062	8.100.1062	
☐	Antispam Pattern	23236.005	23244.007	
☐	URL Filtering Engine	3.910.1008	3.910.1008	
☐	Smart Scan Agent Pattern	13.571.00	13.581.00	

Managed Services

Hostname	Connection	Scanner Service	Policy Service	EUQ Management Console
192.168.1.100		Stop	Stop	Stop

2. Under **Components**, verify the version numbers of the antivirus, antispyware, and antispam components that IMSVA uses to protect your network.
 3. To update all components, select the first check box on the column header next to the **Name** field. To update specific component(s), select the check box next to the desired component.
 4. Click **Update**.
-

Rolling Back a Component Update

If you encounter any system issues after updating IMSVA components, you can roll back to the previous version.

Procedure

1. Go to the **System Status** screen.
 2. To roll back all components to the previous versions, select the first check box on the column header next to the **Name** field. To roll back specific component(s), select the check box next to the desired component.
 3. Click the **Rollback** button.
-

Scheduled Component Updates

Updating components is a two-step process:

1. At the scheduled time, the IMSVA admin database will first check the update source for new engine or pattern files.
2. IMSVA scanners will then check the admin database at regular intervals for updated components. The default interval is three minutes.

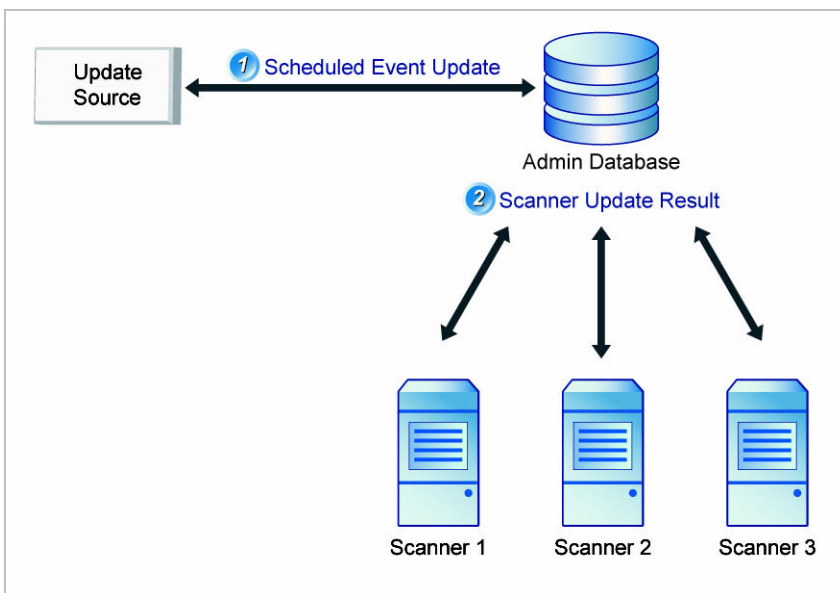


FIGURE 5-1. Scan engine and pattern file updates

Configuring Scheduled Updates

If you are unable to regularly download antivirus and antispam components, your network will be at risk from Internet threats. To automate the update process, configure an update schedule. If your network has limited Internet bandwidth, schedule updates during off-peak hours.

Procedure

1. Go to **Administration > Updates > Components**.

The **Updates** screen appears with the **Schedule** tab selected by default.

The screenshot shows the 'Component Updates' window with the 'Schedule' tab selected. The window has a title bar with a question mark icon. Below the title bar, there are two tabs: 'Schedule' (selected) and 'Source'. The main content area is divided into three sections:

- Enable scheduled update:** A checkbox that is checked.
- Update Component:** A list of components to update, each with a checked checkbox:
 - Virus Scan Engine
 - Advanced Threat Scan Engine
 - Virus Pattern
 - Spyware Pattern
 - IntelliTrap Pattern
 - IntelliTrap Exception Pattern
 - Antispam Engine
 - Antispam Pattern
 - URL Filtering Engine
 - Smart Scan Agent Pattern
- Update Schedule:** A section for configuring the update frequency. It includes:
 - Minutes intervals:** A radio button that is selected, with a dropdown menu showing '15'.
 - hourly:** A radio button.
 - daily:** A radio button.
 - weekly:** A radio button.
 - Time settings:** For the 'daily' and 'weekly' options, there are dropdown menus for the day of the week (e.g., 'Sunday') and time (e.g., '00 : 00').

At the bottom of the window, there are 'Save' and 'Cancel' buttons.

2. Select the **Enable scheduled update** check box.
3. Under **Update Component**, select the components to update. Trend Micro recommends updating all components.
4. Under **Update Schedule**, select the update frequency:
 - **Minute intervals:** Updates every { } minutes per hour. Select the minute interval.

For example, if you select 15, the update is triggered four times an hour: at 00, 15, 30, 45 minutes. If you select 30, the update will be triggered twice an hour: at 00 and 30 minutes.
 - **Hourly:** Updates every hour at { } minutes. Select the number of minutes after the hour.

For example, if you select 15, the update is triggered at 15 minutes after the hour, every hour.

- **Daily:** Updates every day at the time you choose. Select the time of day.
- **Weekly:** Updates once a week at the specified day and time. Select a day of the week and the time of day.

5. Click **Save**.

Updating the System and Application Files

When new operating system and application files become available from Trend Micro, upload them to a parent IMSVA device and all of its child devices. By default, child devices will be updated before the parent device.

Updating devices is a two-step process:

- Upload the file to the IMSVA parent device.
- Deploy the file to selected devices.

Uploading a New System or Application File

Procedure

1. Go to **Administration > Updates > System & Applications**.
2. Under **Upload**, click **Browse** and locate the file.
3. Click **Upload**.

After the file finishes uploading, the package type, build number, and title appear under **Latest uploaded package**.

Deploying the System or Application File

Procedure

1. Select the check boxes next to the devices to which you want to deploy the update.
2. Click **Update**.
3. Accept the license agreement. After the update is complete, a summary page appears.
4. Click **OK**.



WARNING!

During the update, do not modify any other settings. To stop the update, click **Cancel**.

If a device check box is grayed out, you cannot deploy the update to the device because the device:

- Already has the updated files.
 - Has more up-to-date files than the ones you are trying to deploy.
 - Is a child device and you have not yet uploaded the files to the parent device.
-

Viewing Update History for any Device or to Roll Back an Update

Procedure

1. Under **Host Name**, click the name of the device you want to view.
A summary screen appears showing the updates and related log information.
2. To remove an update, click **Rollback**.

You can only roll back the latest application updates.

3. To view details of the patch update, click **Download patch log**.
 4. To go back to the main screen, click **OK**.
-

Chapter 6

Getting Started with Cloud Pre-Filter

This chapter deals exclusively with Cloud Pre-Filter and how it is used with IMSVA.

Topics include:

- *[Understanding Cloud Pre-Filter on page 6-2](#)*
- *[Creating a Cloud Pre-Filter Account on page 6-5](#)*

Understanding Cloud Pre-Filter

Cloud Pre-Filter service is a managed email security service powered by the Trend Micro Email Security SaaS Solutions. By routing your inbound messages through the service, you can protect your domains against spam, phishing, viruses, and other messaging threats before the threats reach your network.

Mail Flow With and Without Cloud Pre-Filter

Without Cloud Pre-Filter, messages containing viruses, spam, and other malicious threats reach your network directly. These malicious messages waste network bandwidth and staff resources for the administration effort of handling malicious messages.

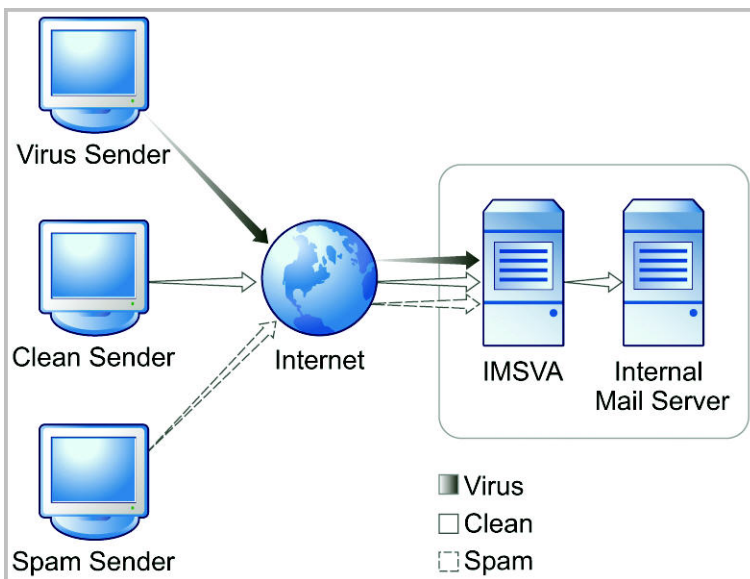


FIGURE 6-1. Mail flow without Cloud Pre-Filter

With Cloud Pre-Filter, you can protect your domains against malicious messages coming from outside your network. Cloud Pre-Filter blocks malicious messages before they reach your network.

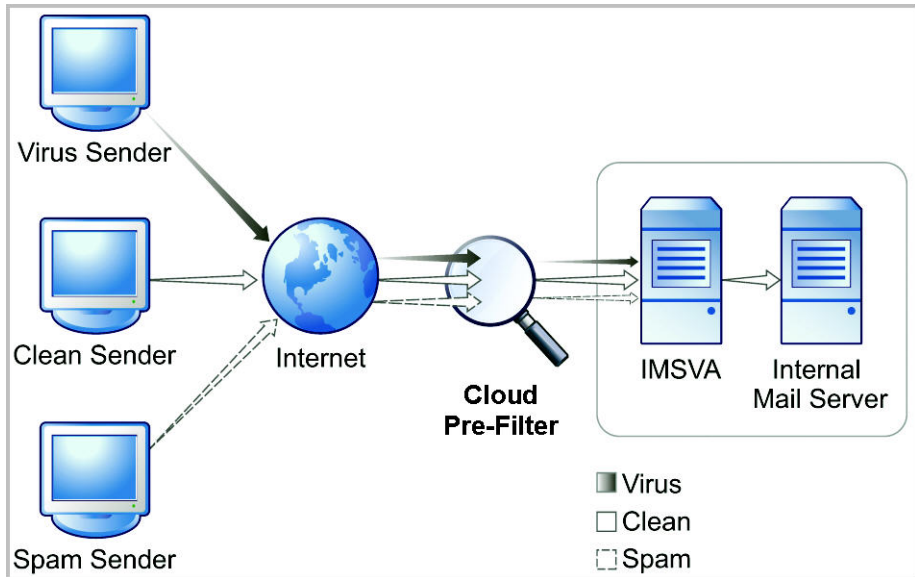


FIGURE 6-2. Mail flow with Cloud Pre-Filter

Cloud Pre-Filter and IMSVA Communication

Cloud Pre-Filter uses the SMTP protocol to route messages to IMSVA.

IMSVA uses an HTTPS connection to communicate with Cloud Pre-Filter for command requests, such as creating an account, managing policies related to an account, and retrieving message tracking and report data.

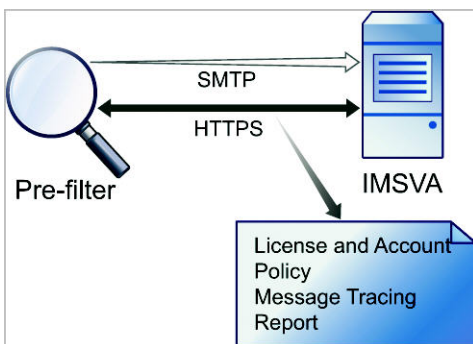


FIGURE 6-3. Cloud Pre-Filter and IMSVA

Cloud Pre-Filter Terminology

When referring to Cloud Pre-Filter, the following terminology applies.

TABLE 6-1. Cloud Pre-Filter Terminology

TERM	DESCRIPTION
Account	The Cloud Pre-Filter account is used to manage Cloud Pre-Filter policies. You must create one Cloud Pre-Filter account before you use the Cloud Pre-Filter service. IMSVA stores the account information locally after creating an account. IMSVA uses the account information to communicate with Cloud Pre-Filter to complete command requests, such as managing Cloud Pre-Filter policies and retrieving message tracking or report data.

TERM	DESCRIPTION
Policy	Cloud Pre-Filter policies apply to your domains. You can create only one policy per domain. When the messages sent to the domain reach Cloud Pre-Filter, Cloud Pre-Filter uses the policy for that domain to determine how to scan the messages and how to route the messages to the domain. Cloud Pre-Filter rejects all messages to domains that do not exist in the Cloud Pre-Filter policy list. Cloud Pre-Filter service stores all policies in the cloud.
Inbound Server	Inbound servers of Cloud Pre-Filter are the servers that receive your inbound messages. Cloud Pre-Filter provides the inbound server addresses when you create a domain to change your MX records.

Creating a Cloud Pre-Filter Account

Before you can use Cloud Pre-Filter you must create a Cloud Pre-Filter account.

Procedure

1. Click **Cloud Pre-Filter**.

The **Create/Authenticate Cloud Pre-Filter Account** screen appears.

Create / Authenticate Cloud Pre-Filter Account

When creating a Cloud Pre-Filter account for the first time, cloud server will generate a key file for the account. Both account name and key file are required when registering Pre-Filter service on cloud server.

Do you have a Cloud Pre-Filter account: ☐ Yes ☒ No

Create Cloud Pre-Filter Account

Account name*:
Account names support: "A-Z", "a-z", "0-9", and "-".

Email address*:
Email addresses support: "A-Z", "a-z", "0-9", "@", ".", "_" and "-".

Your location*:

Create

2. Select **No** next to **Do you have a Cloud Pre-Filter account:**.
3. Specify an account name and email address for the account.
4. Specify your location from the **Your location** list. This setting specifies which of the global Trend Micro data centers you use.
5. Click **Create**.

IMSVa generates a key for the Cloud Pre-Filter account.

Create / Authenticate Cloud Pre-Filter Account

When creating a Cloud pre-filter account for the first time, cloud server will generate a key file for the account. Both account name and key file are required when registering pre-filter service on cloud server.

✓ Account successfully created. Make sure to export the key file and keep it in a safe place. [Export Key File](#)

[Load Cloud Pre-Filter service](#)

- Save this key to a secure location. IMSVA uses the key and the user name to authenticate connection to Cloud Pre-Filter.



Tip

Trend Micro recommends saving the key file. The key file contains your account password, data center information, and other related settings.

- Click **Load Cloud Pre-Filter service**.

The **Cloud Pre-Filter Policy List** screen appears.

Cloud Pre-Filter

Powered by Trend Micro Email Security SaaS Solutions



TREND MICRO™
SMART
PROTECTION
NETWORK™

Cloud Pre-Filter Policy List ?

[Cloud Pre-Filter Account Information](#)
[Cloud Pre-Filter Status and Scheduled Maintenance Information](#)

Add Delete		1-1 of 1	Page 1
Domains	Email Reputation	Antivirus	Antispam
Add Delete imsva82@jacky-test.com !	Advanced	✓	✓

Add Delete
1-1 of 1
Page 1

15 per page

Note: Trend Micro recommends that you do the following to maximize the benefits of Cloud Pre-Filter.

- Configure the MX records for Cloud Pre-Filter with a higher priority (specify a lower number) than your existing MX records. Your existing MX records then act as a backup to Cloud Pre-Filter, enabling uninterrupted email delivery.
- Create Cloud Pre-Filter policies that mirror, but are less aggressive than, on-premise IMSVA policies. Using duplicate policies helps protect your business in the unlikely event that Cloud Pre-Filter becomes unavailable.

- To view the account information, click **Cloud Pre-Filter Account Information** on the **Cloud Pre-Filter Policy List** screen.

Cloud Pre-Filter Account Information

Account name:

Key File:

Export Key File

Email address:

Change Email Address

Email address:

New email address:

Confirm email address:

Save

Cancel

Chapter 7

Getting Started with ATSE and Virtual Analyzer

This chapter explains how to enable Advanced Threat Scan Engine (ATSE) and configure Virtual Analyzer.

Topics include:

- *[Scan Technology on page 7-2](#)*
- *[About Advanced Threat Scan Engine on page 7-2](#)*
- *[About Virtual Analyzer on page 7-4](#)*

Scan Technology

IMSVa allows you to select the level of malware detection appropriate for your company's security policy by configuring the scan engine.

The following table outlines the scanning technology available in IMSVa.

TABLE 7-1. Scan Technology

SCAN TECHNOLOGY	DESCRIPTION
Virus Scan Engine	The Virus Scan Engine employs basic pattern matching and heuristic scanning technology to identify threats.
Advanced Threat Scan Engine (ATSE)	ATSE performs aggressive scanning to check for less conventional threats such as document exploits. By enhancing the features of the Virus Scan Engine, ATSE detects possible advanced threats that can be sent to Virtual Analyzer for further analysis.  Note IMSVa integrates with Virtual Analyzer, which is an isolated virtual environment used to manage and analyze samples within Deep Discovery Analyzer.

About Advanced Threat Scan Engine

The Advanced Threat Scan Engine (ATSE) uses a combination of pattern-based scanning and heuristic scanning to detect document exploits and other threats used in targeted attacks.

Major features include:

- Detection of zero-day threats
- Detection of embedded exploit code
- Detection rules for known vulnerabilities
- Enhanced parsers for handling file deformities

**Important**

Because ATSE identifies both known and unknown advanced threats, enabling ATSE may increase the possibility of legitimate files being flagged as malicious. Trend Micro recommends sending detected files to a controlled virtual environment for further observation and analysis.

Understanding Advanced Threats

Advanced threats use less conventional means to attack or infect a system. Heuristic scanning can detect advanced threats to mitigate damage to company systems. Enabling ATSE adds another layer of protection to systems against threats that are typically used in targeted attacks.

Some types of advanced threats that ATSE detects include:

- **Exploits:** Exploits are pieces of code purposely created by attackers to take advantage of software vulnerabilities. Such code is typically incorporated into malware.
- **Targeted attacks:** Targeted attacks refer to computer intrusions staged by threat actors that aggressively pursue and compromise specific targets. These attacks seek to maintain a persistent presence within the target's network so that the attackers can move laterally and extract sensitive information.
- **Zero-day threats:** Zero-day threats exploit previously unknown vulnerabilities in software.

**Tip**

Trend Micro recommends enabling ATSE.

Enabling Advanced Threat Scan Engine

Procedure

1. Go to **Policy > Scan Engine**.

2. Select **Enable Advanced Threat Scan Engine**.
 3. Click **Save**.
-

The IMSVA daemon is automatically restarted when ATSE is enabled.

About Virtual Analyzer

IMSVA integrates with Virtual Analyzer in Deep Discovery Analyzer, which is a separately licensed product that provides on-demand analysis of file and URL samples.

IMSVA sends suspicious messages, including attachments, to Virtual Analyzer for further analysis. If Virtual Analyzer scanning is enabled for certain attachment file types, messages with those attachments are also sent to Virtual Analyzer. Virtual Analyzer performs content simulation and analysis in an isolated virtual environment to identify characteristics commonly associated with many types of malware.

In particular, Virtual Analyzer checks if files attached to messages contain exploit code. Although many files include non-executable data, attackers find ways to cause such files to exploit vulnerabilities in programs and operating systems that run them. Because of this, sending malicious files to target users has become an effective way for attackers to compromise systems.

ATSE Detections and Virtual Analyzer

IMSVA leverages ATSE to determine which messages are sent to Virtual Analyzer. When enabled, ATSE provides an additional layer of protection against advanced threats, such as document exploits and other threats used in targeted attacks.

ATSE detections are identifiable through the prefixes **HEUR**, **EXPL** and **AFI MACRO**. If the detection name contains one of these prefixes, IMSVA:

- Sends the entire message (including attachments) to Virtual Analyzer for further analysis.
- Determines further action based on the analysis result from Virtual Analyzer.

Virtual Analyzer assigns a risk level to each analyzed message. IMSVA queries this risk level approximately 60 seconds after sending the message to Virtual Analyzer. After receiving the risk level, IMSVA determines whether the message is a clean message, a **Probable advanced threat**, or an **Analyzed advanced threat** based on the risk level and the security level that you select on the IMSVA management console.

Virtual Analyzer Risk Levels and IMSVA Security Level Settings

IMSVa processes an ATSE-detected message based on the risk level returned by Virtual Analyzer and the security level that you select on the IMSVA management console. Possible scenarios are:

- If the returned risk level does not match the security level you select, IMSVA determines that the message is a clean message.
- If no risk level is returned, or if the returned risk level is invalid, or if the maximum time allowed for Virtual Analyzer analysis expires, IMSVA triggers a Virtual Analyzer scanning exception and logs the detection as a **Probable advanced threat (ATSE)**.
- If the returned risk level matches the security level you select, IMSVA performs specified action and logs the detection as an **Analyzed advanced threat (ATSE)**.

The following table contains the security levels, the corresponding Virtual Analyzer risk levels, and the actions triggered by IMSVA.



Tip

Trend Micro recommends setting the security level to **Low**.

SECURITY LEVEL	DESCRIPTION	RISK LEVEL
High	Apply action on all messages exhibiting any suspicious behavior	• High risk • Medium risk • Low risk

SECURITY LEVEL	DESCRIPTION	RISK LEVEL
Medium	Apply action on messages with a moderate to high probability if being malicious	• High risk • Medium risk
Low	Apply action only on messages with a high probability of being malicious	• High risk

Configuring Virtual Analyzer Settings

Procedure

1. Go to **Policy > Virtual Analyzer**.

The **Virtual Analyzer Settings** tab appears by default.

Virtual Analyzer

Virtual Analyzer Settings | Server Management

☒ Submit email messages to Virtual Analyzer ⓘ

☒ Submit URLs to Virtual Analyzer ⓘ

Security Level Settings

After Virtual Analyzer evaluates the risk level of a message, IMSVA performs the specified action on the message based on the security level configured below.

☐ High Apply action on all messages exhibiting any suspicious behavior

☐ Medium Apply action on messages with a moderate to high probability of being malicious

☒ Low Apply action only on messages with a high probability of being malicious (recommended)

Timing Settings

Maximum time allowed for analysis: seconds (Value range: 300-1800)

Database Disconnection Settings

If the IMSVA admin database is disconnected, IMSVA performs the following action:

☒ Stop submitting messages to Virtual Analyzer

☐ Take action specified for Virtual Analyzer scanning exceptions

Virtual Analyzer Proxy Settings

☐ Enable proxy

Proxy type: HTTP

Proxy server:

Proxy server port:

User name:

Password:

2. Select **Submit email messages to Virtual Analyzer**.
3. Select **Submit URLs to Virtual Analyzer**.
4. Configure the **Security Level** settings for the messages that Virtual Analyzer analyzes.

**Note**

The security level determines the Virtual Analyzer risk level that triggers an action from IMSVA. For more information, see [Virtual Analyzer Risk Levels and IMSVA Security Level Settings on page 7-5](#).

The available security level settings are: **High**, **Medium**, and **Low**. Trend Micro recommends setting the security level to **Low**.

5. Set the maximum time allowed for Virtual Analyzer analysis.
 6. Select either of the following actions to perform when the IMSVA admin database is disconnected:
 - **Stop submitting messages to Virtual Analyzer**
 - **Take action specified for Virtual Analyzer scanning exceptions**
 7. Configure the Virtual Analyzer proxy server settings.
 - Proxy server
 - Proxy server port
 - User name
 - Password
-

**Note**

IMSVA supports only HTTP proxies.

8. Click **Save**.
-

**Note**

IMSVA can notify you if Virtual Analyzer is unable to return a valid or complete analysis result. For details about notifications, see [Notifications on page 28-1](#).

Adding Virtual Analyzer Servers

To achieve better load balancing and failover capabilities, IMSVA allows you to add multiple servers for Virtual Analyzer. The round-robin algorithm is used for the servers that have the same preference.

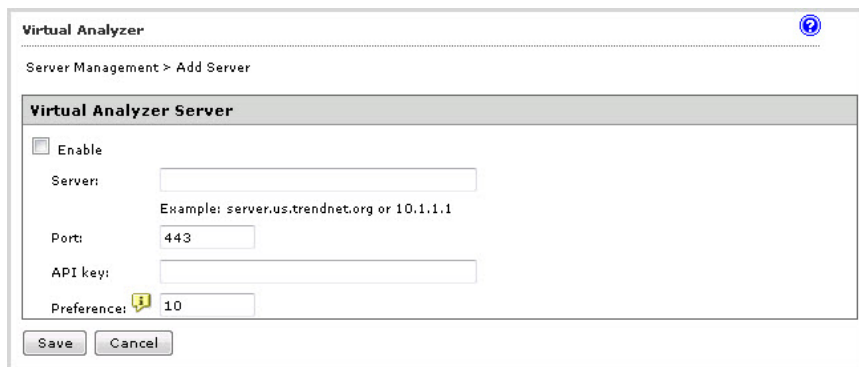
You can also enable, disable and delete Virtual Analyzer servers on the IMSVA management console.

Procedure

1. Go to **Policy > Virtual Analyzer**.

The **Virtual Analyzer Settings** tab appears by default.

2. Click the **Server Management** tab.
3. Click **Add**.



The screenshot shows a dialog box titled "Virtual Analyzer" with a sub-header "Server Management > Add Server". Inside the dialog, there is a section titled "Virtual Analyzer Server" containing the following fields and controls:

- An "Enable" checkbox, which is currently unchecked.
- A "Server:" text input field with an example value: "server.us.trendnet.org or 10.1.1.1".
- A "Port:" text input field with the value "443".
- An "API key:" text input field.
- A "Preference:" text input field with the value "10", accompanied by a small icon of a document with a yellow highlight.
- "Save" and "Cancel" buttons at the bottom.

4. Select the **Enable** check box.
5. Specify the server FQDN or IP address, port number, API key and preference value.



Note

Preference represents the priority of Virtual Analyzer servers. The lower the preference value, the higher the priority.

6. Click **Save.**

Chapter 8

Getting Started with Email Encryption

This chapter deals exclusively with Trend Micro Email Encryption and how it is used with IMSVA.

Topics include:

- *Understanding Email Encryption on page 8-2*
- *Using Email Encryption on page 8-3*
- *Registering for Email Encryption on page 8-3*
- *Managing Domains on page 8-4*
- *Registering Domains on page 8-5*

Understanding Email Encryption

Trend Micro Email Encryption encrypts messages using Identity-Based Encryption (IBE). For example, user1@a.com sends a message with private information to user2@b.com. The domain a.com is registered with IMSVA for encryption and decryption. A policy rule enables outgoing messages containing private information to be encrypted. IMSVA encrypts the message sent to this user2@b.com.

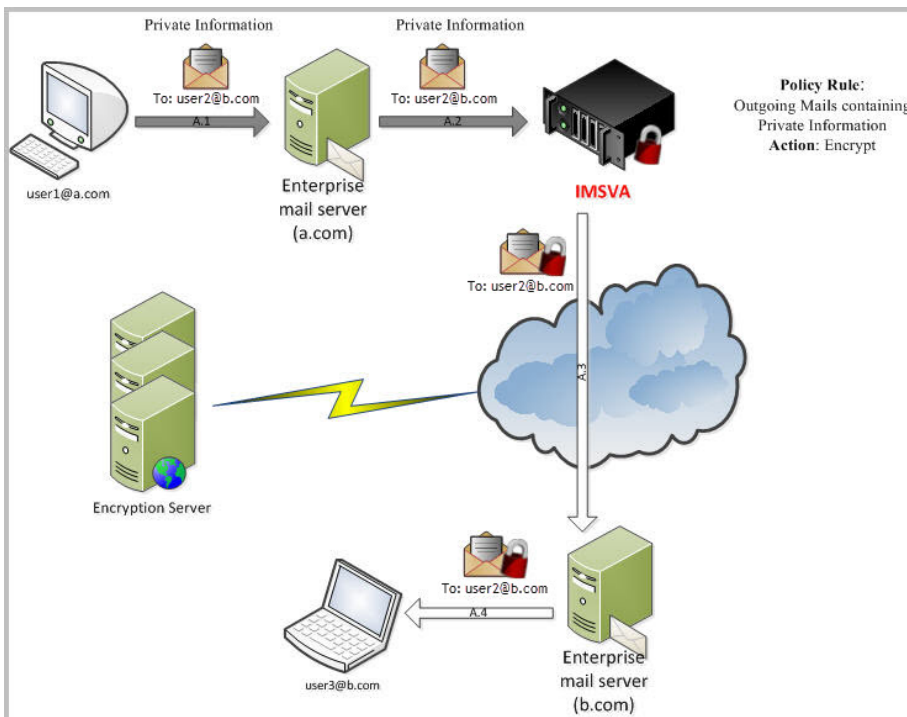


FIGURE 8-1. IMSVA Email Encryption

**Tip**

Before using Trend Micro Email Encryption, Trend Micro recommends that an NTP server is used with IMSVA. This ensures standard time and date data for IMSVA.

Using Email Encryption

Using Trend Micro Email Encryption requires following these steps:

- **Step 1:** Register IMSVA to the encryption service (See [Registering for Email Encryption on page 8-3](#))
- **Step 2:** Register domains to the encryption service (See [Registering Domains on page 8-5](#))
- **Step 3:** Configure policies to encrypt your messages (See [Adding Policies on page 19-2](#))

Registering for Email Encryption

To encrypt messages with Trend Micro Email Encryption technology, IMSVA needs to be registered to the Trend Micro Email Encryption Server.

Procedure

1. Go to **Policy > Encryption Settings**.

The Register Trend Micro Email Encryption screen appears.

2. Provide your contact information.

**Note**

The email address you provide in the contact information is very important for registering your domains to the Email Encryption Server. Key files are sent to the email address you provide. Upload key files to complete the domain ownership process.

The Trend Micro Email Encryption Server team contacts you using the email address. The email address is only used for receiving key files and notifications. The contact email address will not be used for marketing purposes.

You cannot change your contact information unless you have registered at least one domain successfully.

3. Click **Next.**

Your contact information is sent to the Trend Micro Email Encryption Server.

**Note**

It may take one or two working days before you receive the information to complete domain ownership verification. If you do not receive a message within 3 working days, contact your sales representative.

What to do next

To change your contact information, click **Change** on the **Gateway Info** tab.

**Note**

The **Change** button is not enabled until at least one domain has been registered successfully.

Managing Domains

The **Manage Domains** tab enables the administrator to register new domains for use with the IMSVA email encryption features. When a domain is

registered with the encryption service, it is permitted to obtain private keys for email addresses on that domain. For example, you want to register `mycompany.org`. After the registration is authorized and completed on the encryption service, IMSVA will be able to obtain private keys to decrypt messages to `user01@mycompany.org`, `user02@mycompany.org`, and so on. The security processes and checks to authorize an IMSVA domain registration, and will include checking publicly available information that might include contacting the domain registrant.

**Note**

For security reasons, the person who is the registered owner of the domain will be contacted by the registration team to validate the IMSVA registration. Therefore, to register a domain, you must be the owner of, or have the permission of, the owner of the domain name.

You can remove a domain from IMSVA by selecting the **[Delete]** link next to the domain. This removes the registration information from the encryption service's database and it will no longer be possible to obtain private keys for email addresses on this domain.

Registering Domains

When registering domains to the Trend Micro Email Encryption Server, messages are sent to the following email addresses to verify ownership of the domains:

- `postmaster@<domain>`
- `webmaster@<domain>`
- the email address returned from a WHOIS lookup for the domain

**WARNING!**

The postmaster and webmaster accounts must exist and be enabled before domains can be registered.

Trend Micro sends a message to the "Contact Information" email address to verify that the domain exists and that the `postmaster@<domain>` and `webmaster@<domain>` accounts exist and are enabled.

**WARNING!**

One of the following must respond to the verification message:

- `postmaster@<domain>`
 - `webmaster@<domain>`
 - the email address returned from a WHOIS lookup for the domain
-

By design, after a domain is registered, it cannot be re-registered. If a domain has already been registered, subsequent re-registration results in a "domain already registered" error. This is enforced for the purpose of security. If there is a need to reinstall IMSVA, backup the database prior to re-installation, and restore it afterwards. This eliminates the need to re-register IMSVA and the same domains after re-installation.

**Note**

IMSVA must be registered to the encryption service before any domains can be registered.

The default sender address for your domains will be `postmaster@<domain>`. You can customize the default sender address from the Encryption Settings screen.

The default sender address is used when IMSVA tries to encrypt a message, but whose domain is not in the Domain List. IMSVA signs these messages with the default sender address.

Registering Domains to the Encryption Service

Procedure

1. Go to the **Policy > Encryption Settings** screen.
2. Click the **Domain** tab.
3. Click **Add**.
4. Add the domains you want to protect to the domain list.

Domains can be manually typed or selected from a list of existing domains. Up to 10 domains can be added at a time.



Note

Domains and their sub-domains are treated as unique entries. Sub-domains must be added separately to the domain list.

Wildcards cannot be used to include sub-domains.

LDAP groups (entries starting with "LDAP") cannot be added to the domain list.

5. Click **Save**.

A progress bar appears as the domain information is sent to the Trend Micro Email Encryption Server. A confirmation screen appears that verifies the domain information was received by the Trend Micro Encryption Server.

6. Read the instructions about what to do once you receive the verification key file.
7. Click **Done**.

The domains appear in the Domain list on the **Domain** tab and a message about the **Domain** tab.

8. If you are the registered owner of the domain, reply to the confirmation message from the Trend Micro Encryption Server. The message is sent to `postmaster@<domain>` and `webmaster@<domain>`. When your

domains are approved, you receive the domain ownership verification key file. You must reply to the confirmation message to prove that you are the owner of the domain.



Note

It may take one or two working days before you receive the key file to register the domain(s) to the encryption service. A key file is sent for each domain that is registered.

If you do not receive a message within 3 working days, contact your sales representative.

9. Once you receive the key file, save it to a secure location.

10. Go to the **Encryption Settings** screen.

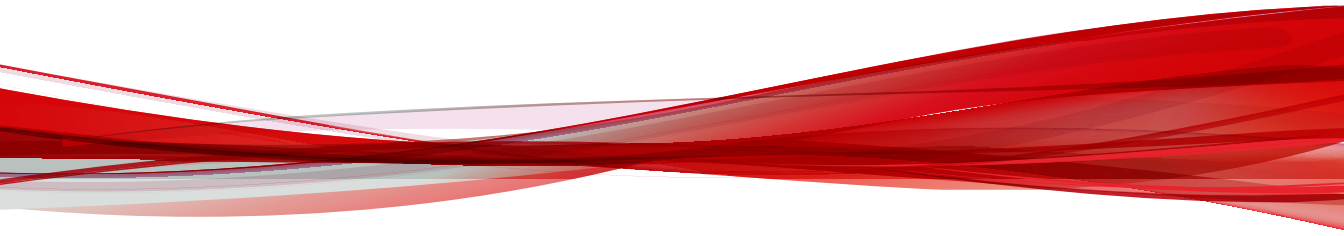
11. Click **Browse** and locate the key.

12. Click **Upload**.

A confirmation message appears when registration completes successfully.

Part II

Configuring IMSVA and Cloud Pre-filter



Chapter 9

Configuring Cloud Pre-Filter

This chapter explains how to configure Cloud Pre-Filter.

Topics include:

- *[Understanding Cloud Pre-Filter Policies on page 9-2](#)*
- *[Creating a Cloud Pre-Filter Policy on page 9-3](#)*
- *[Verifying Cloud Pre-Filter Works on page 9-14](#)*
- *[Configuring DNS MX Records on page 9-14](#)*
- *[Suggested IMSVA Settings When Using Cloud Pre-Filter on page 9-15](#)*
- *[Disabling Cloud Pre-Filter on page 9-16](#)*

Understanding Cloud Pre-Filter Policies

The Cloud Pre-Filter service offers policy-based management of your email security. The policy for a domain regulates how each filter is applied to messages sent to the domain.

The following table lists the information that defines each policy.

TABLE 9-1. Cloud Pre-Filter Policies

SECTION	DESCRIPTION
Domain	The domain that will be covered by the policy. With the correct routing settings, all messages to this domain are protected by Cloud Pre-Filter. Each domain must be unique, and only one policy can be applied to a domain.
Valid Recipient	This setting works by comparing the list of users on your LDAP servers to a list of your users on Cloud Pre-Filter. The Cloud Pre-Filter list of your users is generated by synchronizing with your LDAP servers. Use the valid recipient check to block all messages that do not have a recipient on your domain. This prevents malicious messages and spam from reaching your network.
Filter settings	These settings define the following Cloud Pre-Filter filtering options: • Whether a filter is enabled or not • For filters that support this option, how each filtering criterion is applied • For filters that support this option, what filter actions to perform
Destination servers	Destination servers are the inbound mail servers for the domain. These servers receive messages bound for the domain after they are processed by the Cloud Pre-Filter service.
Approved and blocked senders	• Approved Sender: Messages from approved senders bypass the Email Reputation service and antispam filters. • Blocked Sender: Messages from blocked senders are blocked immediately and never reach your network.

**Note**

Trend Micro recommends that you create Cloud Pre-Filter policies that mirror, but are less aggressive than, on-premise IMSVA policies. Using duplicate policies helps protect your business in the unlikely event that Cloud Pre-Filter becomes unavailable.

Considerations

- Each policy applies to one domain only and only one policy can be created for each domain.
- A policy comprises of a domain, filtering settings, approved and blocked sender lists, and destination servers.
- Review each filter type and assess whether you want to apply it to a domain before saving the policy. The following filters are enabled by default:
 - Email Reputation
 - Antivirus
 - Antispam

**Tip**

Trend Micro recommends that you have the antivirus and antispam filters enabled and properly configured. Without these filters, the domain is highly vulnerable to large numbers of unwanted mail and infected messages.

Creating a Cloud Pre-Filter Policy

To provide email security services to a domain, create a policy for that domain.

**Note**

If your network uses a proxy server, verify your proxy settings are correct at **Administration > Proxy**, before creating a Cloud Pre-Filter policy.

Creating a Cloud Pre-Filter policy requires the following steps:

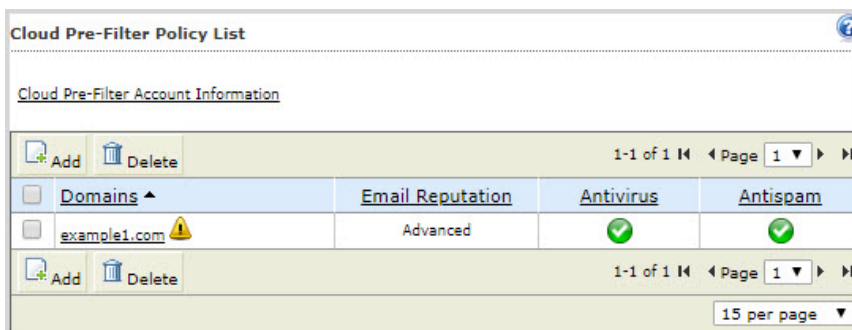
- [Step 1: Domain Settings on page 9-4](#)
- [Step 2: Configuring Condition Settings on page 9-7](#)
- [Step 3: Configuring Filter Settings on page 9-11](#)

Step 1: Domain Settings

Procedure

1. Click **Cloud Pre-Filter**.

The **Cloud Pre-Filter Policy List** screen appears.



Cloud Pre-Filter Policy List			
Cloud Pre-Filter Account Information			
1-1 of 1 ◀ Page 1 ▶			
☐ Domains ▲	Email Reputation	Antivirus	Antispam
☐ example1.com ⚠	Advanced	✓	✓
1-1 of 1 ◀ Page 1 ▶			
15 per page ▼			

2. Click **Add**.

The **Step 1: Specify Domain and Destination Server** screen appears.

Add Policy

[Policy List](#) > [New Policy](#)

› **Step 1: Specify Domain and Destination Server** ››› Step 2 ››› Step 3

< Previous Next > Cancel

Specify Domain

Domain name*:

For example: domain.com

Inbound Server Addresses

The Cloud Pre-Filter inbound server addresses, for this domain, display here after the policy is saved in Cloud Pre-Filter. Change the MX record of the domain to the Cloud Pre-Filter inbound server address. After changing the MX record, Cloud Pre-Filter processes all email messages sent to this domain, and then sends the messages to the destination servers you specify.

Specify Destination Server

Add Delete Import Export

☐	Address Type	Address	Port	Priority ▲
< Previous Next > Cancel				

3. Provide the name of the domain to protect.



Note

Specify a domain or subdomain, for example, domain.com or *.domain.com. Top-level domains are not allowed, and only a single level of subdomain matching is supported.

4. Click **Add** under Specify Destination Server.

The **Destination Server** screen appears.

Destination Server

New Policy > Add Destination Server

Add Cancel

Address Type: IP address ▼

Address*:

Port*: 25

Priority*: 10 ⓘ

Review the existing servers in the list when determining the priority for new destination servers.

Address Type	Address	Port	Priority ▲

Add Cancel

5. Specify the addresses of the domain's actual destination servers to allow Cloud Pre-Filter to relay messages to these servers after processing.
 - a. Select one of the following from the **Address Type** drop-down list:
 - **IP address:** IP address of the MTA or IMSVA that receives messages from Cloud Pre-Filter
 - **A record:** Hostname Cloud Pre-Filter uses for DNS lookup
 - **MX record:** Mail exchange record Cloud Pre-Filter uses for DNS lookup



Note

A policy can only contain one address type for a destination server. An IP address and an A record are considered to be the same type. An MX record is considered to be a different type.

- b. Provide an address for IMSVA in the **Address** field.
 - c. Provide a port number for communication between IMSVA and Trend Micro Email Security SaaS Solutions. The default value is port 25.

- d. Provide a value for **Priority** for the destination server.

The Priority option specifies routing priority for the destination servers. Cloud Pre-Filter service will attempt to route messages to servers with higher priority values first. The lower the number, the higher the priority.

You do not need to specify a priority for an **MX record** destination server. The priority for the MX record will be resolved automatically.

6. Click **Add**.

The **Step 1: Specify Domain and Destination Server** screen appears, with IMSVA's details in the Destination Server list.

Step 2: Configuring Condition Settings

Approved and Blocked Senders

Messages from Approved Senders are able to bypass the Email Reputation service and antis spam filters, while messages from Blocked Senders are prevented from reaching recipients.

Specifying an IP address will block or approve all messages from that IP address.

The approved lists take precedence over the blocked list, the Email Reputation filter, and the antis spam filter. All messages from addresses that match the addresses in the approved list are not processed by these filters.



Note

The Approved list from Email Reputation, IP Profiler or spam rules can be imported to the Cloud Pre-Filter Approved list.

Valid Recipients

This feature works by comparing the list of users on your LDAP servers to a list of your users on Cloud Pre-Filter. The Cloud Pre-Filter list of your users is generated by synchronizing with your LDAP servers.

Use the valid recipient check to block all messages that do not have a recipient on your domain. This prevents malicious messages and spam from reaching your network.



Tip

Trend Micro recommends enabling scheduled synchronization to ensure all valid messages reach your network. LDAP servers must be configured before enabling the valid recipient check and scheduled synchronization.

Procedure

1. Click **Next**.

The **Step 2: Specify Sender conditions** screen appears.

Add Policy 

[Policy List](#) > New Policy

Step 1 >>> **Step 2: Specify Sender conditions** >>> Step 3

< Previous Next > Cancel

Approved Sender List

 Add  Delete  Import  Export 0-0 of 0 < Page 1 >

☐ Address

Approved sender list is empty

 Add  Delete  Import  Export 0-0 of 0 < Page 1 >

15 per page

Blocked Sender List

 Add  Delete  Import  Export 0-0 of 0 < Page 1 >

☐ Address

Blocked sender list is empty

 Add  Delete  Import  Export 0-0 of 0 < Page 1 >

15 per page

Valid Recipient

☐ Enable Valid Recipient check

Scheduled maintenance: ☐ Synchronize LDAP server with Cloud Pre-Filter daily 

Manual maintenance: 

[Verify that a recipient is valid.](#)

< Previous Next > Cancel

2. Click **Add** to add an entry to the list.

The **Add Approved Sender List** or **Add Blocked Sender List** screen appears.

Add Approved Sender List

Add Policy > Add Approved Sender List

☒ IP Address

☐ Email Address

Contains email address or wildcard username:
(example: username@domainname, *@domainname)

Add Blocked Sender List

Add Policy > Add Blocked Sender List

☒ IP Address

☐ Email Address

Contains email address or wildcard username:
(example: username@domainname, *@domainname)

3. Provide an email address or IP address.
4. Click **Add** beside the IP Address and Email Address fields.

The entry appears in the list.



WARNING!

The wildcard character * may be used to specify any string in the local-part (local-part@domain.com) of email addresses. Use wildcard characters with caution as they may allow or block messages from a large set of email addresses.

5. Click **Add** under the list.
- The entry appears in the specified list.
6. To import entries to the approved or blocked senders list:

- When using the import function, use a text file with only one full email or IP address per line.
 - When importing sender addresses, ensure that you select the correct import mode. Selecting to replace addresses will delete all existing addresses from the list.
7. Click **Import** for the specified list.
A dialog box appears.
 8. Specify the file to import.
 9. Click **Import**.
The list displays the imported entries.
 10. Select **Enable valid recipient check**.
 11. Select **Synchronize LDAP server with Cloud Pre-Filter daily**.

**Note**

Trend Micro recommends enabling scheduled synchronization to ensure all valid messages reach your network.

After upgrade, the recipient check and scheduled synchronization cannot work properly because the local LDAP cache is empty. You can manually trigger recipient check and scheduled synchronization by clicking **Save & Synchronize** in LDAP settings.

Step 3: Configuring Filter Settings

The Step 3: Select Filter screen contains settings for three filters:

TABLE 9-2. Cloud Pre-Filter Filters

FILTER	DESCRIPTION
Email Reputation	Email Reputation enables you to take advantage of a dynamic and constantly updated email source rating system to block spam and other unwanted messages. Email Reputation blocks messages from source IP addresses whose current reputation ratings are poor. You can choose Email Reputation Advanced or Email Reputation Standard. Email Reputation Standard queries the standard reputation database. Email Reputation Advanced queries the standard reputation database as well as a dynamic database that is updated in real time.
Antivirus	When enabled, the antivirus filter can stop messages containing known and unknown malware code, whether this code is contained in an attachment or embedded in the message body. Messages found to contain malware code are automatically deleted.
Antispam	When enabled, the antispam filter checks messages for spam and phishing characteristics. The filter identifies messages as spam based on the selected catch rate. The antispam filter uses a Web Reputation and spam prevention filter to stop spam from entering your network. The antispam filter can use two approaches when detecting spam: • Spam: This setting is very conservative. Almost every "spam" detection is truly an unwanted message. This setting has the following actions: Delete and Quarantine. • Potential Spam: This setting is more aggressive. However, there may be some messages marked as "spam" that may be legitimate messages. This setting has the following actions: Delete, Quarantine, and Pass.

Procedure

1. Click **Next**.

The **Step 3: Select Filter** screen appears.

Add Policy

[Policy List](#) > [New Policy](#)

Step 1 >>> Step 2 >>> **Step 3: Select Filter**

< Previous Finish Cancel

Select Filter		
Filter Type	Status	Action
Email Reputation	Advanced ▼ ⓘ	Reject
Antivirus	Enable ▼	Delete
Antispam	Enable ▼	Delete ▼ ⓘ (Spam) Delete ▼ ⓘ (Potential spam)

< Previous Finish Cancel

2. Specify the status for the filters.
3. Specify the action for the filters.

The filters use the following actions:

- **Delete:** Deletes the entire message without quarantining it
- **Quarantine:** Saves a copy of the entire message in the local IMSVA quarantine area.

Administrators can delete or deliver the message after assessing the message.

- **Reject:** Rejects the message without quarantining it
- **Pass:** Cloud Pre-Filter performs no action and sends the messages directly to IMSVA. IMSVA then scans the messages.

4. Click **Finish**.

Cloud Pre-Filter Policy List appears with the domain appearing in the list. The status for the filters display along with the domain.

Verifying Cloud Pre-Filter Works

You can verify that a policy works correctly before activating the policy.

For example:

You want to verify that a policy created for the domain `your-domain.com` processes your email traffic correctly and that Cloud Pre-Filter directs your messages to your IMSVA.

To verify the policy works correctly, send a message with a specified sender and recipient account (the recipient's domain should be part of `your-domain.com`) directly to the Cloud Pre-Filter inbound server for `your-domain.com`.

An example Cloud Pre-Filter inbound server address for the policy is `im.emailsecurity.trendmicro.com`.

Send the test message to the inbound server address.

Wait a few minutes after sending the message and query the message tracking logs using Cloud Pre-Filter + IMSVA data.



Note

The test message must be sent directly to the Cloud Pre-Filter inbound server for the domain. The Cloud Pre-Filter inbound server addresses for the domain appear on the **Domain** tab for the policy.

Configuring DNS MX Records

After configuring Cloud Pre-Filter settings and verifying that email traffic is delivered from Cloud Pre-Filter to IMSVA, add the Cloud Pre-Filter "Inbound Server Address" to the MX records for your DNS server. The Cloud Pre-Filter host displays under the **Inbound Server Address** section of the **Domain** tab. This is the final step before using Cloud Pre-Filter to scan your email traffic.

**WARNING!**

You **MUST** configure your mail delivery (MX) records to route your email traffic through Cloud Pre-Filter. If this step is not completed, your messages will be delivered to your local servers, and not to Cloud Pre-Filter for scanning.

**Tip**

Trend Micro recommends configuring the MX records for Cloud Pre-Filter with a higher priority (specify a lower number) than your existing MX records. Your existing MX records then act as a backup to Cloud Pre-Filter.

Suggested IMSVA Settings When Using Cloud Pre-Filter

Cloud Pre-Filter uses port 9000 as the web service listening port. This port must be open on the firewall for IMSVA to connect to Cloud Pre-Filter.

While Cloud Pre-Filter does not impact the deployment of IMSVA, Cloud Pre-Filter does impact how you should configure IMSVA.

TABLE 9-3. IMSVA Recommended Settings When Using Cloud Pre-Filter

SECURITY SERVICE	RECOMMENDED ACTION
Sender Filtering (Email Reputation and IP Profiler)	When Cloud Pre-Filter filters messages for all your domains: Disable or do not activate Sender Filtering Cloud Pre-Filter uses Email Reputation to filter all messages before they reach your network. This makes using Sender Filtering (Email Reputation and IP Profiler) redundant.
	When Cloud Pre-Filter filters messages for some of your domains: Enable and use Sender Filtering (Email Reputation and IP Profiler) Cloud Pre-Filter is not using Email Reputation to scan all messages before they reach your network. The messages from domains that are not routed through Cloud Pre-Filter may still be malicious.

SECURITY SERVICE	RECOMMENDED ACTION
Spam Prevention Solution (SPS)	IMSVA should always use SPS, which means antispam policies should still be created. Cloud Pre-Filter uses a very conservative approach to detect spam. Cloud Pre-Filter does this to lower the risk that a legitimate message is detected as spam. Using antispam policies on IMSVA will further reduce the spam reaching your email recipients.
Trend Micro Antivirus and Content Filter	IMSVA should always use the Antivirus and Content Filter, which means antivirus policies and content filtering policies should still be created. Cloud Pre-Filter does not support content filtering of messages. Content filtering policies must be created in IMSVA. Also, even though Cloud Pre-Filter does filter for viruses, Trend Micro recommends creating antivirus policies.
DKIM	Cloud Pre-Filter has no impact on DKIM. Configure and use this feature as your network requires.
Transport Layer Security (TLS)	Cloud Pre-Filter supports TLS. If the MTA sending messages to Cloud Pre-Filter supports TLS, the messages are delivered using TLS. When messages reach Cloud Pre-Filter from an inbound server using TLS, Cloud Pre-Filter delivers the message to the destination server using TLS. If the destination server does not support TLS, the message is delivered over SMTP. When messages reach Cloud Pre-Filter from an inbound server that does not use TLS, Cloud Pre-Filter delivers the message to the destination server over SMTP.

Disabling Cloud Pre-Filter

There is no way to disable Cloud Pre-Filter from the IMSVA management console. The only way to disable Cloud Pre-Filter is to change the DNS MX record of your domain to point to IMSVA or to an MTA and then to IMSVA.

Chapter 10

Configuring Sender Filtering Settings

This chapter provides general descriptions about the various configuration tasks to get IMSVA up and running.

Topics include:

- *Sender Filtering Service on page 10-2*
- *Using Email Reputation on page 10-3*
- *Configuring Sender Filtering on page 10-4*
- *Displaying Suspicious IP Addresses and Domains on page 10-18*
- *Domain-based Message Authentication, Reporting & Conformance (DMARC) on page 10-19*

Sender Filtering Service

The Sender Filtering service has three individual components: Email Reputation, IP Profiler and SMTP Traffic Throttling.

- Email Reputation filters connections from spam senders when establishing SMTP sessions.
- IP Profiler helps protect the mail server from attacks with smart profiles from the Intrusion Detection Service (IDS).
- SMTP Traffic Throttling blocks messages from a single IP address or sender for a certain time when the number of connections or messages reaches the specified maximum.



Tip

Trend Micro recommends deploying Sender Filtering as the first line of defense in your messaging infrastructure.

Although most email systems have a multi-layer structure that often includes some pre-existing IP blocking, spam filtering, and virus filtering, Trend Micro recommends completely removing other IP blocking techniques from the messaging environment. Sender Filtering should act as the precursor to any application filtering you might use.



Note

Sender Filtering is only available from IPv4 networks. Incoming email messages from IPv6 networks are not blocked by Email Reputation, IP Profiler or SMTP Traffic Throttling.

When email traffic is extremely large, SMTP Traffic Throttling might not precisely block email messages as configured due to the time delay between rule trigger and activation.

Using Email Reputation

Trend Micro maintains a list of IP addresses belonging to known spam senders in a central database. Email reputation filters spam by blocking the IP addresses stored in this database.

Preparing Your Message Transfer Agent for Use With Email Reputation Services

Configure your MTA to perform the appropriate DNS queries for the type of Email Reputation to which you subscribed.

- **Standard:** Blocks connections with a 550 level error code (“connection refused”). The MTA returns this error code to the server initiating the connection because the IP address is in the Standard Reputation database as a known spammer.
- **Advanced:** Configure the MTA to make two DNS queries. If the MTA does not receive a response from the first query to the standard reputation database, it makes a second query to the dynamic reputation database. The MTA should return a temporarily deny connection 450 level error code (“server temporarily unavailable, please retry”) when a response is received from this database.

Legitimate email servers with compromised hosts temporarily sending spam may be listed in the dynamic reputation database. If the connection request is from a legitimate email server, it will re-queue and try sending the message later. This process will cause a short delay in mail delivery until the listing expires but will not permanently block the email.

Some servers may have additional options for handling questionable IP connections. These options include throttling or routing messages for more detailed scanning.

You can find instructions for configuring the MTA or firewall on the Trend Micro website:

<https://tmspn.securecloud.com/>

These instructions have been provided by the vendor or manufacturer of the product (MTA or firewall). Refer to your product manuals and/or technical support organization for detailed configuration and setup options.

**Note**

Insert your Activation Code to replace the instructional text example; do not include any dashes.

Using the Email Reputation Management Console

Visit the Email reputation management console at <https://ers.trendmicro.com/> to access global spam information, view statistics, manage Email reputation settings, and perform administrative tasks.

For details, see the Email reputation management console Online Help. Click the help icon in the upper right corner of any help screen to access the Online Help.

Configuring Sender Filtering

To configure Sender Filtering, perform the following steps:

1. *[Enabling Email Reputation, IP Profiler and SMTP Traffic Throttling on page 10-4](#)*
2. *[Adding Approved List Records on page 10-5](#)*
3. *[Adding Blocked List Records on page 10-6](#)*
4. *[Enabling Sender Filtering Rules on page 10-7](#)*
5. *[Configuring Email Reputation on page 10-16](#)*

Enabling Email Reputation, IP Profiler and SMTP Traffic Throttling

Enable Email reputation, IP Profiler and SMTP Traffic Throttling to begin Sender Filtering protection. You can enable all or one type of protection.

Procedure

1. Go to **Sender Filtering > Overview**.

The **Sender Filtering Overview** screen appears.

Sender Filtering Overview

☒ Email reputation ☒ IP Profiler ☒ SMTP Traffic Throttling

Blocked Domains/IP Addresses Refresh Last 1 day (Last 24 hours) ▼

DHA Attack

Domain	IP	Dropped Connections
No malicious domains or IP addresses have been found for the last 1 day(s).		

Bounced Mail

Domain	IP	Dropped Connections
No malicious domains or IP addresses have been found for the last 1 day(s).		

Virus

Domain	IP	Dropped Connections
No malicious domains or IP addresses have been found for the last 1 day(s).		

Spam

Domain	IP	Dropped Connections
No malicious domains or IP addresses have been found for the last 1 day(s).		

User specified

Domain	IP	Dropped Connections
No malicious domains or IP addresses have been found for the last 1 day(s).		

2. Select the **Email reputation**, **IP Profiler** and **SMTP Traffic Throttling** check boxes.
3. Clear all or any of the **Email reputation**, **IP Profiler** and **SMTP Traffic Throttling** check boxes as required.
4. Click **Save**.

Adding Approved List Records

IMSVa does not filter hosts that appear in the Approved List.

Procedure

1. Go to **Sender Filtering > Approved List**.

The **Approved List** screen appears.

2. Click **Add**.

The **Add Approved List Record** screen appears.

3. Select the **Enable** check box.

4. Specify the host domain, IP address, subnet address and mask, or sender address that you would like to add to the Approved List.



Note

By default, the **Scheduled resolution** check box is selected, which means that IMSVA will periodically resolve the A record or MX record associated with the domain.

Domain applies to Email Reputation and IP Profiler, while **Sender** applies to SMTP Traffic Throttling.

5. Click **Save**.

The host appears in the **Approved List**.

Adding Blocked List Records

IMSVA blocks hosts that appear in the Blocked List.

Procedure

1. Go to **Sender Filtering > Blocked List**.

The **Blocked List** screen appears.

2. Click **Add**.

The **Add Blocked List Record** screen appears.

3. Select the **Enable** check box.
4. Specify the domain, IP address, or subnet address and mask for the host that you would like to add to the Blocked List.
5. Select **Block temporarily** or **Block permanently**.
6. Optional: If you select **Block temporarily**, specify the block duration.
7. Click **Save**.

The host appears in the **Blocked List**.

**Note**

If a host has been added to both the "permit list" described in [Configuring Connection Settings on page 11-3](#) and the Block List, the "permit list" overrides the Block List. IMSVA will not block this host.

Enabling Sender Filtering Rules

Rules are set to monitor the behavior of all sender addresses and block them according to the threshold setting. Rules can be set for the following:

- Spam
- Viruses
- DHA attacks
- Bounced mail
- SMTP traffic throttling

**WARNING!**

Before enabling sender filtering rules, add all of your email server IP addresses (that send outgoing messages to IMSVA) to the Sender Filtering Approved List. To configure the Sender Filtering Approved List, see [Adding Approved List Records on page 10-5](#).

Specifying Sender Filtering Spam Settings

Procedure

1. Go to **Sender Filtering > **Rules**.**

The **Rules** screen appears with five tabs, one for each type of threat.

Rules: IP/Sender Profiling Settings (IP/Sender Behavior Monitor)

Rules are set to monitor the behavior of all IP/sender addresses and block them according to the threshold setting.

Spam | Virus | DHA Attack | Bounced Mail | SMTP Traffic Throttling

☐ Enable

Duration to monitor: 20 hour(s)

Rate (%): 80 %

Total messages: 1000

Triggering action: Block temporarily ▼

Block duration: 30 minute(s)

Save Cancel Restore Defaults

2. Click the **Spam tab.**

The **Spam** screen appears.

3. Select the **Enable check box to enable blocking of spam.**

4. Specify a value for the following:

- **Duration to monitor:** The number of hours that IMSVA monitors email traffic to see if the percentage of spam messages exceeds the threshold you set.
- **Rate (%):** The maximum number of allowable messages with spam threats.
- **Total messages:** The total number of spam messages out of which the threshold percentage is calculated.

Consider the following example:

Duration to monitor: 1 hour at a rate of 20 out of 100.

During each one-hour period that spam blocking is active, IMSVA starts blocking IP addresses when more than 20% of the messages it receives contain spam and the total number of messages exceeds 100.

5. Next to **Triggering action**, select one of the following:
 - **Block temporarily:** Block messages from the IP address temporarily and allow the upstream MTA to try again after the block duration ends.
 - **Block permanently:** Never allow another message from the IP address and do not allow the upstream MTA to try again.
6. Optional: If you select **Block temporarily**, specify the block duration.
7. Click **Save**.

Specifying Sender Filtering Virus Settings

Procedure

1. Go to **Sender Filtering > Rules**.

The **Rules** screen appears with five tabs, one for each type of threat.

Rules: IP/Sender Profiling Settings (IP/Sender Behavior Monitor) ⓘ

Rules are set to monitor the behavior of all IP/sender addresses and block them according to the threshold setting.

Spam **Virus** DHA Attack Bounced Mail SMTP Traffic Throttling

☐ Enable

Duration to monitor: 20 hour(s)

Rate (%): 80 %

Total messages: 1000

Triggering action: Block temporarily ▼

Block duration: 30 minute(s)

Save Cancel Restore Defaults

2. Click the **Virus** tab.

The **Virus** screen appears.

3. Select the **Enable** check box to enable blocking of viruses.

4. Configure the following:

- **Duration to monitor:** The number of hours that IMSVA monitors email traffic to see if the percentage of messages with viruses exceeds the threshold you set.
- **Rate (%):** The maximum number of allowable messages with viruses (the numerator).
- **Total messages:** The total number of infected messages out of which the threshold percentage is calculated (the denominator).

Consider the following example.

Duration to monitor: 1 hour at a rate of 20 out of 100

During each one-hour period that virus blocking is active, IMSVA starts blocking IP addresses when more than 20% of the messages it receives contain viruses and the total number of messages exceeds 100.

5. Next to **Triggering action**, select one of the following:
 - **Block temporarily:** Block messages from the IP address temporarily and allow the upstream MTA to try again after the block duration ends.
 - **Block permanently:** Never allow another message from the IP address and do not allow the upstream MTA to try again.
 6. Optional: If you select **Block temporarily**, specify the block duration.
 7. Click **Save**.
-

Specifying Sender Filtering Directory Harvest Attack (DHA) Settings

Procedure

1. Go to **Sender Filtering > Rules**.

The **Rules** screen appears with five tabs, one for each type of threat.

2. Click the **DHA Attack** tab.

The **DHA Attack** screen appears.

Rules: IP/Sender Profiling Settings (IP/Sender Behavior Monitor)

Rules are set to monitor the behavior of all IP/sender addresses and block them according to the threshold setting.

Spam Virus **DHA Attack** Bounced Mail SMTP Traffic Throttling

☐ Enable [Setting example](#)

Duration to monitor: hour(s)

Rate (%): %

Total messages:

Sent to more than:

Non-existing recipients exceeds: (if LDAP service is running)

Triggering action:

Block duration: minute(s)

Save Cancel Restore Defaults

3. Select the **Enable** check box to enable blocking of directory harvest attacks.
4. Configure the following:
 - **Duration to monitor:** The number of hours that IMSVA monitors email traffic to see if the percentage of messages signaling a DHA attack exceeds the threshold you set.
 - **Rate (%):** The maximum number of allowable messages with DHA threats (the numerator).
 - **Total messages:** The total number of DHA messages out of which the threshold percentage is calculated (the denominator).

- **Sent to more than:** The maximum number of recipients allowed for the threshold value.
- **Non-existing recipients exceeds:** The maximum number of non-existent recipients allowed for the threshold value. DHA attacks often include randomly generated email addresses in the receiver list.

**Note**

The LDAP service must be running to determine non-existing recipients.

Consider the following example.

Duration to monitor: 1 hour at a rate of 20 out of 100 sent to more than 10 recipients when the number of non-existing recipients exceeds 5.

During each one-hour period that DHA blocking is active, IMSVA starts blocking IP addresses when it receives more than 20% of the messages that were sent to more than 10 recipients (with more than five of the recipients not in your organization) and the total number of messages exceeds 100.

**Tip**

Technically, the LDAP server is not a must-have. The DHA rule of IMSVA can also obtain the DHA results returned from Postfix, which in turn passes these results to FoxProxy through the LDAP server or other means. FoxProxy then analyzes the results to determine if they are DHA attacks.

LDAP server is only one of the means by which Postfix checks if a user's mailbox exists.

5. Next to **Triggering action**, select one of the following

- **Block temporarily:** Block messages from the IP address temporarily and allow the upstream MTA to try again after the block duration ends.

- **Block permanently:** Never allow another message from the IP address and do not allow the upstream MTA to try again.
- Optional: If you select **Block temporarily**, specify the block duration.
 - Click **Save**.

Specifying Sender Filtering Bounced Mail Settings

Procedure

- Go to **Sender Filtering > Rules**.

The **Rules** screen appears with five tabs, one for each type of threat.

- Click the **Bounced Mail** tab.

The **Bounced Mail** screen appears.

Rules: IP/Sender Profiling Settings (IP/Sender Behavior Monitor)

Rules are set to monitor the behavior of all IP/sender addresses and block them according to the threshold setting.

Spam Virus DHA Attack **Bounced Mail** SMTP Traffic Throttling

☐ Enable

Duration to monitor: 20 hour(s)

Rate (%): 80 %

Total messages: 1000

Triggering action: Block temporarily ▼

Block duration: 30 minute(s)

Save Cancel Restore Defaults

- Select the **Enable** check box to enable blocking of bounced mail.
- Configure the following:
 - **Duration to monitor:** The number of hours that IMSVA monitors email traffic to see if the percentage of messages signaling bounced mail exceeds the threshold you set.

- **Rate (%):** The maximum number of allowable messages signaling bounced mail (the numerator).
- **Total messages:** The total number of bounced messages out of which the threshold percentage is calculated (the denominator).

Consider the following example:

Duration to monitor: 1 hour at a rate of 20 out of 100

During each one-hour period that blocking for bounced mail is active, IMSVA starts blocking IP addresses when more than 20% of the messages it receives are bounced messages and the total number of messages exceeds 100.

**Note**

The LDAP service must be running to check bounced mail.

5. Next to **Triggering action**, select one of the following:
 - **Block temporarily:** Block messages from the IP address temporarily and allow the upstream MTA to try again after the block duration ends.
 - **Block permanently:** Never allow another message from the IP address and do not allow the upstream MTA to try again.
 6. Optional: If you select **Block temporarily**, specify the block duration.
 7. Click **Save**.
-

Specifying Sender Filtering SMTP Traffic Throttling Settings

Procedure

1. Go to **Sender Filtering > Rules**.

The **Rules** screen appears with five tabs, one for each type of threat.

2. Click the **SMTP Traffic Throttling** tab.

The **SMTP Traffic Throttling** screen appears.

Rules: IP/Sender Profiling Settings (IP/Sender Behavior Monitor)

Rules are set to monitor the behavior of all IP/sender addresses and block them according to the threshold setting.

Spam Virus DHA Attack Bounced Mail **SMTP Traffic Throttling**

☒ **IP-based throttling**

Duration to monitor: 5 minutes

☒ Maximum connections: 10000

☒ Maximum messages: 1000

Triggering action: Block temporarily (response code: 421)

Block duration: 30 minutes

☐ **Sender-based throttling**

Duration to monitor: 5 minutes

Maximum messages: 1000

Triggering action: Block temporarily (response code: 421)

Block duration: 30 minutes

Save Cancel Restore Defaults

3. Optional: Select the **IP-based throttling** check box and configure the following:
 - **Duration to monitor:** The length of time that IMSVA monitors email traffic to see if the number of messages from a single IP address exceeds the maximum you set.
 - **Maximum connections:** The maximum number of connections allowed for a single IP address.
 - **Maximum messages:** The maximum number of email messages that can be sent from a single IP address.
 - **Triggering action:** **Block temporarily** is the only action that will be triggered.

Block temporarily: Block messages from the IP address temporarily and allow the upstream MTA to try again after the block duration ends.

- **Block duration:** The length of time that IMSVA will block messages from the IP address.
4. Optional: Select the **Sender-based throttling** check box and configure the following:
- **Duration to monitor:** The amount of time that IMSVA monitors email traffic to see if the number of messages from a single sender exceeds the maximum you set.
 - **Maximum messages:** The maximum number of email messages that can be sent from a single sender.
 - **Triggering action:** **Block temporarily** is the only action that will be triggered.

Block temporarily: Block messages from the sender temporarily and allow the upstream MTA to try again after the block duration ends.
 - **Block duration:** The length of time that IMSVA will block messages from the sender.
5. Click **Save**.
-

Configuring Email Reputation

Email reputation verifies IP addresses of incoming messages using the Trend Micro Email Reputation database.

Procedure

1. Go to **Sender Filtering > Email Reputation**.

The **Email Reputation** screen appears.

Email Reputation

Email reputation verifies IP addresses of incoming email messages using one of the world's largest, most trusted reputation database along with a dynamic reputation database to identify new spam and phishing sources, stopping even zombies and botnets as they first emerge.

Email Reputation Settings
☐ Enable Email Reputation
View global spam information, reports, create or manage Approved and Blocked Sender IP address lists, perform administrative tasks, and configure the service. Email Reputation Portal 
Set Service Level
☐ Standard: Uses the Standard Reputation database to block messages from known spam sources. Click for more information. 
☒ Default intelligent action Permanent denial of connection (550) for RBL+ matches
☐ Take customized action for all matches SMTP error code: 550 (range 400 - 599; default=550) SMTP error string : error message
☒ Advanced: Uses both Standard and Dynamic Reputation databases to block messages from known and suspected spam sources. Click for more information. 
☒ Default intelligent action Permanent denial of connection (550) for RBL+ matches Temporary denial of connection (450) for Zombie matches
☐ Take customized action for all matches SMTP error code: 450 (range 400 - 599; default=450) SMTP error string : Service unavailable
Save Cancel

2. Select the **Enable Email reputation** check box.
3. Click a radio button next to one of the following, depending on your level of service, and configure the settings:

Standard:

- **Default intelligent action:** Email reputation permanently denies connection (550) for RBL+ matches.
- **Take customized action for all matches:**
 - **SMTP error code:** Blocks any connections that have a certain SMTP code. Specify an SMTP code.
 - **SMTP error string:** Specify the message associated with the SMTP error code.

Advanced:

- **Default intelligent action:** Email reputation permanently denies connection (550) for RBL+ matches and temporarily denies connection (450) for Zombie matches.
- **Take customized action for all matches:**
 - **SMTP error code:** Blocks any connections that have a certain SMTP code. Specify an SMTP code.
 - **SMTP error string:** Specify the message associated with the SMTP error code.



Note

The above SMTP error code and error string will be sent to the upstream MTA that will then take the necessary pre-configured actions, such as recording the error code and error string in a log file.

4. Click Save.

Displaying Suspicious IP Addresses and Domains

IMSVA creates log entries of the IP addresses or domains that have sent messages violating scanning conditions, but are still not blocked because the total number of messages did not exceed the threshold you set for the given time period.

Procedure

1. Go to **Sender Filtering > Suspicious IP**.
 2. Configure any of the following:
 - Next to **Type**, select the check boxes next to the type of threat that the IP filter detected.
 - Next to **Dates**, select the date-time range within which IMSVA blocked the sender.
 - If you know a specific IP address to query, specify it next to **IP**.
 - To display the corresponding domain names of the IP addresses, select the **Show Domain names** check box.
 - Next to **Logs per page**, select the number of log entries to display on the screen at a time.
 3. Click **Display Log**.
 4. Perform any of the additional actions:
 - To block an IP address temporarily, select the corresponding check box in the list, then click **Block Temporarily**.
 - To block an IP address permanently, select the corresponding check box in the list, then click **Block Permanently**.
 - To change the number of items that appears in the list at a time, select a new display value from the drop-down box on the top of the table.
 - To sort the table, click the column title.
-

Domain-based Message Authentication, Reporting & Conformance (DMARC)

Domain-based Message Authentication, Reporting and Conformance (DMARC) is an email validation system designed to detect and prevent email spoofing. It is intended to combat certain techniques often used in phishing

and email spam, such as email messages with forged sender addresses that appear to originate from legitimate organizations. It provides a way to authenticate email messages for specific domains, send feedback to senders, and conform to a published policy.

DMARC is designed to fit into the existing email authentication process of IMSVA. The way it works, is to help email recipients to determine if the purported message aligns with what the recipient knows about the sender. If not, DMARC includes guidance on how to handle the non-aligned messages. DMARC requires that a message passes the Sender Policy Framework (SPF) or DomainKeys Identified Mail (DKIM) signature check.

By defining DMARC settings, IMSVA allows you to add domain names for DMARC verification, set IP addresses to bypass DMARC verification, and specify actions to take on messages that fail DMARC verification.

Specifying DMARC Settings

IMSVa authenticates email messages of the specified domain and allows administrators to take actions on messages that fail to pass DMARC authentication. If DMARC authentication passes, the messages will be delivered normally. If DMARC authentication fails, the messages will be quarantined, rejected or delivered according to the DMARC settings.

Procedure

1. Go to **Sender Filtering > DMARC**.

The **Domain-based Message Authentication, Reporting & Conformance (DMARC)** screen appears.

2. Select **Enable DMARC**.
3. Optionally select **Insert an X-Header into email messages**.
X-Header is added to indicate whether DMARC authentication is successful or not.
4. Optionally select **Deliver daily reports to senders for authentication failures**.

If you select this option, aggregated reports will be generated daily for authentication failures and sent back to email senders.

5. Type a domain name for the DMARC verification list and click **Add**.

You can import, export and delete DMARC verification list records. Make sure the import file is a text file containing one record per line.

6. (Optional) Type an IP address for the DMARC exception list and click **Add**.

You can import, export and delete DMARC exception list records. Make sure the import file is a text file containing one record per line.

7. Under **Actions**, specify actions to take on messages that fail DMARC authentication.

A DMARC tag instructs recipients how to handle email messages that fail DMARC authentication. There are three values for the tag: "none", "quarantine", and "reject". IMSVA enables you to specify the action to take in each scenario based on the instructions:

- **None:** select the action to take when the DMARC tag value is "none".
- **Quarantine:** select the action to take when the DMARC tag value is "quarantine".
- **Reject:** select the action to take when the DMARC tag value is "reject".
- **No DMARC records:** select the action to take when there is no DMARC records.

8. Click **Save**.
-

Chapter 11

Configuring SMTP Settings

This chapter provides general descriptions on the various configuration tasks that you need to perform to get IMSVA up and running.

Topics include:

- *Configuring SMTP Routing on page 11-2*
- *Configuring the SMTP Greeting Message on page 11-2*
- *Configuring Connection Settings on page 11-3*
- *Configuring Message Rule Settings on page 11-7*
- *Configuring Message Delivery Settings on page 11-10*
- *Configuring DKIM Signature Settings on page 11-16*

Configuring SMTP Routing

The following procedure explains the tasks required to configure SMTP routing.

1. [Configuring the SMTP Greeting Message on page 11-2](#)
2. [Configuring Connection Settings on page 11-3](#)
3. [Configuring Message Rule Settings on page 11-7](#)
4. [Specifying Message Delivery Settings on page 11-11](#)

Configuring the SMTP Greeting Message

Use the **SMTP Routing** screen to configure SMTP settings for the MTA, such as the SMTP greeting message and the location of the mail processing queue, where IMSVA saves messages before scanning and delivering them.

Procedure

1. Go to **Administration > IMSVA Configuration > SMTP Routing**.

The **SMTP Routing** screen appears.

SMTP Routing 

SMTP | Connections | Message Rule | Message Delivery

Greeting Message

SMTP server greeting message:

ESMTP IMSVA

2. Specify SMTP server **Greeting Message** (displays when a session is created).

3. Click **Save**.
-

Configuring Connection Settings

Configure SMTP connection settings for the MTA from the Connection settings screen.

Procedure

1. Go to **Administration > IMSVA Configuration > SMTP Routing**.
2. Click the **Connections** tab.

The **Connections** screen appears.

SMTP Interface

Port:

Disconnect after: minutes of inactivity

Simultaneous connections: ☐ No limit ☒ Allow up to connections

Connection Control

You can either permit or deny computers to connect with the server.

☒ Accept all, except the following list

☒ Single computer

Example: 123.123.123.123 or
2001:db8:10ff::ae:44f2

☐ Group of computers

IP version

Subnet address

Example: 10.123.123.123

Subnet mask

Example: 255.255.255.0

☐ Deny all, except the following list

3. Specify the **SMTP Interface** settings.

- **Port:** Specify the listening port of the SMTP server.
- **Disconnect after { } minutes of inactivity:** Specify a time-out value.

- **Simultaneous connections:** Click **No limit** or **Allow up to {} connections** and specify the maximum number of connections.
4. Specify the **Connection Control** settings.
- a. Select **Accept all, except the following list** to configure the "deny list" or **Deny all, except the following list** to configure the "permit list".

**Note**

The "permit list" or "deny list" configured here overrides the Approved List or Block List configured for SMTP Traffic Throttling.

- b. Configure the list.
- **Single computer:** Specify an IP address and then click >> to add it to the list.
 - **Group of computers:**
 1. Select the IP version.
 - For IPv4 addresses, specify a subnet address and mask.
 - For IPv6 addresses, specify a subnet address.
 2. Click >> to add the group to the list.
 - **Import from file:** Click to import an IP list from a file. The following shows sample content of an IP list text file:
- ```
192.168.1.1
192.168.2.0:255.255.255.0
192.168.3.1:255.255.255.128
192.168.4.100
192.168.5.32:255.255.255.192
2001:db8:10ff::ae:44f2
```

2001:db8::/32

5. Specify the **Transport Layer Security** settings.

a. Select **Enable Incoming Transport Layer Security**.

This option enables the IMSVA SMTP Server to accept messages only through a TLS connection.

b. Select **Only accept SMTP connection by TLS** for IMSVA to accept only secure incoming connections.

This option enables the IMSVA SMTP Server to accept messages only through a TLS connection.

c. Click a **Browse** button next to one of the following:

- **CA certificate:** A CA certificate is usually used for verifying SMTP clients. However, IMSVA does not verify the client and only uses the CA certificate for enabling the TLS connection.

Only upload this file if it is provided to you together with the public key. Otherwise, this file is not mandatory for enabling a TLS connection.

- **Private key:** The SMTP client encrypts a random number using IMSVA SMTP server's public key and an encryption key to generate the session keys.

IMSVa SMTP server then uses the private key to decrypt the random number in order to establish the secure connection. This key must be uploaded to enable a TLS connection.

- **SMTP server certification:** The IMSVA SMTP server's public key made available to the SMTP clients for generating the session keys.

This key must be uploaded to enable a TLS connection.

d. Click **Upload** to save the file to the IMSVA server.

e. Select **Enable Outgoing Transport Layer Security** to protect outbound messages, if desired.

6. Click **Save**.
- 

## Configuring Message Rule Settings

To set limits on the messages that IMSVA can handle and to control email relay, configure all settings on the **Messages Rules** screen.

### Email Relay

To prevent spammers from using the IMSVA MTA as a relay for spam, configure relay control by adding the mail domains on your network to the **Incoming Message Settings** list. When IMSVA receives a message, it looks at the final destination of the message and compares it to this list. IMSVA discards the message under the following circumstances:

- The destination domain is not in this list
- The parent domain of the destination domain is not in this list
- The host is not on the **Permitted Senders of Relayed Mail** list

Incoming message settings are different from message delivery domain settings. For more information, see [Configuring Message Delivery Settings on page 11-10](#).

### Specifying Message Rules

---

#### Procedure

1. Go to **Administration > IMSVA Configuration > SMTP Routing**.
2. Click the **Message Rule** tab.

The **Message Rule** screen appears.

**SMTP Routing** ?

---

SMTP   Connections   **Message Rule**   Message Delivery

**Message Limits**

Type 0 to remove any limitations.

Maximum message size (1 to unlimited):  MB

Maximum number of recipients: (1-99999)

**Relay Control**

☐ Reject unknown sender domains. ⓘ

☐ Reject unknown recipients. (by checking LDAP) ⓘ

☐ Reject unknown IP address. (Enabling this option might impact IMSVA performance.) ⓘ

**Incoming Message Settings**

**Add Domain**

For example: example.com

Note: To ensure that IMSVA receives incoming messages, Trend Micro recommends adding all internal domains in your network.

test.com

**Permitted Senders of Relayed Mail**

The following hosts can relay mail to all domains and are excluded from the above relay restriction.

☐ Host only  
☒ Same subnet as the host  
☐ Same IP class as the host  
☐ Specified IP addresses:

☒ **Single computer**  
  
 For example,  
 123.123.123.123 or  
 2001:db8:10ff::ae:44f2

☐ **Group of computers**
>>

**IP version** IPv4 <<

**Subnet address**  
  
 e.g., 10.123.123.123

**Subnet mask**  
  
 e.g., 255.255.255.0

3. Specify the **Message Limits** settings:

- **Maximum message size:** Specify the number of megabytes.
- **Maximum number of recipients:** Specify the number of recipients from 0 to 99999.

4. Specify the **Relay Control** parameters to have IMSVA reject messages matching the selected condition.

5. Specify the **Incoming Message Settings**.

IMSVA relays the messages to the added domains.

The following shows sample content of a domain list text file:

- domain.com: Imports the exact domain

- \*.domain.com: Imports all sub-domains
- domain.org: Imports the exact domain

**Note**

The import file must be a text file containing one domain per line. Optionally, use wildcards when specifying the domain.

---

**6. Specify the Permitted Senders of Relayed Mail.**

- Host only
- Same subnet as the host
- Same IP class as the host
- Specified IP addresses

**7. Click Save.****Tip**

For security reasons, Trend Micro recommends avoiding open relay when configuring the message rule settings.

---

## Configuring Message Delivery Settings

IMSVa maintains a routing table based on recipient domains and email addresses. IMSVa then uses this routing table to route email messages (with matching recipient domains or email addresses) to specified destination servers or to destination servers that match specified mail exchanger records (MX records).

There are two message delivery methods:

- MX record lookup

When delivering an email message using MX record lookup, IMSVa queries the specified MX record, and then delivers the email message to the destination server identified by the MX record.



- Static routing

When delivering an email message using static routing, IMSVA first sends the email message to the destination server with the highest priority. If the server is unavailable, IMSVA chooses the remaining servers in descending order of their priority. If multiple destination servers have the same priority, IMSVA randomly selects a server for message delivery.

## Specifying Message Delivery Settings

Specify settings for the next stage of delivery. IMSVA checks the recipient domains or email addresses, determines destination servers, and sends email messages to the selected destination servers.

---

### Procedure

1. Go to **Administration > IMSVA Configuration > SMTP Routing**.
2. Click the **Message Delivery** tab.

The **Message Delivery Settings** screen appears.

#### SMTP Routing



SMTP   Connections   Message Rule   **Message Delivery**

### Message Delivery Settings

Messages to be delivered

IMSVa chooses destination servers based on recipients' domains and email addresses.

Mail server A

Mail server B

Mail server C

...

Recipients

Email address A

Domain B

1-3 of 3   Page 1

| Domain or Email Address                                | Description                              |
|--------------------------------------------------------|------------------------------------------|
| <input type="checkbox"/> <a href="#">sample.com</a>    | MX record lookup                         |
| <input type="checkbox"/> <a href="#">mail.isvw.com</a> | Static routing - 2 destination server(s) |
| Other domains                                          | Determined by DNS                        |

1-3 of 3   Page 1

Display: 15 per page

3. In the **Message Delivery Settings** section, click **Add**.

The **Add Message Delivery Settings** screen appears.

**Add Message Delivery Settings** 

[Message Delivery](#) > Add

| Domain or Email Address                                                                                    |                                               |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------|
| Domain or email address:  | <input type="text"/>                          |
| Delivery Method                                                                                            |                                               |
| Delivery method:                                                                                           | <input type="text" value="MX record lookup"/> |
| Detailed Settings                                                                                          |                                               |
| MX record name:                                                                                            | <input type="text"/>                          |
| Port:                                                                                                      | <input type="text"/>                          |

4. Specify the recipient domain or email address.
5. Select either of the following from the **Delivery method** drop-down list:
  - **MX record lookup:** Specify the detailed MX record settings, including the MX record name and port, to identify destination servers.
  - **Static routing:** Specify the detailed destination server settings, including the server address, port, and preference, and then click **Add Destination Server**.

The specified destination server is added to the destination server list.



#### Note

Preference represents the priority of destination servers. The lower the preference value, the higher the priority.

Optionally add multiple destination servers for one recipient domain or email address.

6. Click **Save**.

The recipient domain or email address is added to the **Message Delivery Settings** table.

---

## Editing Message Delivery Settings

---

### Procedure

1. Go to **Administration > IMSVA Configuration > SMTP Routing**.

2. Click the **Message Delivery** tab.

The **Message Delivery Settings** screen appears.

3. In the **Message Delivery Settings** section, click a record in the **Domain or Email Address** column.

4. Update the recipient domain or email address in the **Domain or Email Address** section.

5. Select either of the following from the **Delivery method** drop-down list:

- **MX record lookup:** Update the detailed MX record settings, including the MX record name and port.
- **Static routing:** Update the detailed destination server settings, including the server address, port, and preference, and then click **Add Destination Server**.

The updated destination server is added to the destination server list.



#### Note

To disable a destination server, click the check mark for the server in the **Enable** column. Then the check mark becomes a cross mark. To enable the server again, click the cross mark.

---

6. Click **Save**.

---

## Importing Message Delivery Settings

Use this option if you have a properly formatted .xml file containing message delivery settings. Optionally, export existing settings from the management console and generate a file according to the exported file.

---

### Procedure

1. Go to **Administration > IMSVA Configuration > SMTP Routing**.
  2. Click the **Message Delivery** tab.  
The **Message Delivery Settings** screen appears.
  3. In the **Message Delivery Settings** section, click **Import**.  
The **Import Message Delivery Settings** screen appears.
  4. Click **Browse** to locate the file to import.
  5. Select one of the following:
    - Merge with current list
    - Overwrite current list
  6. Click **Import**.
- 

## Exporting Message Delivery Settings

### Procedure

1. Go to **Administration > IMSVA Configuration > SMTP Routing**.
  2. Click the **Message Delivery** tab.  
The **Message Delivery Settings** screen appears.
  3. In the **Message Delivery Settings** section, select a record in the **Domain or Email Address** column.
  4. Click **Export**.
-

## Configuring DKIM Signature Settings

DomainKeys Identified Mail (DKIM) is an email validation system that detects email spoofing by validating a domain name identity associated with a message through cryptographic authentication.

IMSVA allows you to prevent spoofing by adding a digital signature to outgoing message headers using the DKIM standard. Recipients can verify that the email messages from your domain are authorized by the domain's administrator and that the messages, including attachments, have not been modified during transport.

On the IMSVA management console, you can add or delete DKIM signatures and import or export DKIM signature files.

### Adding a DKIM Signature

#### Procedure

1. Go to **Administration > IMSVA Configuration > DKIM Signature**.

The **DKIM Signature** screen appears.

**DKIM Signature**

☐ Enable DKIM signature

Headers to sign: ☒ From ☒ To ☒ Date [Customize](#)

| Domain                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 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### 3. Click **Add**.

The **Add DKIM Signature** screen appears.

### 4. Specify the general settings.

- **Domain:** Specify the domain where email messages are sent, for example, `*.example.com`.
- **SDID:** Specify the signing domain identifier, for example, `example.com`.
- **Selector:** Specify the selector to subdivide key namespace or retain the default value.
- **Private key:** Upload a private key or request IMSVA to create a private key. If you want to generate a private key, select the key length before generation.

5. (Optional) Specify the advanced settings.

- **Header canonicalization:** Select **Simple** or **Relaxed**.
- **Body canonicalization:** Select **Simple** or **Relaxed**.



**Note**

Two canonicalization algorithms are defined for each of the email header and the email body: a "simple" algorithm that tolerates almost no modification and a "relaxed" algorithm that tolerates common modifications such as whitespace replacement and header field line rewrapping.

---

- **Enable signature expiration:** If you select this option, set the number of days that the signature will be valid.
- **Enable body length:** If you select this option, set the number of bytes allowed for the email body.
- **AUID:** Specify the Agent or User Identifier on behalf of which SDID is taking responsibility.
- **Exempt domain:** Specify one or multiple domains to be excluded from DKIM signing.

6. Click **Save**.

---



# Chapter 12

## Configuring Known Hosts Settings

This chapter provides general descriptions about known hosts and explains how to add, import, and export known hosts.

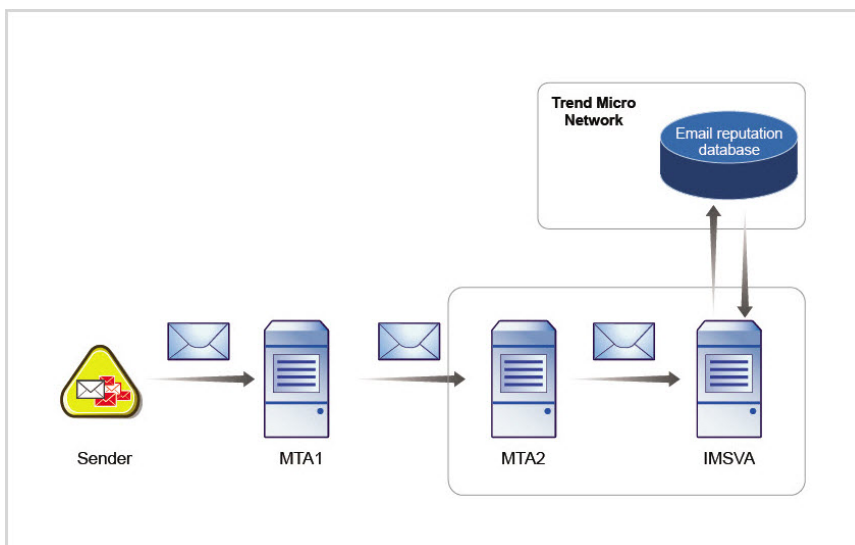
Topics include:

- *[About Known Hosts on page 12-2](#)*
- *[Adding Known Hosts on page 12-3](#)*
- *[Importing Known Hosts on page 12-4](#)*
- *[Exporting Known Hosts on page 12-4](#)*

## About Known Hosts

Known hosts include trusted mail transfer agents (MTAs) and the Cloud Pre-Filter that are deployed before IMSVA on your network. If your IMSVA is deployed at the Internet gateway, you do not need to specify known hosts. Use the known host settings in either of the following situations:

- If you have one or multiple MTAs configured upstream from IMSVA on your network, enable the known host setting and add these MTAs as known hosts. IMSVA then traces the nearest upstream MTA that is not in the known host list and queries its IP address against the email reputation database as well as the IP Profiler approved and blocked lists.



For example, if you have MTA2 configured before IMSVA on your network and MTA1 outside your network deployed before MTA2, enable the known host setting and add MTA2 as a known host. IMSVA then uses the IP address of MTA1 for query.

- If your IMSVA is deployed behind the Cloud Pre-Filter, enable the known host setting. By default, the Cloud Pre-Filter IP address is in the known host list.

If your network has upstream MTAs or the Cloud Pre-Filter deployed before IMSVA, use the known host settings for the following reasons:

- IMSVA regards all external email messages as coming from these MTAs or the Cloud Pre-Filter and uses their IP addresses for query. All mail traffic routed through these IP addresses will then be considered safe.
- IMSVA considers these IP addresses as spam sources since all spam messages come from these addresses before they arrive at IMSVA in the mail flow.

**Note**

IMSVA synchronizes Cloud Pre-Filter IP addresses to the known host list at 03:00 a.m. every day. These known hosts will not appear on the management console.

---

## Adding Known Hosts

---

### Procedure

1. Go to **Administration > IMSVA Configuration > Known Hosts**.

The **Known Hosts** screen appears.

2. Select the **Enable Known Hosts** check box.
3. Specify the IP address and description for the host to add.

**Note**

IMSVA supports IPv4 and IPv6 addresses for known hosts. Optionally specify a single IP addresses and subnet addresses.

---

4. Click **Add**.

The new host appears in the known host list.

5. Click **Save**.
- 

## Importing Known Hosts

---

### Procedure

1. Go to **Administration > IMSVA Configuration > Known Hosts**.

The **Known Hosts** screen appears.

2. Click **Import**.

The **Import Known Hosts** dialog box appears.

3. Click **Browse** to locate the file to import.

4. Select one of the following:

- Merge with current list
- Overwrite current list

5. Click **Import**.



### Note

IMSVA can import host addresses from only a text file. Ensure that the text file contains only one IP address or subnet address per line.

---

## Exporting Known Hosts

---

### Procedure

1. Go to **Administration > IMSVA Configuration > Known Hosts**.

The **Known Hosts** screen appears.

2. Select one or multiple hosts to export.

3. Click **Export**.



**Note**

IMSVa exports only host addresses without description.

---



# Chapter 13

## Configuring Transport Layer Security

This chapter provides general descriptions about Transport Layer Security (TLS) and explains how to configure TLS settings and manage certificates in IMSVA for TLS environments.

Topics include:

- *About Transport Layer Security on page 13-2*
- *Prerequisites for Using TLS with IMSVA on page 13-3*
- *Configuring TLS Settings on page 13-5*
- *Managing Certificates in IMSVA on page 13-14*

## About Transport Layer Security

In IMSVA, Transport Layer Security (TLS) provides a secure communication channel between servers over the Internet, ensuring the privacy and integrity of the data during transmission.

Two servers (Server A and Server B) establish a TLS connection through a handshaking procedure as described below:

1. The handshake begins when Server B requests a secure connection with Server A by sending a list of ciphers.
2. Server A then selects one cipher presented by Server B and replies with its digital certificate that may have been signed by a certificate authority (CA).
3. Server B verifies Server A's identity with the trusted CA certificate. If the verification fails, Server B may choose to stop the TLS handshake.
4. Upon verifying Server A's identity, Server B proceeds to generate the session keys by encrypting a message using a public key.
5. This message can only be decrypted using the corresponding private key. Server B's identity is thus authenticated when Server A is able to decrypt the message successfully using the private key.
6. The handshake completes and the secure connection is established after the servers have created the material required for encryption and decryption.



IMSVA applies TLS on traffic entering IMSVA and traffic exiting IMSVA, not on incoming or outgoing message traffic.

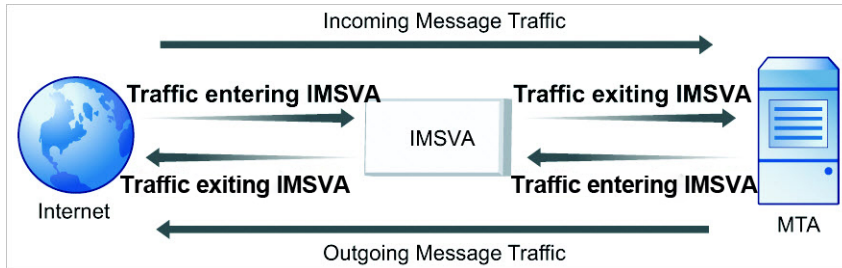


**FIGURE 13-1. IMSVA TLS Communication**

## Prerequisites for Using TLS with IMSVA

Establishing the TLS infrastructure requires that the organization has its own CA key or is able to sign all generated certificate requests by the external CA. Private keys and certificate requests must be generated for each SMTP server in the network. The certificate requests should be signed by the CA.

### Obtaining a Digital Certificate

To obtain a digital certificate, perform one of the following actions:

- Create a certificate signing request (CSR) on the management console. Request a CA to sign the certificate. Import the signed certificate into IMSVA.
- Create a self-signed certificate on the management console.
- Apply for the certificate and public/private key pairs from a CA. Import the certificate and key file into IMSVA.

**Note**

A default certificate and key file is provided with IMSVA.

For details about certificate management, see [Managing Certificates in IMSVA on page 13-14](#).

---

## Ensure that the Certificate Format is Valid

- IMSVA only supports the .pem certificate format.
  - Ensure that the signed certificate contains both the private key and certificate information.
- 

**Note**

If your certificate is in PKCS12 format, convert it to the PEM format using the command:

```
[root@imsva ~]# openssl pkcs12 -in mycert.pfx -out mycert.pem
```

---

## Supported Protocols and Cipher Suites

**TABLE 13-1. Supported protocols**

| SECURITY LEVEL | PROTOCOL                   |
|----------------|----------------------------|
| Opportunistic  | TLSv1, TLSv1.1 and TLSv1.2 |
| Must           | TLSv1, TLSv1.1 and TLSv1.2 |
| Verify         |                            |

**Note**

The SSLv3 protocol is disabled according to CVE-2014-3566. To enable SSLv3, run the following statements:

```
postconf -e
smtpd_tls_mandatory_protocols=SSLv3,TLSv1,TLSv1.1,TLSv1.2
&& postconf -e
smtp_tls_mandatory_protocols=SSLv3,TLSv1,TLSv1.1,TLSv1.2 &&
postconf -e smtpd_tls_protocols=!SSLv2 && postconf -e
smtp_tls_protocols=!SSLv2 && postfix reload
```

For details about the supported cipher suites, run the following statement:

```
openssl ciphers -v 'HIGH:MEDIUM:!RC4@STRENGTH'
```

## Configuring TLS Settings

Use the management console to enable the TLS settings for messages entering and exiting IMSVA. With IMSVA acting as the server, enable incoming TLS. With IMSVA acting as the client, enable outgoing TLS.

### TLS Settings for Messages Entering IMSVA

IMSVA applies TLS to messages that enter and exit the server where IMSVA is installed. Message traffic can enter IMSVA from two directions:

- Message traffic from the Internet that is to be delivered to your clients.
- Message traffic from your clients to the client's intended recipient

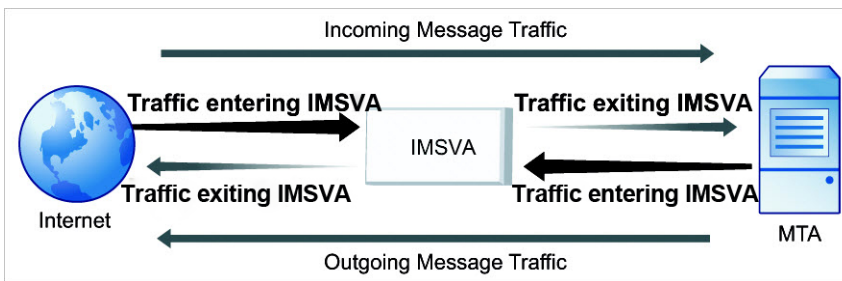


**FIGURE 13-2. TLS: Traffic Entering IMSVA**

## Adding TLS Settings for Messages Entering IMSVA

### Procedure

1. Go to **Administration > IMSVA Configuration > Transport Layer Security**.

The **Transport Layer Security** screen appears with the **Messages Entering IMSVA** tab displayed by default.



2. Click **Add** under **IP Address/Domain List**.

The **Add TLS IP Address or Domain** screen appears.

**Add TLS IP Address or Domain**

☒ **Enable**

IP address or domain:

Examples:
 

- IP address: 123.123.123.123 or 2001:db8:10ff::ae:44f2
- Subnet address: 123.123.123.123/255.255.255.0, 123.123.123.123/24, or 2001:db8:10ff::ae:44f2/32
- Domain: domain.com
- Subdomain: \*.domain.com

Security level: Never Never use TLS

Cipher grade: Medium

OK
Cancel



### Note

By default, the **Enable** check box is selected. If you clear this check box, the TLS settings you specify in the following steps do not take effect.

3. Specify the IP or subnet address of the target email client or the domain of target email senders in the **IP address or domain** field.
4. Select one of the following from the **Security level** drop-down list:
  - Never:** IMSVA does not use TLS for the specified IP address or domain.
  - Opportunistic:** IMSVA declares support for TLS for the specified IP address or domain. The client can choose whether to start a TLS connection.
  - Must:** IMSVA requires TLS for communication for the specified IP address or domain. Communication between IMSVA and the client is encrypted.
  - Verify:** IMSVA requires the client to start a TLS connection for the specified IP address or domain and send its certificate to IMSVA for client identification.

5. If any option other than **Never** was selected from the **Security level** drop-down list, select one of the following from the **Cipher grade** drop-down list:

- **Medium:** Communication between IMSVA and clients uses "medium" and "strong" encryption cipher suites.

For details about these cipher suites, see [Supported Protocols and Cipher Suites on page 13-4](#).

- **Strong:** Communication between IMSVA and clients uses "strong" encryption cipher suites.

For details about these cipher suites, see [Supported Protocols and Cipher Suites on page 13-4](#).

6. Click **OK**.

When you use the default TLS setting or specify a TLS domain or subdomain, the **Never** security level does not take effect if your client issues a STARTTLS command. To make the **Never** security level effective, do either of the following:

- Ask your client not to issue STARTTLS before transmission.
- Disable TLS for all messages entering IMSVA by running the following command:

**Note**

Trend Micro does not recommend this operation because it affects all messages entering IMSVA.

---

```
postconf -e smtpd_tls_security_level=none && postfix
reload
```

To enable TLS back again, run the following command:

```
postconf -e smtpd_tls_security_level=may && postfix
reload
```

---

## Importing TLS Settings for Messages Entering IMSVA

Make sure to import files encoded only in UTF-8.

---

### Procedure

1. Go to **Administration > IMSVA Configuration > Transport Layer Security**.

The **Transport Layer Security** screen appears with the **Messages Entering IMSVA** tab displayed by default.

2. Click **Import** under **IP Address/Domain List**.

The **Import TLS IP Address or Domain List** screen appears.

3. Click **Browse** to locate the file to import.
  4. Select one of the following:
    - **Merge with current list**
    - **Overwrite current list**
  5. Click **Import**.
- 

## Exporting TLS Settings for Messages Entering IMSVA

### Procedure

1. Go to **Administration > IMSVA Configuration > Transport Layer Security**.

The **Transport Layer Security** screen appears with the **Messages Entering IMSVA** tab displayed by default.

2. Select a record under **IP Address/Domain List**.
  3. Click **Export**.
-

## TLS Settings for Messages Exiting IMSVA

IMSVA applies TLS to messages that enter and exit the server where IMSVA is installed. Message traffic can exit IMSVA from two directions:

- Message traffic from the Internet that is to be delivered to your clients.
- Message traffic from your clients to the client's intended recipient

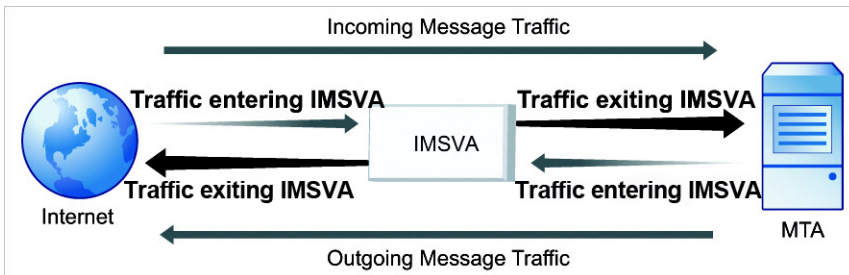


FIGURE 13-3. TLS: Traffic Exiting IMSVA

## Adding TLS Settings for Messages Exiting IMSVA

### Procedure

1. Go to **Administration > IMSVA Configuration > Transport Layer Security**.

The **Transport Layer Security** screen appears with the **Messages Entering IMSVA** tab displayed by default.

2. Click the **Messages Exiting IMSVA** tab.



The **Messages Exiting IMSVA** screen appears.

**Transport Layer Security** 

Messages Entering IMSVA **Messages Exiting IMSVA** SMTP and HTTPS Certificates Trusted CA Certificates

**Domain List** 

☐ All 1 record(s)     1-1 of 1   Page 1   

| Name    | Security Level | Cipher Grade | Status |
|---------|----------------|--------------|--------|
| default | Opportunistic  | Medium       |        |

☐ All 1 record(s)     1-1 of 1   Page 1   

Display: 15 per page 

3. Click **Add** under **Domain List**.

The **Add TLS Domain** screen appears.

**Add TLS Domain**

☒ **Enable**

Domain:

Examples:

- Domain: domain.com
- Subdomain: \*.domain.com

Security level: Never  Never use TLS

Cipher grade: Medium 



**Note**

By default, the **Enable** check box is selected. If you clear this check box, the TLS settings you specify in the following steps do not take effect.

- Specify the domain of target recipients in the **Domain** field.
- Select one of the following from the **Security level** drop-down list:
  - **Never:** IMSVA does not use TLS for the specified domain.
  - **Opportunistic:** IMSVA declares support for TLS for the specified domain. The server can choose whether to start a TLS connection.

- **Must:** IMSVA requires TLS for communication for the specified domain. Communication between IMSVA and the server is encrypted.
  - **Verify:** IMSVA requires the server to start a TLS connection for the specified domain and send its certificate to IMSVA for server identification.
6. If any option other than **Never** was selected from the **Security level** drop-down list, select one of the following from the **Cipher grade** drop-down list:
- **Medium:** Communication between IMSVA and clients uses "medium" and "strong" encryption cipher suites.  
  
For details about these cipher suites, see [Supported Protocols and Cipher Suites on page 13-4](#).
  - **Strong:** Communication between IMSVA and clients uses "strong" encryption cipher suites.  
  
For details about these cipher suites, see [Supported Protocols and Cipher Suites on page 13-4](#).
7. Click **OK**.

**Note**

If several TLS domains point to the same destination server specified in message delivery settings but their security levels are different, the highest level overrides other levels.

---

## Importing TLS Settings for Messages Exiting IMSVA

Make sure to import files encoded only in UTF-8.

---

### Procedure

1. Go to **Administration > IMSVA Configuration > Transport Layer Security**.

The **Transport Layer Security** screen appears with the **Messages Entering IMSVA** tab displayed by default.

2. Click the **Messages Exiting IMSVA** tab.

The **Messages Exiting IMSVA** screen appears.

3. Click **Import** under **Domain List**.

The **Import TLS Domain List** screen appears.

4. Click **Browse** to locate the file to import.
5. Select one of the following:
  - **Merge with current list**
  - **Overwrite current list**

6. Click **Import**.
- 

## Exporting TLS Settings for Messages Exiting IMSVA

---

### Procedure

1. Go to **Administration > IMSVA Configuration > Transport Layer Security**.

The **Transport Layer Security** screen appears with the **Messages Entering IMSVA** tab displayed by default.

2. Click the **Messages Exiting IMSVA** tab.

The **Messages Exiting IMSVA** screen appears.

3. Select a record under **Domain List**.
  4. Click **Export**.
-

## Managing Certificates in IMSVA

This section introduces how to manage certificates in IMSVA for TLS environments.

### SMTP and HTTPS Certificates

SMTP and HTTPS certificates identify IMSVA to other entities, for example, message transfer agents (MTAs). Along with the SMTP or HTTPS certificate, a private key is stored in IMSVA to prove its authenticity. This type of certificate is used for both SMTP and HTTPS protocols to authenticate MTAs.

IMSVA management console allows you to do any of the following:

- [Creating a Self-Signed Certificate on page 13-14](#)
- [Creating a Certificate Signing Request on page 13-16](#)
- [Importing a Certificate on page 13-18](#)
- [Exporting a Certificate on page 13-20](#)
- [Assigning a Certificate on page 13-21](#)
- [Deleting Certificates on page 13-23](#)

### Creating a Self-Signed Certificate

---

#### Procedure

1. Go to **Administration > IMSVA Configuration > Transport Layer Security**.

The **Transport Layer Security** screen appears with the **Messages Entering IMSVA** tab displayed by default.

2. Click the **SMTP and HTTPS Certificates** tab.

The **SMTP and HTTPS Certificates** screen appears.

**Transport Layer Security** 

Messages Entering IMSVA Messages Exiting IMSVA **SMTP and HTTPS Certificates** Trusted CA Certificates

**SMTP and HTTPS Certificate List** Filter by: All certificates

☐ All 3 record(s)      1-3 of 3 Page 1

| <input type="checkbox"/> | Name                   | Status    | Not Before            | Not After             | Valid |
|--------------------------|------------------------|-----------|-----------------------|-----------------------|-------|
| <input type="checkbox"/> | default_console(Trend) | In use    | 2009-04-01 07:43:36.0 | 2019-03-30 07:43:36.0 | Yes   |
| <input type="checkbox"/> | default_mta(Trend)     | In use    | 2011-04-02 04:29:00.0 | 2031-04-02 04:29:00.0 | Yes   |
| <input type="checkbox"/> | csr                    | Requested | N/A                   | N/A                   | Yes   |

☐ All 3 record(s)      1-3 of 3 Page 1

Display: 15 per page



### Note

IMSVA checks the validity of all certificates at 01:00 a.m. every day. If you find the **Valid** value for a certificate is **No**, the possible causes are:

- The certificate is not yet valid.
- The certificate has expired.
- The certificate has been revoked through the Online Certificate Status Protocol.
- The certificate has been revoked by the certificate revocation list.

Replace invalid certificates that are in use to ensure secure TLS verification.

### 3. Click **Add** under **SMTP and HTTPS Certificate List**.

The **Add Certificate** screen appears.

### 4. Configure available settings:

| OPTION | DESCRIPTION                 |
|--------|-----------------------------|
| Name   | Specify a certificate name. |

| OPTION            | DESCRIPTION                                                                                                   |
|-------------------|---------------------------------------------------------------------------------------------------------------|
| Type              | Select <b>Self-Signed Certificate</b> from the <b>Type</b> drop-down list.                                    |
| Key length        | Select a key length for the public and private key pair. The greater the length, the stronger the encryption. |
| Country code      | Select the country where your organization resides.                                                           |
| State             | Specify the state where your organization resides.                                                            |
| Locality          | Specify the locality where your organization resides.                                                         |
| Organization      | Specify your organization.                                                                                    |
| Organization unit | Specify your organization unit.                                                                               |
| Common name       | Specify a descriptive name that identifies a certificate.                                                     |
| Email address     | Specify your email address.                                                                                   |
| Valid days        | Specify how long you plan to use a certificate.<br><br>Maximum value: 7300                                    |

5. Click **Save**.
- 

## Creating a Certificate Signing Request

---

### Procedure

1. Go to **Administration > IMSVA Configuration > Transport Layer Security**.

The **Transport Layer Security** screen appears with the **Messages Entering IMSVA** tab displayed by default.

2. Click the **SMTP and HTTPS Certificates** tab.

The **SMTP and HTTPS Certificates** screen appears.

3. Click **Add** under **SMTP and HTTPS Certificate List**.

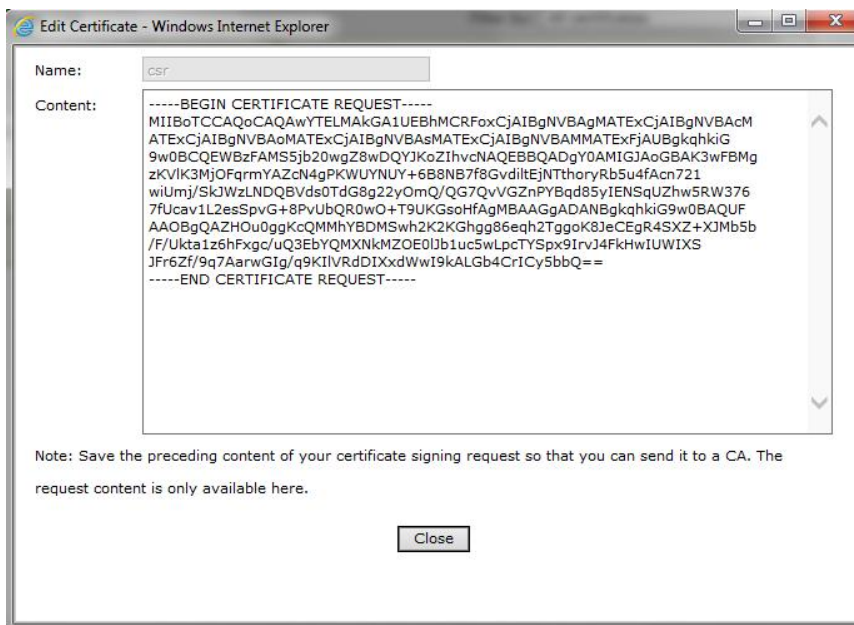
The **Add Certificate** screen appears.

4. Configure available settings.

| OPTION            | DESCRIPTION                                                                                                   |
|-------------------|---------------------------------------------------------------------------------------------------------------|
| Name              | Specify a certificate name.                                                                                   |
| Type              | Select <b>Certificate Signing Request</b> from the <b>Type</b> drop-down list.                                |
| Key length        | Select a key length for the public and private key pair. The greater the length, the stronger the encryption. |
| Country code      | Select the country where your organization resides.                                                           |
| State             | Specify the state where your organization resides.                                                            |
| Locality          | Specify the locality where your organization resides.                                                         |
| Organization      | Specify your organization.                                                                                    |
| Organization unit | Specify your organization unit.                                                                               |
| Common name       | Specify a descriptive name that identifies a certificate.                                                     |
| Email address     | Specify your email address.                                                                                   |

5. Click **Save**.

Your certificate signing request (CSR) content appears.



## 6. Copy and save the CSR content.



### Note

Send your request to a CA to sign. After your CSR is signed and returned to you, import your certificate into IMSVA.

## Importing a Certificate

If you obtained a certificate from a CA or if your CSR is signed by a CA and returned to you, import it into IMSVA.

### Procedure

1. Go to **Administration > IMSVA Configuration > Transport Layer Security**.



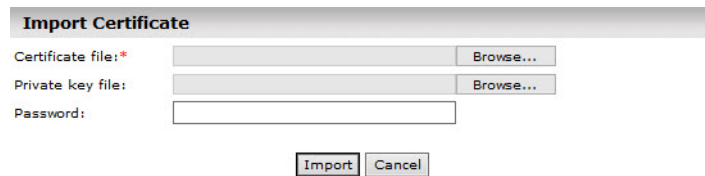
The **Transport Layer Security** screen appears with the **Messages Entering IMSVA** tab displayed by default.

2. Click the **SMTP and HTTPS Certificates** tab.

The **SMTP and HTTPS Certificates** screen appears.

3. Click **Import** under **SMTP and HTTPS Certificate List**.

The **Import Certificate** screen appears.



4. Select the certificate file and private key file that you want to import.

**Note**

IMSVA only supports certificates in PEM format and private keys using the RSA algorithm.

If you saved your certificate and private key in the same file, specify the path for **Certificate file**. IMSVA will import the certificate and private key together.

5. Optional: Specify the password to decrypt the private key file.

**Note**

The password is required only when the private key file is encrypted.

6. Click **Import**.

## Exporting a Certificate

---

### Procedure

1. Go to **Administration > IMSVA Configuration > Transport Layer Security**.

The **Transport Layer Security** screen appears with the **Messages Entering IMSVA** tab displayed by default.

2. Click the **SMTP and HTTPS Certificates** tab.

The **SMTP and HTTPS Certificates** screen appears.

3. Select a certificate to export.



#### Note

Certificate signing requests (CSRs) cannot be exported.

---

4. Click **Export** under **SMTP and HTTPS Certificate List**.

The **Export Certificate** screen appears.

**Export Certificate**

Name:

☐ Export the private key file

Password:

5. Optional: Select the **Export the private key file** check box.



#### Note

To export the private key file, specify the password to decrypt the file.

---

6. Click **Export**.
-

## Assigning a Certificate

After importing a certificate or creating a self-signed certificate, assign the certificate to a service to use it.

---

### Procedure

1. Go to **Administration > IMSVA Configuration > Transport Layer Security**.

The **Transport Layer Security** screen appears with the **Messages Entering IMSVA** tab displayed by default.

2. Click the **SMTP and HTTPS Certificates** tab.

The **SMTP and HTTPS Certificates** screen appears.

3. Select a certificate to assign to a service.



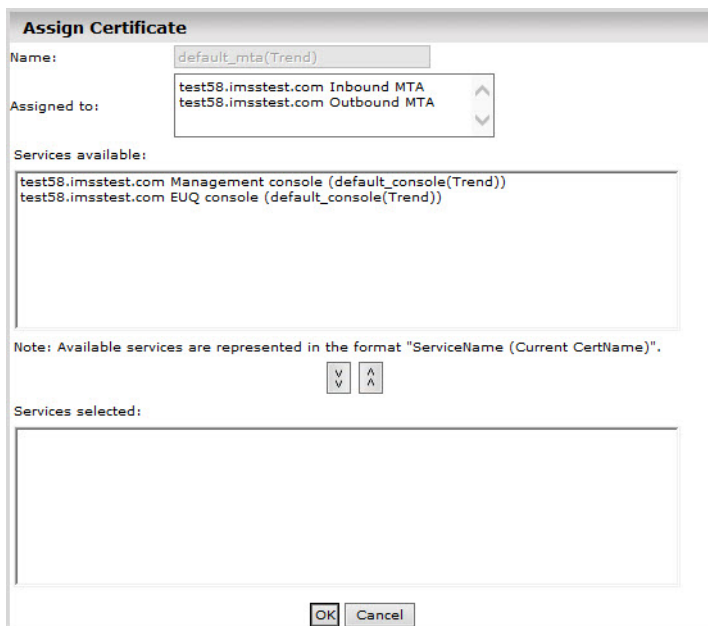
#### Note

Certificate signing requests (CSRs) cannot be assigned.

---

4. Click **Assign** under **SMTP and HTTPS Certificate List**.

The **Assign Certificate** screen appears.



The **Assign Certificate** dialog box contains the following elements:

- Name:** A text field containing `default_mta(Trend)`.
- Assigned to:** A list box with two items: `test58.imsstest.com Inbound MTA` and `test58.imsstest.com Outbound MTA`. Up and down arrow buttons are on the right.
- Services available:** A list box with two items: `test58.imsstest.com Management console (default_console(Trend))` and `test58.imsstest.com EUQ console (default_console(Trend))`.
- Note:** Available services are represented in the format "ServiceName (Current CertName)".
- Two small square buttons with 'V' and 'A' icons.
- Services selected:** An empty list box.
- Buttons:** **OK** and **Cancel** buttons at the bottom right.

5. Select one or multiple services under **Services available**.
6. Click  to add the services to **Services selected**.
7. Click **OK**.



**Note**

If the selected service has been assigned a certificate, the new certificate replaces the old one.

---

## Deleting Certificates

---

### Procedure

1. Go to **Administration > IMSVA Configuration > Transport Layer Security**.

The **Transport Layer Security** screen appears with the **Messages Entering IMSVA** tab displayed by default.

2. Click the **SMTP and HTTPS Certificates** tab.

The **SMTP and HTTPS Certificates** screen appears.

3. Select one or multiple certificates to delete.



#### Note

Certificates currently in use cannot be deleted.

---

4. Click **Delete** under **SMTP and HTTPS Certificate List**.
- 

## Trusted CA Certificates

CA certificates verify remote certificates that are presented to IMSVA. CA certificates have a dependency relationship that forms a Certificate Trust List (CTL) hierarchy. This hierarchy connects a certificate with its root CA and verifies its authenticity.

The IMSVA management console allows you to do any of the following:

- [Importing CA Certificates on page 13-24](#)
- [Exporting CA Certificates on page 13-25](#)
- [Deleting CA Certificates on page 13-26](#)

## Importing CA Certificates

### Procedure

1. Go to **Administration > IMSVA Configuration > Transport Layer Security**.

The **Transport Layer Security** screen appears with the **Messages Entering IMSVA** tab displayed by default.

2. Click the **Trusted CA Certificates** tab.

The **Trusted CA Certificates** screen appears.

#### Transport Layer Security

?

Messages Entering IMSVA
Messages Exiting IMSVA
SMTP and HTTPS Certificates
**Trusted CA Certificates**

**Trusted CA Certificate List**

☐ All 113 record(s)
 


1-15 of 113
Page 1

| <input type="checkbox"/> | Subject                                                                                       | Not Before            | Not After             | Valid |
|--------------------------|-----------------------------------------------------------------------------------------------|-----------------------|-----------------------|-------|
| <input type="checkbox"/> | C=BE, O=GlobalSign nv-sa, CN=GlobalSign Root CA                                               | 1998-09-01 07:00:00.0 | 2028-01-28 07:00:00.0 | Yes   |
| <input type="checkbox"/> | C=BE, O=GlobalSign nv-sa, CN=Trusted Root CA G2                                               | 2012-04-25 06:00:00.0 | 2027-04-25 06:00:00.0 | Yes   |
| <input type="checkbox"/> | C=BM, O=QuoVadis Limited, CN=QuoVadis Root Certification Authority                            | 2001-03-19 13:33:33.0 | 2021-03-17 13:33:33.0 | Yes   |
| <input type="checkbox"/> | C=ES, O=IPS Internet publishing Services s.l., CN=IPS CA Chained CAs Certification Authority  | 2001-12-28 19:53:58.0 | 2025-12-26 19:53:58.0 | Yes   |
| <input type="checkbox"/> | C=ES, O=IPS Internet publishing Services s.l., CN=IPS CA CLASE1 Certification Authority       | 2001-12-28 19:59:38.0 | 2025-12-26 19:59:38.0 | Yes   |
| <input type="checkbox"/> | C=ES, O=IPS Internet publishing Services s.l., CN=IPS CA CLASE3 Certification Authority       | 2001-12-28 20:01:44.0 | 2025-12-26 20:01:44.0 | Yes   |
| <input type="checkbox"/> | C=ES, O=IPS Internet publishing Services s.l., CN=IPS CA CLASEA1 Certification Authority      | 2001-12-28 20:05:32.0 | 2025-12-26 20:05:32.0 | Yes   |
| <input type="checkbox"/> | C=ES, O=IPS Internet publishing Services s.l., CN=IPS CA CLASEA3 Certification Authority      | 2001-12-28 20:07:50.0 | 2025-12-26 20:07:50.0 | Yes   |
| <input type="checkbox"/> | C=DK, O=TDC, CN=TDC OCES CA                                                                   | 2003-02-11 03:39:30.0 | 2037-02-11 04:09:30.0 | No    |
| <input type="checkbox"/> | C=ES, O=IPS Internet publishing Services s.l., CN=IPS CA Timestamping Certification Authority | 2001-12-28 20:10:18.0 | 2025-12-26 20:10:18.0 | Yes   |
| <input type="checkbox"/> | C=EU, O=AC Camerfirma SA CIF A82743287, CN=Chambers of Commerce Root                          | 2003-09-30 11:13:43.0 | 2037-09-30 11:13:44.0 | Yes   |
| <input type="checkbox"/> | C=EU, O=AC Camerfirma SA CIF A82743287, CN=Global Chambersign Root                            | 2003-09-30 11:14:18.0 | 2037-09-30 11:14:18.0 | Yes   |
| <input type="checkbox"/> | C=FI, O=Sonera, CN=Sonera Class1 CA                                                           | 2001-04-06 05:49:13.0 | 2021-04-06 05:49:13.0 | Yes   |
| <input type="checkbox"/> | C=FI, O=Sonera, CN=Sonera Class2 CA                                                           | 2001-04-06 02:29:40.0 | 2021-04-06 02:29:40.0 | Yes   |
| <input type="checkbox"/> | C=GB, O=Comodo CA Limited, CN=AAA Certificate Services                                        | 2003-12-31 19:00:00.0 | 2028-12-31 18:59:59.0 | Yes   |

☐ All 113 record(s)
 


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Page 1

Display: 15 per page

**Note**

IMSVA checks the validity of all certificates at 01:00 a.m. every day. If you find the **Valid** value for a certificate is **No**, the possible causes are:

- The certificate is not yet valid.
- The certificate has expired.
- The certificate has been revoked through the Online Certificate Status Protocol.
- The certificate has been revoked by the certificate revocation list.

Replace invalid CA certificates to ensure secure TLS verification.

3. Click **Import** under **Trusted CA Certificate List**.

The **Import Certificate** screen appears.

Import Certificate

Certificate file:  Browse...

Import Cancel

4. Select the certificate file that you want to import.

**Note**

IMSVA only supports certificates in PEM format.

If you want to import multiple CA certificates, save them into the same file and then import the file.

5. Click **Import**.

## Exporting CA Certificates

### Procedure

1. Go to **Administration > IMSVA Configuration > Transport Layer Security**.

The **Transport Layer Security** screen appears with the **Messages Entering IMSVA** tab displayed by default.

2. Click the **Trusted CA Certificates** tab.

The **Trusted CA Certificates** screen appears.

3. Select one or multiple CA certificates to export.
  4. Click **Export** under **Trusted CA Certificate List**.
- 

## Deleting CA Certificates

---

### Procedure

1. Go to **Administration > IMSVA Configuration > Transport Layer Security**.

The **Transport Layer Security** screen appears with the **Messages Entering IMSVA** tab displayed by default.

2. Click the **Trusted CA Certificates** tab.

The **Trusted CA Certificates** screen appears.

3. Select one or multiple CA certificates to delete.
  4. Click **Delete** under **Trusted CA Certificate List**.
-



# Chapter 14

## Configuring POP3 Settings

This chapter provides instructions for configuring POP3 settings.

Topics include:

- *Scanning POP3 Messages on page 14-2*
- *Enabling POP3 Scanning on page 14-3*
- *Configuring POP3 Settings on page 14-3*
- *Configuring POP3 Scan Service on page 14-5*

## Scanning POP3 Messages

In addition to SMTP traffic, IMSVA can scan POP3 messages at the gateway as clients in your network retrieve them. Even if your company does not use POP3 messages, your employees might access their personal POP3 email accounts using email clients on their computers. Gmail® or Yahoo!® accounts are some examples of POP3 email accounts. This can create points of vulnerability on your network if the messages from those accounts are not scanned.

### Understanding POP3 Scanning

The IMSVA POP3 scanner acts as a proxy server (positioned between mail clients and POP3 servers) to scan messages as the clients retrieve them.

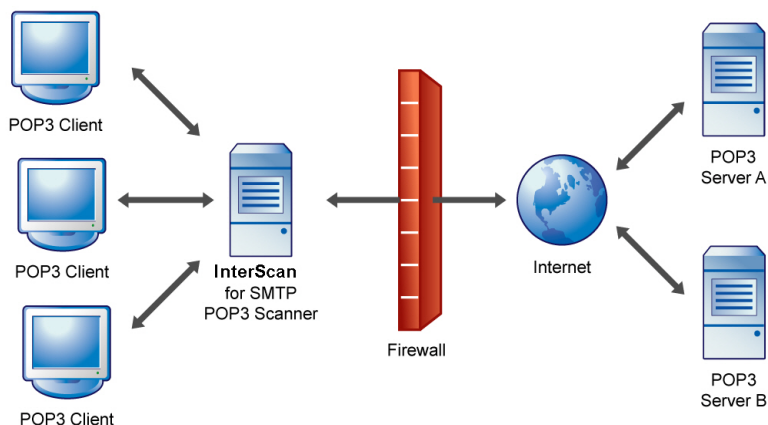


**FIGURE 14-1. Scanning POP3 messages**

To scan POP3 traffic, configure your email clients to connect to the IMSVA server POP3 proxy, which connects to POP3 servers to retrieve and scan messages.

You can set up the following connection types:

- **Generic:** Allows you to access different POP3 servers using the same port, typically 110, the default port for POP3 traffic.
- **Dedicated:** Accesses the POP3 server using a specified port. Use these connections when the POP3 server requires authentication using a secure logon, such as APOP or NTLM.

## POP3 Requirements

For IMSVA to scan POP3 traffic, a firewall must be installed on the network and configured to block POP3 requests from all the computers on the network, except the IMSVA server. This configuration ensures that all POP3 traffic passes to IMSVA through the firewall and that IMSVA scans the POP3 data flow.

## Enabling POP3 Scanning

Before IMSVA can begin scanning POP3 traffic, enable POP3 scanning and configure POP3 settings.

---

### Procedure

1. Go to **System Status**.
  2. Under **Enable Connections**, select the **Accept POP3 connections** check box.
  3. Click **Save**.
- 

## Configuring POP3 Settings

You can specify the IMSVA server ports that clients will use to retrieve POP3 traffic. The default POP3 port is 110. However, if your users need to access a POP3 server through an authenticated connection (through the APOP command or using NTLM), you may also set up a dedicated connection and assign a custom port.

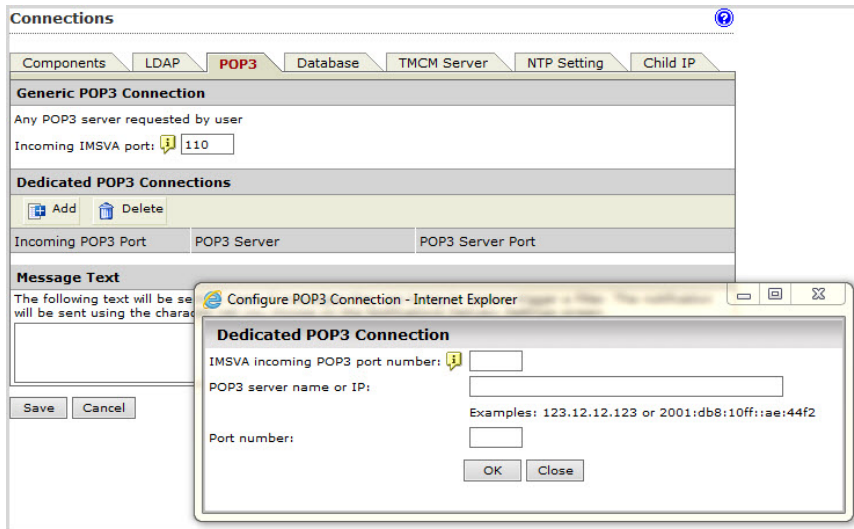
---

## Procedure

1. Go to **Administration > IMSVA Configuration > Connections**.

The **Components** tab appears by default.

2. Click the **POP3** tab.



3. Do one of the following:
    - To accept any POP3 server requested by a user, specify the incoming IMSVA port number, if it is different from the default port 110.
    - To access the POP3 server using a specific port for authentication purposes, click **Add** to create a new dedicated POP3 connection. Provide the required information and click **OK**.
  4. Click **Save**.
-

## Configuring POP3 Scan Service

---

### Procedure

1. Enable POP3 connections.
  - a. Go to **System Status**.
  - b. Click **Accept POP3 connections** under Enable Connections.
  - c. Click **Save**.
2. Configure the POP3 settings.

For details, see [Configuring POP3 Settings on page 14-3](#).
3. Configure the email client.
  - **POP3 server**: IP address of IMSVA
  - **POP3 port**: Port specified in IMSVA
  - **User account**
    - If you have specified a generic POP3 server:  
Username#remote\_server
    - If you have specified a dedicated POP3 server: Username
  - **Password**: User's password on the remote server



#### Note

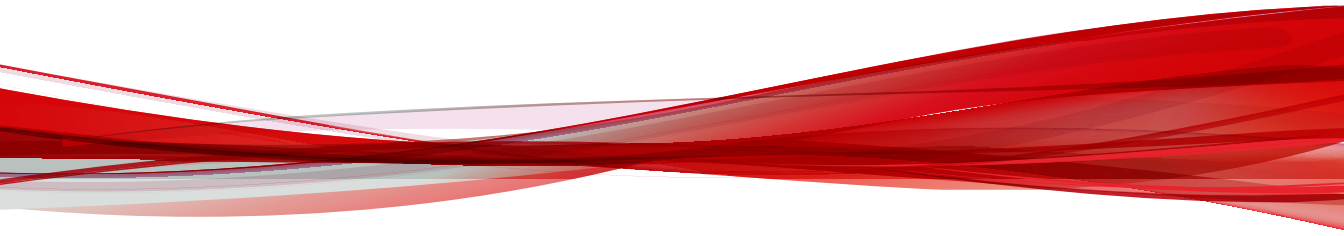
If you have specified a generic POP3 server and the POP3 port is changed at the remote POP3 server, please set the user account format to username#remote\_server#remote\_POP3\_port.

---



# **Part III**

## **IMSVA Policies**







# Chapter 15

## Managing Policies

This chapter provides instructions for creating, modifying, and managing IMSVA policies.

Topics include:

- *[About Policies on page 15-2](#)*
- *[How the Policy Manager Works on page 15-2](#)*
- *[Filter Policies that Display in the Policy List on page 15-3](#)*

## About Policies

IMSVA policies are rules that are applied to SMTP and POP3 messages. Create rules to enforce your organization's antivirus and other security goals. By default, IMSVA includes a Global Antivirus rule to help protect your network from viruses and related Internet threats. Because an antivirus rule addresses the most critical and potentially damaging types of messages, you should always keep it in the first position on the rule list so IMSVA can analyze traffic for virus content first.

The antivirus rule does not protect against spam. For the best protection against spam, configure a custom rule that includes spam in the scanning conditions, and activate Sender Filtering.



### Note

Before creating a new policy, ensure that you have defined the internal addresses. See [Configuring Internal Addresses on page 17-2](#) for more information.

---

## How the Policy Manager Works

You can create multiple rules for the following types of policies. Use policies to reduce security and productivity threats to your messaging system:

- **Antivirus:** Scans messages for viruses and other malware such as spyware and worms.
- **Others:** Scans spam, phishing, or social engineering attack messages, message content, and other attachment criteria.

An IMSVA policy has the following components:

- **Route:** A set of sender and recipient email addresses or groups, or an LDAP user or group to which the policy is applied. You can use the asterisk (\*) to create wildcard expressions and simplify route configuration.
- **Filter:** A rule or set of rules that apply to a specific route, also known as scanning conditions. IMSVA contains predefined filters that you can

use to combat common virus and other threats. You can modify these predefined filters or define your own filters.

- **Action:** The action that IMSVA performs if the filter conditions are met. Depending on the filter result, a filter action is performed that determines how the message is finally processed.

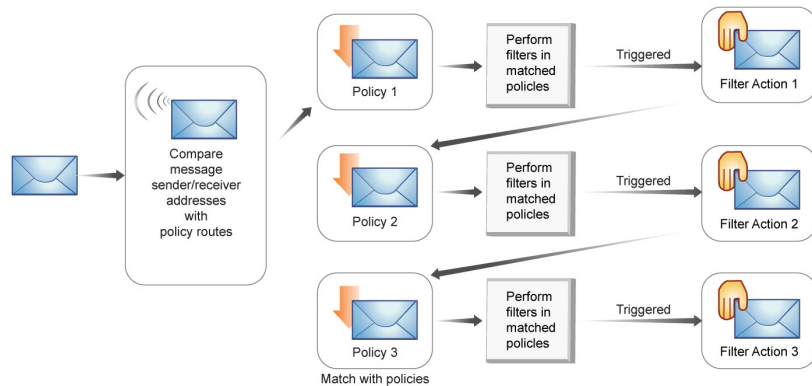


**FIGURE 15-1. Simplified policy manager process flow**



**Note**

For more information on how to create a policy, see [Configuring Policies on page 19-1](#).

## Filter Policies that Display in the Policy List

### Procedure

1. Go to **Policy > Policy List**.

The **Policy** screen appears.

**2. Configure the Filter by options:**

**a. Specify a route:**

- All routes: Displays all policies
- Incoming: Displays policies that only monitor incoming messages
- Outgoing: Displays policies that only monitor outgoing messages
- Both directions: Displays policies that monitor "incoming", "outgoing", and "incoming and outgoing" messages
- POP3: Displays policies that only monitor POP3 messages

**b. Specify the type of protection the policy provides:**

- All types
- Viruses and malware
- C&C email
- Spam, phishing and social engineering attack email
- Graymail
- Web Reputation
- Attachments
- Content
- Compliance
- Size
- Other

**c. Specify the users the policy protects:**

- All Groups
- [Find user or group]

# Chapter 16

## Configuring Common Policy Objects

This chapter provides instructions for configuring common policy objects, such as address groups, keywords, expression, compliance templates, notifications, and stamps.

Topics include:

- *[Policy Object Descriptions on page 16-2](#)*
- *[Address Groups on page 16-2](#)*
- *[Using the Keyword & Expression List on page 16-13](#)*
- *[Data Loss Prevention on page 16-25](#)*
- *[Notifications on page 16-44](#)*
- *[Stamps on page 16-49](#)*
- *[DKIM Approved List on page 16-53](#)*
- *[Web Reputation Approved List on page 16-54](#)*
- *[URL Keyword List on page 16-57](#)*

## Policy Object Descriptions

Common policy objects simplify policy management by storing configurations that can be shared across all policies.

**TABLE 16-1. Policy Objects**

| POLICY OBJECTS               | DESCRIPTION                                                                                                                                                                                      |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Address Groups               | Organize multiple email addresses into a single group.                                                                                                                                           |
| Keywords & Expressions       | Create keywords or expressions to prevent information leaks, block spam, or block derogatory messages from entering or moving in your network.                                                   |
| Compliance Templates         | Create compliance templates to prevent sensitive data from leaving your network.                                                                                                                 |
| Notifications                | Create messages to notify a recipient or email administrator that IMSVA took action on a message's attachment or that the message violated IMSVA rule scanning conditions.                       |
| Stamps                       | Create stamps to notify a recipient that IMSVA took action on a message's attachment or that the message violated scanning conditions for rules.                                                 |
| DKIM Approved List           | Messages from domains with matched DKIM signatures will not be scanned or marked as spam.                                                                                                        |
| Web Reputation Approved List | Domains appearing in the Web Reputation Approved List will not be scanned or blocked by web reputation filters. However, other filters could block messages on the Web Reputation Approved List. |
| URL Keyword List             | URLs that contain any of the specified keywords will not be sent to Virtual Analyzer for analysis.                                                                                               |

## Address Groups

An address group is a list of email addresses to which your policy applies. Address groups allow you to organize multiple email addresses into a single group and apply the same policy to every address in the group.

For example, you have identified three types of content that you do not want transmitted through your company's email system and have defined three filters (in parentheses) to detect these types of content:

- Sensitive company financial data (FINANCIAL)
- Job search messages (JOBSEARCH)
- VBS script viruses (VBSCRIPT)

Consider the following address groups within your company:

- All Executives
- All HR Department
- All IT Development Staff

The filters that you use in the policies will be applied to these groups as follows:

| ADDRESS GROUPS           | FINANCIAL   | JOBSEARCH   | VBSCRIPT    |
|--------------------------|-------------|-------------|-------------|
| All Executives           | Not applied | Applied     | Applied     |
| All HR Department        | Applied     | Not applied | Applied     |
| All IT Development Staff | Applied     | Applied     | Not applied |

Executives, HR staff, and IT developers have legitimate business reasons to send financial information, job search-related correspondence and VBS files, respectively, so you would not apply some filters to those groups.

In IMSVA, email addresses identify the different members of your organization and determine the policies that apply to them. Defining accurate and complete address groups ensures that the appropriate policies apply to the individuals in those groups.

## Creating Address Groups

An address group is a collection of user email addresses in your organization. Create an address group to apply rules to several email

addresses at the same time, rather than applying rules to each address individually.

Create address groups before creating any policies or when specifying the route during policy creation. Optionally, add an address group when modifying an existing policy. Manually create address groups or import them from a text file that contains one email address per line.

**Tip**

Although address groups can be created during policy creation, Trend Micro recommends creating address groups before you begin creating policies.

---

**Procedure**

1. Go to **Policy > Address Group**.

The **Address Groups** screen appears.

2. Click **Add**.

The **Add Address Group** screen appears.



**Add Address Group**

Address group > Add Address Group

Address groups can contain email addresses or wildcarded domains (examples: \*@example.com, \*@\*.example.com....)

Save Cancel

Address group name:

Addresses:

Add Import Delete Export

Save Cancel

3. Specify a group name.
4. Do any of the following:
  - **Add an individual address:**
    - Specify an email address and click **Add**. Optionally, use wildcard characters to specify the email address. For example, \*@hr.com.
  - **Import an address list:**
    - a. Click **Import**.  
The **Import Address Group** screen appears.
    - b. Click **Browse** to locate the file to import.
    - c. Select one of the following:
      - Merge with current list

- Overwrite current list

d. Click **Import**.

**Note**

IMSVa can import email addresses from only a text file. Ensure that the text file contains only one email address per line. Optionally, use wildcard characters to specify the email address. For example, \*@hr.com.

---

5. Click **Save**.

The **Address Groups** screen appears with the new address group appearing in the Address Groups table.

---

## Adding an Address Group During Policy Creation

Create an address group when specifying the route during policy creation by adding email addresses individually or importing them from a text file.

---

**Note**

IMSVa can import email addresses from only a text file. Ensure that the text file contains only one email address per line. Optionally, use wildcard characters to specify the email address. For example, \*@hr.com.

---

---

### Procedure

1. Go to **Policy > Policy List**.
2. Click the **Add** button.
3. Select **Antivirus** or **Other** from the drop-down list to create an antivirus rule or a rule against other threats.

The **Step 1: Select Recipients and Senders** screen appears.

4. Click the **Recipients** or **Senders** link.

The **Select addresses** screen appears.

**Add Rule** 

[Policy List](#) > New Rule

➤ **Step 1: Select Recipients and Senders** >>> Step 2 >>> Step 3 >>> Step 4

This rule will apply to

< Previous   Next >   Cancel

|            |                                     |
|------------|-------------------------------------|
| To         | <a href="#">Recipients</a>          |
| From       | <a href="#">Senders</a>             |
| Exceptions | <a href="#">Sender to Recipient</a> |

---

If recipients and senders are

- incoming
- to Anyone
- AND
- from Anyone

< Previous   Next >   Cancel

5. Select **Select Address Groups** from the drop-down list.

**Incoming Message To** ?

Add Rule > Incoming Message To

Save Cancel

**Select addresses**

☐ Anyone

☒ Any of the selected addresses

Select address groups ▼

test

Add >

| Selected |  |
|----------|--|
|          |  |
|          |  |
|          |  |
|          |  |
|          |  |

Add Edit Delete

Save Cancel

6. Click **Add**.

The **Add Address Group** screen appears.

7. Specify a group name.

8. Do one of the following:

- Add an individual address:
  - Specify an email address and click **Add** to add email addresses individually. Optionally, use wildcard characters to specify the email address. For example, \*@hr.com.
- Import an **address** list:
  - a. Click **Import**.

The **Import Address Group** screen appears.

- b. Click **Browse** to locate the file to import.
- c. Select one of the following:
  - **Merge with current list**
  - **Overwrite current list**
- d. Click **Import**.

**Note**

IMSVa can import email addresses from only a text file. Ensure that the text file contains only one email address per line. Optionally, use wildcard characters to specify the email address. For example, \*@hr.com.

---

9. Click **Save**.
- 

## Editing or Deleting an Address Group

Edit or delete an address group from the **Address Groups** screen or by editing an existing policy.

---

### Procedure

1. Go to **Policy > Address Groups**.

The **Address Groups** screen appears.

2. Do either of the following

- Edit an address group:
  - a. Click an existing address group from the Address Group table.  
The **Address Group** screen appears.
  - b. Edit the address group as required.
  - c. Click **Save**.

The **Address Groups** screen appears.

- Delete an address group:
  - a. Select the check box next to an address group.
  - b. Click **Delete**.

---

## Editing or Deleting an Address Group from an Existing Policy

---

### Procedure

1. Go to **Policy > Policy List**.
2. Click the link for an existing policy.
3. Click the **If recipients and senders are** link.
4. Click the **Recipients or Senders** link.

The **Select addresses** screen appears.

The screenshot shows a web interface for configuring an 'Incoming Message To' rule. The breadcrumb trail is 'Default spam rule > Incoming Message To'. There are 'Save' and 'Cancel' buttons at the top. The main section is titled 'Select addresses' and contains two radio buttons: 'Anyone' (unselected) and 'Any of the selected addresses' (selected). Below the radio buttons is a text input field labeled 'Enter email address' with a dropdown arrow. To the right of the input field is an 'Add >' button. On the right side of the screen is a table titled 'Selected' with two columns: email addresses and delete icons. The table contains two entries: '\*@\*' and 'test@imssrd.com'. At the bottom of the screen are 'Save' and 'Cancel' buttons.

| Selected        |  |
|-----------------|--|
| *@*             |  |
| test@imssrd.com |  |
|                 |  |
|                 |  |
|                 |  |
|                 |  |

5. Select **Select address groups** from the drop-down list.

**Incoming Message To**

Default spam rule > Incoming Message To

Save Cancel

**Select addresses**

☐ Anyone

☒ Any of the selected addresses

Select address groups ▼

test

Add >

Add Edit Delete

**Selected**

|                 |  |
|-----------------|--|
| *@*             |  |
| test@imssrd.com |  |
|                 |  |
|                 |  |
|                 |  |
|                 |  |

Save Cancel

6. Select the desired address group and click the **Edit** or **Delete** button accordingly.

## Exporting an Address Group

Export address groups to import settings into other IMSVA servers. Export address groups from existing policies or from the address group list.

### Procedure

1. Go to **Policy > Address Groups**.  
The **Address Groups** screen appears.

2. Click the address group to export.

The **Address Group** screen appears.

3. Click **Export**.

The **File Download** screen appears.

4. Click **Save**.

The **Save As** dialog box appears.

5. Specify the name and location to export the address group.

6. Click **Save**.
- 

## Exporting an Address Group from an Existing Policy

---

### Procedure

1. Go to **Policy > Policy List**.

2. Click the link for an existing policy.

3. Click the If recipients and senders are link.

4. Click the **Recipients** or **Senders** link.

The **Select addresses** screen appears.

5. Select **Select address groups** from the drop-down list.

6. Click **Edit**.

The **Address Group** screen appears.

7. Click **Export**.

The **File Download** screen appears.

8. Click **Save**.

The **Save As** dialog box appears.

9. Specify the name and location to export the address group.



## 10. Click **Save**.

---

# Using the Keyword & Expression List

Keywords are special words or phrases. Add related keywords to a keyword list to identify specific types of data. For example, "prognosis", "blood type", "vaccination", and "physician" are keywords that may appear in a medical certificate. To prevent the transmission of medical certificate files, configure IMSVA to block files containing these keywords.

Expressions are data that have a certain structure. For example, credit card numbers typically have 16 digits and appear in the format "nnnn-nnnn-nnnn-nnnn", making them suitable for expression-based detections.

IMSVa can take action on an email message based on its subject, body, header or attachment. To filter email messages by content, combine keywords or regular expressions in keyword expression lists.

## Selecting Scanning Conditions for Content

---

### Procedure

1. Create or modify an "Other" (not an Antivirus) policy.
  - For information on creating a new rule, see [Configuring Policies on page 19-1](#).
  - For information on modifying an existing rule, see [Configuring Existing Policies on page 22-1](#).
2. Under **Content**, on the **Scanning Conditions** screen, select the check boxes next to the parts of a message to which you want the content conditions to apply.
3. Click the link that specifies the part of the message to which you want to configure content conditions.

The **Keyword Expressions** screen appears with two columns:

- **Available:** Expressions available for use, but not currently in use.

- **Selected:** Expressions currently in use.
4. If configuring expressions for the header, select the check boxes next to the header items where the expression applies.
  5. Click **Add**.

The screen for managing keyword expressions appears.

6. Configure the expressions.
7. In the **Available** list, click the expression list to enable.
8. Click >>.

The expressions appear in the **Selected** list.

To keep an expression list available but temporarily prevent IMSVA from using it, click the expression in the selected list, and then click <<.

9. Click **Save** to continue to the scanning conditions selection screen.
- 

## Configuring an Expression

Configure keywords and regular expressions to enable IMSVA to scan message content. Create keywords or expressions on the **Keywords & Expressions** screen or during policy creation.



### Tip

Although keywords or expressions can be created during policy creation, Trend Micro recommends creating keywords or expressions before you begin creating policies.

---

When creating expressions:

- Start with simple expressions. Modify the expressions if they are causing false alarms or fine tune them to improve detections.
- Specify criteria when creating expressions. An expression must meet specified criteria before IMSVA subjects it to a policy.

## Creating Keywords or Expressions

---

### Procedure

1. Go to **Policy > Keywords & Expressions**.

The **Keywords & Expressions** screen appears.

2. Click **Add**.

The **Add Keyword Expression** screen appears.

3. Next to **List name**, specify a descriptive name.

4. Next to **Match**, select one of the following that specifies when IMSVA takes action:

- **Any specified:** Message content matches any of the keywords or expressions in the list.
- **All specified:** Message content matches all keywords or expressions in the list.
- **Not the specified:** Message content does not match any of the keywords or expressions in the list.
- **Only when combined score exceeds threshold:** Message content contains one or more keywords or expressions in the list. If only one keyword or expression was detected, its score must be higher than the threshold. If several keywords or expressions are detected, their combined score must be higher than the threshold.

Next to **Total message score to trigger action**, specify a number that represents the maximum score for allowed keyword expressions. When you add an expression, you can set a value for the Score.

5. To create a new keyword expression, do the following:

- a. Click **Add**.

The **Add Keyword Expression** list appears.

- b. Specify the keywords. For a partial match, specify the keyword. To specify an exact match, use **\b** before and after the keyword.

For example:

- keyword matches "keywords", "akeyword"
  - \bkeyword\b matches "keyword" only
- c. Specify a description for the added keyword expression to make it easier to understand.
  - d. Click **Save**.
6. For IMSVA to consider the capitalization of message content when it uses the filter, select the check box under **Case sensitive**.
7. If you selected **Only when combined score exceeds threshold**:
- a. Specify a threshold in the **Total message score to trigger action** field.
  - b. Select a value from the **Score** drop-down box.
8. Click **Save**.

The **Keywords & Expressions** screen appears with the new keyword or expression appearing in the table.

---

## Adding/Editing a Keyword or Expression during Policy Creation/Modification

---

### Procedure

1. Create or modify an "Other" (not an Antivirus) policy.
  - For information on creating a new rule, see [Configuring Policies on page 19-1](#).
  - For information on modifying an existing rule, see [Configuring Existing Policies on page 22-1](#).

2. Under **Content** on the **Scanning Conditions** screen, click the link that specifies the part of the message to which you want to configure content conditions.

The **Keyword Expressions** screen appears with two columns.

3. Click **Add** or **Edit** from the **Keyword Expressions** screen.

The configuration screen for keyword expression lists appears.

4. Next to **List name**, specify a descriptive name.
5. Next to **Match**, select one of the following that specifies when IMSVA takes action:
  - **Any specified:** Message content can match any of the expressions in the list.
  - **All specified:** Message content must match all the expressions in the list.
  - **Not the specified:** Message content must not match any of the expressions in the list.
  - **Only when combined score exceeds threshold:** Next to Total message score to trigger action, specify a number that represents the maximum score for allowed keyword expressions. When you add an expression, you can set a value for the Score.

6. To create an expression, click **Add**.

The **Add Keyword Expression** list appears.

7. Specify the keywords. For a partial match, specify the keyword. To specify an exact match, use **\b** before and after the keyword.

For example:

- keyword matches "keywords", "akeyword"
- \bkeyword\b matches "keyword" only

8. Specify a description for the keywords.
9. If you selected **Only when combined score exceeds threshold:**

- a. Specify a threshold in the **Total message score to trigger action field**.
    - b. Select a value from the **Score** drop-down box.
  10. Click **Save**.
  11. For IMSVA to consider the capitalization of message content when it uses the filter, select the check box under **Case sensitive**.
  12. Click **Save** to continue modifying or creating the policy.
- 

## About Regular Expressions

IMSVA treats all keyword expressions as regular expressions. IMSVA supports the following regular expressions.



### Tip

Although keywords or expressions can be created during policy creation, Trend Micro recommends creating keywords or expressions before you begin creating policies.

---

## Characters

| REGULAR EXPRESSION | DESCRIPTION                             |
|--------------------|-----------------------------------------|
| .(dot)             | Any character (byte) except newline     |
| x                  | The character 'x'                       |
| \\                 | The character '\'                       |
| \a                 | The alert (bell) character (ASCII 0x07) |

| REGULAR EXPRESSION | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| \b                 | <ol style="list-style-type: none"> <li>1. If this meta-symbol is within square brackets [] or by itself, it will be treated as the backspace character (ASCII 0x08). For example, [\b] or \b</li> <li>2. If this meta-symbol is at the beginning (or end) of a regular expression, it means any matched string of the regular expression must check whether the left (or right) side of the matched string is a boundary. For example: <ul style="list-style-type: none"> <li>• \bluck &gt; left side must be the boundary</li> <li>• luck\b &gt; right side must be the boundary</li> <li>• \bluck\b &gt; both sides must be the boundary</li> </ul> </li> <li>3. If this meta-symbol appears in the middle of a regular expression, it will cause a syntax error.</li> </ol> |
| \f                 | The form-feed character (ASCII 0x0C)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| \n                 | The newline (line feed) character (ASCII 0x0A)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| \r                 | The carriage-return character (ASCII 0x0D)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| \t                 | The normal (horizontal) tab character (ASCII 0x09)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| \v                 | The vertical tab character (ASCII 0x0B)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| \n                 | The character with octal value 0n (0 <= n <= 7)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| \nn                | The character with octal value 0nn (0 <= n <= 7)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| \mnn               | The character with octal value 0mnn (0 <= m <= 3, 0 <= n <= 7)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| \xhh               | The character with a hexadecimal value 0xhh, for example, \x20 means the space character                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## Bracket Expression and Character Classes

Bracket expressions are a list of characters and/or character classes enclosed in brackets []. Use bracket expressions to match single characters in a list, or a range of characters in a list. If the first character of the list is the caret ^ then it matches characters that are not in the list.

For example:

| EXPRESSION | MATCHES                              |
|------------|--------------------------------------|
| [abc]      | a, b, or c                           |
| [a-z]      | a through z                          |
| [^abc]     | Any character except a, b, or c      |
| [:alpha:]  | Any alphabetic character (see below) |

Each character class designates a set of characters equivalent to the corresponding standard C isXXX function. For example, [:alpha:] designates those characters for which isalpha() returns true (example: any alphabetic character). Character classes must be within bracket expression.

| CHARACTER CLASS | DESCRIPTION                                             |
|-----------------|---------------------------------------------------------|
| [:alpha:]       | Alphabetic characters                                   |
| [:digit:]       | Digits                                                  |
| [:alnum:]       | Alphabetic characters and numeric characters            |
| [:cntrl:]       | Control character                                       |
| [:blank:]       | Space and tab                                           |
| [:space:]       | All white space characters                              |
| [:graph:]       | Non-blank (not spaces, control characters, or the like) |
| [:print:]       | Like [:graph:], but includes the space character        |
| [:punct:]       | Punctuation characters                                  |
| [:lower:]       | Lowercase alphabetic                                    |
| [:upper:]       | Uppercase alphabetic                                    |
| [:xdigit:]      | Digits allowed in a hexadecimal number (0-9a-fA-F)      |



For a case-insensitive expression, [:lower:] and [:upper:] are equivalent to [:alpha:].

## Boundary Matches

| EXPRESSION | DESCRIPTION       |
|------------|-------------------|
| ^          | Beginning of line |
| \$         | End of line       |

## Greedy Quantifiers

| EXPRESSION | DESCRIPTION                                    |
|------------|------------------------------------------------|
| R?         | Matches R, once or not at all                  |
| R*         | Matches R, zero or more times                  |
| R+         | Matches R, one or more times                   |
| R{n}       | Matches R, exactly n times                     |
| R{n,}      | Matches R, at least n times                    |
| R{n,m}     | Matches R, at least n but no more than m times |

R is a regular expression.

Trend Micro does not recommend using ".\*" in a regular expression. ".\*" matches any length of letters and the large number of matches may increase memory usage and affect performance.

For example:

If the content is 123456abc, the regular expression ".\*abc" match results are:

- 12345abc
- 23455abc
- 3456abc

- 456abc
- 56abc
- 6abc
- abc

In this example, replace ".\*abc" with "abc" to prevent excessive use of resources.

## Logical Operators

| EXPRESSION | DESCRIPTION                          |
|------------|--------------------------------------|
| RS         | R followed by S (concatenation)      |
| R S        | Either R or S                        |
| R/S        | An R but only if it is followed by S |
| (R)        | Grouping R                           |

R and S are regular expressions

## Shorthand and meta-symbol

eManager provides the following shorthand for writing complicated regular expressions. eManager will pre-process expressions and translate the shorthand into regular expressions.

For example, {D}+ would be translated to [0-9]+. If a shorthand expression is enclosed in brackets (example: {}) or double-quotes, then IMSVA will not translate that shorthand expression to a regular expression.

| SHORTHAND | DESCRIPTION      |
|-----------|------------------|
| {D}       | [0-9]            |
| {L}       | [A-Za-z]         |
| {SP}      | [(),;.\<>@\[\]:] |

| SHORTHAND | DESCRIPTION |
|-----------|-------------|
| {NUMBER}  | [0-9]+      |
| {WORD}    | [A-Za-z]+   |
| {CR}      | \r          |
| {LF}      | \n          |
| {LWSP}    | [\t]        |
| {CRLF}    | (\r\n)      |
| {WSP}     | [\t\f]+     |
| {ALLC}    | .           |

eManager also provides the following meta-symbols. The difference between shorthand and meta-symbols is that meta-symbols can be within a bracket expression.

| META-SYMBOL | DESCRIPTION   |
|-------------|---------------|
| \s          | [[:space:]]   |
| \S          | [^[:space:]]  |
| \d          | [[:digit:]]   |
| \D          | [^[:digit:]]  |
| \w          | [_[:alnum:]]  |
| \W          | [^_[:alnum:]] |

## Literal string and escape character of regular expressions

To match a character that has a special meaning in regular expressions (example: +), you need to use the backslash \ escape character. For example, to match string C/C++, use the expression C\C\+\+.

Sometimes, you have to add many escape characters to your expression (example: C\C\+\+). In this situation, enclose the string C/C++ in double-

quotes (example: .REG "C/C++") then the new expression is equivalent to the old one. Characters (except \ which is an escape character) within double-quotes are literal. The following are some examples:

| EXPRESSION              | DESCRIPTION                                                                                             |
|-------------------------|---------------------------------------------------------------------------------------------------------|
| "C/C++"                 | Match string C/C++ (does not include double-quotes)                                                     |
| "Regular\x20Expression" | Match string Regular Expression (does not include double-quotes), where \x20 means the space character. |
| "[xyz]\ "foo"           | Match the literal string: [xyz]"foo                                                                     |

Change the adjacent <space> to "\x20" for the following in a regular expression:

- .AND.
- .OR.
- .NOT.
- .WILD.

## Searching for Policies Using an Expression Keyword

---

### Procedure

1. Select the **Policy Search** tab.
2. Next to **Keyword**, specify an expression keyword to search for policies.
3. Click **Query**.

A list of policies whose expressions contain the specified keyword appear. The associated expression list and expressions are also provided in the list.

---

## Data Loss Prevention

Data Loss Prevention (DLP) safeguards an organization's confidential and sensitive data—referred to as digital assets—against accidental disclosure and intentional theft. DLP allows you to:

- Identify the digital assets to protect
- Create policies that limit or prevent the transmission of digital assets through common channels, such as email and external devices
- Enforce compliance to established privacy standards

DLP evaluates data against a set of rules defined in policies. Policies determine the data that must be protected from unauthorized transmission and the action that DLP performs when it detects transmission.

### Data Identifier Types

Digital assets are files and data that an organization must protect against unauthorized transmission. Define digital assets using the following data identifiers:

- **Expressions:** Data that has a certain structure. For details, see [Expressions on page 16-25](#).
- **File attributes:** File properties such as file type and file size. For details, see [File Attributes on page 16-32](#).
- **Keywords:** A list of special words or phrases. For details, see [Keywords on page 16-35](#).

**Note**

It is not possible to delete a data identifier used in a DLP template. Delete the template before deleting the data identifier.

---

### Expressions

An expression is data that has a certain structure. For example, credit card numbers typically have 16 digits and appear in the format "nnnn-nnnn-nnnn-nnnn", making them suitable for expression-based detections.

You can use predefined and customized expressions. For details, see [Predefined Expressions on page 16-26](#) and [Customized Expressions on page 16-26](#).

## Predefined Expressions

IMSVA comes with a set of predefined expressions. These expressions cannot be modified or deleted.

IMSVA verifies these expressions using pattern matching and mathematical equations. After IMSVA matches potentially sensitive data with an expression, the data may also undergo additional validation.

For a complete list of predefined expressions, see <http://docs.trendmicro.com/en-us/enterprise/data-protection-reference-documents.aspx>.

### Viewing Settings for Predefined Expressions



#### Note

Predefined expressions cannot be modified or deleted.

---

## Procedure

1. Go to **Policy > Policy Objects > DLP Data Identifiers**.
  2. Click the **Expressions** tab.
  3. Click an expression name.
  4. View settings in the screen that opens.
- 

## Customized Expressions

Create customized expressions if none of the predefined expressions meet your requirements.

Expressions are a powerful string-matching tool. Become comfortable with expression syntax before creating expressions. Poorly written expressions can dramatically impact performance.

When creating expressions:

- Refer to the predefined expressions for guidance on how to define valid expressions. For example, when creating an expression that includes a date, refer to the expressions prefixed with "Date".
- Note that Data Loss Prevention follows the expression formats defined in Perl Compatible Regular Expressions (PCRE). For more information on PCRE, visit the following website:

<http://www.pcre.org/>

- Start with simple expressions. Modify the expressions if they are causing false alarms or fine tune them to improve detections.

Administrators can choose from several criteria when creating expressions. An expression must satisfy the chosen criteria before Data Loss Prevention subjects it to a DLP policy. For details about the different criteria options, see *Criteria for Customized Expression on page 16-27*.

**Criteria for Customized Expression**

**TABLE 16-2. Criteria Options for Customized Expressions**

| CRITERIA | RULE | EXAMPLE                                                                                                                      |
|----------|------|------------------------------------------------------------------------------------------------------------------------------|
| None     | None | All - Names from US Census Bureau<br><br>Expression: [^\w]([A-Z][a-z]{1,12}(\s?,\s? [\s])s([A-Z])\.\s)[A-Z][a-z]{1,12})[^\w] |

| CRITERIA            | RULE                                                                                                                                                                               | EXAMPLE                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Specific characters | <p>An expression must include the characters you have specified.</p> <p>In addition, the number of characters in the expression must be within the minimum and maximum limits.</p> | <p>US - ABA Routing Number</p> <p>Expression: <code>[^\d]([0123678]\d{8})</code><br/><code>[^\d]</code></p> <p>Characters: 0123456789</p> <p>Minimum characters: 9 (from 4 to 90)</p> <p>Maximum characters: 9 (from 4 to 90)</p> <hr/> <div> <b>Note</b><br/>Maximum characters must be larger than or equal to minimum characters.</div> <hr/> |



| CRITERIA | RULE                                                                                                                                                                                                                                                                         | EXAMPLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Suffix   | <p>Suffix refers to the last segment of an expression. A suffix must include the characters you have specified and contain a certain number of characters.</p> <p>In addition, the number of characters in the expression must be within the minimum and maximum limits.</p> | <p>All - Home Address</p> <p>Expression: <code>\D(\d+\s[a-z.]+\s([a-z]+\s){0,2} (lane ln street st avenue ave  road rd place pl drive dr circle cr court ct boulevard blvd)\.?[0-9a-z,#\s\.\]{0,30}[\s,][a-z]{2}\s\d{5}(-\d{4})?)[^\d-]</code></p> <p>Suffix characters: 0123456789-</p> <p>Number of characters: 5 (from 3 to 90)</p> <p>Minimum characters in the expression: 25 (from 4 to 90)</p> <p>Maximum characters in the expression: 80 (from 4 to 90)</p> <hr/> <div> <b>Note</b></div> <p>The number of characters in the expression must be within the minimum and maximum limits.</p> |

| CRITERIA                   | RULE                                                                                                                                                                                                                                                                                                               | EXAMPLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Single-character separator | <p>An expression must have two segments separated by a character. The character must be 1 byte in length.</p> <p>In addition, the number of characters left of the separator must be within the minimum and maximum limits. The number of characters right of the separator must not exceed the maximum limit.</p> | <p>All - Email Address</p> <p>Expression:<br/> <code>[^\\w.]([\\w\\.]{1,20})@[a-z0-9]{2,20}[\\.][a-z]{2,5}[a-z\\.]{0,10})[^\\w.]</code></p> <p>Separator: @</p> <p>Minimum characters to the left: 3<br/>(from 3 to 90)</p> <p>Maximum characters to the left: 15<br/>(from 4 to 90)</p> <p>Maximum characters to the right: 30<br/>(from 4 to 90)</p> <hr/> <p> <b>Note</b></p> <p>Maximum characters to the left must be larger than minimum characters to the left.</p> <p>Maximum characters to the right must be larger than maximum characters to the left.</p> |

### Creating a Customized Expression

#### Procedure

1. Go to **Policy > Policy Objects > DLP Data Identifiers**.
2. Click the **Expressions** tab.
3. Click **Add**.  
A new screen displays.
4. Specify a name for the expression. The name must not exceed 128 bytes in length.

5. Specify a description that does not exceed 255 bytes in length.
6. Specify the expression and set whether it is case-sensitive.
7. Specify the displayed data.

For example, if you are creating an expression for ID numbers, type a sample ID number. This data is used for reference purposes only and will not appear elsewhere in the product.

8. Select one of the following criteria and configure additional settings for the chosen criteria (see [Criteria for Customized Expression on page 16-27](#)):
  - None
  - Specific characters
  - Suffix
  - Single-character separator
9. Optional: Select a validator for the expression.

**Note**

Data units follow semantic rules. Not every 9-digit number is a valid social security number and not every 15- or 16-digit number is a valid credit card number. To reduce false positives, expression validators check if the extracted data units follow these rules.

---

10. Test the expression against actual data.

For example, if the expression is for a national ID, type a valid ID number in the **Test data** text box, click **Test**, and then check the result.

11. Click **Save**.

**Note**

Save the settings only if the testing was successful. An expression that cannot detect any data wastes system resources and may impact performance.

---

**Note**

Optionally, copy a predefined expression and edit the copy to create your customized expression.

---

### Importing Customized Expressions

Use this option if you have a properly-formatted .xml file containing the expressions. Generate the file by exporting the expressions from either the IMSVA server you are currently accessing or from another IMSVA server.

---

### Procedure

1. Go to **Policy > Policy Objects > DLP Data Identifiers**.
2. Click the **Expressions** tab.
3. Click **Import** and then locate the .xml file containing the expressions..
4. Click **Import**.

A message appears, informing you if the import was successful.

---

**Note**

Every customized expression is identified by its **name** field in the .xml file. This name is a unique internal name that does not display on the management console.

If the file contains a customized expression that already exists, IMSVA overwrites the existing expression. To retain the existing expression, change its internal name before importing the expression file.

---

### File Attributes

File attributes are specific properties of a file. Use two file attributes when defining data identifiers: file type and file size. For example, a software development company may want to limit the sharing of the company's software installation package to the R&D department, whose members are

responsible for the development and testing of the software. In this case, the IMSVA administrator can create a policy that blocks the transmission of executable files that are 10 to 40 MB in size to all departments except R&D.

Trend Micro recommends combining file attributes with other DLP data identifiers for a more targeted detection of sensitive files because file attributes, by themselves, are poor identifiers of sensitive files. Continuing the preceding example, third-party software installation packages shared by other departments will most likely be blocked.

For a complete list of supported file types see <http://docs.trendmicro.com/en-us/enterprise/data-protection-reference-documents.aspx>.

## Creating a File Attribute List

---

### Procedure

1. Go to **Policy > Policy Objects > DLP Data Identifiers**.
2. Click the **File Attributes** tab.
3. Click **Add**.  
A new screen displays.
4. Specify a name for the file attribute list. The name must not exceed 128 bytes in length.
5. Specify a description that does not exceed 255 bytes in length.
6. Next to **Except flag**, select either of the following:
  - **Except:** The selected file types will be excluded.
  - **Not except:** The selected file types will be included.
7. Select your preferred true file types.
8. If a file type you want to include is not listed, select **File extensions** and then specify the file type's extension. IMSVA checks files with the specified extension but does not check their true file types. Guidelines when specifying file extensions:

- Each extension must start with an asterisk (\*), followed by a period (.), and then the extension. The asterisk is a wildcard, which represents a file's actual name. For example, \*.pol matches 12345.pol and test.pol.
  - You can include wildcards in extensions. Use a question mark (?) to represent a single character and an asterisk (\*) to represent two or more characters. See the following examples:
    - \*.m matches the following files: ABC.dem, ABC.prm, ABC.sdc
    - \*.m\*r matches the following files: ABC.mgdr, ABC.mtp2r, ABC.mdmr
  - Be careful when adding an asterisk at the end of an extension as this might match parts of a file name and an unrelated extension. For example: \*.do\* matches abc.doctor\_john.jpg and abc.donor12.pdf.
  - Use semicolons (;) to separate file extensions. There is no need to add a space after a semicolon.
9. Specify the minimum and maximum file size in bytes (1 bytes to 2 GB).
10. Click **Save**.

**Note**

Optionally, copy an existing file attribute list and edit the copy to create another file attribute list.

---

## Importing a File Attribute List

Use this option if you have a properly-formatted .xml file containing the file attribute lists. Generate the file by exporting the file attribute lists from either the IMSVA server you are currently accessing or from another IMSVA server.

---

## Procedure

1. Go to **Policy > Policy Objects > DLP Data Identifiers**.
2. Click the **File Attributes** tab.
3. Click **Import** and then locate the .xml file containing the file attribute lists.
4. Click **Import**.

A message appears, informing you if the import was successful.



### Note

Every file attribute list is identified by its **name** field in the .xml file. This name is a unique internal name that does not display on the management console.

If the file contains a file attribute list that already exists, IMSVA overwrites the existing file attribute list. To retain the existing file attribute list, change its internal name before importing the file attribute file.

---

## Keywords

Keywords are special words or phrases. Add related keywords to a keyword list to identify specific types of data. For example, "prognosis", "blood type", "vaccination", and "physician" are keywords that may appear in a medical certificate. If you want to prevent the transmission of medical certificate files, you can use these keywords in a DLP policy and then configure IMSVA to block files containing these keywords.

Combine commonly used words to form meaningful keywords. For example, combine "end", "read", "if", and "at" to form keywords found in source codes, such as "END-IF", "END-READ", and "AT END".

You can use predefined and customized keyword lists. For details, see [Predefined Keyword Lists on page 16-36](#) and [Customized Keyword Lists on page 16-37](#).

## Predefined Keyword Lists

IMSVA comes with a set of predefined keyword lists. These keyword lists cannot be modified or deleted. Each list has built-in conditions that determine if the template should trigger a policy violation.

For details about the predefined keyword lists in IMSVA, see <http://docs.trendmicro.com/en-us/enterprise/data-protection-reference-documents.aspx>.

## How Keyword Lists Work

### Number of Keywords Condition

Each keyword list contains a condition that requires a certain number of keywords be present in a document before the list will trigger a violation.

The number of keywords condition contains the following values:

- **All:** All of the keywords in the list must be present in the document.
- **Any:** Any one of the keywords in the list must be present in the document.
- **Specific number:** There must be at least the specified number of keywords in the document. If there are more keywords in the document than the number specified, a violation will trigger.

### Distance Condition

Some of the lists contain a “distance” condition to determine if a violation is present. “Distance” refers to the amount of characters between the first character of one keyword and the first character of another keyword. Consider the following entry:

**First Name:** \_John\_ **Last Name:** \_Smith\_

The **Forms - First Name, Last Name** list has a “distance” condition of fifty (50) and the commonly used form fields of “First Name” and “Last Name”.



In the example above, a violation will trigger as the number of characters between the “F” in First Name and the “L” in Last Name is equal to eighteen (18).

For an example of an entry that would not trigger a violation, consider the following:

The **first name of our new employee from Switzerland is John. His** last name is Smith.

In this example, the number of characters between the "f" in "first name" and the "l" in "last name" is sixty-one (61). This exceeds the distance threshold and does not trigger a violation.

### Customized Keyword Lists

Create customized keyword lists if none of the predefined keyword lists meet your requirements.

A keyword list must meet specified criteria before IMSVA subjects it to a DLP policy. Choose one of the following criteria for each keyword list:

- **Any keyword**
- **All keywords**
- **All keywords within <x> characters**
- **Combined score for keywords exceeds threshold**

For details about the criteria rules, see [Customized Keyword List Criteria on page 16-37](#).

#### Customized Keyword List Criteria

**TABLE 16-3. Criteria for a Keyword List**

| CRITERIA     | RULE                                                          |
|--------------|---------------------------------------------------------------|
| Any keyword  | A file must contain at least one keyword in the keyword list. |
| All keywords | A file must contain all the keywords in the keyword list.     |

| CRITERIA                                      | RULE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| All keywords within <x> characters            | <p>A file must contain all the keywords in the keyword list. In addition, the number of characters from the beginning of the first keyword to the beginning of the last keyword must be within &lt;x&gt; characters.</p> <p>For example, your 3 keywords are WEB, DISK, and USB and the number of characters you specified is 20.</p> <p>If IMSVA detects all keywords in the order DISK, WEB, and USB, the number of characters from the "D" (in DISK) to the "U" (in USB) must be 20 characters or less.</p> <p style="padding-left: 40px;">The following data matches the criteria: DISK####WEB###USB</p> <p style="padding-left: 40px;">The following data does not match the criteria:<br/>DISK*****WEB****USB(21 characters between "D" and "U")</p> <p>When deciding on the number of characters, remember that a small number, such as 10, will usually result in faster scanning time but will only cover a relatively small area. This may reduce the likelihood of detecting sensitive data, especially in large files. As the number increases, the area covered also increases but scanning time might be slower.</p> |
| Combined score for keywords exceeds threshold | <p>A file must contain one or more keywords in the keyword list. If only one keyword was detected, its score must be higher than the threshold. If there are several keywords, their combined score must be higher than the threshold.</p> <p>Assign each keyword a score of 1 to 10. A highly confidential word or phrase, such as "salary increase" for the Human Resources department, should have a relatively high score. Words or phrases that, by themselves, do not carry much weight can have lower scores.</p> <p>Consider the scores assigned to keywords when configuring the threshold. For example, if you have five keywords and three of those keywords are high priority, the threshold can be equal to or lower than the combined score of the three high priority keywords. This means that the detection of these three keywords is enough to treat the file as sensitive.</p>                                                                                                                                                                                                                                 |

### Creating a Keyword List

## Procedure

1. Go to **Policy > Policy Objects > DLP Data Identifiers**.

2. Click the **Keyword Lists** tab.
3. Click **Add**.

A new screen displays.
4. Specify a name for the keyword list. The name must not exceed 128 bytes in length.
5. Specify a description that does not exceed 255 bytes in length.
6. Choose one of the following criteria and configure additional settings for the chosen criteria:
  - **Any keywords**
  - **All keywords**
  - **All keywords within <x> characters**
  - **Combined score for keywords exceeds threshold**
7. To manually add keywords to the list:
  - a. Specify a keyword that is 3 to 40 bytes in length and set whether it is case-sensitive.
  - b. Click **Add**.
8. To delete keywords, select the keywords and click **Delete**.
9. Click **Save**.

**Note**

Optionally, copy a predefined keyword list and edit the copy to create your customized keyword list.

---

### Importing a Keyword List

Use this option if you have a properly-formatted .xml file containing the keyword lists. Generate the file by exporting the keyword lists from either the IMSVA server you are currently accessing or from another IMSVA server.

---

## Procedure

1. Go to **Policy > Policy Objects > DLP Data Identifiers**.
2. Click the **Keyword Lists** tab.
3. Click **Import** and then locate the .xml file containing the keyword lists.
4. Click **Import**.

A message appears, informing you if the import was successful.



### Note

Every customized keyword list is identified by its **name** field in the .xml file. This name is a unique internal name that does not display on the management console.

If the file contains a customized keyword list that already exists, IMSVA overwrites the existing keyword list. To retain the existing keyword list, change its internal name before importing the keyword file.

---

## DLP Compliance Templates

A Data Loss Prevention (DLP) compliance template combines DLP data identifiers and logical operators (And, Or, Except) to form condition statements. Only files or data that meet a certain condition statement will be subject to a DLP policy.

For example, a file must be a Microsoft Word file (file attribute) AND must contain certain legal terms (keywords) AND must contain ID numbers (expressions) for it to be subject to the "Employment Contracts" policy. This policy allows Human Resources personnel to transmit the file through printing so that the printed copy can be signed by an employee. Transmission through all other possible channels, such as email, is blocked.

Optionally create your own templates if you have configured DLP data identifiers. You can also use predefined templates. For details, see [Customized DLP Templates on page 16-41](#) and [Predefined DLP Templates on page 16-41](#).

**Note**

It is not possible to delete a template used in a DLP policy. Remove the template from the policy before deleting it.

---

## Predefined DLP Templates

Trend Micro comes with a set of predefined templates that you can use to comply with various regulatory standards. These templates cannot be modified or deleted.

For a detailed list on the purposes of all predefined templates, and examples of data being protected, see <http://docs.trendmicro.com/en-us/enterprise/data-protection-reference-documents.aspx>.

## Customized DLP Templates

Create your own templates if you have configured data identifiers. A template combines data identifiers and logical operators (And, Or, Except) to form condition statements.

For more information and examples on how condition statements and logical operators work, see *Condition Statements and Logical Operators on page 16-41*.

## Condition Statements and Logical Operators

IMSVa evaluates condition statements from left to right. Use logical operators carefully when configuring condition statements. Incorrect usage may lead to an erroneous condition statement producing unexpected results.

See the examples in the following table.

**TABLE 16-4. Sample Condition Statements**

| CONDITION STATEMENT                                                                  | INTERPRETATION AND EXAMPLE                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [Data Identifier 1] <b>And</b> [Data Identifier 2] <b>Except</b> [Data Identifier 3] | A file must meet [Data Identifier 1] and [Data Identifier 2] but not [Data Identifier 3].<br><br>For example:<br><br>A file must be [an Adobe PDF document] and must contain [an email address] but should not contain [all of the keywords in the keyword list]. |
| [Data Identifier 1] <b>Or</b> [Data Identifier 2]                                    | A file must meet [Data Identifier 1] or [Data Identifier 2].<br><br>For example:<br><br>A file must be [an Adobe PDF document] or [a Microsoft Word document].                                                                                                    |
| <b>Except</b> [Data Identifier 1]                                                    | A file must not meet [Data Identifier 1].<br><br>For example:<br><br>A file must not be [a multimedia file].                                                                                                                                                      |

As the last example in the table illustrates, the first data identifier in the condition statement can have the "Except" operator if a file must not meet all of the data identifiers in the statement. In most cases, the first data identifier does not have an operator.

## Creating a Template

### Procedure

1. Go to **Policy > Policy Objects > DLP Compliance Templates**.
2. Click **Add**.  
  
A new screen displays.
3. Specify a name for the template. The name must not exceed 128 bytes in length.
4. Specify a description that does not exceed 255 bytes in length.

5. Specify a digital asset definition using one of the following:
  - **Expression:** Select **Expression**, select an expression name, and set the number of times the expression must occur before IMSVA blocks the message from leaving your network.
  - **Keyword:** Select **Keyword** and select a keyword list. IMSVA prevents the transmission of files if they contain keywords in the selected list.
  - **File Attributes:** Select **File Attributes** and select a file attribute list. IMSVA prevents the transmission of files if they match the attributes specified in the list.

**Note**

If the **File Attributes** option is not shown, no file attribute list exists. To create a file attribute list, see [Creating a File Attribute List on page 16-33](#).

---

6. Click + to add more entries.
7. Select a logical operator for each entry.

**Note**

Use logical operators carefully when configuring condition statements. Incorrect usage leads to an erroneous condition statement that will likely produce unexpected results. For examples of correct usage, see [Condition Statements and Logical Operators on page 16-41](#).

---

8. Click **Add**.

The digital asset definition appears in the **Compliance Template Definition** list.
9. Add multiple digital asset definitions if required.
10. Click **Save**.

The compliance template appears in the compliance template list.

---

## Importing Templates

Use this option if you have a properly-formatted .xml file containing the templates. Generate the file by exporting the templates from either the IMSVA server you are currently accessing or from another IMSVA server.

---

### Procedure

1. Go to **Policy > Policy Objects > DLP Compliance Templates**.
2. Click **Import** and then locate the .xml file containing the templates.
3. Click **Import**.

A message appears, informing you if the import was successful.

---



#### Note

Every customized template is identified by its **name** field in the .xml file. This name is a unique internal name that does not display on the management console.

If the file contains a customized template that already exists, IMSVA overwrites the existing template. To retain the existing template, change its internal name before importing the template file.

---

## Notifications

To notify a recipient or an email administrator that IMSVA performed action on a message's attachment or that the message violated IMSVA rule scanning conditions, send a notification.

Although you can create notifications during policy creation, Trend Micro recommends creating notifications before you begin creating policies.



For details about adding to the policy notifications list, see [Adding or Modifying Policy Notifications on page 16-45](#).

## Sending Policy Notifications

---

### Procedure

1. Create or modify a policy.
  - For information on creating a new rule, see [Configuring Policies on page 19-1](#).
  - For information on modifying an existing rule, see [Configuring Existing Policies on page 22-1](#).
2. Under **Monitor**, on the **Select Actions** screen during policy modification or creation, click **Send policy notifications**.

The **Notifications** screen appears with two columns:

- **Available:** Notification messages available for use, but not currently in use.
  - **Selected:** Notification messages currently in use.
3. Add or modify a notification.
  4. In the **Available** list, click the notifications you want to enable.
  5. Click >>.

The notifications appear in the **Selected** list.

To keep a notification available but temporarily prevent IMSVA from using it, click the notification in the selected list, and then click <<.

6. Click **Save** to continue creating or modifying the policy.
- 

## Adding or Modifying Policy Notifications

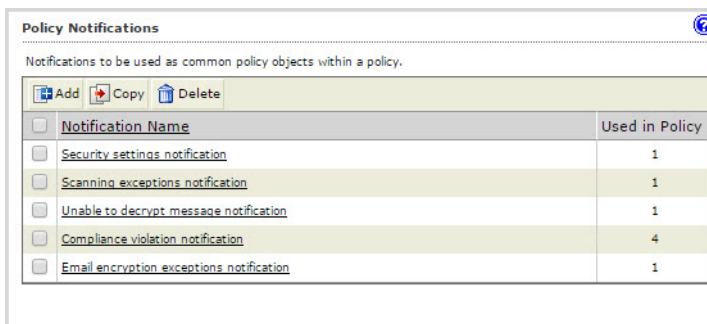
Create policy notifications from the **Policy Notifications** screen or during policy creation or modification.

---

## Procedure

1. Go to **Policy > Policy Notifications**.

The **Policy Notifications** screen appears.



2. Click **Add**.

The **Add/Edit Policy Notification** screen appears.

**Policy Notifications** ?

[Policy Notifications](#) > Add Policy Notification

**Notification Settings**

Notification Name:

From:

To:

☐ Original mail sender

☐ Original mail recipient

**Email**

Subject:

Message: ☐ Attach the message [Variables list](#)

**SNMP Trap**

☒ Disable ☐ 0, Default

Message:

3. Configure the following:

- **Name:** Specify a descriptive name for the notification.
- **From:** Specify a sender email address.
- **To:** Specify the receiver email addresses and select the check boxes next to Original Mail Sender and/or Original Mail Recipient. Separate each address with a semicolon (;).
- **Subject:** Specify the subject line of the notification.

- **Message:** Specify the notification message.
4. To send the original message as an attachment of the notification message, select the check box next to **Attach the message**.
  5. To see the types of variables you can include in the message, click **Variables list**.
  6. To send an SNMP trap, configure the following:
    - a. Click one of the following:
      - **Disable (first radio button):** Avoid sending any trap IDs.
      - **Second radio button:** Select one of the default SNMP traps.
      - **Third radio button:** Specify a custom trap ID.
    - b. **Message:** Specify the notification message.
  7. Click **Save**.
- 

## Adding or Modifying a Policy Notification During Policy Creation or Modification

---

### Procedure

1. Create or modify a policy.
  - For information on creating a new rule, see [Configuring Policies on page 19-1](#).
  - For information on modifying an existing rule, see [Configuring Existing Policies on page 22-1](#).
2. Under **Monitor** on the **Select Actions** screen, click **Send policy notifications**.

The **Notifications** screen appears with two columns:

- **Available:** Notification messages available for use, but not currently in use.

- **Selected:** Notification messages currently in use.
3. Click **Add** or **Edit**.

The configuration screen for the notification appears.
  4. To send an email notification, configure the following:
    - **Name:** Specify a descriptive name for the notification.
    - **From:** Specify a sender email address.
    - **To:** Specify the receiver email addresses and select the check boxes next to Original Mail Sender and/or Original Mail Recipient. Separate each address with a semicolon (;).
    - **Subject:** Specify the subject line of the notification.
    - **Message:** Specify the notification message.
  5. To send the original message as an attachment of the notification message, select the check box next to **Attach the message**.
  6. To see the types of variables you can include in the message, click **Variables list**.
  7. To send an SNMP trap, configure the following:
    - a. Click one of the following:
      - **Disable (first radio button):** Avoid sending any trap IDs.
      - **Second radio button:** Select one of the default SNMP traps.
      - **Third radio button:** Specify a custom trap ID.
    - b. **Message:** Specify the notification message.
  8. Click **Save**.
- 

## Stamps

To notify a recipient that IMSVA took action on a message's attachment or that the message violated scanning conditions for rules, add a stamp to the beginning or end of the message body.

**Tip**

Add stamps only for messages that the intended recipients will eventually receive. If you are configuring a rule to delete messages that violate your scanning conditions, adding a stamp is not necessary.

---

## Using Stamps in a Policy

---

### Procedure

1. Create or modify a policy.
    - For information on creating a new rule, see [Configuring Policies on page 19-1](#).
    - For information on modifying an existing rule, see [Configuring Existing Policies on page 22-1](#).
  2. While creating or modifying a policy on the **Select Actions** screen, select the check box next to **Insert stamp in body** or **Insert stamp in clean email messages** under **Modify**.
- 

## Creating Stamps

Create stamps from the Stamps screen or during policy creation or modification.

---

**Note**

While stamps can be created during policy creation, Trend Micro recommends creating stamps before you begin creating policies.

---

### Procedure

1. Go to **Policy > Stamps**.  
The **Stamps** screen appears.

**Stamps** 

Stamps are used as common policy objects within a policy on the actions page.

 Add  Copy  Delete

| <input type="checkbox"/> Stamps Name                          | Used in Policy |
|---------------------------------------------------------------|----------------|
| <input type="checkbox"/> <a href="#">Unscanned_attachment</a> | 1              |

2. Click **Add** or select a stamp to edit from the **Stamp** list.

The **Add/Edit Stamp** screen appears.

**Stamps** 

[Stamps](#) > New Stamp

Name:

Insert at: ☒ End of message body  
☐ Beginning of message body

Text: [Variables list](#)

☒ Do not stamp TNEF-encoded messages or digitally signed messages.

3. Next to **Name**, specify the name of the stamp
4. Next to **Insert at**, click **End of message body** or **Beginning of message body**.
5. Under **Text**, specify the message. To see the types of variables you can include in the message, click **Variables list**.
6. To prevent possible damage to Transport Neutral Encapsulation Format (TNEF)-encoded messages or digitally signed messages, select **Do not stamp TNEF-encoded messages or digitally signed messages**.

7. Click **Save** to return to the Stamps screen.
- 

## Creating a Stamp During Policy Creation or Modification

---

### Procedure

1. Create or modify a policy.
    - For information on creating a new rule, see [Configuring Policies on page 19-1](#).
    - For information on modifying an existing rule, see [Configuring Existing Policies on page 22-1](#).
  2. Under **Modify** on the **Select Actions** screen, click **Edit** next to **Insert stamp in body** or **Insert stamp in clean email messages**.

The **Stamps** screen appears showing the available stamps.
  3. To add a new stamp, click **Add**. To modify an existing stamp, click it in the list box and then click **Edit**.

An edit screen appears.
  4. Next to **Name**, specify the name of the stamp.
  5. Next to **Insert at**, click **End of message body** or **Beginning of message body**.
  6. Under **Text**, specify the message. To see the types of variables you can include in the message, click **Variables list**.
  7. To prevent possible damage to TNEF-encoded messages or digitally signed messages, select **Do not stamp TNEF-encoded messages or digitally signed messages**.
  8. Click **Save** to return to the **Stamps** screen.
  9. Click **Done**.
-



## DKIM Approved List

DomainKeys Identified Mail (DKIM) is a signature/cryptography-based email authentication that provides a method for validating a message during its transfer over the Internet. By validating that the message comes from the source it is claiming, IMSVA provides spam and phishing protection for your network. Validated messages are not marked as spam and are not scanned for spam. This means false positives are reduced as is the need for scanning messages from a source that is known to be safe.

## Enabling the DKIM Approved List

### Procedure

1. Go to **Policy > Approved List**.

The **DKIM Approved List** tab appears.

The screenshot shows the 'Approved List' configuration window. The 'DKIM Approved List' tab is active. The interface includes a checkbox labeled 'Enable the DKIM Approved List for use in policies.' which is currently unchecked. Below the checkbox is a text input field for 'Domain name:' with an 'Add >>' button next to it. An example is provided: 'Example: \*.domain.com or domain.com'. To the right of the text input is a list area with 'Delete', 'Import', and 'Export' buttons. At the bottom of the window are 'Save' and 'Cancel' buttons.

2. Select the **Enable the DKIM Approved List for use in policies** check box.
3. Populate the list with known safe domains.

**Manually:**

- a. Specify a domain name.
- b. Click **Add**.

**Import a list:**

---

**Note**

When importing a text file for the DKIM Approved List, only one domain should be on each line.

---

- a. Click **Import**.  
The **Import DKIM Approved List** appears.
- b. Click **Browse** to locate the file to import.
- c. Select one of the following:
  - Merge with current list
  - Overwrite current list
- d. Click **Import**.

4. Click **Save**.
- 

## Web Reputation Approved List

Web reputation protects users on your network from malicious URLs in messages. Web reputation does this by scanning URLs in messages and then comparing the URL with known malicious URLs in the Trend Micro Web reputation database. The Web Reputation Approved List provides administrators with a way to bypass scanning and blocking of URLs which the administrator knows to be safe.

**Note**

IMSAVA will not rewrite URLs in the Web Reputation Approved List though you have enabled Time-of-Click Protection.

---

## Enabling the Web Reputation Approved List

---

### Procedure

1. Create or modify an "Other" (not an Antivirus) policy.
    - For information on creating a new rule, see [Configuring Policies on page 19-1](#).
    - For information on modifying an existing rule, see [Configuring Existing Policies on page 22-1](#).
  2. Under **Web Reputation** on the Scanning Conditions screen, click **Web Reputation settings**.

The **Web Reputation Settings** screen appears.
  3. Select the **Enable the use of the Web Reputation Approved List** check box.
  4. Click **Save**.

The **Step 2: Select Scanning Conditions** screen appears.
  5. Continue configuring the policy.
- 

## Adding to the Web Reputation Approved List

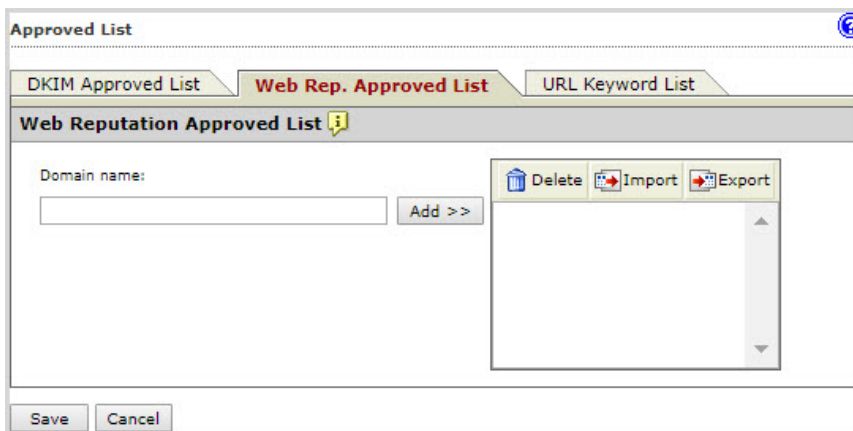
Domains added to the Web Reputation Approved List will not be scanned by IMSVA. Only add domains that you know are safe.

---

### Procedure

1. Go to **Policy > Approved List**.
2. Click the **Web Rep. Approved List** tab.

The **Web Rep. Approved List** screen appears.



3. Populate the Web Reputation Approved List in one of the following ways:

**Manually:**

- a. Specify a domain. For example: \*.trendmicro.com.
- b. Click **Add>>**.

**Import a list:**



**Note**

When importing a text file for the Web Reputation Approved List, only one domain should be on each line.

- a. Click **Import**.

The **Import Web Reputation Approved List** appears.

- b. Click **Browse** to locate the file to import.
- c. Select one of the following:
  - Merge with current list
  - Overwrite current list

- d. Click **Import**.
4. Click **Save**.

## URL Keyword List

URLs that contain any of the specified keywords are considered one-click URLs and will not be sent to Virtual Analyzer.

### Configuring the URL Keyword List

#### Procedure

1. Go to **Policy > Approved List**.
2. Click the **URL Keyword List** tab.

The **URL Keyword List** screen appears.

3. Configure the URL keyword list in one of the following ways:

#### Manually:

- a. Specify a keyword, for example, **subscription**.

- b.** Click **Add>>**.

**Import a list:**



**Note**

URL keywords are not case sensitive.

Specify one keyword per line.

---

- a.** Click **Import**.  
The **Import Keywords** screen appears.
- b.** Click **Browse** to locate the file to import.
- c.** Select one of the following:
- Merge with current list
  - Overwrite current list
- d.** Click **Import**.
-

# Chapter 17

## Configuring Internal Addresses

This chapter provides instructions for configuring internal addresses.

Topics include:

- *[Configuring Internal Addresses on page 17-2](#)*

## Configuring Internal Addresses

For reporting and rule creation, IMSVA uses internal addresses to determine which policies and events are Inbound and Outbound:

- For incoming messages, specify the recipient's address, which is in range of the internal addresses. For example: internal address is `imsstest.com`, valid recipients include `jim@imsstest.com`, `bob@imsstest.com`.
- For outgoing messages, specify the sender's address, which is in range of the internal addresses. For example: internal address is `imsstest.com`, valid senders include `jim@imsstest.com`, `bob@imsstest.com`.
- For both incoming and outgoing messages, the rule applies to senders or recipients that match the mail address.

## Setting Internal Addresses

---

### Procedure

1. Go to **Policy > Internal Addresses**.



The **Internal Addresses** screen appears.

**Internal Addresses**

Note: Please specify a "known" set of users or domains. These shall encompass Incoming and Outgoing addresses for reporting and rule-creation purposes.

**Internal domains and usergroups**

Enter domain  >>

| Selected |
|----------|
| test.com |
|          |
|          |
|          |
|          |
|          |
|          |

- Under **Internal Domains and User Groups**, select one of the following from the drop-down box:

- **Enter domain:** Specify a domain and click >>. Do not type the "@" or user name parts of an email address. For example, domainname or domainname1.domainname2 are valid; user@domainname is invalid.



#### Note

You can use wildcards for domain names. For example, use \*.domain.com to include all sub-domains for "domain.com". However, you cannot use two asterisks in the user name or domain name portion of the address, or use the "@" symbol. \*.\*@domain.com and user@\*.\* are both invalid.

- **Search for LDAP group:** A screen for searching the LDAP groups appears. Specify an LDAP group name (not an individual LDAP user) that you want to search in the text box and click **Search**. The search result appears in the list box. To add it to the Selected list, click the LDAP group and then click >>.

**Note**

When searching an LDAP group for the internal addresses, you can use wildcards at the beginning and/or at the end of the LDAP group if you have specified Microsoft Active Directory or Sun iPlanet Directory as the LDAP server.

---

3. To import domains from a file, click **Import from File** and select the file.

**Tip**

Import both the exact domain and all sub-domains for best results.

---

The following shows sample content of a domain list text file:

- domain.com: Imports the exact domain
- \*.domain.com: Imports all sub-domains
- domain.org: Imports the exact domain

**Note**

The import file must be a text file containing one domain per line. You can use wildcards when specifying the domain.

---

4. Click **Save**.
-

## Exporting Internal Addresses

---

### Procedure

1. Go to **Policy > Internal Addresses**.

The **Internal Addresses** screen appears.

2. Click **Export**.

A **File Download** dialog box appears.

3. Click **Save**.

A **Save As** dialog box appears.

4. Specify the location and file name.

5. Click **Save**.
-



# Chapter 18

## Using Trend Micro Smart Protection

This chapter discusses Trend Micro™ smart protection solutions and describes how to set up the environment required to use the solutions.

- *About Trend Micro Smart Protection on page 18-2*
- *Smart Protection Sources on page 18-5*
- *Selecting a Scan Method on page 18-7*
- *Using Web Reputation Services on page 18-10*

## About Trend Micro Smart Protection

Trend Micro provides next-generation content security through smart protection services. By processing threat information in the cloud, Trend Micro smart protection reduces demand on system resources and eliminates time-consuming signature downloads.

Smart protection services include:

### **File Reputation Services**

File reputation decouples the pattern file from the local scan engine and conducts pattern file lookups to the Trend Micro Smart Protection Network. High performance content delivery networks ensure minimum latency during the checking process and enable more immediate protection.

Trend Micro continually enhances file reputation to improve malware detection. Smart Feedback allows Trend Micro to use community feedback of files from millions of users to identify pertinent information that helps determine the likelihood that a file is malicious.

### **Web Reputation Services**

With one of the largest reputation databases in the world, Trend Micro web reputation tracks the credibility of domains based on factors such as age, historical location changes, and suspicious activity indicators discovered through malware behavior analysis. Trend Micro assigns reputation scores to specific pages instead of classifying entire sites to increase accuracy and reduce false positives.

Web reputation technology prevents users from:

- Accessing compromised or infected sites
- Communicating with Command & Control (C&C) servers used in cybercrime

## The Need for a New Solution

The conventional threat handling approach uses malware patterns or definitions that are delivered to a client on a scheduled basis and stored locally. To ensure continued protection, new updates need to be received and reloaded into the malware prevention software regularly.

While this method works, the continued increase in threat volume can impact server and workstation performance, network bandwidth usage, and the overall time it takes to delivery quality protection. To address the exponential growth rate of threats, Trend Micro pioneered a smart approach that off-loads the storage of malware signatures to the cloud. The technology and architecture used in this effort allows Trend Micro to provide better protection to customers against the volume of emerging malware threats.

## Trend Micro™ Smart Protection Network™

Trend Micro delivers File Reputation Services and Web Reputation Services to IMSVA through the Trend Micro™ Smart Protection Network™.

The Trend Micro Smart Protection Network is a next-generation cloud-client content security infrastructure designed to protect customers from security risks and web threats. It powers both on-premise and Trend Micro hosted solutions to protect users whether they are on the network, at home, or on the go. The Smart Protection Network uses lighter-weight clients to access its unique in-the-cloud correlation of email, web, and file reputation technologies, as well as threat databases. Customers' protection is automatically updated and strengthened as more products, services and users access the network, creating a real-time neighborhood watch protection service for its users.

The Smart Protection Network provides File Reputation Services by hosting the majority of the malware pattern definitions. A client sends scan queries to the Smart Protection Network if its own pattern definitions cannot determine the risk of a file.

The Smart Protection Network provides Web Reputation Services by hosting web reputation data previously available only through Trend Micro hosted servers. A client sends web reputation queries to the Smart Protection Network to check the reputation of websites that a user is attempting to

access. The client correlates a website's reputation with the specific web reputation policy enforced on the computer to determine whether access to the site is allowed or blocked.

For more information on the Smart Protection Network, visit:

[www.smartprotectionnetwork.com](http://www.smartprotectionnetwork.com)

## Smart Feedback

Trend Micro Smart Feedback provides continuous communication between Trend Micro products and its 24/7 threat research centers and technologies. Each new threat identified through every single customer's routine reputation check automatically updates all Trend Micro threat databases, blocking any subsequent customer encounters of a given threat.

By continuously processing the threat intelligence gathered through its extensive global network of customers and partners, Trend Micro delivers automatic, real-time protection against the latest threats and provides "better together" security, much like an automated neighborhood watch that involves the community in the protection of others. Because the gathered threat information is based on the reputation of the communication source, not on the content of the specific communication, the privacy of a customer's personal or business information is always protected.

Samples of information sent to Trend Micro:

- File checksums
- Websites accessed
- File information, including sizes and paths
- Names of executable files

You can terminate your participation to the program anytime from the web console.



**Tip**

You do not need to participate in Smart Feedback to protect your computers. Your participation is optional and you may opt out at any time. Trend Micro recommends that you participate in Smart Feedback to help provide better overall protection for all Trend Micro customers.

For more information on the Smart Protection Network, visit:

<http://www.smartprotectionnetwork.com>

## Smart Protection Sources

Trend Micro delivers File Reputation Services and Web Reputation Services to IMSVA and smart protection sources.

Smart protection sources provide File Reputation Services by hosting the majority of the virus/malware pattern definitions. IMSVA clients host the remaining definitions. The client sends scan queries to smart protection sources if its own pattern definitions cannot determine the risk of the file. Smart protection sources determine the risk using identification information.

Smart protection sources provide Web Reputation Services by hosting web reputation data previously available only through Trend Micro hosted servers. The client sends web reputation queries to smart protection sources to check the reputation of websites that a user is attempting to access. The client correlates a website's reputation with the specific web reputation policy enforced on the endpoint to determine whether access to the site will be allowed or blocked.

The smart protection source to which the client connects depends on the client's location. Clients can connect to either Trend Micro Smart Protection Network or Smart Protection Server.

## Smart Protection Sources Compared

The following table highlights the differences between Smart Protection Network and Smart Protection Server.

**TABLE 18-1. Smart Protection Sources Compared**

| <b>BASIS OF COMPARISON</b>  | <b>SMART PROTECTION SERVER</b>                                                                              | <b>TREND MICRO SMART PROTECTION NETWORK</b>                                                                                                                     |
|-----------------------------|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Purpose                     | Designed and intended to localize smart protection services to the corporate network to optimize efficiency | A globally scaled, Internet-based infrastructure that provides smart protection services to clients who do not have immediate access to their corporate network |
| Administration              | IMSVA administrators install and manage these smart protection sources                                      | Trend Micro maintains this source                                                                                                                               |
| Pattern update source       | Trend Micro ActiveUpdate server                                                                             | Trend Micro ActiveUpdate server                                                                                                                                 |
| Client connection protocols | HTTP and HTTPS                                                                                              | HTTPS                                                                                                                                                           |

## Adding Smart Protection Servers

Smart Protection Servers localize smart protection services to the corporate network to reduce outbound traffic and optimize efficiency.

You can add, delete, import and export Smart Protection Servers on the IMSVA management console. The steps outlined below detail the process to add a Smart Protection Server.

---

### Procedure

1. Go to **Policy > Smart Protection**.

The **Security Risk Scan** tab appears by default.

2. Click the **Local Sources** tab.

3. Click **Add**.

The **Add Smart Protection Server** screen appears.

4. Specify Smart Protection Server settings.

- a. Specify the server IP address or FQDN.
- b. To use File Reputation Services, select **File Reputation Port** and specify the port number.
- c. To use Web Reputation Services, select **Web Reputation Port** and specify the port number.
- d. Specify the preference value.

**Note**

Preference represents the priority of a Smart Protection Server. The lower the preference value, the higher the priority.

---

5. Specify the proxy setting.
    - a. Select the **Enable** check box to enable the proxy server.
    - b. Specify the proxy server IP address or FQDN, port number, user name and password.
  6. Click **Test Connection** to verify Smart Protection Server connection.
  7. Click **Save**.
- 

## Selecting a Scan Method

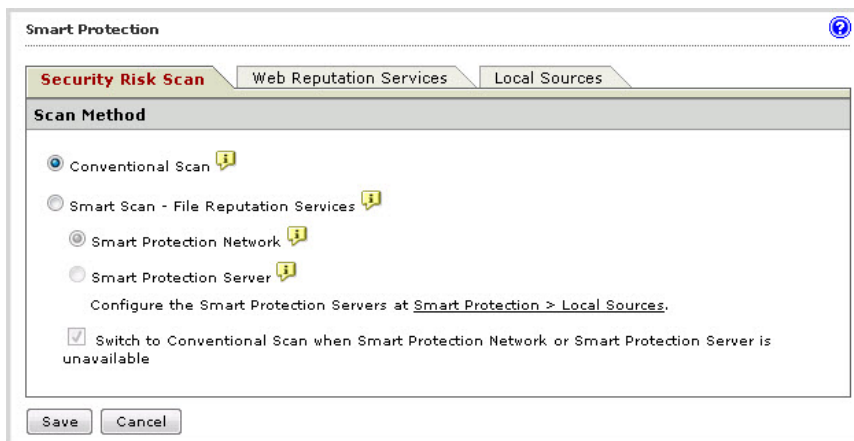
IMSVA provides two scanning methods for detection of malware and other security threats.

---

### Procedure

1. Go to **Policy > Smart Protection**.

The **Security Risk Scan** tab appears by default.



2. Select one of the following malware scanning methods.

- **Conventional Scan:** Conventional scan leverages anti-malware and antispyware components stored locally.

The Virus Pattern contains information that helps IMSVA identify the latest virus/malware and mixed threat attacks. Trend Micro creates and releases new versions of the Virus Pattern several times a week, and any time after the discovery of a particularly damaging virus/malware.

- **Smart Scan - File Reputation Services:** Smart Scan leverages threat signatures that are stored in the cloud.

When in Smart Scan mode, IMSVA uses the Smart Scan Agent Pattern to check for security risks. The Smart Scan Agent Pattern is updated daily by Trend Micro and delivers the same protection provided by conventional anti-malware and antispyware patterns. If the Smart Scan Agent Pattern cannot determine the reputation of a file, IMSVA queries the Smart Protection Network to provide up-to-date protection.

**Note**

Conventional Scan is the default scan method.

---

3. If you selected **Smart Scan - File Reputation Services**, select one of the following smart protection sources:
- **Smart Protection Network:** If you select this option, specify the proxy server setting.
  - **Smart Protection Server:** If you select this option, click the **Local Sources** tab and configure Smart Protection Servers.
- 

**Note**

IMSVA reverts to Conventional Scan when the selected Smart Protection Network or Smart Protection Server is unavailable. IMSVA can switch to Conventional Scan only when you have selected **Switch to Conventional Scan when Smart Protection Network or Smart Protection Server is unavailable**.

---

4. Click **Save**.
- 

**Note**

If Smart Scan is selected, IMSVA attempts to connect to the Smart Protection Network or Smart Protection Server immediately after you click **Save**. If a connection is not established, IMSVA does not save your settings. Reselect a scan method and save your settings again.

IMSVA automatically restarts the Scan Service whenever you change your scan method settings.

---

When IMSVA reverts to Conventional Scan, you can query system event logs for each scanner's connection timeouts. If any scanner has frequent connection timeouts, check the network configuration of that scanner. For details on querying system event logs, see [Querying System Event Logs on page 26-12](#).

You can configure IMSVA to send notifications for scan method changes. For details on configuring notifications, see [Configuring Event Criteria and Notification Message on page 28-4](#).

## Using Web Reputation Services

If you have configured Smart Scan on the **Security Risk Scan** tab, the smart protection environment has been set up, and IMSVA is ready to use File Reputation Services. To allow IMSVA to use Web Reputation Services, configure web reputation policies.

---

### Procedure

1. Go to **Policy > Smart Protection**.

The **Security Risk Scan** tab appears by default.

2. Click the **Web Reputation Services** tab.
3. Select one of the following smart protection sources:
  - **Smart Protection Network:** If you select this option, go to **Administration > Proxy** and configure the proxy setting.
  - **Smart Protection Server:** If you select this option, click the **Local Sources** tab and configure Smart Protection Servers.



#### Note

IMSVa reverts to Smart Protection Network when the selected Smart Protection Server is unavailable. IMSVA can switch back to Smart Protection Network only when you have selected **Switch to Smart Protection Network when Smart Protection Server is unavailable**.

If you select the **Do not make external queries to Smart Protection Network** check box, IMSVA requests Smart Protection Servers not to make queries outside of the users' environment.

- 
4. Click **Save**.
-

# Chapter 19

## Configuring Policies

This chapter provides instructions for creating, modifying, and managing IMSVA policies.

Topics include:

- *[Adding Policies on page 19-2](#)*
- *[Specifying a Route on page 19-2](#)*
- *[Specifying Scanning Conditions on page 19-10](#)*
- *[Specifying Actions on page 19-37](#)*
- *[Finalizing a Policy on page 19-44](#)*

## Adding Policies

Before creating a policy, ensure that you have configured the internal addresses.

For information, see [Configuring Internal Addresses on page 4-13](#).

Creating a policy involves the following steps:

- Step 1: [Specifying a Route on page 19-2](#)
- Step 2: [Specifying Scanning Conditions on page 19-10](#)
- Step 3: [Specifying Actions on page 19-37](#)
- Step 4: [Finalizing a Policy on page 19-44](#)



### Tip

To prevent a virus leak and ensure that all messages are scanned, Trend Micro recommends that you maintain at least one antivirus rule that applies to all messages. Select all messages from the drop-down list when specifying the route for an antivirus rule.

---

## Specifying a Route

The first step in adding a rule is configuring the following:

### Route

A specific "To" and "From" combination that includes a recipient's and sender's email addresses, LDAP users or groups, or address groups. You can also configure exceptions to a route.

### Route type

The direction of SMTP traffic, POP3 traffic, or all traffic.



## Adding a Route

**Procedure**

1. Go to **Policy > Policy List**.  
The **Policy List** screen appears.
2. Click **Add** and select one of the following:
  - Antivirus
  - Other

| OPTION    | DESCRIPTION                                                                                                                                                                                         |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Antivirus | The <b>Antivirus</b> rule scans messages for viruses and other malware such as spyware and worms.                                                                                                   |
| Other     | The <b>Other</b> rule scans for spam, phishing or social engineering attack messages, graymail messages, message content, encrypted messages, regulatory compliance, and other attachment criteria. |

The **Add Rule** screen appears.

3. Select the policy route type from the drop-down list next to **This rule will apply to**.

- **incoming messages**
- **outgoing messages**
- **both incoming and outgoing messages**
- **POP3**
- **all messages**

#### 4. Select the recipients and senders:

- For incoming messages, specify the recipient's address, which is in range of the internal addresses.

For example: internal address is `imsstest.com`, valid recipients include `jim@imsstest.com`, `bob@imsstest.com`.

- For outgoing messages, specify the sender's address, which is in range of the internal addresses.

For example: internal address is `imsstest.com`, valid senders include `jim@imsstest.com`, `bob@imsstest.com`.

- For both incoming and outgoing messages, the rule applies to senders or recipients that match the mail address.



#### Note

- a. You can use the asterisk wildcard when specifying an email address. For more information, see [Using the Asterisk Wildcard on page 22-14](#).
- b. If you selected POP3, you cannot configure the route. The rule applies to all POP3 routes.
- c. If you selected "all messages" for a rule, the rule also applies to messages from any sender to any recipient.

#### 5. Click **Next**.

The **Step 2: Select Scanning Conditions** screen appears.

## Editing a Route

### Procedure

1. Go to **Policy > Policy List**.

The **Policy List** screen appears.

2. Click the name of the policy to edit.

The **Summary** screen for the policy appears.

3. Click **Edit** for **If recipients and senders are**.

The **Recipients and Senders** screen for the policy appears.

4. Select the policy route type from the drop-down list next to **This rule will apply to**.

- **incoming messages**
- **outgoing messages**
- **both incoming and outgoing messages**
- **POP3**
- **all messages**



**Note**

The **This rule will apply to** option cannot be modified in the Global DKIM Enforcement rule.

---

5. Select the recipients and senders:

- For incoming messages, specify the recipient's address, which is in range of the internal addresses.

For example: internal address is `imsstest.com`, valid recipients include `jim@imsstest.com`, `bob@imsstest.com`.

- For outgoing messages, specify the sender's address, which is in range of the internal addresses.

For example: internal address is `imsstest.com`, valid senders include `jim@imsstest.com`, `bob@imsstest.com`.

- For both incoming and outgoing messages, the rule applies to senders or recipients that match the mail address.

**Note**

- a. You can use the asterisk wildcard when specifying an email address. For more information, see [Using the Asterisk Wildcard on page 22-14](#).
  - b. If you selected POP3, you cannot configure the route. The rule applies to all POP3 routes.
  - c. If you selected "all messages" for a rule, the rule also applies to messages from any sender to any recipient.
- 

**6. Click Save.**

---

## Route Configuration

A route is a specific "To" and "From" combination that includes a recipients' and sender's email addresses, LDAP users or groups, or address groups. You can also configure exceptions to a route.

Senders and recipients must be on the Internal Addresses list if you select incoming messages or outgoing messages when adding a new rule or modifying an existing rule:

- If you are configuring an outgoing message, the Internal Address list applies to the senders.
- If you are configuring an incoming message, the Internal Address list applies to the recipients.

Use the asterisk wildcard to include a range of email addresses. For example:

- `user@company.com`: Adds only the specific address.
- `*@company.com`: Adds any user at the domain `company.com`.
- `*@*.company.com`: Adds any user at any subdomain of `company.com`.

For example, `user1@accounting.company.com` would be included.

- `*@*`: Adds all addresses.

## Configuring the Route

---

### Procedure

1. Click one of the following on the **Select Recipients and Senders** screen:
  - **Recipients or Senders:** Appears if you selected incoming messages or outgoing messages.
  - **Users:** Appears if you selected both incoming and outgoing messages.
2. Under **Select addresses**, select one of the following:
  - **Anyone:** Select this option to remove any restriction on the recipients or senders.
  - **Enter address:** Specify the email address to add.
  - **Search for LDAP users or groups:** Specify the LDAP user or group name and click **Search**. The results display in the list box.
  - **Select address groups:** All existing address groups appear in the list. If there are a large number of email addresses that you will reuse for routes in several rules, click **Add** to create an address group.
3. If you are adding an email address or email address group, click **Add>**. If you are adding an LDAP or address group, click it in the list box, and then click **Add>**.
4. To remove any email address or email address group from the **Selected** list, click the trash can icon.
5. Click **Save**.

**Tip**

When selecting an LDAP group as the recipients or senders, you can use wildcards at the beginning and/or at the end of the LDAP group if you have specified Microsoft Active Directory or Sun iPlanet Directory as the LDAP server.

To prevent virus leaks and ensure that all messages are scanned, Trend Micro recommends that you maintain at least one antivirus rule that applies to all messages at all times.

---

## Configuring Exceptions for Routes

Do the following to configure a route that applies to a large group of senders or recipients, with the exception of specific users, to whom the rule does not apply.

---

### Procedure

1. Click the link next to **Exceptions**, on the **Add Rule** screen.

The Exceptions screen appears for the specified traffic direction (incoming, outgoing, both incoming and outgoing messages, or all messages).

2. Under **Select addresses**, select one of the following for both the **From** and **To** addresses:
  - **Enter email address:** Type the email address to add.
  - **Search for LDAP users or groups:** Type the LDAP user or group name and click **Search**. The results display in the list box.
  - **Select address groups:** All existing address groups appear in the list. If there are a large number of email addresses that you will reuse for routes in a rule, click **Add** to create an address group.
3. If you are adding an email address, click **Add>**. If you are adding an LDAP or address group, click it in the list box, and then click **Add>**.

4. To remove a sender-recipient pair from the list, click the trash can icon.
  5. Click **Save**.
- 

## Specifying Scanning Conditions

After selecting the senders and recipients for a new rule or modifying the senders and recipients for an existing rule, configure the rules to filter message traffic based on several conditions.

The scanning conditions vary depending on whether **Antivirus** rules or **Other** rules are being created.

---

### Procedure

1. Select the check boxes as desired, from the **Step 2: Select Scanning Conditions** screen. The categories of scanning conditions for the **Antivirus** and the **Other** rule types vary as follows:
  - Antivirus rule
    - a. **Files to Scan:** Set the default method for scanning messages and specific file types containing viruses and other malware.

**TABLE 19-1. Files to Scan**

| SETTING                                           | DESCRIPTION                                                                                    |
|---------------------------------------------------|------------------------------------------------------------------------------------------------|
| All scannable files                               | Attempt to scan all files.                                                                     |
| IntelliScan: uses "true file type" identification | Use IntelliScan to identify malicious code that can be disguised by a harmless extension name. |



| SETTING             | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Specific file types | <p>Select the check box next to one of the following types of file extensions to scan:</p> <ul style="list-style-type: none"> <li>• <b>Application and executables:</b> Click the link and select the sub-types to scan.</li> <li>• <b>Documents:</b> Click the link and select the sub-types to scan.</li> <li>• <b>Compressed files:</b> Click the link and select the sub-types to scan.</li> <li>• <b>Specified file extensions:</b> Specify the extension in the text box. You do not need to type the period (.) before the extension. You can also use an asterisk wildcard for the extension.</li> </ul> |

- b. **IntelliTrap Settings:** Scan compressed files for viruses/malware and send samples to TrendLabs for investigation.
    - **IntelliTrap:** Scan message attachments that contain real-time compressed executable files.
    - **Send the IntelliTrap samples to TrendLabs:** IMSVA can automatically send messages with attachments that IntelliTrap catches to TrendLabs.
  - c. **Spyware/Grayware Scan:** Scan for other types of threats such as spyware and adware.
- Other rule
    - a. Select one of the following next to **Take rule action when**, which specifies when IMSVA can take action on a message:
      - **all conditions matched (AND):** When a message matches all of the conditions.
      - **any conditions matched (OR):** When a message matches any of the conditions.
    - b. **C&C Email:** Scans message headers for email addresses known to be used as C&C callback addresses.

This filter is not triggered if the detected email addresses are found in the **C&C Email Approved List**. For more information, see [Configuring the C&C Email Approved List on page 19-14](#).

**Note**

Selecting **C&C Email** and the filter relation **all conditions matched (AND)** disables the **Phishing/Social Engineering Attack/Spam** and **Web Reputation** filters.

---

- c. **Phishing/Social Engineering Attack/Spam:** Scans messages identified as spam, phishing, and social engineering attack. Spam messages are generally unsolicited messages containing mainly advertising content. Phishing messages, on the other hand, originate from senders masquerading as trustworthy entities. Social engineering attack refers to suspicious behavior that the Antispam Engine detects in several parts of an email transmission.
  - **Spam detection settings:** Click the link to select a level of spam protection and configure lists for approved and blocked senders and text exemptions.
  - **Phishing email**
  - **Social Engineering Attack Protection**
- d. **Web Reputation:** Scans URLs in messages to protect against phishing and other malicious websites.
- e. **Graymail:** Scans messages against the ERS score to identify graymail messages.
- f. **Attachment:** Scans messages for file attachments that match the selected criteria, such as attachments with specific extensions or belonging to a certain true file type.
  - **Name or extension:** Click the link to configure filter settings for specific file names or extension names.
  - **MIME content type:** Click the link to configure filter settings for MIME content types.

- **True file type:** Click the link to configure filter settings for common executable, document, image, media, and compressed files and configure whether to send these types of files to Virtual Analyzer for analysis.
  - **Size is {>, <, =} {size} {MB, KB, B}:** Select to filter attachments of a size that is more than, less than, or equal to a certain number of bytes, kilobytes, or megabytes. Specify a number that represents the file size.
  - **Number is {>, <, =} {number}:** Select to filter the number of attachments that is more than, less than, or equal to a certain number. Specify a number that represents the total number of attachments for each message.
  - **Password protected zip files (unscannable files):** Select to filter password protected zip files that cannot be scanned by IMSVA.
- g. **Size:** Scans messages that match the specified message size.
- **Message size is {>, <, =} {size} {MB, KB}:** Select to filter messages of a size that is more than, less than, or equal to a certain number of kilobytes, or megabytes. Specify a number that represents the message size.
- h. **Content:** Scans messages containing the keyword expressions that match those expressions specified in the subject, body, header, or attachment keyword expressions links.
- **Subject keyword expressions:** Click the link to manage your expression lists.
  - **Subject is blank:** Select to filter messages without a subject. Sometimes spam messages do not contain subject lines.
  - **Body keyword expressions:** Click the link to manage your expression lists.

- **Header keyword expressions:** Click the link to manage your expression lists. Headers include Subject, To, From, CC, and other headers that you can specify.
  - **Attachment keyword expressions:** Click the link to manage your expression lists. Attachments include attachment names and attachment content.
  - i. **Data Loss Prevention:** Scans messages to protect against data leakage using regulatory compliance templates. Click **DLP compliance templates** to see the list of available templates.
  - j. **Others:** Scans messages in which the number of recipients match the specified number. Also scans messages that are received within the specified time range.
    - **Number of recipients is {>, <, =} {number}:** Select to filter the number of recipients. Specify a number that represents the total number of recipients for each message.
    - **Received time range:** Click the link to select a day and time within which a message was received.
    - **Unable to decrypt messages:** Select to filter encrypted messages that cannot be decrypted by IMSVA.
    - **Spoofed internal messages:** Click the link to create or modify a trusted internal IP address list.
- 

## Configuring the C&C Email Approved List

IMSVA does not identify messages from senders and recipients in this list as C&C email. The list can contain a maximum of 5,000 entries.

---



### Note

IMSVA identifies addresses used in the message header and not the SMTP session.

---

## Procedure

1. On the **Scanning Conditions** screen, select **C&C email settings**.
2. Click **C&C email settings**.

The **C&C Email Settings** screen appears.

3. Select **Enable C&C Email Approved List**.
4. Add email addresses using any of the following methods:
  - a. Type an email address in the box then click **Add**.

The address appears in the list.



### Note

You can use the asterisk character to add multiple addresses. For details, see [Using the Asterisk Wildcard on page 22-14](#).

- b. Import email addresses from a text file on a local host to the IMSVA server.

**Note**

Each line in the file should contain only one email address that follows any of the valid formats. IMSVA does not import incorrectly formatted email addresses.

If the list already contains email addresses, choose whether to merge the new entries or overwrite the existing ones.

---

5. Optional: Export the address list as a text file.
  6. Optional: Send a message to [cnc\\_falsepositive@trendmicro.com](mailto:cnc_falsepositive@trendmicro.com) to notify Trend Micro about email addresses that may have been misclassified.
- 

**Note**

For more information, see *[Submitting Potentially Misclassified Email Addresses to Trend Micro on page 19-16](#)*.

---

7. Click **Save**.
- 

## Submitting Potentially Misclassified Email Addresses to Trend Micro

---

### Procedure

1. Take screenshots of the management console, error messages, or any notification you receive from IMSVA.
2. Create a new email message with the following information:
  - Subject line: [IMSV 9.1 SP1] Potentially misclassified email address
  - Email body:
    - Specify the email address.
    - Explain why it is potentially misclassified.

- Attachments:
  - Screenshots that you took in Step 1.
  - Email message(s) incorrectly identified as malicious



#### Important

Do not use the **Forward** command as it deletes essential information from the message header. Instead, send the message as an attachment (.msg or .eml).

---

3. Send the email message to: [cnc\\_falsepositive@trendmicro.com](mailto:cnc_falsepositive@trendmicro.com).
- 

## Selecting Scanning Conditions for Spam

Spam criteria includes a spam catch rate/detection threshold setting and configurable lists for approved and blocked senders and for text exemption rules.

---

### Procedure

1. Under **Phishing/Social Engineering Attack/Spam** on the scanning conditions selection screen for the Other rule type, select the check box next to **Spam detection settings**.

2. Click **Spam detection settings**.

The **Spam Detection Settings** screen appears.

3. To enable spam scanning, select the check box next to **Select a spam catch rate** or specify a detection threshold.

If you do not select this check box, IMSVA will not label any messages that violate this rule as spam. You can, however, still take actions on any senders in the Blocked Senders list below.

4. Select one of the following spam catch rates or specify a detection threshold.
  - **High:** Catches more spam. Select a high catch rate if too much spam is getting through to your clients.

- **Medium:** Catches an average amount of spam (the default selection).
- **Low:** Catches less spam. Select a low catch rate if IMSVA is tagging too many legitimate messages as spam.
- **Specify a detection threshold:** Specify a threshold value (between 3.0 and 10.0) that represents how critically IMSVA analyzes messages to determine if they are spam.

**Note**

A higher threshold value means that a message must be very "spam-like" for IMSVA to consider it spam. This decreases the spam catch rate, but it also results in a lower number of false positives. If IMSVA is tagging too many legitimate messages as spam (too many false positives), specify a higher threshold value.

A lower threshold value means that a message only needs to be slightly "spam-like" for IMSVA to consider it spam. This increases the spam catch rate, but it also results in a higher number of false positives. If IMSVA is letting too much spam through to your clients as legitimate messages, specify a lower threshold value.

- 
5. Click **DKIM approved list** to enable or disable use of the DKIM Approved List. IMSVA does not scan or mark messages as spam, if the messages come from domains appearing in the DKIM approved list.
  6. Select the check boxes next to any of the following lists to enable them:
    - **Approved sender list:** Prevents IMSVA from identifying messages from senders in this list as spam.
    - **Blocked sender list:** Forces IMSVA to identify messages from senders in this list as spam.
    - **Text exemption list:** Prevents IMSVA from identifying messages that contains any of the text in this list as spam.



**Note**

For instructions on configuring the lists, see [Configuring Approved and Blocked Sender Lists on page 19-19](#).

---

7. Click **Save** to continue selecting scanning conditions.
- 

## Configuring Approved and Blocked Sender Lists

To provide added flexibility to spam filtering scanning conditions, IMSVA provides the following lists:

### Approved sender list

Prevents IMSVA from identifying messages from senders in this list as spam.

### Blocked sender list

Forces IMSVA to identify messages from senders in this list as spam.

Configure the lists when you select spam scanning conditions.

---

## Procedure

1. Select the check box next to **Approved sender list** or **Blocked sender list**.
2. To add addresses manually, do the following:
  - a. Next to **Email address**, specify the address. To add multiple addresses, use the asterisk (\*) wildcard.
  - b. Click **Add**.The address appears in the list.
3. To import an address group from a file on a local host to the IMSVA server, do the following:
  - a. Click **Import**.
  - b. Click **Browse** and locate the file. A dialog box appears.

- c. Click **Open**.
    - d. If addresses are already in the list, choose whether to merge them or overwrite them with the imported list.
    - e. Click **Import**.
  - 4. To export an address group as a file on the IMSVA server, do the following:
    - a. Click **Export**. A Save dialog box appears.
    - b. Click **Save**.
    - c. Specify a name for the file and a location to save the file.
    - d. Click **Save**. The file saves to the location and a dialog appears.
    - e. Click **Close**.
  - 5. Click **Save**.
- 

## Configuring Spam Text Exemption Rules

IMSVa does not identify any of the text in the text exemption list as spam. Configure rules for this list if you want users to always receive messages that contain specific keywords.

Use regular expressions to define the conditions. Type a backslash character before any of the following characters:

`\ | ( ) { } [ ] ^ $ * + . ?`

---

### Procedure

1. When configuring the spam scanning conditions, select the **Exclude messages matching text exemption rules** check box under **Text Exemption Rules**.
2. To add a new text exemption rule, click **Add**. To configure an existing rule, click it in the list box, and then click **Edit**.

The **Text Exemption Rules** screen appears.

3. Next to **Name**, specify a descriptive name for the text exemption rule.
4. Next to **Scan area**, select a portion of the message.

**Note**

If you select **Subject**, **From**, **To**, or **Reply-to** as the scan area and use **Line beginning** to match the header, provide only the header content for **Line beginning**.

Example:

- a. Select **From** as the scan area.
- b. Under **Strings to match**, provide a message string for **Line beginning**. For example, `test@trendmicro.com`.

If you select **All Headers** as the scan area and use **Line beginning** to match the header, provide the header name as well.

Example:

- a. Select **All Headers** as the scan area.
- b. Under **Strings to match**, provide both the header name and a message string for **Line beginning**. For example, `From: test@trendmicro.com`.

- 
5. Next to **Items are case sensitive**, select the check box to consider the text case as well as the content.
  6. Under **Strings to match**, specify the text strings in the text boxes. Line beginning means matching regular expressions at the beginning of a line. Line end means matching regular expressions at the end of a line.
  7. Click **Save**.
- 

## Configuring Graymail Exceptions

The exception list is a list of IP addresses to ignore when filtering content. Add up to 5,000 IP addresses by either adding individual addresses or by

importing multiple addresses from a text file. The policy takes effect on IP addresses in their order in the list.

---

## Procedure

1. Create or modify an "Other" (not an Antivirus) policy.
  - For information on creating a new rule, see [Configuring Policies on page 19-1](#).
  - For information on modifying an existing rule, see [Configuring Existing Policies on page 22-1](#).
2. Under **Graymail**, click **Graymail detection settings**.

The **Graymail detection settings** screen appears.

**Graymail detection settings** 

[New Rule](#) > Graymail detection settings

---

**Graymail Scan Categories**

☒ Marketing message and newsletter

☒ Social network notification

☒ Other graymail

**Graymail Exception List**

Messages from IP addresses in the exception list are not scanned or blocked.

☐ Enable Exception List

IP address:

Define each exception list entry by:

- IPv4 address or address range  
Example: 10.64.12.1, 10.64.12.1-10
- IPv4 address / subnet mask  
Example: 10.64.12.0/24
- IPv6 address or address range  
Example: 2001::10, 2001::10-64
- IPv6 address / prefix length  
Example: 2001::10/64

3. Select **Enable Exception List**.

4. Add IP addresses using the following methods:

- a. Specify an IP address and then click **Add>>**.

The IP address appears in the list.

- b. Import IP addresses from a text file on a local host to the IMSVA server.

For details, see [Importing Graymail Exceptions on page 19-24](#).

5. Optional: Export the IP address list as a text file.
  6. Click **Save**.
- 

## Importing Graymail Exceptions

### Before you begin

Complete configuring graymail exceptions.

---



#### Note

- Each line in the file should contain only one IP address that follows any of the valid formats. IMSVA does not import incorrectly formatted IP addresses.
  - If the list already contains an IP address that is in the file, the IP address is ignored.
  - If the file contains greater than 5,000 IP address, only the first 5,000 are imported.
- 
- 

### Procedure

1. In the right pane of the **Graymail Exception List** area, click **Import**.  
The **Import Graymail Exception List** screen appears.

**Import Graymail Exception List**

File:  Browse...

(Format: one IP address per line)

Merge option: ☒ Merge with current list  
☐ Overwrite current list

Import Cancel

2. Click **Browse** and locate the file.  
Examples of valid input:

### IPv4 addresses

```
123.123.123.123
62.36.52.1-255
62.36.52.0/24
```

### IPv6 addresses

```
1050:0:0:0:5:600:300c:326b
ff06::c3
```

3. Select one of the following merge options:
    - Select **Merge with current list** to append the IP addresses in the file to the existing exceptions list.
    - Select **Overwrite current list** to replace the existing list with the IP addresses in the file.
  4. Click **Import**.
- 

## Configuring Web Reputation Settings

Enable and configure Web Reputation settings to protect your clients from malicious URLs in messages.

### Enabling Web Reputation Settings

---

#### Procedure

1. Create or modify an “Other” (not an Antivirus) policy.
  - For information on creating a new rule, see [Configuring Policies on page 19-1](#).
  - For information on modifying an existing rule, see [Configuring Existing Policies on page 22-1](#).
2. Under Web Reputation on the **Scanning Conditions** screen, select the **Web Reputation settings** check box.

3. Click **Next** to continue configuring the policy.
- 

## Completing Web Reputation Settings

---

### Procedure

1. Create or modify an “Other” (not an Antivirus) policy.
  - For information on creating a new rule, see [Adding Policies on page 19-2](#).
  - For information on modifying an existing rule, see [Modifying Existing Policies on page 22-2](#).
2. Under Web Reputation on the **Scanning Conditions** screen, select **Web Reputation settings**.
3. Click **Web Reputation Settings**.

The **Web Reputation Settings** screen appears.
4. Select one of the following security levels.
  - **High**: Blocks more websites embedded in messages but also increases the risk of false positives. Select **High** if your users are visiting too many malicious websites.
  - **Medium**: Blocks an average number of malicious websites. **Medium** is the default setting because it blocks most web threats while keeping the false positive count low.
  - **Low**: Blocks fewer websites embedded in messages and reduces the risk of false positives. Select **Low** if IMSVA is blocking too many legitimate websites.
5. Select the action to take if IMSVA detects URLs that have not been tested by Trend Micro.
  - **Bypass**: Bypasses email messages that contain the URLs.
  - **Apply the policy action**: Applies the action specified in the policy.



- **Submit to Virtual Analyzer:** Submits the URLs to Virtual Analyzer for further analysis.
6. Select **Enable Time-of-Click Protection** and click one of the following:
- **Apply to URLs that have not been tested by Trend Micro**
  - **Apply to URLs marked by Web Reputation Services with smart flags**
  - **Apply to all URLs**

**Note**

A smart flag is an indicator for rewriting URLs in email messages, which leverages correlation intelligence of Trend Micro Smart Protection Network to detect suspicious and malicious Web threat behaviors.

- 
7. Optional: Select **Apply to URLs in digitally signed messages** if necessary.

**Note**

Enabling Time-of-Click Protection for digitally signed messages is not recommended because digital signatures might be destroyed.

- 
8. Select **Enable the use of the Web Reputation Approved List** to prevent IMSVA from scanning and blocking domains included in the Web Reputation Approved List.
9. Click **Save**.
- 

### Configuring Time-of-Click Protection Settings

If you enable Time-of-Click Protection, IMSVA rewrites URLs in email messages for further analysis. Trend Micro analyzes those URLs at the time of click and will block them if they are malicious to protect you.

## Procedure

### 1. Go to **Policy > Time-of-Click Protection**.

The **Time-of-Click Protection** screen appears.

| Time-of-Click Protection Settings |         |
|-----------------------------------|---------|
| Actions:                          |         |
| Dangerous:                        | Block ▼ |
| Highly Suspicious:                | Block ▼ |
| Suspicious:                       | Allow ▼ |
| Untested:                         | Allow ▼ |

Save Cancel

### 2. Under **Actions**, do the following:

- **Dangerous:** Select an action ( **Allow**, **Warn** or **Block**) to take on dangerous URLs. The default value is **Block**.

Dangerous URLs are verified to be fraudulent or known sources of threats.

- **Highly Suspicious:** Select an action ( **Allow**, **Warn** or **Block**) to take on highly suspicious URLs. The default value is **Block**.

Highly suspicious URLs are suspected to be fraudulent or possible sources of threats.

- **Suspicious:** Select an action ( **Allow**, **Warn** or **Block**) to take on suspicious URLs. The default value is **Allow**.

Suspicious URLs are associated with spam or possibly compromised.

- **Untested:** Select an action ( **Allow**, **Warn** or **Block**) to take on untested URLs. The default value is **Allow**.

While Trend Micro actively tests URLs for safety, users may encounter untested pages when visiting new or less popular websites. Blocking access to untested pages can improve safety but can also prevent access to safe pages.

3. Click **Save**.

---

## Selecting Scanning Conditions for Attachments

IMSVA can filter email traffic based on the files attached to messages.

### Specifying Scanning Conditions for Attachment Names or Extensions

---

#### Procedure

1. Under **Attachment** on the scanning conditions selection screen, select the check box next to **Name or extension**.
2. Click **Name or extension**.  
The **Attachment Name or Extension** screen appears.
3. Next to **Select**, select one of the following:
  - **Selected attachment names:** IMSVA takes action on messages with attachments of the selected names.
  - **Not the selected attachment names:** IMSVA takes action on messages with attachments that are not of the selected names.
4. Select the check boxes next to the attachments to scan or not scan.
5. To add your own attachment name, do the following:
  - a. Select the check box next to **Attachments named**.
  - b. Click **Import** to import from an existing text file. Another window appears.

Alternatively, specify the names in the text box. Use a semicolon (;) to separate values. You can also use an asterisk wildcard for the extension.

- c. Click **Save**.
  6. Click **Save** to continue selecting scanning conditions.
- 

## Specifying MIME Content Type Scanning Conditions

---

### Procedure

1. Under **Attachment** on the scanning conditions selection screen, select the check box next to **MIME content type**.
  2. Click **MIME content type**.  
The **Attachment MIME Type** screen appears.
  3. Next to **Select**, select one of the following:
    - **Selected attachment types:** IMSVA takes action on messages with attachments of the selected types.
    - **Not the selected attachment types:** IMSVA takes action on messages with attachments that are not of the selected types.
  4. Select the check boxes next to the MIME content types to filter.
  5. To add your own MIME types, type them in the text box.  
Use a semicolon (;) to separate values. You can also use an asterisk wildcard for the MIME type.
  6. Click **Save** to continue selecting scanning conditions.
- 

## Specifying True File Type Scanning Conditions

---

### Procedure

1. Under **Attachment** on the scanning conditions selection screen, select the check box next to **True file type**.
2. Click **True file type**.  
The **Attachment True File Type** screen appears.

3. Next to **Select**, select one of the following:
  - **Selected attachment types:** IMSVA takes action on messages with attachments of the selected types.
  - **Not the selected attachment types:** IMSVA takes action on messages with attachments that are not of the selected types.
4. Select the check boxes next to the true file types to filter.
5. Optional: Under **Virtual Analyzer Scanning**, select **Submit files to Virtual Analyzer**.

**Note**

Before selecting **Submit files to Virtual Analyzer**, make sure you have configured Virtual Analyzer settings. For details, see [Configuring Virtual Analyzer Settings on page 7-6](#).

If Virtual Analyzer is not enabled, the scanning condition for attachment true file types cannot take effect.

---

6. Click **Save** to continue selecting scanning conditions.
- 

## Specifying Attachment Size Scanning Conditions

---

### Procedure

1. Under **Attachment** on the scanning conditions screen, select the check box next to **Size is {>, <, =} {size} {MB, KB, B}**.
  2. Select the comparison symbol (>, <, =).
  3. Specify a number to represent the size.
  4. Select Megabytes, Kilobytes, or Bytes (**MB, KB, B**).
  5. Continue selecting scanning conditions.
-

## Specifying Attachment Number Scanning Conditions

---

### Procedure

1. Under **Attachment** on the scanning conditions screen, select the check box next to **Number of attachments** {>, <, =} {**number**}.
  2. Choose the comparison symbol (>, <, =).
  3. Specify a number to represent the number of attachments.
  4. Continue selecting scanning conditions.
- 

## Blocking Password Protected Zip Files

---

### Procedure

- Under **Attachment** on the scanning conditions screen, select the check box next to **password protected zip files (unscanned files)**.
- 

## Selecting Scanning Conditions for Message Size

IMSVA can take action on a message based on its total size, including all attachments.

---

### Procedure

1. Under **Size** on the scanning conditions selection screen, select the check box next to **Message size is** {>, <, =} {**size**} {**MB or KB**}.
  2. Select the comparison symbol (>, <, =).
  3. Specify a number to represent the size of the message.
  4. Select **Megabytes** or **Kilobytes (MB or KB)**.
  5. Continue selecting scanning conditions.
-

## Selecting Scanning Conditions for Message Content

IMSVa can take action on a message based on its content and where the content appears. See [Configuring an Expression on page 16-14](#) for more information on how to specify the content to filter.

---

### Procedure

1. Go to **Policy > Policy List**.

The **Policy** screen appears.

2. Create or modify an "Other" (not an Antivirus) policy.
3. Under **Content**, on the **Step 2: Select Scanning Conditions** screen, select the check boxes next to the parts of a message to which you want the content conditions to apply.
4. Click the link that specifies the part of the message to which you want to configure content conditions. The **Keyword Expressions** screen appears with two columns:

- **Available:** Expressions available for use, but not currently in use.
- **Selected:** Expressions currently in use.

5. If you are configuring expressions for the header, select the check boxes next to the header items where the expression will apply.
6. Click **Add**.

The screen for managing keyword expressions appears.

7. Configure the expressions.
8. In the **Available** list, click the expression list you want to enable.
9. Click **>>**.

The expressions appear in the **Selected** list.

To keep an expression list available but temporarily prevent IMSVa from using it, click the expression in the selected list, and then click **<<**.

10. Click **Save** to continue to the scanning conditions selection screen.
- 

## Specifying Compliance Scanning Conditions

Regulatory compliance for IMSVA must be activated before the compliance templates can be used in a policy.

---

### Procedure

1. Go to **Policy > Policy List**.  
The **Policy** screen appears.
  2. Create or modify an "Other" (not an Antivirus) policy.
  3. Under **Data Loss Prevention**, click **DLP compliance templates**.  
The **DLP Compliance Templates** screen appears.
  4. Select the DLP compliance templates you require from the **Available** list.
  5. Click **Save** to continue to the scanning conditions selection screen.
- 

## Specifying "Other" Scanning Conditions

IMSVA can filter email traffic based on the following:

- Number of recipients
  - Message arrival time
  - Message content is encrypted
- 

### Procedure

1. Go to **Policy > Policy List**.  
The **Policy** screen appears.
2. Create or modify an "Other" (not an Antivirus) policy.
  - For information on creating a new rule, see [Configuring Policies on page 19-1](#).



- For information on modifying an existing rule, see [Configuring Existing Policies on page 22-1](#).
3. Under **Other**, on the Scanning Conditions screen, select the check boxes next to the following:
    - **Number of recipients is {>, <, =} {number}**: Blocks messages if the number of recipients is less than, exceeds, or is equal to the specified limit.
    - **Received time range**: Blocks messages if they enter your network within the specified time range.
    - **Password protected zip files(uns scanned files)**: Blocks encrypted messages that cannot be decrypted by IMSVA.
    - **Spoofed internal messages**: Blocks all messages that do not originate from the trusted IP address list.
- 

## Selecting Scanning Conditions for Number of Recipients

IMSVa can take action on a message based on the number of recipients to which the message is addressed.

---

### Procedure

1. Under **Others** on the scanning conditions selection screen, select the check box next to **Number of recipients is {>, <, =} {number}**.
  2. Select the comparison symbol (>, <, =).
  3. Specify a number to represent the number of recipients.
  4. Continue selecting scanning conditions.
- 

## Setting Scanning Conditions for Message Arrival Time

IMSVa can take action on a message based on the time it arrived.

---

### Procedure

1. Under **Others** on the scanning conditions selection screen, select the check box next to **Received time range**.
  2. Click **Received time range**.  
The **Time Range** screen appears.
  3. Next to **Select**, select one of the following:
    - **Anytime within selected ranges**
    - **Anytime except selected ranges**
  4. From the time drop-down boxes, select the day, start time, and end time.
  5. Click **Add**.
  6. Click **Save** to continue selecting scanning conditions.
- 

### Setting Scanning Conditions for Spoofed Internal Messages

IMSVa blocks all messages if they do not originate from the trusted internal IP address list. This filter triggers only on messages where the sender's and recipient's domains are the same.

---

### Procedure

1. Under **Others** on the scanning conditions selection screen, select the check box next to **Spoofed internal messages**.
2. Click **Spoofed internal messages**.

The Spoofed Internal Messages screen appears.

---



#### **WARNING!**

All edge MTA IP addresses must be added to this list if the feature is enabled. If the IP addresses are not added to the list, all messages from the edge MTAs that are not added will be blocked.

---

3. Add IP addresses to the Trusted Internal IP List.
  4. Click **Save**.
- 

## Specifying Actions

The main actions for both the Antivirus and Other rules are similar, although there are minor differences in the options listed. Select the desired action(s) from the following categories:

### Intercept

Allows you to choose whether you would like IMSVA to intercept the messages and prevent them from reaching the recipients. Choosing the intercept option allows you to specify an action for IMSVA to take on intercepted messages.

### Modify

Instructs IMSVA to make some alterations to the messages or the attachments, such as inserting a stamp or tagging the subject.

### Monitor

Instructs IMSVA to send a notification, archive or blind copy the messages if you would like to further analyze them.

---

### Procedure

1. Click **Next** from the **Step 2: Select Scanning Conditions** screen.

The **Step 3: Select Actions** screen appears.



#### Note

The screen that appears in this step depends on the type of rule that you are creating. The antivirus rule contains two tabs that allow you to configure the main actions and the actions for special viruses.

---

## Specifying Actions for "Other" Rules

## Procedure

### 1. Configure **Intercept** settings.

| OPTION                           | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Do not intercept messages</b> | This specific rule does not intercept messages. If there are other rules, IMSVA will process the message. If there are no rules, IMSVA passes the message to your network.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Delete entire message</b>     | Deletes the message and all attachments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Quarantine to</b>             | IMSVA puts the message and its attachments into the quarantine area that you select from the drop-down box.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Change recipient to</b>       | IMSVA sends the message to another recipient. Specify the recipient email address and separate multiple recipients with a semicolon (;).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Handoff</b>                   | <p>IMSVA hands off the message to a specific mail server. Select Handoff if you have a secure messaging server on your network that can process or handle the message. Configure the following:</p> <ul style="list-style-type: none"> <li>• Next to <b>Host</b>, Specify the FQDN or IP address of the mail server.</li> <li>• Next to <b>Port</b>, specify the port number through which the mail server receives email traffic.</li> </ul> <hr/> <p> <b>Note</b><br/>IMSVA can only track a message before it is handed off. After the handoff, the message is no longer traceable as it is not in the control of IMSVA.</p> |

### 2. Configure **Modify** settings.

| OPTION                    | DESCRIPTION                                                                                                                                                                                                                                                                |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Insert X-header</b>    | Inserts a user-specified message to the header of messages.                                                                                                                                                                                                                |
| <b>Delete attachments</b> | <p>Select an action for IMSVA to take:</p> <ul style="list-style-type: none"> <li>• <b>Delete matching attachment:</b> Remove only the attachment that matches the attachment scan condition.</li> <li>• <b>Delete all attachments:</b> Remove all attachments.</li> </ul> |

| OPTION                      | DESCRIPTION                                                                                                                                                                         |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Insert stamp in body</b> | Insert text at the beginning or end of the message. From the drop-down box, select the name of the stamp to insert or click Edit to go to the Stamps screen and manage your stamps. |
| <b>Tag subject</b>          | Add text to the subject line of the message. Click <b>Tag subject</b> to edit the tag.                                                                                              |
| <b>Postpone delivery to</b> | Delay delivery until a specified hour of the day. Select the hour of the day and minutes from the drop-down boxes.                                                                  |
| <b>Encrypt message</b>      | Encrypt the message and send the message to the recipient.                                                                                                                          |

### 3. Configure **Monitor** settings.

| OPTION                           | DESCRIPTION                                                                                                                                                                                                                             |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Send policy notifications</b> | Send a message to one or more recipients. To select a type of notification, click Send policy notifications. For instructions on creating notifications, see <a href="#">Notifications on page 16-44</a> .                              |
| <b>Archive modified to</b>       | Archive the message to an archive area.                                                                                                                                                                                                 |
| <b>BCC</b>                       | Blind carbon copy the message to another recipient. Specify the recipient's email address and separate multiple addresses with a semicolon (;). Select the BCC option to prevent the intended recipients from seeing the new recipient. |

## Specifying Actions for "Virus" Rules Main Actions

Main Actions allow you to specify the default actions that IMSVA takes when messages match the scanning conditions specified in Step 2: Scanning Conditions.



### Note

If a message is detected by ATSE and if Virtual Analyzer is enabled, IMSVA performs the specified actions and sends a copy of the message to Virtual Analyzer for further analysis.

## Procedure

### 1. Configure **Intercept** settings.



#### Tip

Trend Micro recommends selecting **Quarantine** as the default action for messages detected by ATSE. IMSVA stores suspicious messages in Quarantine to allow Virtual Analyzer to complete its analysis.

| OPTION                           | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Do not intercept messages</b> | This specific rule does not intercept messages. If there are other rules, IMSVA will process the message. If there are no rules, IMSVA passes the message to your network.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Delete entire message</b>     | Deletes the message and all attachments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Quarantine to</b>             | IMSVA puts the message and its attachments into the quarantine area that you select from the drop-down box.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Change recipient to</b>       | IMSVA sends the message to another recipient. Specify the recipient email address and separate multiple recipients with a semicolon (;).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Handoff</b>                   | <p>IMSVA hands off the message to a specific mail server. Select Handoff if you have a secure messaging server on your network that can process or handle the message. Configure the following:</p> <ul style="list-style-type: none"> <li>Next to <b>Host</b>, specify the FQDN or IP address of the mail server.</li> <li>Next to <b>Port</b>, specify the port number through which the mail server receives email traffic.</li> </ul> <hr/> <p> <b>Note</b> IMSVA can only track a message before it is handed off. After the handoff, the message is not traceable anymore as it is no longer within the control of IMSVA.</p> |

### 2. Configure **Modify** settings.

**Note**

Options under **If IMSVA finds a virus** are only available for Antivirus rules.

| OPTION                                      | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>If IMSVA finds a virus</b>               | <p>Select the check box to enable actions if IMSVA finds a virus or other malware, and then click one of the following:</p> <ul style="list-style-type: none"> <li>• <b>Use ActiveAction:</b> Enable IMSVA to automatically use pre-configured scan actions for specific types of viruses/malware.</li> <li>• <b>Attempt to clean attachments. If unable to clean:</b> Select an action for IMSVA to take if it cannot clean the attachment: <ul style="list-style-type: none"> <li>• <b>Delete matching attachment:</b> Remove only the attachments with viruses/malware.</li> <li>• <b>Delete all attachments:</b> Remove all attachments.</li> </ul> </li> <li>• <b>Delete attachments:</b> Select an action for IMSVA to take. <ul style="list-style-type: none"> <li>• <b>Delete matching attachment:</b> Remove only the attachment with viruses/malware.</li> <li>• <b>Delete all attachments:</b> Remove all attachments.</li> </ul> </li> </ul> |
| <b>Insert X-header</b>                      | <p>Inserts a user-specified message to the header of messages.</p> <hr/> <div data-bbox="512 967 571 1016" data-label="Image"> </div> <div data-bbox="581 964 628 984" data-label="Section-Header"><b>Note</b></div> <div data-bbox="580 992 1186 1078" data-label="Text"> <p>If you configure multiple rules to add an x-header, the X-header appears only once in the message. The X-header appears as configured in the last rule.</p> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Insert stamp in body</b>                 | <p>Insert text at the beginning or end of the message. From the drop-down box, select the name of the stamp to insert or click <b>Edit</b> to go to the Stamps screen and manage your stamps.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Insert stamp in clean email messages</b> | <p>Insert text into clean messages signifying that the message is safe. From the drop-down box, select the name of the stamp to insert or click <b>Edit</b> to go to the Stamps screen and manage your stamps.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| OPTION                      | DESCRIPTION                                                                                                                                                                                              |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                             |  <b>Note</b><br>The <b>Insert safe stamp for clean mails</b> option is not available on the <b>Special Viruses</b> tab. |
| <b>Tag subject</b>          | Add text to the subject line of the message. Click <b>Tag subject</b> to edit the tag.                                                                                                                   |
| <b>Postpone delivery to</b> | Delay delivery until a specified hour of the day. Select the hour of the day and minutes from the drop-down boxes.                                                                                       |

### 3. Configure **Monitor** settings.

| OPTION                           | DESCRIPTION                                                                                                                                                                                                                             |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Send policy notifications</b> | Send an message to one or more recipients. To select a type of notification, click Send policy notifications. For instructions on creating notifications, see <a href="#">Notifications on page 16-44</a> .                             |
| <b>Archive modified to</b>       | Archive the message to an archive area.                                                                                                                                                                                                 |
| <b>BCC</b>                       | Blind carbon copy the message to another recipient. Specify the recipient's email address and separate multiple addresses with a semicolon (;). Select the BCC option to prevent the intended recipients from seeing the new recipient. |

## Specifying Actions for "Virus" Rules Special Viruses

Special Virus settings allow you to specify the actions that IMSVA takes if the messages match any of the following criteria. The actions specified on this screen will override the default actions specified on the **Main Actions** tab.



- **Mass mailing:** IMSVA takes the actions specified in this section if it detects mass mailing messages.
- **Spyware/grayware:** Allows you to specify the corresponding actions if you have selected any of the Spyware/Grayware Scanning options on the Scanning Conditions screen in step 2. If IMSVA detects spyware/grayware in a message, it takes the actions that are specified here.



#### Note

IMSVA takes the default action for messages matching the Spyware/Grayware Scanning conditions if you do not select alternative actions.

- **IntelliTrap:** Allows you to specify the corresponding actions if you have selected the IntelliTrap Setting options on the Scanning Conditions screen in step 2.



#### Note

IMSVA takes the default action for messages matching the IntelliTrap conditions if you do not select alternative actions.

## Creating a Tag Subject

To notify a recipient that IMSVA took action on a message's attachment or that the message violated scanning conditions for a rule, add a brief message to the beginning of the subject line. Add a tag only for messages that the

intended recipients will eventually receive. If you are configuring a rule to delete messages that violate your scanning conditions, adding a tag is not necessary.

---

### Procedure

1. When you select actions, click **Tag subject** under Modify actions.  
An edit screen appears.
  2. Specify the text to insert in the subject line next to **Tag**.
  3. To prevent possible damage to digitally signed messages, select **Do not tag digitally signed messages**.
  4. Click **Save** to continue selecting actions.
  5. To use a tag, select the check box next to **Tag subject** under **Modify**.
- 

## Finalizing a Policy

After you select actions for a rule, name and enable the rule. Also, assign an order number that represents its position within the hierarchy of rules. IMSVA allows you to add any notes to the rule that you think are necessary for future reference. You can also modify this information for an existing rule.

When viewing rules, note the following:

-  The green check mark button indicates that the rule is active.
-  The red cross mark button indicates that the rule is saved but inactive.
-  The gray cross mark button indicates that the rule and the Activation Code for the product are both inactive.



#### Note

You can enable and disable rules by clicking the buttons.

---

# Finalizing a Rule

## Procedure

1. Use one of the following methods to open the screen:
  - When creating a new policy, click **Next** on the **Step 3: Select Actions** screen. The Step 4: Name and Order screen appears.
  - When finalizing an existing policy, click the name of the policy in the policy list on the **Policy > Policy List** screen.

Add Rule

Policy List > New Rule

Step 1 >>> Step 2 >>> Step 3 >>> **Step 4: Name and Order**

< Previous
Finish
Cancel

Rule

Notes

☒ Enable

Rule Name:

Order Number:

| Order | Existing Rules        | Action        | Modified          | Status |
|-------|-----------------------|---------------|-------------------|--------|
| 1     | Global antivirus rule | Active action | December 25, 2006 |        |
| 2     | Default spam rule     | Quarantine    | December 25, 2006 |        |

If recipients and senders are  
outgoing  
to Anyone  
AND  
from \*@test.com  
And scanning conditions match  
Subject is blank  
Then action is  
Quarantine message

< Previous
Finish
Cancel

2. Select the **Enable** check box to activate the rule.
3. Specify a name for the rule in the **Rule Name** field.

4. In the **Order Number** field, specify the priority in which IMSVA will perform the scan. IMSVA applies the rule to messages according to the order you specify.
5. Click the **Notes** tab.

The **Notes** screen appears.

The screenshot shows the 'Add Rule' dialog box with the title bar 'Add Rule' and a help icon. Below the title bar is a breadcrumb 'Policy List > New Rule'. A progress bar indicates 'Step 1 >>> Step 2 >>> Step 3 >>> Step 4: Name and Order'. Below the progress bar are buttons '< Previous', 'Finish', and 'Cancel'. The 'Notes' tab is selected, showing a 'Created:' field, a 'Last modified:' field, and a 'Notes:' text area containing the text 'Blocks outgoing email messages from test.com'. At the bottom are buttons '< Previous', 'Finish', and 'Cancel'.

6. Specify a note to distinguish the new rule from other rules.
  7. If you are creating a new policy, verify that the information on the screen is correct. If any information about the rule is incorrect, click < **Previous** and make your changes.
  8. Click **Finish** to complete a new rule or **Save** to modify an existing rule.
-

# Chapter 20

## Configuring Encryption Settings

This chapter provides instructions for configuring encryption settings for IMSVA.

Topics include:

- *[Configuring Encryption Settings on page 20-2](#)*
- *[Encrypting Message Traffic on page 20-3](#)*
- *[Configuring Encryption Policies on page 20-3](#)*

## Configuring Encryption Settings

Trend Micro Email Encryption must have your registered domain in order to work. When you register a domain, Trend Micro Email Encryption acquires an encryption key that is unique to your registered and confirmed domain. Without the key, Trend Micro Email Encryption cannot encrypt your message.

**Note**

In addition to logging in, this email address will be used only for other product related use (example: password resets and registration notifications). It will not be used for marketing purposes, nor sold to any other party. You will not receive spam as a result of registering Encryption for Email.

In distributed environments, the ID that appears on the **Encryption Settings** > **IMSVa** tab is shared by the parent IMSVa and all child IMSVAs.

## Encryption Types

There is a difference between the **Encryption exception** rule and the **Unable to decrypt messages** policy rule.

**TABLE 20-1. Encryption Types**

| FEATURE                    | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Encryption exception       | This rule triggers when IMSVa cannot decrypt or encrypt messages using an Identity-Based Encryption (IBE) algorithm.                                                                                                                                                                                                                                                   |
| Unable to decrypt messages | <p>This rule is used to detect messages encrypted by Pretty Good Privacy (PGP) encryption or Secure/Multipurpose Internet Mail Extensions (S/MIME) encryption.</p> <p>IMSVa can decrypt messages encrypted by IBE. However, you must first register a domain to the Trend Micro Email Encryption Server before IMSVa is able to decrypt messages from that domain.</p> |

## Encrypting Message Traffic

Your domains must be registered to the Trend Micro Encryption Email service for email encryption to work. See [Registering Domains to the Encryption Service on page 8-7](#) for more information.

After configuring encryption settings, IMSVA can decrypt and encrypt the messages to protect the message content.

For encrypted message traffic entering your network, IMSVA decrypts the messages automatically and scans the messages according to the policy rules you specify. Outgoing messages are re-encrypted after scanning to protect the message content.

## Configuring Encryption Policies

IMSVA can encrypt plain text message content when you select Encrypt message when specifying scan actions for policies.

If you enable a rule to encrypt incoming messages, registration and support messages from privatepost.com are not encrypted.



### Note

Encrypting messages is a terminal action. The message will be delivered to the intended recipient if this action is taken.

After selecting **Encrypt message**, **Deliver the message** is selected automatically and the following selections are not available: **Delete entire message**, **Change recipient to**, and **Postpone delivery to**.

---





# Chapter 21

## Configuring Scanning Exceptions

This chapter provides instructions for configuring IMSVA scanning exceptions.

Topics include:

- *Setting Scan Exceptions on page 21-2*
- *Configuring Exceptions for Security Settings Violations on page 21-3*
- *Setting Scan Actions for Security Setting Violations on page 21-4*
- *Setting Scan Actions for Malformed Messages on page 21-5*
- *Configuring Exceptions for Encrypted Messages on page 21-6*
- *Setting Scan Actions for Encrypted Messages on page 21-7*
- *Setting Scan Actions for Virtual Analyzer Scanning Exceptions on page 21-9*

## Setting Scan Exceptions

Under certain circumstances, you may want to prevent IMSVA from scanning certain types of messages that could be part of a DoS attack. For example, messages with extremely large attachments require significant IMSVA server resources to scan fully. Additionally, messages addressed to hundreds of recipients are most likely spam or some type of attack.

Rather than consuming IMSVA resources to scan these types of messages, set scan exceptions to bypass scanning and instruct IMSVA to take action on the messages immediately.



### WARNING!

1. For the actions specified in Scan Exceptions to take effect, verify that the Global antivirus rule is enabled.
2. For malformed messages, when a message triggers the scan exception, IMSVA stops scanning and takes the corresponding actions. That means IMSVA will not trigger any policy rules when a scan exception occurs.

For security setting violations and encryption exceptions, IMSVA will not stop scanning after the action of the scan exception executes. IMSVA continues checking other policy rules. IMSVA will stop scanning if it encounters a terminal scan action.

---

## Configuring Scan Exceptions

---

### Procedure

1. Go to **Policy > Scanning Exceptions**.
2. To set scan exception conditions for messages based on several conditions, click the **Security settings violations** link under Exception.  
The **Security Settings Violations** screen appears.
3. To set scan exception conditions for encrypted or decrypted messages, click the **Encryption exceptions** link under Exception.

The **Encryption Exceptions** screen appears.

4. To set an action for an exception type, click the corresponding link under **Action**.
- 

## Configuring Exceptions for Security Settings Violations

The scan exceptions for the security settings violations on this screen apply to all senders and receivers.

---

### Procedure

1. On the **Scanning Exceptions** screen, click **Security settings violations** under **Exception**.

The **Security Settings Violations** screen appears.

2. To set limits on the types of messages IMSVA can scan, configure the following:
  - **Total message size exceeds { } MB:** Specify the maximum number of megabytes.
  - **Total # recipients exceeds { } recipients:** Specify the maximum number of recipients.
  - **Total # embedded layers in compressed file exceeds { } layers:** Select the maximum number of layers.
  - **Total decompressed size of any single file exceeds { } MB:** Specify the maximum number of megabytes.
  - **Total # files in compressed file exceeds { } files:** Specify the maximum number of files.

3. Click **Save**.

The **Scanning Exceptions** screen reappears.

---

## Setting Scan Actions for Security Setting Violations

The scan actions for the security settings violations on this screen apply to all senders and receivers.

### Procedure

1. On the **Scanning Exceptions** screen, click the action name link under **Actions** for **Security settings violations**.

The screen for configuring actions appears.

2. Configure **Intercept** settings.

| OPTION                           | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Do not intercept messages</b> | IMSVA does not take action on the message. IMSVA processes the message using other rules if other rules exist.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Delete entire message</b>     | Deletes the message and all attachments.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Quarantine to</b>             | IMSVA moves the message and its attachments into the quarantine area that you select from the drop-down box. For instructions on creating a new quarantine area, see <a href="#">Configuring Quarantine and Archive Settings on page 27-2</a> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Handoff</b>                   | <p>IMSVA hands off the message to a specific mail server. Select <b>Handoff</b> if you have a secure messaging server on your network that can process or handle the message. Configure the following:</p> <ul style="list-style-type: none"> <li>• Next to <b>Host</b>, specify the FQDN or IP address of the mail server.</li> <li>• Next to <b>Port</b>, specify the port number through which the mail server receives email traffic.</li> </ul> <hr/> <p> <b>Note</b><br/>IMSVA can only track a message before it is handed off. After the handoff, the message is not traceable anymore as it is no longer within the control of IMSVA.</p> |

3. Configure **Monitor** settings.

| OPTION                           | DESCRIPTION                                                                                                                                                                                                                             |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Send policy notifications</b> | Send a notification message to one or more recipients. To select a type of notification, click <b>Send policy notifications</b> . For instructions on creating notifications, see <a href="#">Notifications on page 16-44</a> .         |
| <b>Archive to</b>                | Archive the message to an archive area. For instructions on creating a new archive area, see <a href="#">Configuring Quarantine and Archive Settings on page 27-2</a> .                                                                 |
| <b>BCC</b>                       | Blind carbon copy the message to another recipient. Specify the recipient's email address and separate multiple addresses with a semicolon (;). Select the BCC option to prevent the intended recipients from seeing the new recipient. |

4. Click **Save**.

## Setting Scan Actions for Malformed Messages

The scan actions for malformed messages security settings violations on this screen apply to all senders and receivers.

### Procedure

1. On the **Scanning Exceptions** screen, click the action name link under **Actions** for **Malformed messages**.

The screen for configuring actions appears.

2. Configure **Intercept** settings.

| OPTION                           | DESCRIPTION                                                                                                  |
|----------------------------------|--------------------------------------------------------------------------------------------------------------|
| <b>Do not intercept messages</b> | IMSA does not take action on the message. IMSA processes the message using other rules if other rules exist. |
| <b>Delete entire message</b>     | Deletes the message and all attachments.                                                                     |
| <b>Quarantine to</b>             | IMSA moves the message and its attachments into the quarantine area that you select from the drop-down box.  |

| OPTION         | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Handoff</b> | <p>IMSVA hands off the message to a specific mail server. Select <b>Handoff</b> if you have a secure messaging server on your network that can process or handle the message. Configure the following:</p> <ul style="list-style-type: none"> <li>• Next to <b>Host</b>, specify the FQDN or IP address of the mail server.</li> <li>• Next to <b>Port</b>, specify the port number through which the mail server receives email traffic.</li> </ul> <hr/> <p> <b>Note</b><br/>IMSVA can only track a message before it is handed off. After the handoff, the message is not traceable anymore as it is no longer within the control of IMSVA.</p> |

### 3. Configure **Monitor** settings.

| OPTION                           | DESCRIPTION                                                                                                                                                                                                                             |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Send policy notifications</b> | Send a notification message to one or more recipients. To select a type of notification, click <b>Send policy notifications</b> . For instructions on creating notifications, see <a href="#">Notifications on page 16-44</a> .         |
| <b>Archive to</b>                | Archive the message to an archive area.                                                                                                                                                                                                 |
| <b>BCC</b>                       | Blind carbon copy the message to another recipient. Specify the recipient's email address and separate multiple addresses with a semicolon (;). Select the BCC option to prevent the intended recipients from seeing the new recipient. |

### 4. Click **Save**.

## Configuring Exceptions for Encrypted Messages

Messages exceeding any of the limits specified on this screen will not be decrypted or encrypted by IMSVA.

---

### Procedure

1. Go to **Policy > Scanning Exceptions > Encryption Exceptions**.
  2. To set limits on encrypted or decrypted messages IMSVA processes, configure the following:
    - **Encrypted message size exceeds { } MB**: Specify the maximum number of megabytes.
    - **Decrypted message size exceeds { } MB**: Specify the maximum number of megabytes.
    - **Total # recipients exceeds { } recipients**: Specify the maximum number of recipients.
    - **Unable to encrypt outgoing message**: Select this option to trigger IMSVA to take action on outgoing messages that IMSVA cannot encrypt.
    - **Unable to decrypt outgoing message**: Select this option to trigger IMSVA to take action on outgoing messages that IMSVA cannot decrypt.
  3. Click **Save**.

The **Scanning Exceptions** screen reappears.
- 

## Setting Scan Actions for Encrypted Messages

---

### Procedure

1. Go to **Policy > Scanning Exceptions**.
2. Click the **Quarantine and Notify** link for **Encryption exception**.

The screen for configuring actions appears.
3. Under **Intercept**, click the radio button next to one of the following:
  - **Do not intercept messages**: IMSVA does not process the message.

- **Delete entire message:** Deletes the message and all attachments.
- **Quarantine to:** IMSVA puts the message and its attachments into the quarantine area that you select from the drop-down box. For instructions on creating a new quarantine area, see [Configuring Quarantine and Archive Settings on page 27-2](#).
- **Handoff:** IMSVA hands off the message to a specific mail server. Select Handoff if you have a secure messaging server on your network that can process or handle the message. Configure the following:
  - Next to **Host**, specify the FQDN or IP address of the mail server.
  - Next to **Port**, specify the port number through which the mail server receives email traffic.

**Note**

IMSVA can only track a message before it is handed off. After the handoff, the message is not traceable any more as it is no longer within the control of IMSVA.

---

4. Under **Monitor**, select the check boxes next to any of the following:
    - **Send policy notifications:** Send a message to one or more recipients. To select a type of notification, click **Send policy notifications**. For instructions on creating notifications, see [Notifications on page 16-44](#).
    - **Archive to:** Archive the message to an archive area. For instructions on creating a new archive area, see [Configuring Quarantine and Archive Settings on page 27-2](#).
    - **BCC:** Blind carbon copy the message to another recipient. Specify the recipient's email address and separate multiple addresses with a semicolon (;). Select the BCC option to prevent the intended recipients from seeing the new recipient.
  5. Click **Save**.
-



## Setting Scan Actions for Virtual Analyzer Scanning Exceptions

---

### Procedure

1. Go to **Policy > Scanning Exceptions**.
2. Click the **Quarantine and Notify** link for **Virtual Analyzer scanning exceptions**.

The screen for configuring actions appears.

3. Under **Intercept**, click the radio button next to one of the following:
  - **Do not intercept messages:** IMSVA does not process the message.
  - **Delete entire message:** Deletes the message and all attachments.
  - **Quarantine to:** IMSVA puts the message and its attachments into the quarantine area that you select from the drop-down box. For instructions on creating a new quarantine area, see [Configuring Quarantine and Archive Settings on page 27-2](#).
  - **Handoff:** IMSVA hands off the message to a specific mail server. Select **Handoff** if you have a secure messaging server on your network that can process or handle the message. Configure the following:
    - Next to **Host**, specify the FQDN or IP address of the mail server.
    - Next to **Port**, specify the port number through which the mail server receives email traffic.



### Note

IMSVA can only track a message before it is handed off. After the handoff, the message is not traceable any more as it is no longer within the control of IMSVA.

---

4. Under **Monitor**, select the check boxes next to any of the following:

- **Send policy notifications:** Send a message to one or more recipients. To select a type of notification, click **Send policy notifications**. For instructions on creating notifications, see [Notifications on page 16-44](#).
- **Archive to:** Archive the message to an archive area. For instructions on creating a new archive area, see [Configuring Quarantine and Archive Settings on page 27-2](#).
- **BCC:** Blind carbon copy the message to another recipient. Specify the recipient's email address and separate multiple addresses with a semicolon (;). Select the BCC option to prevent the intended recipients from seeing the new recipient.

5. Click **Save**.

---

# Chapter 22

## Configuring Existing Policies

This chapter provides instructions for creating, modifying, and managing IMSVA policies.

Topics include:

- *Modifying Existing Policies on page 22-2*
- *Policy Example 1 on page 22-5*
- *Policy Example 2 on page 22-9*
- *Using the Asterisk Wildcard on page 22-14*

## Modifying Existing Policies

Modification of rules follows a different process from rule creation.

---

### Procedure

1. Go to **Policy > Policy List**.
  2. Click the name of the rule to edit.  
The **Summary** screen for the rule appears.
  3. Click **Edit** for **If recipients and senders are** .
  4. Configure the route settings.  
For more information, see [Specifying a Route on page 19-2](#).
  5. Click **Edit** for one of the following:
    - **And scanning conditions match** (Antivirus and Other rules)
    - **And domains listed here do not pass DKIM verification.** (Global DKIM rule)
  6. Configure the scan settings. For more information, see the following:
    - For Antivirus and Other rules: [Specifying Scanning Conditions on page 19-10](#)
    - For the Global DKIM Enforcement rule: [Using the Domain List for the Global DKIM Enforcement Rule on page 22-2](#)
  7. Click **Edit** for **Then action is**.
  8. Configure the action settings.  
For more information, see [Specifying Actions on page 19-37](#).
  9. Click **Save**.
- 

### Using the Domain List for the Global DKIM Enforcement Rule

IMSVa marks all processed messages as spam from domains appearing in the Domain List that:

- Do not pass DKIM validation
- Do not have a DKIM-Signature

## Adding Domains to the Domain List in the Global DKIM Enforcement Rule

---

### Procedure

1. Click **Policy > Policy List**.

The **Policy** screen appears.

2. Click the **Global DKIM Enforcement rule** link.

The **Policy Summary** screen appears.

3. Click **Edit** in the **And domains listed here do not pass DKIM verification** row.

The **Scanning Conditions** screen appears.

4. Populate the Domain List in one of the following ways:

- Manually:
  - a. Specify a domain name.
  - b. Click **Add**.
- Import a list:



#### Note

When importing a text file for the Domain List, only one domain should be on each line.

---

- a. Click **Import**. The Import DKIM Enforcement List appears.
- b. Specify the file path and file name or click **Browse** and locate the file.
- c. Select one of the following:

- **Merge with current list**
- **Overwrite current list**

d. Click **Import**.

5. Click **Save**.

---

## Modifying Recipients and Senders for Existing Rules

---

### Procedure

1. Go to **Policy > Policy List**.

2. Click the name of the rule to edit.

The **Summary [policy name]** screen for the rule appears.

3. Click **Edit** for **If recipients and senders** are.

4. Select the policy route type from the drop-down list next to **This rule will apply** to.

- **incoming messages**
- **outgoing messages**
- **both incoming and outgoing messages**
- **POP3**
- **all messages**

5. Select the recipients and senders:

- For incoming messages, specify the recipient email address, which is in range of the internal addresses. (Example: internal address is `imsstest.com`, valid recipients include `jim@imsstest.com`, `bob@imsstest.com`).
- For outgoing messages, specify the sender's address, which is in range of the internal addresses. (Example: internal address is `imsstest.com`, valid senders include `jim@imsstest.com`, `bob@imsstest.com`).

- For both incoming and outgoing messages, the rule applies to senders or recipients that match the email address.
- If you selected POP3, you cannot configure the route. The rule applies to all POP3 routes.
- If you selected "all messages" for a rule, the rule also applies to messages from any sender to any recipient.

**6. Click **Save**.**

---

## Policy Example 1

Create a rule to delete attachments with specific file names or extensions and then stamp the affected incoming message with an explanation to the recipients.

- [Step 1: Specify the Route on page 22-5](#)
- [Step 2: Specify the Scanning Conditions on page 22-7](#)
- [Step 3: Specify the Actions on page 22-7](#)
- [Step 4: Specify the Priority on page 22-9](#)

### Step 1: Specify the Route

---

#### Procedure

1. Go to **Policy > Policy List**.
2. Click **Add**.
3. Select **Other** from the drop-down list.

The **Step 1: Select Recipients and Senders** screen appears.

**Add Rule** 

[Policy List](#) > New Rule

➤ **Step 1: Select Recipients and Senders** >>> Step 2 >>> Step 3 >>> Step 4

This rule will apply to incoming messages ▼

[< Previous](#) [Next >](#) [Cancel](#)

|            |                                     |
|------------|-------------------------------------|
| To         | <a href="#">Recipients</a>          |
| From       | <a href="#">Senders</a>             |
| Exceptions | <a href="#">Sender to Recipient</a> |

---

If recipients and senders are  
incoming  
to [Anyone](#)  
AND  
from [Anyone](#)

[< Previous](#) [Next >](#) [Cancel](#)

4. Next to **This rule will apply to**, select incoming messages from the drop-down list.

5. Click the **Recipients** link.

The **Select addresses** screen appears.

- To apply this rule to any recipients, select **Anyone**.
- To apply this rule to specific recipients, select **Any of the selected addresses**, and then specify the target email address or group.

6. Click **Save**.

The **Step 1: Select Recipients and Senders** screen re-appears.

---



## Step 2: Specify the Scanning Conditions

### Procedure

1. Click **Next**.

The **Step 2: Select Scanning Conditions** screen appears.

2. Next to **Take rule action when**, select **any condition matched (OR)**.
3. To enable the **Name or extension** condition, select the check box next to it.
4. Click **Name or extension**.

The **Attachment Name or Extension** screen appears.

5. Select the file extensions to block or consider blocking.
6. Click **Save**.

The **Step 2: Select Scanning Conditions** screen re-appears.

## Step 3: Specify the Actions

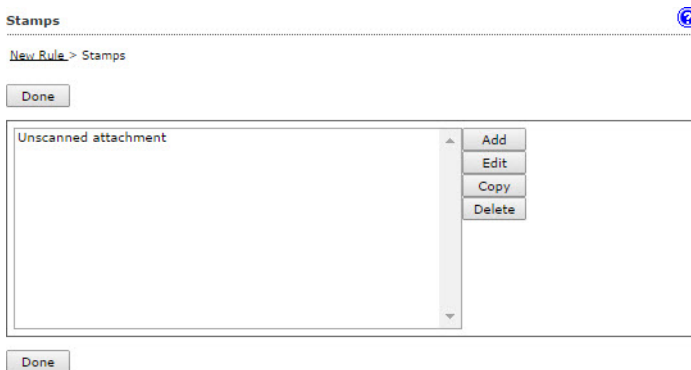
### Procedure

1. Click **Next**.

The **Step 3: Select Actions** screen appears.

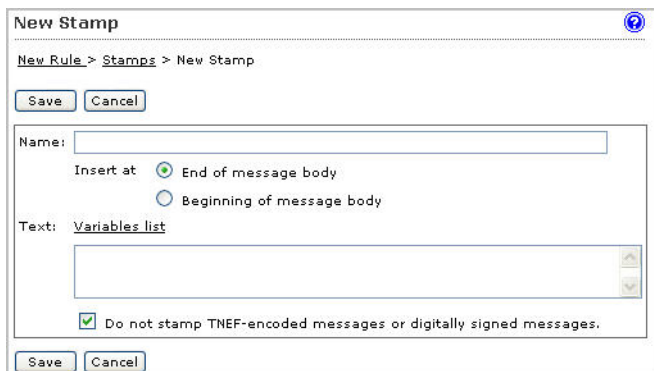
2. Under **Modify**, to enable the **Delete attachment** action, select the check box next to it.
3. Select **Matching attachment** from the drop-down list if it is not already selected.
4. Select the check box next to **Insert stamp in body**.
5. If there is no suitable stamp available from the drop-down list, click **Edit**.

The **Stamps** screen appears.



6. Click **Add** to create a new stamp.

The **New Stamp** screen appears.



7. Specify the required information.
  8. Click **Save**.  
The **Stamps** screen re-appears.
  9. Click **Done**.  
The **Select Actions** screen re-appears.
  10. Select the newly created stamp from the drop-down list.
- 

## Step 4: Specify the Priority

---

### Procedure

1. Click **Next**.  
The **Step 4: Name and Order** screen appears.
  2. Specify the rule name and order number.
  3. Click **Finish**.  
The newly created rule will appear highlighted in the **Policy List** screen.
- 

## Policy Example 2

Create a rule that quarantines messages containing specific keywords in the subject or body and then apply this rule to all recipients except administrators.

- [\*Step 1: Specify the Route on page 22-10\*](#)
- [\*Step 2: Specify the Scanning Conditions on page 22-11\*](#)
- [\*Step 3: Specify the Actions on page 22-14\*](#)
- [\*Step 4: Specify the Priority on page 22-14\*](#)

## Step 1: Specify the Route

### Procedure

1. Go to **Policy > Policy List**.

The **Policy List** screen appears.

2. Click **Add**.

3. Select **Other** from the drop-down list.

The **Step 1: Select Recipients and Senders** screen appears.

4. Next to **This rule will apply to**, select **incoming messages** from the drop-down list.

5. Click the **Recipients** link.

The **Select addresses** screen appears.

6. Select **Anyone**.

7. Click **Save**.

The **Step 1: Select Recipients and Senders** screen re-appears.

8. Click the **Sender to Recipient** link next to **Exceptions**.

The **Exceptions** screen appears.

Incoming Message Except

Add Rule > Incoming Message Except

Save Cancel

**Select addresses**

From (sender) To (recipient)

Enter email address Enter email address

Add >

| From | To |
|------|----|
|      |    |

Save Cancel

9. Under **From (sender)**, type \*@\* to specify any sender.
10. Under **To (recipient)**, specify the administrator's email address.
11. Click **Add**.

The sender-recipient pair appears in the list.

12. To add other administrators or recipients, repeat steps 9 to 11.
13. Click **Save** after you finish adding all the desired recipients.

The **Step 1: Select Recipients and Senders** screen re-appears.

## Step 2: Specify the Scanning Conditions

### Procedure

1. Click **Next**.
- The **Step 2: Select Scanning Conditions** screen appears.
2. Next to **Take rule action when**, select **any condition matched (OR)**.
  3. To enable the **Subject Keyword Expressions** condition under **Content**, select the check box next to it.
  4. Click **Subject Keyword Expressions**.

The **Keyword Expressions** screen appears.

**Keyword Expressions** ?

[New Rule](#) > Keyword Expressions

| Available                                                                                                                                                                     |                                                                          | Selected |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|----------|
| <input type="button" value="Add"/> <input type="button" value="Edit"/> <input type="button" value="Copy"/> <input type="button" value="Delete"/>                              |                                                                          |          |
| Profanity<br>HOAXES<br>Chainmail<br>Sexual Discrimination<br>Racial Discrimination<br>HTML and script messages<br>Credit Card Number<br>Social Security Number<br>Bounce Mail | <input type="button" value=""/> >><br><input type="button" value=""/> << |          |

5. If the desired keywords are not available from the existing list, click **Add** to create a new keyword list.

The **New Keyword Expression** screen appears.

The screenshot shows the 'New Keyword Expression' screen. At the top, the title is 'Keyword Expressions' with a help icon. Below the title is a breadcrumb trail: 'New Rule > Keyword Expressions > New Keyword Expression'. There are 'Save' and 'Cancel' buttons. The main form has a 'List name:' text box, a 'Match:' dropdown menu set to 'Any specified', and an 'Add' button with a plus icon. Below the 'Add' button is a checkbox and the text 'Keywords/regular expressions'. To the right of this is a 'Case sensitive' checkbox. At the bottom are 'Save' and 'Cancel' buttons.

6. Specify the required information.
7. To add an individual keyword expression, click **Add**.

The **Add Keyword Expression** screen appears.

The screenshot shows the 'Add Keyword Expression' screen. At the top, the title is 'Add Keyword Expression' with a help icon. Below the title is a breadcrumb trail: 'New Rule > Keyword Expressions > Add Keyword Expression'. There are 'Save' and 'Cancel' buttons. The main form has a text area for 'Keyword:' with a vertical scrollbar. Below the text area is a note: 'Type a backslash \ immediately before the following characters: . \ | ( ) { } [ ] ^ \$ \* + or ?'. There is a checkbox for 'Case sensitive'. Below this is a text area for 'Description:' with a vertical scrollbar. At the bottom are 'Save' and 'Cancel' buttons.

8. Specify the desired keyword expression and click **Save**.

The **New Keyword Expression** screen re-appears.

9. Repeat steps 7 and 8 for additional keyword expressions.
10. After you have added all the required keyword expressions, specify the List name for the new keyword list and click **Save**.

The **New Keyword Expression** screen re-appears.

11. Select the new list and click >> to insert the list into the Selected box.

12. Click **Save**.

The **Step 2: Select Scanning Conditions** screen re-appears.

13. To enable the **Body Keyword Expression** condition, select the check box next to it.

14. Click **Body Keyword Expression**.

The **Keyword Expressions** screen appears.

15. Select the new keyword list and click >> to insert the list into the Selected box.

16. Click **Save**.

The **Step 2: Select Scanning Conditions** screen re-appears.

Ensure that both the Subject keyword and Body keyword expressions are selected.

| Content                             |                                                |
|-------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> | <a href="#">Subject keyword expressions</a>    |
| <input type="checkbox"/>            | Subject is blank                               |
| <input checked="" type="checkbox"/> | <a href="#">Body keyword expressions</a>       |
| <input type="checkbox"/>            | <a href="#">Header keyword expressions</a>     |
| <input type="checkbox"/>            | <a href="#">Attachment keyword expressions</a> |

## Step 3: Specify the Actions

---

### Procedure

1. Click **Next**.

The **Step 3: Select Actions** screen appears.

2. Under **Intercept**, select **Quarantine to**.
  3. Accept the **Default Quarantine** area or click the drop-down list to select the desired quarantine area.
- 

## Step 4: Specify the Priority

---

### Procedure

1. Click **Next**.

The **Step 4: Name and Order** screen appears.

2. Specify the rule name and order number.
3. Click **Finish**.

The newly created rule will appear highlighted in the **Policy list** screen.

---

## Using the Asterisk Wildcard

You can use the asterisk (\*) as a wildcard in email addresses when defining routes and in file names.

### Wildcards in Email Addresses

Wildcards can appear in the name or domain sections of an email address. The following are valid examples:

- **name@\***: Valid representation of the whole name.
- **\*@domain.tld, name@\*.tld**: Valid representation of the whole name or the domain (not the top level domain (TLD)).



- **\*@\*.tld**: Valid representation of both the name and the domain (not the TLD).

Wildcards cannot appear in a subdomain or the top-level domain. Wildcards also cannot appear with other letters; they must appear alone. The following are invalid examples:

- **name@domain\*.tld**: Invalid representation of a subdomain.
- **name@domain.\***: Invalid representation of a TLD.
- **\*name@domain.tld**: Invalid use in conjunction with a name.

## Wildcards in File Names

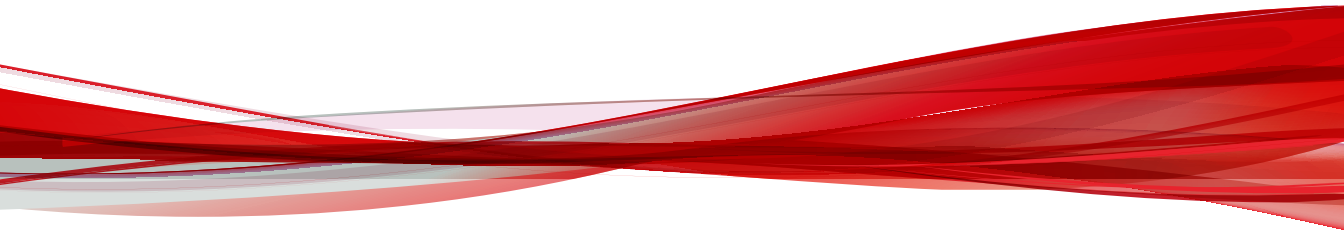
You can use wildcard characters in file names the same way you can use them in email addresses. Use an asterisk in the name or the extension sections of a file name, but not in conjunction with a partial name or extension. The following are valid examples:

- **\*.\***: Valid representation of all files.
- **\*.extension**: Valid representation of all files of a certain extension.
- **name.\***: Valid representation of files with a specific name but with any extension.
- **\*name.\***: Valid representation of a name.
- **name.\*extension**: Valid representation of an extension.



# **Part IV**

## **Monitoring the Network**





# Chapter 23

## Monitoring the Network

This section provides you with general instructions on the tasks that you need to perform for day-to-day maintenance.

Topics include:

- *[Monitoring Your Network on page 23-2](#)*
- *[Viewing System Status on page 23-2](#)*

## Monitoring Your Network

IMSVa provides a set of tools that enable you to monitor network traffic. You can obtain useful information such as the statistics on the performance of IMSVa components, or generate reports that display a breakdown of messages matching various scanning conditions.

## Viewing System Status

The **System Status** screen provides at-a-glance information about the status of IMSVa components and services.

---

### Procedure

1. Go to **System Status**.
2. Manage settings.

| OPTION                    | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Enable Connections</b> | <p>View the connections currently enabled (POP3).</p> <p>To enable or disable connections:</p> <ol style="list-style-type: none"><li>a. Select or clear the check box next to a connection item.</li><li>b. Click <b>Save</b>.</li></ol>                                                                                                                                                                                                                                                                                                                |
| <b>Components</b>         | <p>View the version numbers of the antivirus, antispyware, and antispam components that IMSVa uses to protect your network.</p> <p>To manually update components:</p> <ol style="list-style-type: none"><li>a. Select the check box next to the component to update.</li><li>b. Click <b>Update</b>.</li></ol> <p>To roll back to the previous version of the components:</p> <ol style="list-style-type: none"><li>a. Select the check box next to the component to roll back.</li><li>b. Click <b>Rollback</b>.</li></ol> <p>To refresh the page:</p> |

| OPTION                  | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         | <ul style="list-style-type: none"><li>Click <b>Refresh</b> to connect to the update source and display the latest component versions in the Availability column.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Managed Services</b> | <p>View other IMSVA services registered to this IMSVA admin database.</p> <p>To start or stop managed services:</p> <ul style="list-style-type: none"><li>Click <b>Start</b> or <b>Stop</b> under the service to change.</li></ul> <p>To unregister managed services:</p> <ul style="list-style-type: none"><li>When a managed service is inactive (it is disconnected from the IMSVA server), the <b>Unregister</b> button appears in the Connection column next to the specific service. To remove the managed service from this IMSVA server, click <b>Unregister</b>.</li></ul> <hr/> <div> <b>Note</b><br/>A managed service could become disconnected for any of the following reasons:</div> <ul style="list-style-type: none"><li>You removed the scanner.</li><li>The IMSVA manager service stopped.</li><li>The scanner server is shut down.</li></ul> |





# Chapter 24

## Dashboard and Widgets

This chapter provides you with general instructions for using the dashboard and widgets with IMSVA.

Topics include:

- *[Using the Dashboard on page 24-2](#)*
- *[Understanding Tabs on page 24-2](#)*
- *[Understanding Widgets on page 24-6](#)*

## Using the Dashboard

The IMSVA dashboard provides at-a-glance information for the IMSVA network. The dashboard is comprised of two components:

- **Tabs:** Allow administrators to create a screen that contains one or more widgets
- **Widgets:** Provide specific information about various security-related events

## User Accounts and the Dashboard

Each user account displays its own dashboard. When a user logs on to IMSVA for the first time, the default tabs and the widgets contained within the tabs appear on the dashboard.

Each user account can customize the dashboard, tabs, and widgets for the account's specific needs. Customizing the dashboard, tabs, or widgets for one user account has no effect on the dashboard, tabs, or widgets for a different user account. Each user account has a completely independent dashboard, tabs, and widgets from every other user account.

## Understanding Tabs

The IMSVA dashboard uses tabs to provide flexibility for administrators. Tabs provide a container for widgets allowing administrators to create their own customized dashboard. The dashboard supports up to 30 tabs per user account.

You can move widgets on tabs by dragging and dropping widgets in various locations on the tab. The layout for a tab determines where you can move the widget.



**Note**

Customizing the dashboard, tabs, or widgets for one user account has no effect on the dashboard, tabs, or widgets for a different user account. Each user account has a completely independent dashboard, tabs, and widgets from every other user account.

**Default Tabs**

The default tabs replace the IMSVA Real-Time Statistics screen. All information that was available on the IMSVA Real-Time Statistics screen is available through the widgets on the default tabs. The dashboard provides the following default tabs:

- System Overview
- Message Traffic
- Sender Filtering
- Cloud Pre-Filter



**Note**

Deleting the default tabs permanently removes the tabs from viewing for the user account that removed the tabs. There is no way to recover a deleted tab. Deleting a default tab has no impact on the dashboard for other user accounts.

**System Overview Tab**

The System Overview tab replaces a portion of the Real-Time Statistics screen. The System Overview tab contains widgets that display system resource usage and queue status information.

**TABLE 24-1. System Overview Tab Widgets**

| WIDGET       | DESCRIPTION                                                  |
|--------------|--------------------------------------------------------------|
| System Usage | Displays the system resources used by IMSVA on your network. |

| WIDGET           | DESCRIPTION                                                                                                                                                                                                   |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mail Queues      | Displays the number of messages that just arrived, number of messages ready for delivery, number of messages deferred due to delivery failure, and number of messages kept on hold for later manual delivery. |
| IMSVa Quarantine | Displays the number of quarantined messages and the disk space for each quarantine area.                                                                                                                      |
| IMSVa Archive    | Displays the number of archived messages and the disk space for each archive area.                                                                                                                            |

## Message Traffic Tab

The Message Traffic tab replaces a portion of the Real-Time Statistics screen. The Message Traffic tab contains widgets that display message traffic statistics and violations detected by IMSVa.

**TABLE 24-2. Message Traffic Tab Widgets**

| WIDGET                 | DESCRIPTION                                                                                                                                    |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| IMSVa Scan Performance | Displays the number of messages that triggered each type of filter for a given period.                                                         |
| Scanning Conditions    | Displays the number of messages that triggered each type of filter and the ratio of these messages compared to the total number of detections. |
| Messages Processed     | Displays the number of incoming and outgoing email traffic.                                                                                    |

## Sender Filtering Tab

The Sender Filtering tab contains widgets that display all the malicious messages and all the spam blocked by Sender Filtering components.

**TABLE 24-3. Sender Filtering Tab Widgets**

| WIDGET                       | DESCRIPTION                                                                                                                  |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Sender Filtering Performance | Displays the number of malicious messages and spam blocked by specific Sender Filtering components and the time of blocking. |
| Sender Filtering Type        | Displays the number of malicious messages and spam blocked by specific Sender Filtering components.                          |

**Cloud Pre-Filter Tab**

The Cloud Pre-Filter tab contains widgets that display Cloud Pre-Filter message traffic and threat detections.

**TABLE 24-4. Cloud Pre-Filter Tab Widgets**

| WIDGET                           | DESCRIPTION                                                          |
|----------------------------------|----------------------------------------------------------------------|
| Cloud Pre-Filter Traffic Summary | Displays the number of messages processed by Cloud Pre-Filter.       |
| Cloud Pre-Filter Violation Types | Displays the number and type of Cloud Pre-Filter message violations. |

**Adding Tabs**

Add tabs to the dashboard to provide a customized information matrix for your IMSVA network needs.

**Procedure**

1. Go to the **Dashboard** screen.
2. Click **New Tab**.  
The **New Tab** screen appears.
3. Specify a meaningful title for the tab in the **Title** field.
4. Select a layout for the tab.

**Note**

The number of widgets that you can add to a tab depends on the layout for the tab. Once the tab contains the maximum number of widgets, you must remove a widget from the tab or create a new tab for the widget.

---

5. Click **Save**.

The empty tab appears on the dashboard.

6. Click **Add Widget** to populate the tab with widgets.
- 

## Configuring Tab Settings

You can change the default name of a tab using the **Tab Settings** screen.

---

### Procedure

1. Go to the **Dashboard** screen.
  2. Click **Tab Settings**.  
The **Tab Settings** screen appears.
  3. Specify a meaningful title for the tab in the **Title** field.
  4. Click **Save**.
- 

## Understanding Widgets

Widgets are the core components for the dashboard. Tabs provide the layout and widgets provide the actual data for the dashboard.



**Note**

Customizing the dashboard, tabs, or widgets for one user account has no effect on the dashboard, tabs, or widgets for a different user account. Each user account has a completely independent dashboard, tabs, and widgets from every other user account.

In some widgets the total number of messages matching each scanning condition consists of overlaps. For example, if a message matches more than one scanning condition, such as spam and attachment, this message will be counted twice, once in the total number for spam and a second time in the total number for attachment.

**Using Widgets**

Each widget provides targeted security-related information. Widgets can display this information in one of the following ways:

- Bar chart
- Pie chart
- Table

Click the help icon on a widget to view the following types of information:

**TABLE 24-5. Widget Help**

| WIDGET TOPIC | DESCRIPTION                                                             |
|--------------|-------------------------------------------------------------------------|
| Overview     | Provides a description for the widget and how the widget can be used    |
| Widget Data  | Detailed information about the data that displays in the widget's table |
| Configure    | Description of settings that are readily visible on the widget          |
| Edit         | Description of settings that require clicking the edit icon to modify   |

## Configuring Widgets

Configuring a widget means modifying settings for the widget that are readily visible on the widget. The following table lists some examples of the widget settings administrators can modify.

**TABLE 24-6. Configuring Widgets**

| SETTING          | DESCRIPTION                                                                                                                                                    |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range            | Modify the time range for data that displays: <ul style="list-style-type: none"><li>• 1 hour</li><li>• 6 hours</li><li>• 12 hours</li><li>• 24 hours</li></ul> |
| Data aggregation | Modify the aggregation for the data by specifying all IMSVA or a single IMSVA.                                                                                 |
| Display          | Modify how the data displays: <ul style="list-style-type: none"><li>• Bar chart</li><li>• Pie chart</li><li>• Table</li></ul>                                  |

## Editing Widgets

Editing a widget means modifying settings for the widget that are not readily visible on the widget. Click the edit icon to access these settings. Examples include:

**TABLE 24-7. Editing Widgets**

| SETTING | DESCRIPTION                                   |
|---------|-----------------------------------------------|
| Title   | Modify the name that displays for the widget. |



| SETTING | DESCRIPTION                                                                                                                                                                                       |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Others  | Some widgets provide settings to modify the amount of data a widget displays (range of entries) or the type of data that displays (security threat type or component type with the product type). |

**Procedure**

1. Go to the **Dashboard** screen.
2. Click the **Edit** icon on the widget. The Edit screen appears.
3. Specify a meaningful title for the widget in the **Title** field.
4. Click **OK**.
5. Specify values for any other settings available on the widget.



**Note**

For more information about "other" settings, check the Help for that specific widget.

6. Click **Save**.

The widget reloads applying the new settings.

**Adding Widgets**

The number of widgets that you can add to a tab depends on the layout for the tab. Once the tab contains the maximum number of widgets, you must remove a widget from the tab or create a new tab for the widget.

**Procedure**

1. Go to any tab on the dashboard.
2. Click **Add Widget**.

The **Add Widget** screen appears.

3. Click one of the following to filter the widgets that display:

| CATEGORY         | DESCRIPTION                            |
|------------------|----------------------------------------|
| All Widgets      | Displays all widgets available         |
| System           | Displays only system widgets           |
| Message Traffic  | Displays only message traffic widgets  |
| Sender Filtering | Displays only Sender Filtering widgets |
| Cloud Pre-Filter | Displays only Cloud Pre-Filter widgets |

4. Select one or more widgets to add to a tab.

5. Click **Add and Reload**.
-

# Chapter 25

## Reports

This chapter provides information on generating one-time and scheduled reports.

Topics include:

- *Generating Reports on page 25-2*
- *Managing One-time Reports on page 25-5*
- *Scheduled Reports on page 25-8*

## Generating Reports

Depending on your needs, you can choose to generate a one-time report on demand or schedule a report to be run at specific intervals. IMSVA offers you the flexibility of specifying the content for each report and the option of viewing or saving the result in HTML or CSV format and sending reports to specified recipients through email.

### Types of Report Content

You can select from the following types of content to be included in the report:

**TABLE 25-1. Cloud Pre-Filter Reports**

| REPORT CONTENT             | DESCRIPTIONS                                                                                                                   |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Traffic and threat summary | Shows the total number and size of incoming messages. Also shows the number of messages matching specific scanning conditions. |

**TABLE 25-2. Summary Reports**

| REPORT CONTENT                   | DESCRIPTIONS                                                                                                                                                         |
|----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Traffic and policy summary       | Shows the total number and size of incoming and outgoing messages, the number of messages matching specific scanning conditions, and a summary of quarantine events. |
| Virus and malicious code summary | Shows a summary of the virus message count by actions.                                                                                                               |
| Spam summary                     | Shows a summary of the total spam message count by antispam engine, Email reputation, IP Profiler, and actions.                                                      |

| REPORT CONTENT                     | DESCRIPTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sender IP address blocking summary | Includes "IP Profiler Summary", "Email Reputation IP Blocking Summary" and "SMTP Traffic Throttling Blocking Summary". The first one shows a summary of the total number of sender connections that reached IP Profiler and are blocked by the different Sender Filtering rules. The second one shows the total sender connections that reached Email reputation and are blocked by Email reputation. The third one shows a summary of total number of sender connections and the total number of email messages that are blocked by SMTP Traffic Throttling. |
| Virtual Analyzer analysis summary  | Shows the total number of analyzed advanced threats by risk level.<br><br><div>  <b>Note</b><br/> Virtual Analyzer may not return a risk level if: </div> <ul style="list-style-type: none"> <li>• A server or connection error occurs</li> <li>• The attachment's file type is unsupported</li> <li>• Analysis has not been completed</li> </ul>                                                                                                                            |
| Time-of-Click Protection summary   | Shows the total number of clicks, number of clicks allowed, number of clicks blocked, number of clicks that get users warned and stopped, and number of clicks that get users warned but continued access.                                                                                                                                                                                                                                                                                                                                                    |

**TABLE 25-3. Encryption Reports**

| REPORT CONTENT                    | DESCRIPTIONS                                                         |
|-----------------------------------|----------------------------------------------------------------------|
| Decryption and encryption summary | Shows the total number and size of encrypted and decrypted messages. |

**TABLE 25-4. Top 10 Reports**

| REPORT CONTENT                                                           | DESCRIPTIONS                                                                                      |
|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Top 10 traffic email addresses                                           | Top 10 email addresses ranked by the total sent and received message count.                       |
| Top 10 virus names                                                       | Top 10 virus names ranked by their detection count.                                               |
| Top 10 blocked IP addresses for Directory Harvest Attack (DHA)           | Top 10 IP addresses ranked by the blocked count for DHA attack.                                   |
| Top 10 IP addresses ranked by the blocked count for bounced mail attack. | Top 10 IP addresses ranked by the blocked count for bounced mail attack.                          |
| Top 10 blocked IP addresses by SMTP Traffic Throttling                   | Top 10 IP addresses ranked by the blocked count for SMTP Traffic Throttling                       |
| Top 10 blocked senders by SMTP Traffic Throttling                        | Top 10 senders ranked by the blocked count for SMTP Traffic Throttling                            |
| Top 10 virus recipients and senders                                      | Top 10 virus recipients and senders ranked by their total received and sent virus message counts. |
| Top 10 most frequently triggered rules                                   | Top 10 rule names ranked by the number of messages that triggered each rule.                      |
| Top 10 spam recipients                                                   | Top 10 spam recipient addresses ranked by their total received spam message count.                |
| Top 10 blocked IP addresses by Email reputation                          | Top 10 blocked IP addresses ranked by the number of connections dropped by Email reputation.      |
| Top 10 blocked IP addresses for spam                                     | Top 10 IP addresses ranked by the blocked count for spam.                                         |
| Top 10 blocked IP addresses for viruses or malicious code                | Top 10 IP addresses ranked by the blocked count for viruses.                                      |
| Top 10 senders of messages with suspicious URLs                          | Top 10 sender addresses ranked by their total received messages that contained suspicious URLs.   |

| REPORT CONTENT                                             | DESCRIPTIONS                                                                               |
|------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Top 10 Trend Micro Email Encryption recipients and senders | Top 10 recipients and senders ranked by email encryption violations.                       |
| Top 10 compliance recipients and senders                   | Top 10 recipients and senders ranked by regulatory compliance violations.                  |
| Top 10 C&C email recipients and senders                    | Top 10 recipients and senders of C&C email based on the addresses used in the SMTP session |
| Top 10 marketing graymail recipients and senders           | Top 10 recipients and senders of marketing newsletter email messages                       |
| Top 10 social network graymail recipients and senders      | Top 10 recipients and senders of social networking update email messages                   |

## Managing One-time Reports

Generate a one-time report for an at-a-glance summary of IMSVA protection. For future reference, IMSVA retains all one-time reports on this screen.

You can also enable IMSVA to automatically generate daily, weekly, or monthly reports.

To view the list of one-time reports that were previously generated, go to **Reports > One-time Reports**.

---

### Procedure

- To change the display, do any of the following:
  - To sort the table, click any of the column headings that are underlined.
  - If too many items appear on the list, click the arrow buttons on top of the list to move to the next page or select a number from the drop-down box that represents which page to view.
  - To change the number of items that appear in the list at a time, select a new display value from the drop-down box at the bottom of the table.

- To generate a report, click **Add**, then specify the report details.

The **Output** column shows “In progress” while the report generates.

- To view the report, click one of the following formats under Output:
  - **HTML**: Opens the report in another browser window.
  - **CSV**: Saves the report to a comma-separated value file that you can open with a spreadsheet application.



#### Note

Email Encryption and compliance report content is not available unless you activate those products. For more information on activating them, see [Managing Product Licenses on page 31-21](#).

- To delete a report, select the check box next to it and click **Delete**.
- To send a report through email, select the check box next to it and click **Email**.

## Adding One-time Reports

You can generate one-time reports on demand to help monitor the traffic on your network.

### Procedure

1. Go to **Reports > One-time Report**.

2. Click **Add**.

The **Add One-time Report** screen appears. For a list of available reports, see [Generating Reports on page 25-2](#).



3. Configure the report settings and then click **Save**.

| OPTION                   | DESCRIPTION                                            |
|--------------------------|--------------------------------------------------------|
| <b>Name</b>              | Specify a descriptive name.                            |
| <b>Dates</b>             | Select the time span that the report will cover.       |
| <b>Report Content</b>    | Select the content to include in the report.           |
| <b>Delivery Settings</b> | Select to enable the delivery settings for the report. |
| <b>Sender</b>            | Specify the sender email address of the report.        |
| <b>Recipient(s)</b>      | Specify the recipients who will receive the report.    |

The report takes several minutes to generate. The message **In progress** appears in the report table.



The screenshot shows the 'One-time Reports' window with a table containing one report. The report is 'Traffic and policy summary', dated 'December 22, 2015 11:31:00 AM', and its status is 'In progress'. The interface includes buttons for 'Add', 'Delete', and 'Email', and a 'Page' selector showing '1' of '1'.

| Report Name                                         | Date                          | Output      |
|-----------------------------------------------------|-------------------------------|-------------|
| <input type="checkbox"/> Traffic and policy summary | December 22, 2015 11:31:00 AM | In progress |

After the report generates, the hyperlinks **HTML** and **CSV** display in the report table.



The screenshot shows the 'One-time Reports' window after three reports have been generated. The table lists 'Traffic and threat summary', 'Virus and malicious code summary', and 'Traffic and policy summary'. Each report has 'HTML' and 'CSV' links in the 'Output' column. The 'Page' selector now shows '1' of '3'.

| Report Name                                               | Date                          | Output                                   |
|-----------------------------------------------------------|-------------------------------|------------------------------------------|
| <input type="checkbox"/> Traffic and threat summary       | December 22, 2015 11:33:58 AM | <a href="#">HTML</a> <a href="#">CSV</a> |
| <input type="checkbox"/> Virus and malicious code summary | December 22, 2015 11:33:34 AM | <a href="#">HTML</a> <a href="#">CSV</a> |
| <input type="checkbox"/> Traffic and policy summary       | December 22, 2015 11:31:00 AM | <a href="#">HTML</a> <a href="#">CSV</a> |

4. Under **Output**, select the output format to export the report data.

Report generation occurs once every five minutes. Report generation could require as much as five minutes in addition to the time required to aggregate reporting data and make the necessary calculations.

## Scheduled Reports

Use scheduled reports to automate report generation. IMSVA provides daily, weekly, and monthly reports.

### Configuring Scheduled Reports

Scheduled reports generate automatically according to the schedules you configure.

#### Procedure

1. Go to **Reports > Settings**.

The **Scheduled Report Settings** screen appears.

| Report Type     | Status | Schedule       | Configure                | # to Save |
|-----------------|--------|----------------|--------------------------|-----------|
| Daily reports   | ✗      | 2:00           | <a href="#">Settings</a> | 60        |
| Weekly reports  | ✗      | Sunday at 2:00 | <a href="#">Settings</a> | 20        |
| Monthly reports | ✗      | Day 1 at 2:00  | <a href="#">Settings</a> | 5         |

2. Click the **Settings** link for one of the following report types:
  - Daily reports
  - Weekly reports
  - Monthly reports

The report settings screen appears (example: **Daily Report Settings**).

**Daily Report Settings**

[Scheduled Report Settings](#) > Daily Report Settings

☐ **Generate daily reports**

Start time: 2   
hh

☐ **Report Content**

**Cloud Pre-Filter Reports**

☐ Traffic and threat summary

**InterScan Messaging Security Virtual Appliance Summary Reports**

☐ Traffic and policy summary

☐ Virus and malicious code summary

☐ Spam summary

☐ Sender IP address blocking summary

☐ Virtual Analyzer analysis summary

☐ Time-of-Click Protection summary

**Encryption Reports**

☐ Decryption and encryption summary

**InterScan Messaging Security Virtual Appliance Top 10 Reports**

☐ Top 10 traffic email addresses

☐ Top 10 virus names

☐ Top 10 blocked IP addresses for Directory Harvest Attack (DHA)

☐ Top 10 blocked IP addresses for bounced mail attack

☐ Top 10 blocked IP addresses by SMTP Traffic Throttling

☐ Top 10 blocked senders by SMTP Traffic Throttling

☐ Top 10 virus recipients and senders

☐ Top 10 most frequently triggered rules

☐ Top 10 spam recipients

☐ Top 10 blocked IP addresses by Email reputation

☐ Top 10 blocked IP addresses for spam

☐ Top 10 blocked IP addresses for viruses or malicious code

☐ Top 10 senders of messages with suspicious URLs

☐ Top 10 Trend Micro Email Encryption recipients and senders

☐ Top 10 compliance recipients and senders

☐ Top 10 C&C email recipients and senders

☐ Top 10 marketing graymail recipients and senders

☐ Top 10 social network graymail recipients and senders

☐ **Delivery Settings**

Sender:

Recipient(s):

Use a semicolon ";" to separate multiple addresses

### 3. Configure the report settings.

For report options, see [Generating Reports on page 25-2](#).

**Note**

When configuring monthly report settings, if you choose to generate the report on the 29th, 30th, or 31st day, IMSVA will generate the report on the last day of the month for months with fewer days. For example, if you select 31, IMSVA will generate the report on the 28th (or 29th) in February, and on the 30th in April, June, September, and November.

---

4. Click **Save**.

The report status changes.

5. Specify the number for each type of report that you would like to retain.

6. Click **Save**.

7. Go to **Reports > Scheduled Reports**.

The **Archived Scheduled Reports** screen appears.

---

**Note**

The report has not generated yet.

---

| Archived Scheduled Reports   |                   |             |
|------------------------------|-------------------|-------------|
| Daily Weekly Monthly         |                   |             |
| Delete Email 1-1 of 1 Page 1 |                   |             |
| <input type="checkbox"/>     | Archived Reports  | Output      |
| <input type="checkbox"/>     | December 21, 2015 | HTML CSV    |
|                              |                   | 15 per page |

8. After the report generates, see [Accessing Scheduled Reports on page 25-10](#) for available report options.
- 

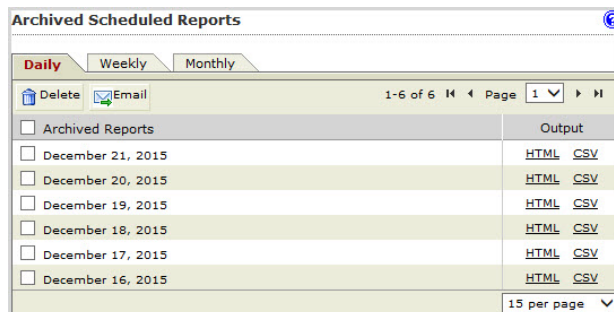
## Accessing Scheduled Reports

---

### Procedure

1. Go to **Reports > Scheduled Reports** from the menu.

The **Schedule Reports** screen appears.



2. Select a tab that corresponds to the generation frequency.
  - **Daily**
  - **Weekly**
  - **Monthly**
3. For available report options, see [Using Scheduled Reports on page 25-11](#).

## Using Scheduled Reports

Go to **Reports > Scheduled Reports** and then open either the **Daily**, **Weekly**, or **Monthly** tab.

### Procedure

- To view the report, click one of the following formats under **Output**:
  - **HTML**: Opens the report in another browser window.
  - **CSV**: Saves the report to a comma-separated value file that you can open with a spreadsheet application.
- To change the display, do one of the following:
  - If too many items appear on the list, click the arrow buttons on top of the list to move to the next page.

- To change the number of items that appears in the list at a time, select a new display value from the drop-down box at the bottom of the table.
  - To delete a report, select the check box next to it and click **Delete**.
  - To send a report through email, select the check box next to it and click **Email**.
-

# Chapter 26

## Logs

This chapter provides you with general instructions on configuring and querying logs.

Topics include:

- *[About Logs on page 26-2](#)*
- *[Configuring Log Settings on page 26-2](#)*
- *[Configuring Syslog Settings on page 26-4](#)*
- *[Querying Logs on page 26-5](#)*

## About Logs

Logs enable you to monitor various types of events and information flow within IMSVA. They also serve as an important resource for troubleshooting.

To enable logs and benefit from the information, do the following:

- **Step 1:** [Configuring Log Settings on page 26-2](#)
- **Step 2:** [Querying Logs on page 26-5](#)

## Configuring Log Settings

You can configure the level of detail that IMSVA writes to the logs and the length of time it stores them. In addition, you can set the update period that controls how frequently the scanner services write their local logs to the IMSVA admin database.

---

### Procedure

1. Go to **Logs > Settings**.

The **Log Settings** screen appears.

2. Configure **Reporting Logs**.

- **Database log update interval:** IMSVA updates the logs regularly at every interval. Select a number between 1 and 60 for the interval. Selecting 60 means that IMSVA updates the logs once every hour.
- **Number of days to keep logs for query:** Specify a value between 1 and 60 that represents the number of days IMSVA preserves the report logs in the IMSVA admin database.

3. Under **Log Files**, configure the following:

- **Application log detail level:** The level of log detail. Select one of the following:
  - **Normal:** The standard level of detail. This level provides the basic information needed by an administrator for daily monitoring and maintenance.



- **Detailed:** A high level of detail. All IMSVA processes write detailed information to the logs, including: POP3 session information, the policy matched, the filter executed, and the action taken.
- **Diagnostic:** Comprehensive information on each event or action. Diagnostic level logs include all information from the detailed level, plus SMTP routing information, and the route match information that determined which policy was applied.
- **Debug:** The most complete and verbose level of detail. Debug logs are only recommended when troubleshooting.

**Note**

Diagnostic or debug logs might consume excessive IMSVA resources and could reduce system performance.

---

- **Number of days to keep log files:** Select the check box and specify a number between 1 and 150 that represents the number of days IMSVA keeps the local log files. To prevent IMSVA from deleting the log files, clear the check box.
- **Maximum log file size for each service:** Select the check box and specify a number between 100 and 99999 that represents the size in MB for local log files for each type of process or service. To remove any size restriction, clear the check box.

**Note**

IMSVA log files are stored in the folder `/opt/trend/imss/log`.

Daily log files for each event type are created at midnight and have the suffix "`<Date>.<Count>`". The `<Count>` suffix is incremented if there is more than one (1) log file per day.

If the log file size exceeds the maximum log file size for each service, IMSVA will delete the oldest file.

---

4. Click **Save**.
- 

## Configuring Syslog Settings

To provide enterprise-class logging capabilities, IMSVA supports sending logs through the syslog protocol to multiple external syslog servers in a structured format. You can send different event log types to multiple syslog servers. On the IMSVA management console, you can add, delete, import and export syslog servers.

The following steps describe how to add a syslog server.

---

### Procedure

1. Go to **Logs > Syslog Settings**.

2. Click **Add**.

The **Add Syslog Server** screen appears.

3. In the **Syslog Server Setting** section, select a facility level.



#### Note

The facility level specifies the source of a message. This lets the configuration file specify that messages from different facilities will be handled differently.

---

4. In the **Syslog Type** section, select syslog types from the following:

- **Message tracking**
- **Policy events**
- **System events**
- **MTA events**
- **Sender filtering**
- **Content scanning**

- **Administration**

5. In the **Syslog Server** section, specify the IP address, port number and supported protocol of the syslog server and click **Add Syslog Server**.

The new syslog server appears in the syslog server list within the **Syslog Server** section.


**Note**

You can continue to add more servers, edit the existing servers, and delete servers from the syslog server list.

---

6. Click **Save**.

The details about each facility level such as the syslog type and server are shown on the **Syslog Settings** screen.

A green check mark appears for each facility level, indicating that the associated syslog server has been enabled. To disable a facility level, click the green check mark.

---

## Querying Logs

You can perform queries on the following types of events or information:

### Message tracking

Records message details such as the sender, recipient(s), message size, and the final action that IMSVA or Cloud Pre-Filter has taken. The query result also indicates the name and type of the policy rule that was triggered.

### System events

Tracks the time of system events such as user access, modification of rules, registration of MCP agent and so on.

### Policy events

Provides details on the policy rules that were triggered, the actions taken, and the message details.

**Quarantine events**

Provides details on quarantine events, for example, the percentage of release events in all the quarantine events.

**URL click tracking**

Provides details on URL clicks such as the message sender, recipient(s), URL, message ID, and whether the URL is blocked, warned or clicked through.

**MTA events**

Provides connection details of Postfix on the local computer where the central controller is installed.

**Sender filtering**

Provides the time when IMSVA started and stopped blocking messages from the queried IP address or sender address.

## Log Query Behavior

With the inclusion of Cloud Pre-Filter to IMSVA, changes in the way that users can query logs have been introduced.

### Message Tracking Enhancement

IMSVA splits **Message tracking** logs in to:

- **IMSVA data only:** These message tracking logs only contain data from IMSVA.

The available query conditions are **Subject**, **Message ID**, **Sender**, **Recipient**, and **Attachment(s)**, and all query conditions can be left blank.

- **Cloud Pre-Filter + IMSVA data:** These message tracking logs contain data from the Cloud Pre-Filter and IMSVA.

The available query conditions are **Sender** and **Recipient**, and **Recipient** is mandatory.

IMSVa includes hyperlinks for quarantined, archived, and postponed messages in **Message tracking** logs. This provides detailed information about those messages.

Query Behavior

IMSVa provides the following log query behavior:

TABLE 26-1. General Query Information

| QUERY                                                              | IMSVa ONLY                                               | IMSVa + CLOUD PRE-FILTER                                                                                                                                                                                                                                                                   |
|--------------------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| a@a.com                                                            | Only the exact match is returned.<br><br>Result: a@a.com | Displays all messages sent to any variant of "a@a.com", including those with multiple recipients.<br><br>Result: <ul style="list-style-type: none"><li>• za@a.com</li><li>• a@a.com.us</li><li>• a@a.com; b@a.com</li><li>• b@a.com; a@a.com</li><li>• b@a.com; a@a.com; c@a.com</li></ul> |
| * in Subject field<br><br>All other query conditions left blank    | Returns <b>all</b> messages                              | Returns approximately <b>10000</b> query results                                                                                                                                                                                                                                           |
| * in Message ID field<br><br>All other query conditions left blank | Returns <b>all</b> messages                              | Returns approximately <b>10000</b> query results                                                                                                                                                                                                                                           |

**TABLE 26-2. "Sender" Query Information**

| QUERY             | IMSVa ONLY                                                                                             | IMSVa + CLOUD PRE-FILTER                                                                            |
|-------------------|--------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| 5!#?              | Valid <b>Sender</b> value in IMSVa, though no results will be returned.                                | Not supported.<br><br>User must provide a properly formatted, complete or partial email address.    |
| *test@example.com | Valid <b>Sender</b> value in IMSVa.<br><br>Returns:<br><br>All variations ending with test@example.com | Not supported. The wildcard "*" is not supported in the <b>Sender</b> field.                        |
| test@example.com  | Valid <b>Sender</b> value in IMSVa.<br><br>Returns:<br><br>Only messages sent from test@example.com    | Valid <b>Sender</b> value in IMSVa.<br><br>Returns:<br><br>Only messages sent from test@example.com |

**TABLE 26-3. "Recipient" Query Information**

| QUERY             | IMSVa ONLY                                                                                                | IMSVa + CLOUD PRE-FILTER                                                                                                                                                                          |
|-------------------|-----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| test@example.com  | Valid <b>Recipient</b> value in IMSVa.<br><br>Returns:<br><br>Only messages sent to test@example.com      | Valid <b>Recipient</b> value in IMSVa.<br><br>Returns:<br><br>Approximately 10000 results sent to all variations of test@example.com (the same as using "**test@example.com*" in IMSVa Only data) |
| *test@example.com | Valid <b>Recipient</b> value in IMSVa.<br><br>Returns:<br><br>All variations ending with test@example.com | Not supported. The wildcard "*" is not supported in the <b>Recipient</b> field.                                                                                                                   |

| QUERY                                  | IMSVa ONLY                                                                                                                       | IMSVa + CLOUD PRE-FILTER                                                                                                                                                                                             |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| test@example.com*                      | Valid <b>Recipient</b> value in IMSVa.<br><br>Returns:<br><br>All variations starting with "test@example.com"                    | Not supported. The wildcard "*" is not supported in the <b>Recipient</b> field.                                                                                                                                      |
| *test@example.com*                     | Valid <b>Recipient</b> value in IMSVa.<br><br>Returns:<br><br>All variations of test@example.com                                 | Not supported. The wildcard "*" is not supported in the <b>Recipient</b> field.<br><br> <b>Tip</b><br>Use test@example.com instead. |
| test@example.com;<br>test2@example.com | Valid <b>Recipient</b> value in IMSVa.<br><br>Result:<br><br>Combined result of querying test@example.com and test2@example.com. | Not supported<br><br> <b>Tip</b><br>Use "test@example.com" or "test2@example.com"                                                   |
| %^\$&^                                 | Valid <b>Recipient</b> value in IMSVa, though no results will be returned.                                                       | Not supported.<br><br>User must provide a properly formatted, complete or partial email address.                                                                                                                     |

**Note**

The data <server name>[127.0.0.1], from returned queries, indicates the default DNS server.

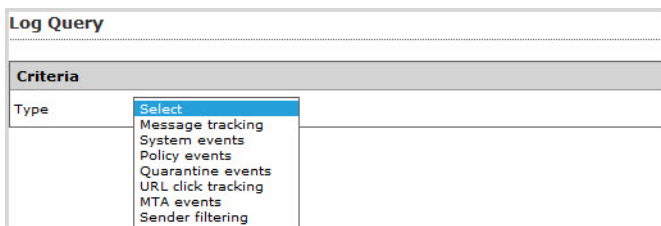
## Querying Message Tracking Logs

---

### Procedure

1. Go to **Logs > Query**.

The **Log Query** screen appears.



The screenshot shows the 'Log Query' interface. At the top is a header 'Log Query'. Below it is a section titled 'Criteria'. Under 'Criteria', there is a 'Type' label followed by a dropdown menu. The dropdown menu is open, showing a list of options: 'Select', 'Message tracking', 'System events', 'Policy events', 'Quarantine events', 'URL click tracking', 'MTA events', and 'Sender filtering'. The 'Message tracking' option is highlighted in blue.

2. Next to **Type**, select **Message tracking**.

The query screen for message event logs appears.

3. In the second drop-down box next to **Type**, select one of the following:
  - **IMSVa data only:** Displays all messages which are directed through IMSVa
  - **Cloud Pre-Filter + IMSVa data:** Displays all messages which are directed through Cloud Pre-Filter and IMSVa. This includes messages which are deleted by Cloud Pre-Filter.
4. Next to **Dates**, select a date and time range.
5. Specify any of the following additional information:
  - **Subject**
  - **Message ID**
  - **Sender**
  - **Recipient(s)**
  - **Attachment(s)**



**Note**

- a. Use the asterisk wildcard for partial searches on any field.
  - b. The **Subject**, **Message ID** and **Attachment(s)** fields only display when **IMSV data only** is selected.
- 

**6. Click Display Log.**

A timestamp, sender, recipient, subject, and last known action appear for each event.

**7. Click the timestamp link to see the following information:**

- **Timestamp**
- **Connecting from**
- **Sender**
- **Recipient**
- **Subject**
- **Size**
- **Attachments**
- **Message ID**
- **Internal Message ID**
- **Rule Name**
- **Rewrite Result**
- **Scan Action**
- **Delivery IP**
- **Delivery Feedback**
- **DKIM Sign Result**
- **Scanner**

- **Scanner that detected the message**
  - **Rule that detected the violation**
  - **Action details**
8. Perform any of the additional actions:
- To change the number of items that appears in the list at a time, select a new display value from the drop-down box on the top of the table.
  - To print the query results, click **Print current page**.
  - To save the query result to a comma-separated value file, click **Export to CSV**.
  - Click the action link to view detailed information about the action.
- 

## Querying System Event Logs

---

### Procedure

1. Go to **Logs > Query**.
2. Next to **Type**, select **System events**.

The query screen for system event logs appears.
3. In the second drop-down box next to **Type**, select one of the following:
  - **All events**: Displays the timestamp and descriptions for all system events.
  - **Updates**: Displays the timestamp of all scan engines and pattern file updates from the ActiveUpdate server to the IMSVA admin database.
  - **Service status**: Displays the timestamp and descriptions when the scanner service is started or stopped.
  - **Audit logs**: Displays the timestamp and descriptions for operations performed by specified administrator accounts.

**Note**

As an enhanced log category of system events, **Audit log** replaces **Admin activity** on the IMSVA management console. Audit logs record various administrator operations and provide a way to query activities of specified administrator accounts.

- **Errors:** Displays the timestamp and descriptions for all errors that IMSVA encountered.
  - **EUQ logs:** Displays the timestamp and descriptions for all End-User Quarantine events.
4. In the third drop-down box next to **Type**, select the server to view.
  5. Next to **Dates**, select a date and time range.
  6. Next to **Description**, specify any special words to search for.
  7. Click **Display Log**.  
A timestamp, component, and description appear for each event.
  8. Perform any of the additional actions:
    - To change the number of items that appears in the list at a time, select a new display value from the drop-down box on the top of the table.
    - To sort the table, click the column title.
    - To print the query results, click **Print current page**.
    - To save the query result to a comma-separated value file, click **Export to CSV**.

## Querying Policy Event Logs

### Procedure

1. Go to **Logs > Query**.

2. Next to **Type**, select **Policy events**.

The query screen for policy event logs appears.

3. In the second drop-down box next to **Type**, select one of the following items related to the policy and the rules you configured for the policy:

- **All**
- **Virus or malicious code**
- **Advanced persistent threat**
- **Spyware/grayware**
- **C&C email**
- **Spam/phish**
- **Graymail**
- **Web Reputation**

**Note**

If you select **Web Reputation**, IMSVA displays two additional drop-down lists that contain website content categories. Select any category name to narrow down your log query.

---

- **DKIM enforcement**
- **Attachment**
- **Size**
- **Content**
- **Compliance**
- **Scanning exceptions**
- **Spam Tagged by Cloud Pre-Filter**
- **Suspicious Objects**
- **Others**

4. Specify any of the following additional information:

- **Sender**
- **Recipient(s)**
- **Rule**
- **Subject**
- **Violating Attachment(s)**
- **Message ID**

If you leave any text box blank, all results for that item appear.

5. Click **Display Log**. A timestamp, action, rule, and message ID appear for each event.

6. Click the timestamp link to see the following information:

- **Timestamp**
- **Sender**
- **Recipient**
- **Subject**
- **Original size**
- **Violating attachments**
- **Violation reason**
- **Rule(s)**
- **Action**
- **Message ID**
- **Internal ID**
- **Scanner**

**Note**

If ATSE is enabled, IMSVA adds the **Probable advanced threat** option for **Violation reason**. If both ATSE and Virtual Analyzer are enabled, IMSVA adds the **Probable advanced threat** or **Analyzed advanced threat** option for **Violation reason**.

---

- **Rule(s)**
  - **Action**
- 

**Note**

If both ATSE and Virtual Analyzer are enabled, IMSVA adds an option about the status of Virtual Analyzer analysis for **Action**.

---

- **Message ID**
  - **Internal ID**
  - **Scanner**
  - **Social engineering attack details**
- 

**Note**

If Virtual Analyzer is not enabled, IMSVA displays **Social engineering attack details** when a social engineering attack is detected. If Virtual Analyzer is enabled, IMSVA displays **Social engineering attack details** only when the detected social engineering attack is confirmed by Virtual Analyzer.

---

**Note**

If both ATSE and Virtual Analyzer are enabled, IMSVA adds **Risk rating** to show the risk level for the entire message received from Virtual Analyzer.

---

7. Perform any of the additional actions:

- To change the number of items that appears in the list at a time, select a new display value from the drop-down box on the top of the table.
- To sort the table, click the column title.
- To print the query results, click **Print current page**.
- To save the query result to a comma-separated value file, click **Export to CSV**.

**Note**

- `"*A*;*B*"` means a string that has A or B.
- `"A*;*B"` means a string that starts with A or ends with B.
- `","` represents the OR operation.

## Querying Quarantine Event Logs

### Procedure

1. Go to **Logs > Query**.
2. Next to **Type**, select **Quarantine events**.  
The query screen for quarantine event logs appears.
3. Next to **Dates**, select a date and time range.
4. Next to **Rule(s)**, specify any rule name keywords to search for.
5. Click **Display Log**.  
A rule name, quarantine event count, release event count, and release percentage appear for each rule.
6. Perform any of the additional actions:
  - To change the number of items that appears in the list at a time, select a new display value from the drop-down box on the top of the table.

- To sort the table, click the column title.
  - To print the query results, click **Print current page**.
  - To save the query result to a comma-separated value file, click **Export to CSV**.
- 

## Querying URL Click Tracking Logs

---

### Procedure

1. Go to **Logs > Query**.
2. Next to **Type**, select **URL click tracking**.  
The query screen for URL click tracking logs appears.
3. Next to **Dates**, select a date and time range.
4. Next to **URL**, specify any URL to search for.
5. Specify any of the following additional information:
  - **Sender**
  - **Recipient(s)**
  - **Message ID**



**Note**

Each URL click tracking log consists of email message information and URL click information. Email message information, including **Sender**, **Recipient(s)** and **Message ID**, is generated by IMSVA, and URL click information, including **Timestamp**, **URL**, **Blocked**, **Warned** and **Clicked Through**, is obtained from the Time-of-Click Protection service. IMSVA combines information from the two sources before providing logs for query.

If you find email message related fields shown as not available in query results, the possible reasons are as follows:

- IMSVA stores email message information only for a certain period of time, which can be configured in log settings. If a user queries logs whose email message information is outdated but URL click information does not expire without specifying any field, those logs will be shown in query results, but the email message related fields will be regarded as not available. However, if a user queries such logs by specifying any of the email message related fields, those logs will not be shown because IMSVA cannot match the specified field values.
- Each IMSVA server has its own email message information for logs, while URL click tracking logs are generated by Activation Codes. If multiple IMSVA servers share one Activation Code, an IMSVA server might hold logs whose email message information belongs to other IMSVA servers. When a user queries logs on that server, the situation is similar to that described for outdated email message information.

---

**6. Click Display Log.**

A click timestamp, message sender, recipient, URL, message ID, and whether the URL is blocked, warned or clicked through appear for each record.

**7. Perform any of the additional actions:**

- To change the number of items that appears in the list at a time, select a new display value from the drop-down box on the top of the table.
  - To sort the table, click the column title.
  - To print the query results, click **Print current page**.
  - To save the query result to a comma-separated value file, click **Export to CSV**.
- 

## Querying MTA Event Logs

---

### Procedure

1. Go to **Logs > Query**.

2. Next to **Type**, select **MTA events**.

The query screen for MTA event logs appears.

3. On the second drop-down menu next to **Type**, select the IMSVA device to query.

4. Next to **Dates**, select a date and time range.

5. Next to **Description**, specify the keyword to search for.

6. Click **Display Log**.

A timestamp and description appear for each event.

7. Perform any of the additional actions:

- To change the number of items that appears in the list at a time, select a new display value from the **Results per page** drop-down box on the top of the table.
  - To print the query results, click **Print current page**.
  - To save the query result to a comma-separated value file, click **Export to CSV**.
-

## Querying Sender Filtering Logs

---

### Procedure

1. Go to **Logs > Query**.
2. Next to **Type**, select **Sender filtering**.
3. In the second drop-down box next to **Type**, select one of the following items related to Sender Filtering:
  - **All**
  - **Email reputation**
  - **DHA attack**
  - **Bounced mail**
  - **Virus**
  - **Spam**
  - **Manual**: Refers to the IP addresses that you have specified in the blocked list.
  - **IP-based SMTP Traffic Throttling**
  - **Sender-based SMTP Traffic Throttling**
  - **DMARC**
4. Next to **Dates**, select a date and time range.
5. Next to **IP**, provide any IP address to search.
6. Next to **Sender**, provide any sender address to search.
7. Click **Display Log**. Information appears for the time that IMSVA both started and stopped blocking each IP address or domain.
8. Perform any of the additional actions:
  - To change the number of items that appears in the list at a time, select a new display value from the drop-down box on the top of the table.

- To print the query results, click **Print current page**.
  - To save the query result to a comma-separated value file, click **Export to CSV**.
-

# Chapter 27

## Mail Areas and Queues

This chapter provides information about IMSVA and Cloud Pre-Filter quarantine, archive areas and mail queues.

Topics include:

- *[About Mail Areas and Queues on page 27-2](#)*
- *[Configuring Quarantine and Archive Settings on page 27-2](#)*
- *[Managing Quarantine Areas on page 27-4](#)*
- *[Managing Archive Areas on page 27-7](#)*
- *[Querying Messages on page 27-9](#)*
- *[Viewing Quarantined Messages on page 27-17](#)*
- *[Viewing Archived Messages on page 27-19](#)*
- *[Viewing Postponed Messages on page 27-20](#)*
- *[Viewing Messages in MTA Queues on page 27-22](#)*
- *[Viewing Messages in the Virtual Analyzer Queue on page 27-24](#)*

## About Mail Areas and Queues

IMSVa stores messages matching specific policy rule actions in the following areas and queues:

- **Quarantine Area:** Stores messages that you would like to analyze before deciding whether to delete or release to the intended recipient(s).
- **Archive Area:** Stores messages for future reference.
- **Postponed Queue:** Stores messages that will be delivered at a specified time.
- **MTA Queues:** Store messages in four types of MTA queues: Incoming, Active, Deferred and Hold. The Incoming queue stores messages that just arrived at IMSVa; the Active queue stores messages ready to be delivered to the next MTA; the Deferred queue stores messages deferred due to delivery failure; the Hold queue stores messages kept on hold for later manual delivery.

There are 4 values to control IMSVa (postfix) retries. For more information, see [Deferred Queue Parameters on page 27-23](#).

For one deferred email message, the lifetime is 24 hours, the first retry attempt is after 15 minutes, the second retry is after 30 minutes, and all subsequent retries are after 60 minutes. That means there are about 25 retries before the `maximal_queue_lifetime` value is reached.

- **Virtual Analyzer Queue:** Stores messages that IMSVa submits to Virtual Analyzer before IMSVa receives message analysis results.

## Configuring Quarantine and Archive Settings

Quarantine and archive settings allow you to manage quarantine and archive areas and allocate the amount of disk space per scanner for storing quarantined or archived messages.

---

### Procedure

1. Go to **Mail Areas & Queues > Settings**.

The **Quarantine and Archive Settings** screen appears.

| Area                                                   | Expiration | Size | Items | EUQ |
|--------------------------------------------------------|------------|------|-------|-----|
| <input type="checkbox"/> Default Quarantine            | 15 day(s)  | 0 MB | 0     |     |
| <input type="checkbox"/> Compliance Quarantine         | 15 day(s)  | 0 MB | 0     |     |
| <input type="checkbox"/> Cloud Pre-Filter Quarantine   | 15 day(s)  | 0 MB | 0     |     |
| <input type="checkbox"/> Suspicious Objects Quarantine | 15 day(s)  | 0 MB | 0     |     |

- Click the **Quarantine** tab (default) or **Archive** tab, to configure a quarantine area or an archive area.

The list of areas appears in the table below.

- To modify the total disk size allowed for all quarantine areas or archive areas for each scanner service, specify the size of the area next to **Disk quota (per scanner)**, and then select **MB** or **GB** from the drop-down box.
- Click **Add**, to add a quarantine or archive area.
- Next to **Name**, specify a descriptive name.
- Next to **Delete messages older than**, specify the number of days after which IMSVA deletes the quarantined or archived messages. The value is exclusive. For example, if you specify 15, IMSVA deletes the quarantined messages on the 16th day.
- Select **Synchronize all messages that do not violate virus, phishing, Web Reputation, advanced threat, and social engineering attack rules or violate virtual analyzer scanning exceptions, to the EUQ database (for this area only)**, to automatically save messages to the EUQ database.

**Note**

After selecting **Synchronize all messages that do not violate virus, phishing, Web Reputation, advanced threat, and social engineering attack rules or violate virtual analyzer scanning exceptions, to the EUQ database (for this area only)**, a check mark appears under the EUQ column of the table on the **Quarantine and Archive Settings** screen.

---

8. Click **Save**.

The **Quarantine and Archive Settings** screen reappears.

9. To view or modify a quarantine or archive area, click the name of the area and configure the settings above.
  10. To delete a quarantine or archive area, select the check box next to it and click **Delete**.
  11. After modifying any settings, click **Save**.
- 

## Managing Quarantine Areas

IMSVA can quarantine messages on the server in the following directory:

\$IMSVA\_HOME/queue/quarantine

**Tip**

Trend Micro recommends quarantining messages that you think you might want to analyze and possibly send to the intended recipient later. Create different types of quarantine areas for different types of messages, such as messages that violate spam scanning conditions or messages that violate message content conditions.

---

### Related information

- [Managing the Quarantine from the Actions Screen of a Policy Rule](#)
- [Managing the Quarantine Settings](#)



## Managing the Quarantine from the Actions Screen of a Policy Rule

If you are configuring the actions for a rule, do the following:

---

### Procedure

1. Click **Edit** next to **Quarantine** to under **Intercept** actions.

The **Quarantines** screen appears showing the available quarantine areas.

2. Do one of the following:
  - To add a new quarantine area, click **Add**.
  - To modify an existing quarantine area, click the area name and then click **Edit**.

An edit screen appears.

3. Next to **Name**, specify the name of the quarantine area.
4. To automatically delete quarantined messages after a certain number of days, next to **Delete messages older than**, specify the number of days from 1 to 60.

This number represents the number of days after which IMSVA deletes the quarantined messages. The value is exclusive. For example, if you specify 15, IMSVA deletes the quarantined messages on the 16th day.

5. Select **Synchronize all messages that do not violate virus, phishing, Web Reputation, advanced threat, and social engineering attack rules or violate virtual analyzer scanning exceptions, to the EUQ database (for this area only)** to automatically save messages to the EUQ database.



### Note

After selecting **Synchronize all messages that do not violate virus, phishing, Web Reputation, advanced threat, and social engineering attack rules or violate virtual analyzer scanning exceptions, to the EUQ database (for this area only)**, a check mark appears under the EUQ column of the table on the **Quarantine and Archive Settings** screen.

---

6. Click **Save** to return to the **Quarantines** screen.
  7. Click **Done** to continue selecting actions.
  8. To quarantine messages, select the radio button next to **Quarantine to** under **Intercept** and select the desired quarantine area from the drop-down box.
- 

## Managing the Quarantine Settings

---

### Procedure

1. Go to **Mail Areas & Queues > Settings**.

The **Quarantine and Archive Settings** screen appears with the **Quarantine** tab displayed by default.

2. Next to **Disk quota per scanner service**, do the following:
    - a. Specify the maximum size for the area.
    - b. Select **MB** or **GB**.
- 



#### Note

When the total disk size for all the quarantined messages exceeds the quota on a scanner, the oldest quarantined messages are deleted first to keep the size under the quota.

---

3. Do one of the following:
  - To add a new quarantine area, click **Add**.
  - To modify an existing quarantine area, click the area name.
4. Next to **Name**, specify the name of the quarantine area.
5. To automatically delete quarantined messages after a certain number of days, next to **Delete messages older than**, specify the number of days from 1 to 60.

This number represents the number of days after which IMSVA deletes the quarantined messages. The value is exclusive. For example, if you specify 15, IMSVA deletes the quarantined messages on the 16th day.

6. Select **Synchronize all messages that do not violate virus, phishing, Web Reputation, advanced threat, and social engineering attack rules or violate virtual analyzer scanning exceptions, to the EUQ database (for this area only)** to automatically save messages to the EUQ database.



#### Note

After selecting **Synchronize all messages that do not violate virus, phishing, Web Reputation, advanced threat, and social engineering attack rules or violate virtual analyzer scanning exceptions, to the EUQ database (for this area only)**, a check mark appears under the EUQ column of the table on the **Quarantine and Archive Settings** screen.

7. Click **Save** to return to the **Mail Areas & Queues Management** screen.
8. Click **Save**.

## Managing Archive Areas

IMSVA can archive messages on the server in the following directory:

\$IMSVA\_HOME/queue/archive

## Managing the Archive from the Actions Screen of a Policy Rule

If you are configuring the actions for a rule, do the following:

### Procedure

1. Click **Edit** next to **Archive modified to** under **Monitor** actions.  
The **Archives** screen appears showing the available quarantine areas.
2. Do one of the following:
  - To add a new archive area, click **Add**.

- To modify an existing archive area, click the area name and then click **Edit**.

An edit screen appears.

3. Next to **Name**, specify the name of the archive area.
4. To automatically delete archived messages after a certain number of days, next to **Delete messages older than**, specify the number of days from 1 to 60.

This number represents the number of days after which IMSVA deletes the archived messages. The value is exclusive. For example, if you specify 15, IMSVA deletes the archived messages on the 16th day.

5. Click **Save** to return to the **Archives** screen.
  6. Click **Done** to continue selecting actions.
  7. To archive messages, select the radio button next to **Archive modified to** under **Monitor** and select the desired archive area from the drop-down box.
- 

## Managing the Archive Settings

---

### Procedure

1. Go to **Mail Areas & Queues > Settings**.

The **Quarantine and Archive Settings** screen appears with the **Quarantine** tab displayed by default.

2. Click the **Archive** tab.
3. Next to **Disk quota per scanner service**, do the following:
  - a. Specify the maximum size for the area.
  - b. Select **MB** or **GB**.

**Note**

When the total disk size for all the archived messages exceeds the quota on a scanner, the oldest archived messages are deleted first to keep the size under the quota.

---

4. Do one of the following:

- To add a new quarantine area, click **Add**.
- To modify an existing quarantine area, click the area name and then click **Edit**.

An edit screen appears.

5. Next to **Name**, specify the name of the archive area.

6. To automatically delete archived messages after a certain number of days, next to **Delete messages older than**, specify the number of days from 1 to 60.

This number represents the number of days after which IMSVA deletes the archived messages. The value is exclusive. For example, if you specify 15, IMSVA deletes the archived messages on the 16th day.

7. Click **Save** to return to the **Mail Areas & Queues Management** screen.

8. Click **Save**.

---

## Querying Messages

You can perform a query on quarantined, archived or postponed messages, or messages in MTA and Virtual Analyzer queues before deciding which action to perform. After viewing the message details, you can release or delete archived messages from IMSVA.



### Tip

Trend Micro recommends quarantining items that could pose a risk to your network, such as messages and attachments that violate antivirus rules. Before you resend any quarantined message, make sure that it does not pose a threat to your network.

Trend Micro recommends archiving only items that you want to reference later.

## Querying the Quarantine Areas

### Procedure

1. Go to **Mail Areas & Queues > Query**.

The **Mail Areas & Queues Management** screen appears. The **Quarantine** tab displays by default. If it does not display, click **Quarantine**.

The screenshot shows the 'Mail Areas & Queues Management' window with the 'Quarantine' tab selected. The 'Criteria' section contains the following fields:

- Search:** Three dropdown menus: 'Any quarantine', 'Any reason', and 'All Products'.
- Dates:** Two date/time pickers. The first is set to '01/30/2016 19:09' (mm/dd/yyyy hh:mm). The second is set to '01/30/2016 20:09' (mm/dd/yyyy hh:mm).
- Sender:** A text input field.
- Subject:** A text input field.
- Recipient(s):** A text input field.
- Violating Attachment(s):** A text input field.
- Rule:** A text input field.
- Message ID:** A text input field.

A 'Display Log' button is located at the bottom left of the criteria section.

2. Under **Criteria**, configure the following:
  - **Search:** Select the quarantine area, the reason the message was quarantined, and the scanner that scanned the message.
  - **Dates:** Select a date and time range.
3. Specify values for the following:
  - **Sender**
  - **Subject**

- **Recipient(s)**
- **Violating Attachment(s)**
- **Rule**
- **Message ID**

**Note**

When querying a message containing multiple recipients or violating attachments, type `*string*` (where string is the name of one of the recipients or attachments).

---

4. Click **Display Log**. The results appear at the bottom of the screen showing the timestamp, sender, recipient, subject, and reason for quarantining the message.
5. To change the display, do any of the following:
  - To sort the table, click any of the column headings (except reason).
  - If too many items appear on the list, click the arrow buttons on top of the list to move to the next page or select the desired page to view from the drop-down list.
  - To change the number of items that appears in the list at a time, select a new display value from the drop-down list at the bottom of the table.
6. To view details about any quarantined message, click the timestamp for the item. The **Quarantine Query** screen appears showing the message and all of its details.
7. To resend any message, click the check box next to it in the query result table, and then click one of the following options:
  - **Deliver**: The message is sent directly to the recipient, bypassing all rules except virus scan rules.
  - **Reprocess**: The message only bypasses the current rule, and may be quarantined again by other filters.

**Tip**

Trend Micro does not recommend resending messages that violated antivirus filters. Doing so could put your network at risk.

---

8. To delete any message, click the check box next to it in the query result table, and then click **Delete**.
- 

**Note**

IMSVA only records and shows the violating attachment names if you have specified **Attachment** as a scanning condition. However, if the number of attachments in the message exceeds the maximum number specified in condition, the attachment name will not be shown.

---

## Querying the Archive Areas

---

### Procedure

1. Go to **Mail Areas & Queues > Query**.  
The **Quarantine** tab displays by default.
2. Click the **Archive** tab.
3. Under **Criteria**, configure the following:
  - **Search:** Select the archive area, the reason the message was archived, and the scanner that scans the message.
  - **Dates:** Select a time range.
4. Specify values for the following:
  - **Sender**
  - **Subject**
  - **Recipient(s)**
  - **Violating Attachment(s)**



- **Rule**
- **Message ID**

**Note**

When querying a message containing multiple recipients or violating attachments, type *\*string\** (where string is the name of one of the recipients or attachments).

---

5. Click **Display Log**. The results appear at the bottom of the screen showing the timestamp, sender, recipient, subject, and reason for archiving the message.
6. To change the display, do any of the following:
  - To sort the table, click any of the column headings (except reason).
  - If too many items appear on the list, click the arrow buttons on top of the list to move to the next page or select the desired page to view from the drop-down list.
  - To change the number of items that appears in the list at a time, select a new display value from the drop-down list at the bottom of the table.
7. To view details about any archived message, click the timestamp for the item.

The **Archive Query** screen appears showing the message and all of its details.
8. To delete any message, click the check box next to it in the query result table, and then click **Delete**.

**Note**

IMSVa only records and shows names of violating attachments if you have specified Attachment as a scanning condition. However, if the number of attachments in the message exceeds the maximum number specified in condition, the attachment name will not be shown.

---

## Querying Postponed Messages

---

### Procedure

1. Go to **Mail Areas & Queues > Query**.

The **Quarantine** tab displays by default.

2. Click the **Postpone** tab.
3. Under **Criteria**, configure the following:
  - **Search:** Select the reason and device.
  - **Dates:** Select a date and time range.
4. Specify values for the following:
  - **Sender**
  - **Subject**
  - **Recipient(s)**
  - **Violating Attachment(s)**
  - **Rule**
  - **Internal ID**
5. Click **Display Log**. The results appear at the bottom of the screen showing the timestamp, sender, recipient, subject, and reason for postponing the message.
6. To change the display, do any of the following:

- To sort the table, click any of the column headings (except reason).
  - If too many items appear on the list, click the arrow buttons on top of the list to move to the next page or select the desired page to view from the drop-down list.
  - To change the number of items that appears in the list at a time, select a new display value from the drop-down list at the bottom of the table.
7. To view details about any postponed message, click the **Timestamp** for the item. The message and all of its details appear.
  8. To resend any message, click the check box next to it in the query result table, and then click **Release**.
  9. To delete any message, click the check box next to it in the query result table, and then click **Delete**.

---

## Querying Messages in MTA Queues

---

### Procedure

1. Go to **Mail Areas & Queues > Query**.

The **Quarantine** tab displays by default.

2. Click the **MTA** tab.
3. Under **Criteria**, configure the following:

- **Search:** Select the queue type and the target device.



#### Note

There are four types of MTA queues for you to select: Incoming, Active, Deferred and Hold. The default value is **Any type**.

---

- **Dates:** Select a date and time range.
4. Specify values for the following:

- **Sender**
  - **Subject**
  - **Recipient(s)**
  - **Message ID**
5. Click **Display Log**.

The results appear at the bottom of the screen.
  6. To change the display, do any of the following:
    - To sort the table, click any of the column headings.
    - If too many items appear on the list, click the arrow buttons on top of the list to move to the next page or select the desired page to view from the drop-down list.
    - To change the number of items that appears in the list at a time, select a new display value from the drop-down list at the bottom of the table.
  7. To view details about any message, click the message in the query result table. The message and all of its details appear.
  8. To delete any message, click the check box next to it in the query result table, and then click **Delete**.
- 

## Querying Messages in the Virtual Analyzer Queue

---

### Procedure

1. Go to **Mail Areas & Queues > Query**.

The **Quarantine** tab displays by default.
2. Click the **Virtual Analyzer** tab.
3. Under **Criteria**, configure the following:
  - **Search:** Select the device.

- **Dates:** Select a date and time range.
4. Specify values for the following:
    - **Sender**
    - **Recipient(s)**
    - **Subject**
  5. Click **Display Log**.

The results appear at the bottom of the screen.
  6. To change the display, do any of the following:
    - To sort the table, click any of the column headings (except reason).
    - If too many items appear on the list, click the arrow buttons on top of the list to move to the next page or select the desired page to view from the drop-down list.
    - To change the number of items that appears in the list at a time, select a new display value from the drop-down list at the bottom of the table.
  7. To view details about any message in the Virtual Analyzer queue, click the **Timestamp** for the item. The message and all of its details appear.
  8. To release a message from Virtual Analyzer scanning, click the check box next to it in the query result table, and then click **Release**.

**Note**

Trend Micro does not recommend releasing suspicious messages from Virtual Analyzer scanning. Doing so could put your network at risk.

---

## Viewing Quarantined Messages

All messages that IMSVA quarantines can be queried and viewed.

---

## Procedure

1. After you perform a query for quarantined messages, click the timestamp for an item in the query result table. The **Quarantine Query** screen appears showing the following information:

- **Timestamp**
- **Sender**
- **Reason**
- **Recipient**
- **Rules**
- **Subject**
- **Scanner**
- **Original Size**
- **Message ID**
- **Internal ID**
- **Attachments**

If ATSE or Social Engineering Attack Protection is enabled, IMSVA also displays the following information:

- **Reason: Probable advanced threat**

If both ATSE and Virtual Analyzer or both Social Engineering Attack Protection and Virtual Analyzer are enabled, IMSVA also displays the following information:

- **Reason: Probable advanced threat** or **Analyzed advanced threat**
- **Virtual Analyzer Status:** Status of Virtual Analyzer analysis

2. Next to **Message view**, click either **Header** or **Message**.
3. Click any of the following buttons:
  - **Back to List:** Return to the query screen.

- **Deliver** : Resend the message to its original recipients.
- **Reprocess**: IMSVA scans the message again and acts accordingly.
- **Delete**: Delete the message.
- **Download** : Save the message to your computer.

**Tip**

Trend Micro recommends not saving messages or attachments that violated an antivirus rule.

---

## Viewing Archived Messages

All messages that IMSVA archives can be queried and viewed.

---

### Procedure

1. After you perform a query for archived messages, click the timestamp for an item in the query result table. The **Archive Query** screen appears showing the following information:
  - **Timestamp**
  - **Sender**
  - **Reason**
  - **Recipient**
  - **Rules**
  - **Subject**
  - **Scanner**
  - **Original Size**
  - **Message ID**
  - **Internal ID**

- **Attachments**

If ATSE is enabled, IMSVA also displays the following information:

- **Reason: Probable advanced threat**

If both ATSE and Virtual Analyzer are enabled, IMSVA also displays the following information:

- **Reason: Probable advanced threat or Analyzed advanced threat**

- **Virtual Analyzer Status:** Status of Virtual Analyzer analysis

2. Next to **Message view**, click either **Header** or **Message**.

3. Click any of the following buttons:

- **Back to List:** Return to the query screen.
- **Delete:** Delete the message.
- **Download :** Save the message to your computer.



**Tip**

Trend Micro does not recommend saving messages or attachments that violated an antivirus rule.

---

## Viewing Postponed Messages

All messages that IMSVA postpones can be queried and viewed.

---

### Procedure

1. After you perform a query for postponed messages, click the timestamp for an item in the query result table. The query screen appears showing the following information:
  - **Timestamp**
  - **Sender**



- **Reason**
- **Recipient**
- **Rules**
- **Subject**
- **Scanner**
- **Original Size**
- **Message ID**
- **Internal ID**
- **Attachments**

If ATSE is enabled, IMSVA also displays the following information:

- **Reason: Probable advanced threat**

If both ATSE and Virtual Analyzer are enabled, IMSVA also displays the following information:

- **Reason: Probable advanced threat or Analyzed advanced threat**
- **Virtual Analyzer Status:** Status of Virtual Analyzer analysis

2. Next to **Message view**, click either **Header** or **Message**.

3. Click any of the following buttons:

- **Back to List:** Return to the query screen.
- **Release:** Resend the message to its original recipients.
- **Delete:** Delete the message.
- **Download :** Save the message to your computer.

**Tip**

Trend Micro does not recommend saving messages or attachments that violated an antivirus rule.

---

## Viewing Messages in MTA Queues

All messages in MTA queues can be queried and viewed. There are four types of MTA message queues: Incoming, Active, Deferred and Hold.

---

### Procedure

1. After you perform a query for messages in MTA queues, click a message in the query result table. The query screen appears showing the following information:
  - **Query Type**
  - **Arrival Time**
  - **Last Host**
  - **Sender**
  - **Recipient(s)**
  - **Subject**
  - **Message Size**
  - **Queue ID**
  - **Message ID**
  - **Last Delivery Result** (available for deferred messages only)
  - **Host**
2. Click any of the following buttons:
  - For a message in the Incoming or Active queue:
    - **Delete:** Delete the message from this queue.
    - **Move to Hold:** Move the message to the Hold queue.
  - For a message in the Deferred queue:
    - **Delete:** Delete the message from this queue.
    - **Deliver:** Deliver the message to the original recipients.

- **Move to Hold:** Move the message to the Hold queue.
- For a message in the Hold queue:
  - **Delete:** Delete the message from this queue.
  - **Deliver:** Deliver the message to the original recipients.
  - **Move to Deferred:** Move the message to the Deferred queue.

## Deferred Queue Parameters

| PARAMETER              | DEFAULT VALUE | DESCRIPTION                                                                                                                                                                                                                                                                                                                           |
|------------------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| queue_run_delay        | 900s          | Determines the time between Deferred queue scans by the queue manager.<br><br>This time should be less than or equal to the <code>minimal_backoff_time</code> setting.                                                                                                                                                                |
| minimal_backoff_time   | 900s          | Determines the minimum time between attempts to deliver a deferred message. When a message is first placed in the Deferred queue, the value of this setting is what determines when the first attempt to redeliver the message is made.<br><br>This time should be equal to or greater than the <code>queue_run_delay</code> setting. |
| maximal_backoff_time   | 3600s         | Determines the maximum time between attempts to deliver a message. The time between each attempt to deliver a deferred message will grow exponentially until it reaches the value in this setting.<br><br>The attempted deliveries are repeated at this value until the <code>maximal_queue_lifetime</code> is reached.               |
| maximal_queue_lifetime | 1d            | Determines the message life time in the Deferred queue. Once the this lifetime expires, messages in the Deferred queue are returned to the sender with an "undelivered" notice.                                                                                                                                                       |

## Viewing Messages in the Virtual Analyzer Queue

Email messages IMSVA submits to Virtual Analyzer are stored in the Virtual Analyzer queue while pending analysis or being analyzed. All messages in the Virtual Analyzer queue can be queried and viewed.

**Note**

Once IMSVA receives the analysis result for an email message, this message will be removed from the Virtual Analyzer queue.

---

### Procedure

1. After you perform a query for messages in the Virtual Analyzer queue, click the timestamp for an item in the query result table. The query screen appears showing the following information:
  - **Timestamp**
  - **Message ID**
  - **Sender**
  - **Recipient**
  - **Rules**
  - **Attachments**
  - **Subject**
  - **Scanner**
  - **Original Size**
  - **Internal ID**
  - **Submission**
  - **Query Time**
  - **Attempts**
  - **Expiration**

2. Next to **Message view**, click either **Header** or **Message**.
  3. Click any of the following buttons:
    - **Back to List:** Return to the query screen.
    - **Release:** Release the message from Virtual Analyzer scanning. IMSVA may continue to scan the message if any other scanning condition is met.
-



# Chapter 28

## Notifications

This chapter provides you with general instructions on notifications in IMSVA.

Topics include:

- *Event Notifications on page 28-2*
- *Configuring Delivery Settings on page 28-2*
- *Configuring Event Criteria and Notification Message on page 28-4*
- *EUQ Digest on page 28-7*
- *Configuring a Logon Notice on page 28-10*
- *Editing Notifications on page 28-11*

## Event Notifications

You can configure IMSVA to send an email or SNMP notification to you or specific users upon the occurrence of the following categories of events:

**TABLE 28-1. Event notifications**

| EVENT                            | DESCRIPTION                                                                                                                                                                                                     |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>System Status</b>             | Informs you when certain IMSVA performances fall below the desired level. For example, when a scanner service stops working, or when the number of messages in the delivery queue exceeds the desired quantity. |
| <b>Scheduled Update Event</b>    | Alerts you when IMSVA is able or unable to perform a scheduled update of the scan engine or pattern files from the update source onto the admin database.                                                       |
| <b>Scanner Update Result</b>     | Alerts you when IMSVA is unable to update the engine or pattern files on any scanner.                                                                                                                           |
| <b>Virtual Analyzer Settings</b> | Alerts you when Virtual Analyzer analysis is incomplete or invalid.                                                                                                                                             |
| <b>Smart Protection Event</b>    | Alerts you when IMSVA reverts to Conventional Scan or is unable to use smart protection services or local sources.                                                                                              |
| <b>DKIM Signature Event</b>      | Alerts you when IMSVA is unable to add DKIM signatures for the specified number of messages.                                                                                                                    |

## Configuring Delivery Settings

The delivery settings allow you to specify email and SNMP trap settings to deliver system and policy event notification messages.

---

### Procedure

1. Go to **Administration > Notifications**.



The **Events** tab appears by default.

2. Click the **Delivery Settings** tab.
3. Under **Email Settings**, configure the following:
  - **To address(es)**: Specify the recipient email addresses.
  - **Sender's email address**: Specify the email address to appear as the sender.
  - **SMTP server address**: Specify the Fully Qualified Domain Name (FQDN) or the IP address of the SMTP server that delivers email on the network.
  - **SMTP server port**: Specify the port number that IMSVA uses to connect to the SMTP server.
  - **Preferred charset**: IMSVA will use this setting to encode the notification messages.
  - **Message header**: Specify the text to appear at the top of the notification.
  - **Message footer**: Specify the text to appear at the bottom of the notification.
4. Under **SNMP Trap**, configure the following:
  - Server name
  - Community
  - SNMP version

| OPTION      | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Server name | <p>Specify the FQDN or IP address of the SNMP server. <b>SNMP Trap</b> is the notification message sent to the Simple Network Management Protocol (SNMP) server when events that require administrative attention occur.</p> <hr/> <div data-bbox="504 1307 561 1356"></div> <div data-bbox="575 1304 622 1325"><b>Note</b></div> <div data-bbox="573 1333 1053 1360">SNMP servers do not support IPv6-formatted addresses.</div> |

| OPTION       | DESCRIPTION                                                                                                                                                                                                                             |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Community    | Specify the SNMP server community name. <b>Community</b> is the group that computers and management stations running SNMP belong to. To send the alert message to all SNMP management stations, specify 'public' as the community name. |
| SNMP version | Select either of the following: <ul style="list-style-type: none"><li>• <b>SNMPv1</b></li><li>• <b>SNMPv2c</b></li></ul> For more information, refer to the SNMP documentation.                                                         |

5. Click **Save**.

If you are using the Configuration Wizard, click **Next**.

---

## Configuring Event Criteria and Notification Message

You can set the criteria under which IMSVA will trigger a notification message and also customize the message content for each event.

---

### Procedure

1. Go to **Administration > Notifications**.

The **Events** tab appears by default.

Notifications

Events

Delivery Settings

Web EUQ Digest

Logon Notice

System Events Notification

| System Status                                                                                                  | Email                               | SNMP                     |
|----------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|
| Notify every <input type="text" value="10"/> minutes                                                           |                                     |                          |
| <a href="#">Service on any scanner stops for more than</a> <input type="text" value="10"/> minutes             | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <a href="#">Data partition free space on any host is less than</a> <input type="text" value="10240"/> MB       | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <a href="#">MTA queue free space on any host is less than</a> <input type="text" value="5120"/> MB             | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <a href="#">Delivery queue contains more messages than</a> <input type="text" value="20000"/> messages         | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <a href="#">Retry queue folder contains more messages than</a> <input type="text" value="10000"/> messages     | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Scheduled Update Event                                                                                         | Email                               | SNMP                     |
| Scheduled update of Virus Pattern, Spyware Pattern, IntelliTrap Pattern, and IntelliTrap Exception Pattern is: |                                     |                          |
| <a href="#">Unsuccessful</a>                                                                                   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <a href="#">Successful</a>                                                                                     | <input type="checkbox"/>            | <input type="checkbox"/> |
| Scheduled update of Virus Scan Engine or URL Filtering Engine is:                                              |                                     |                          |
| <a href="#">Unsuccessful</a>                                                                                   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <a href="#">Successful</a>                                                                                     | <input type="checkbox"/>            | <input type="checkbox"/> |
| Scheduled update of Antispam Engine or Antispam Pattern is:                                                    |                                     |                          |
| <a href="#">Unsuccessful</a>                                                                                   | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <a href="#">Successful</a>                                                                                     | <input type="checkbox"/>            | <input type="checkbox"/> |
| Scanner Update Result                                                                                          | Email                               | SNMP                     |
| <a href="#">Applying engine or pattern update fails on any scanner</a>                                         | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Virtual Analyzer Settings                                                                                      | Email                               | SNMP                     |
| <a href="#">Message analysis is incomplete or invalid</a>                                                      | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Smart Protection Event                                                                                         | Email                               | SNMP                     |
| <a href="#">Smart protection services unavailable on your server</a>                                           | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <a href="#">Switched to Conventional Scan</a>                                                                  | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| <a href="#">Unable to use local sources for Web Reputation queries</a>                                         | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| DKIM Signature Event                                                                                           | Email                               | SNMP                     |
| Notify every <input type="text" value="10"/> minutes                                                           |                                     |                          |
| <a href="#">Unable to add DKIM signatures for more than</a> <input type="text" value="5"/> messages            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Save

Cancel

2. Under **System Status**, configure the following:

- **Notify every {} minutes:** Specify the notification frequency for all performance notifications.

To edit each of the following notifications, click the link.

- **Service on any scanner stops for more than:** Specify the number of minutes.
- **Data partition free space on any host is less than:** Specify the number of MB.
- **MTA queue free space on any host is less than:** Specify the number of MB.
- **Delivery queue contains more messages than:** Specify the number of messages.
- **Retry queue folder contains more messages than:** Specify the number of messages.

**Note**

The notifications **Delivery queue contains more messages than** and **Retry queue folder contains more messages than** only function when IMSVA runs with Postfix.

---

3. Under **Scheduled Update Event**, click the **Unsuccessful** and **Successful** links to edit notifications for component updates.

**Scheduled Update Event** is the event in which the latest engine and pattern files from the Update Source are updated onto the IMSVA admin database.

4. Under **Scanner Update Results**, click the **Applying engine or pattern update fails on any scanner** link to edit the notification.

**Scanner Update Results** are the results of updating the latest engine and pattern files from the IMSVA admin database onto the scanners.

5. Under **Virtual Analyzer Settings**, click the **Message analysis is incomplete or invalid** link to edit the notification.

This notification describes the breakdown in communication between IMSVA and Virtual Analyzer. IMSVA may send this notification because of:

- A file or database operation error

- A client, server, or network connection error
  - An invalid analysis report
6. Under **Smart Protection Event**, click the following links to edit notifications:
    - **Smart protection services unavailable on your server**
    - **Switched to Conventional Scan**
    - **Unable to use local sources for Web Reputation queries**
  7. Under **DKIM Signature Event**, configure the following:
    - **Notify every { } minutes:** Specify the notification frequency for all performance notifications.
    - **Unable to add DKIM signatures for more than:** Specify the number of minutes.
  8. Select the **Email** and/or **SNMP** check boxes according to how you would like to receive the notification.
  9. Click **Save**.
- 

## EUQ Digest

The EUQ digest is a notification that IMSVA sends to inform users about messages that were processed as spam and temporarily stored in the EUQ.



### Note

IMSVA sends EUQ digests only if there are new quarantined messages since the last digest.

IMSVA does not send EUQ digests for distribution list addresses. To manage the quarantined messages of distribution lists, users must log on to the EUQ management console.

---

The EUQ digest provides the following information:

- **Total spam mail count:** Number of new messages in EUQ since the last notification
- **Message list:** Summary of new messages processed as spam
  - **Sender:** Sender email address
  - **Subject:** Subject line
  - **Size:** Message size (including attachments)
  - **Received:** Date and time the message was received
  - **Inline action links:** Links that users can click to apply actions to quarantined messages and to add senders to the **Approved Senders** list

**Note**

Inline action links display only if you enable this feature.

---

## Configuring EUQ Digest Settings

---

### Procedure

1. Go to **Administration > Notifications**.

The **Events** tab displays by default.

2. Click **Web EUQ Digest**.
3. Select the check box next to **Enable EUQ Digest**.
4. Under **Digest Schedule**, click the radio button next to one of the following frequencies:
  - **Periodic:** Select the time point to send EUQ digests periodically every day from the drop-down box. Click **Add** to add more entries.

**Note**

If specifying multiple time entries, make sure you retain an interval of at least three hours. In addition, a maximum of six time entries is allowed.

---

- **Daily:** Select the time to send EUQ digests every day from the drop-down boxes.
  - **Weekly:** Select the day and time to send EUQ digests every week from the drop-down boxes.
5. Under **Digest Mail Template**, specify the subject and notification content.  
  
To see a list of variables to include in the notification, click **Variables list**.
  6. Select **Enable inline action** to allow users to apply actions from the EUQ digest.
  7. Click **Save**.
- 

## Inline Action Links

IMSVA enables users to apply actions to quarantined messages through links in the EUQ digest. Users can select any of the following actions by clicking the corresponding link.

- **Delete:** Deletes the message and all attachments.
  - **Release:** Releases the message from quarantine. IMSVA may scan the message again or deliver it to the original recipients.
- 

**Note**

If you enabled the **Control the 'auto-add' approved Sender behavior when end user reprocess a message** feature, IMSVA automatically adds senders of released messages to the **Approved Senders** list.

---

- **Add sender to Approved list:** Prevents IMSVA from identifying messages from this sender as spam.

IMSVa automatically deletes messages after a period that you specify. You can also manually delete and release messages from the IMSVa management console. Users cannot select actions for messages that have been deleted or released.

**Important**

Trend Micro does not recommend forwarding notifications. Inline action links remain active in forwarded messages.

---

## Configuring a Logon Notice

A logon notice is a customizable message displayed to administrators on the logon page.

---

### Procedure

1. Go to **Administration > Notifications**.

The **Events** tab displays by default.

2. Click **Logon Notice**.

The screenshot shows a web-based configuration window titled "Notifications" with a help icon in the top right. It has four tabs: "Events", "Delivery Settings", "Web EUQ Digest", and "Logon Notice", with the last one being selected. Below the tabs, a text area is provided for the logon notice. Above the text area, a small text block states: "Specify the greeting displayed to administrators on the logon page. The maximum length is 2,000 characters. Only plain text is supported. To configure the EUQ logon notice, refer to the User Quarantine Access page." At the bottom of the window are "Save" and "Cancel" buttons.

3. Specify a logon notice that will be displayed to administrators.



4. Click **Save**.
- 

## Editing Notifications

---

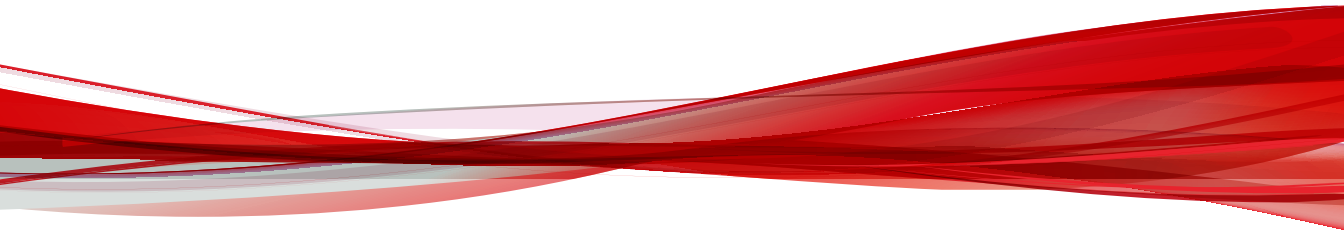
### Procedure

1. Go to **Administration > Notifications**.
  2. Click the notification to edit.  
The edit screen for that notification appears.
  3. Specify the subject and message, or SNMP message.  
To see a list of variables to include in the notification, click **Variables list**.
  4. Click **Save**.
-



# **Part V**

## **Administering IMSVA**





## Chapter 29

# Backing Up, Restoring, and Replicating Settings

This chapter provides instructions on how to back up and restore IMSVA configuration settings. If you have deployed multiple IMSVA scanners and are using Trend Micro Control Manager simultaneously, you can also replicate IMSVA settings without having to reconfigure settings for each new scanner.

Topics include:

- [\*Importing and Exporting on page 29-2\*](#)
- [\*Backing Up IMSVA on page 29-4\*](#)
- [\*Restoring IMSVA by Importing Settings on page 29-6\*](#)
- [\*Replicating Settings on page 29-7\*](#)

## Importing and Exporting

To back up IMSVA settings, export the settings from the management console. In the event of system failure, you can restore the settings by importing the configuration file that you have backed up previously. Note the following when importing/exporting settings:

- You cannot import or export the component list and child device registration information.
- When exporting/importing your settings, the database will be locked. Therefore, all IMSVA actions that depend on database access, such as performing a mail trace, will not function.

Trend Micro strongly suggests that you:

- Adjust the component list and child device registration information after import if necessary
- Back up a copy of the current configuration before each import operation, in order to recover from mistaken import processes.
- Perform import/export when IMSVA is idle because importing and exporting affects IMSVA performance.

## Importing and Exporting Settings

Use the **Import/Export** screen to create a backup of IMSVA settings. Keeping a backup allows you to easily re-apply your settings to an IMSVA 9.1 SP1 device if you experience any problems that require you to rescue the application. You can also replicate a configuration across several IMSVA 9.1 SP1 devices by importing the same configuration file into the desired devices.

To reuse the original configuration settings from supported versions after upgrading to IMSVA 9.1 SP1, import the configuration files that you have backed up previously.

## Exporting Device Configuration Files

During export, do not:

- Access other management console screens or modify any settings.
  - Perform any database operations.
  - Start/stop any services on the device or in the group to which the device belongs.
  - Register/unregister any child devices into/from the group to which the device belongs.
  - Start other export or import tasks.
- 

### **Procedure**

1. Go to **Administration > Import/Export**.
  2. Click **Export**.
  3. When the dialog box appears, click **Save** and save it to your computer.
  4. To return to the **Import/Export** screen, click **Return**.
- 

### **Importing Device Configuration Files**

During import, do not:

- Access other management console screens or modify any settings.
- Perform any database operations.
- Start/stop any services on the device or in the group to which the device belongs.
- Register/unregister any child devices into/from the group to which the device belongs.
- Start other export or import tasks.

If the import is unsuccessful, the configuration will roll back to the original settings before the import. If the import is unsuccessful during the import of EUQ approved list settings, all settings rollback except for the EUQ approved list settings.

---

## Procedure

1. Log on to the IMSVA management console.
2. Click **System Status**.
3. Verify that no services are starting or stopping. If services are starting or stopping, wait until the operation has completed.
4. Go to **Administration > Import/Export**.
5. Under **Import Configuration Files**, click **Browse...** and locate the file.
6. Click **Import**.

The original IMSVA settings and rules, such as domain-based delivery settings, will be deleted and replaced by the imported settings and rules.

All services on each device in the group restart to apply the imported settings and rules. Wait until all services restart.

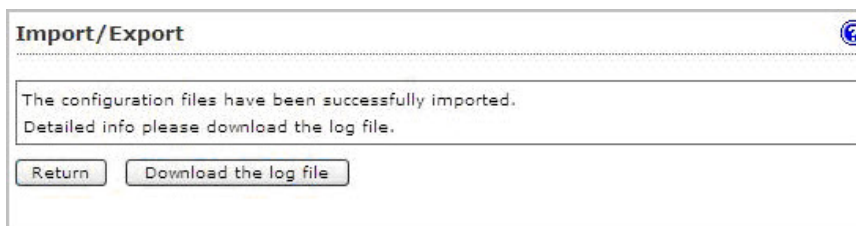


### Note

Only services that were running while the import performs will restart.

---

7. If the import is successful, you may click **Download log file** to view details of the import.



---

## Backing Up IMSVA

Trend Micro recommends exporting your settings to:

- **Keep a backup:** In case a problem occurs with the IMSVA application file and you need to rescue the application. Importing your



configuration backup will prevent you from having to configure all settings again.

- **Replicate settings across several devices:** If you have several devices on your network, you do not need to configure most settings on each of them separately.

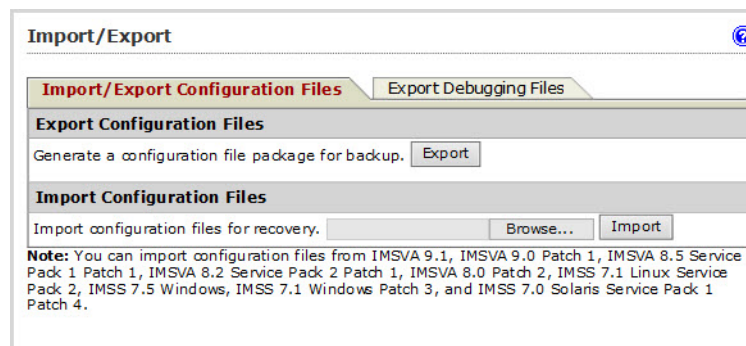
## Exporting Settings

During export, do not:

- Access other management console screens or modify any settings
- Perform any database operations
- Start/stop any services on the device or in the group to which the device belongs
- Register/unregister any child devices into/from the group to which the device belongs
- Launch other export or import tasks

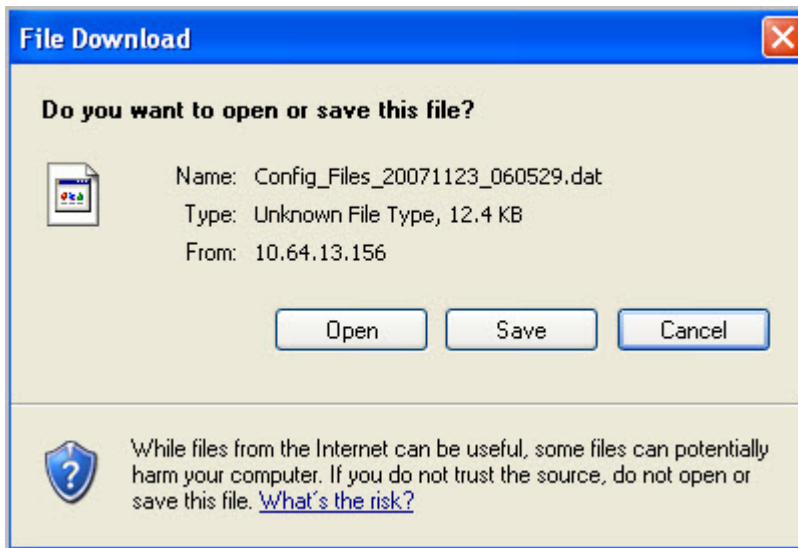
### Procedure

1. Go to **Administration > Import/Export**.



2. Click **Export**.

3. When the **File Download** dialog box appears, click **Save** to save the configuration file to your computer.



4. To return to the **Import/Export** screen, click **Return**.
- 

## Restoring IMSVA by Importing Settings

During import, do not:

- Access other management console screens or modify any settings.
- Perform any database operations.
- Start/stop any services on the device or in the group to which the device belongs.
- Register/unregister any child devices into/from the group to which the device belongs.
- Launch other export or import tasks.

---

## Procedure

1. Click **System Status**.
2. Verify that no services are starting or stopping. If services are starting or stopping, wait until they are stable.
3. Go to **Administration > Import/Export**.
4. Under **Import Configuration Files**, click **Browse...** and locate the file.
5. Click **Import**.

The original settings and rules, such as domain-based delivery settings, will be deleted and replaced by the imported settings and rules. All services on each device in the group will be restarted to apply the imported settings and rules. Wait until all services are restarted.



### Note

For detailed settings that cannot be restored during migration, see the IMSVA Installation Guide.

---

## Replicating Settings

If you have installed multiple IMSVA scanners that do not share the same admin database, you can use Trend Micro Control Manager to replicate settings across these scanners without having to configure each scanner separately. If the scanners share the same admin database, it is not necessary to replicate settings.

Do the following if you intend to replicate settings using Control Manager:

- **Step 1:** Back up IMSVA settings.
- **Step 2:** Enable the MCP agent.
- **Step 3:** Replicate settings from the Control Manager management console.

## Enabling MCP Agent

IMSVa automatically installs the Trend Micro Management Communication Protocol agent during installation. To integrate with Control Manager, provide the Control Manager server details and enable the agent from the management console.

---

### Procedure

1. Go to **Administration > IMSVa Configuration > Connections**.

The **Components** tab appears by default.

2. Click the **TMC Server** tab.

The **TMC Server Settings** screen appears.

The screenshot shows a web interface titled "Connections" with a help icon in the top right. Below the title is a tabbed menu with tabs for "Components", "LDAP", "POP3", "Database", "TMC Server" (which is selected and highlighted in red), "NTP Setting", and "Child IP".

Under the "TMC Server" tab, there is a section titled "Connection Status" with a red message "Not registered". Below this is the "TMC Server Settings" section, which contains the following fields and options:

- A button labeled "Un-register All Agents".
- An unchecked checkbox labeled "Enable MCP Agent".
- A "Server:" label followed by an information icon and a text input field.
- A "Communication protocol:" label with two radio button options: "HTTP" (selected) with a port input field showing "80", and "HTTPS" with a port input field showing "443".
- A "Web server authentication:" label with the following fields:
  - "User name:" followed by an information icon and a text input field.
  - "Password:" followed by a masked input field showing "\*\*\*\*\*".

Below the TMC Server Settings is the "Proxy Settings" section, which includes:

- An unchecked checkbox labeled "Enable proxy".
- A "Proxy type:" label followed by a dropdown menu currently set to "HTTP".
- A "Proxy server:" label followed by an information icon and a text input field.
- A "Port:" label followed by a text input field.
- A "User name:" label followed by a text input field.
- A "Password:" label followed by a masked input field showing "\*\*\*\*\*".

At the bottom of the form is the "Suspicious Object List Settings" section, which has two unchecked checkboxes: "Suspicious file list" and "Suspicious URL list" (which has an information icon next to it).

At the very bottom of the form are two buttons: "Save" and "Cancel".

3. Provide the required information.
4. Select the check box next to **Enable MCP Agent**.
5. Click **Save**.

## Replicating Settings from Control Manager

After enabling the Management Communication Protocol agent from the IMSVA management console, you can start to replicate IMSVA settings by logging on to the Control Manager management console.

---

### Procedure

1. Go to **Products** from the Control Manager menu.  
The **Product Directory** screen appears.
  2. Locate the source IMSVA scanner from the Product Directory tree.
  3. Mouseover **Configure**.  
A drop-down list appears.
  4. Select **Configuration Replication** from the drop-down list.
  5. Select the check box next to the target server.
  6. Click the **Replication** button.
-

# Chapter 30

## End-User Quarantine

This chapter explains how to use End-User Quarantine (EUQ).

Topics include:

- *About EUQ on page 30-2*
- *EUQ Authentication on page 30-2*
- *Configuring End-User Quarantine (EUQ) on page 30-2*
- *Distribution List EUQ Management on page 30-13*
- *Disabling EUQ on page 30-15*
- *Managing EUQ Databases on page 30-16*

## About EUQ

IMSVA provides web-based EUQ to improve spam management. The web-based EUQ service allows end users to manage the spam quarantine of their personal accounts and of distribution lists that they belong to. Messages that are determined to be spam are quarantined. These messages are indexed into a database by the EUQ agent and are then available for end users to review, delete, or approve for delivery.

You can specify the period to keep messages in the quarantine. IMSVA automatically deletes messages that are not released from quarantine. Deleted messages cannot be recovered.

## EUQ Authentication

Enabling EUQ requires one of the following authentication methods:

- **LDAP authentication:** Before enabling EUQ, configure LDAP settings using any of the following ways:
  - Go to **Administration > IMSVA Configuration > Connections**, then click the **LDAP** tab.
  - Go to **Administration > IMSVA Configuration > Configuration Wizard**. For details, see [Configuring LDAP Settings on page 4-10](#).
- **SMTP authentication:** Specify recipient domains and server addresses on the **EUQ Authentication** screen during the enabling process.

## Configuring End-User Quarantine (EUQ)

To allow end-users to access quarantined spam items that IMSVA might have misidentified as spam, do the following:

1. [Enabling EUQ on page 30-3](#)
2. [Configuring SMTP Server Settings on page 30-4](#)
3. [Starting or Stopping the EUQ Management Console on page 30-6](#)
4. [Enabling End-User Access on page 30-8](#)



5. [Opening the End-User Quarantine Management Console Remotely on page 30-12](#)

## Enabling EUQ

Enabling EUQ requires one of the following authentication methods:

- LDAP
- SMTP

For information about EUQ authentication, see [EUQ Authentication on page 30-2](#).

---

### Procedure

1. Go to **Administration > End-User Quarantine**.

The **EUQ Management** tab appears.

2. Select **Enable End-User Quarantine**.

3. Select an authentication method.

- **Use LDAP for EUQ authentication:** This option is disabled if LDAP settings are not configured. If LDAP settings are configured, this is the default authentication method.
- **Use SMTP Server for authentication:** When selected, the SMTP settings section appears. Specify recipient domains and server

addresses. For more information, see [Configuring SMTP Server Settings on page 30-4](#).

**End-User Quarantine**

**EUQ Management**

**Enable EUQ Feature**

☒ Enable End-User Quarantine Save

☒ Use LDAP for EUQ authentication

☐ Use SMTP Server for EUQ authentication

**Remove EUQ data**

Remove all data (including messages and approved senders) from all EUQ services. Remove

**Redistribute EUQ Data**

Redistribute EUQ data to all servers for performance.

☐ Only redistribute approved senders

☒ Redistribute all (approved senders and spam) Redistribute

(Redistribute EUQ data after you start or stop the EUQ server on a child IMSVA device or add a new child IMSVA device to an EUQ server.)

Note: If you add multiple child devices or start/stop multiple EUQ servers, you do not need to click the Redistribute button for each device or EUQ server separately. Simply perform all the additions or start/stop all the EUQ servers and click Redistribute once.

#### 4. Click **Save**.

The EUQ service automatically starts.



#### Note

Your settings will not be saved automatically. To avoid losing your information, do not navigate away from the page without clicking **Save**.

## Configuring SMTP Server Settings

### Procedure

#### 1. Go to **Administration > End-User Quarantine**.

The **EUQ Management** tab appears.

- On the **EUQ Management** screen, select **Use SMTP Server for EUQ authentication**.

The SMTP settings section appears.

End-User Quarantine

**EUQ Management**

**Enable EUQ Feature**

☒ Enable End-User Quarantine Save

☐ Use LDAP for EUQ authentication

☒ Use SMTP Server for EUQ authentication

Specify recipient domains and SMTP server addresses.

Add Delete 0-0 of 0 Page 1

| Domain | Server/Port |
|--------|-------------|
|--------|-------------|

15 per page

- Click **Add**.

The **SMTP Server Configuration** screen appears.

**Email Domain**

Specify a domain to be used in quarantine management.

Domain:

**Server Address and Port**

Specify the SMTP server address and port to be used in domain authentication.

Server address:

Port:

Encrypt communication: ☒

OK Close

- Specify the following information:

- **Email Domain:** Indicates a domain that will be used to access the EUQ console. IMSVA uses the recipient's domain to determine the SMTP server to be used for authentication.

**Note**

You can use the following formats to specify domains:

- company.com
- \*.company.com: Any subdomain of company.com
- \*: Any domain

A domain can only be listed once. Only unique domains will be added to the list.

---

- **Server Address and Port:** Indicates the server address and port that will be used to assign the server address for the destination domain.

**Note**

Use the default port 25 or specify a different port.

---

Only one SMTP server can be assigned to a domain. However, more than one domain can be mapped to an SMTP server.

5. Click **OK**.

The information appears in the SMTP settings table.

---

**Note**

Deleting all domain and server information disables EUQ. Deleted items cannot be recovered.

---

## Starting or Stopping the EUQ Management Console

You can manually start or stop the EUQ management console.

## Procedure

### 1. Go to **System Status**.

The **System Status** screen appears.

In the **Managed Services** table, a green check mark appears under **EUQ Management Console**, indicating that the EUQ management console is active.

System Status

Enable Connections

☐ Accept POP3 connections
 

Save

Components

Last refresh: Dec 25, 2013 12:27:18 PM

Refresh

Update

Rollback

| <input type="checkbox"/> | Name                                                 | Current Version      | Availability         | Update Schedule |
|--------------------------|------------------------------------------------------|----------------------|----------------------|-----------------|
| <input type="checkbox"/> | Virus Scan Engine                                    | 9.850.1008           | 9.850.1008           | 15 minutes      |
| <input type="checkbox"/> | Advanced Threat Scan Engine                          | 9.860.1030           | 9.860.1030           | 15 minutes      |
| <input type="checkbox"/> | Virus Pattern                                        | 11.209.00            | 9.3.239.00           | 15 minutes      |
| <input type="checkbox"/> | Spyware Pattern                                      | 1.555.00             | 1.400.00             | 15 minutes      |
| <input type="checkbox"/> | IntelliTrap Pattern<br>IntelliTrap Exception Pattern | 0.205.00<br>1.123.00 | 0.205.00<br>1.379.00 | 15 minutes      |
| <input type="checkbox"/> | Antispam Engine                                      | 8.100.1028           | 8.000.1002           | 15 minutes      |
| <input type="checkbox"/> | Antispam Pattern                                     | 21058.004            | 20023.0015           | 15 minutes      |
| <input type="checkbox"/> | URL Filtering Engine                                 | 3.800.1010           | 3.000.1009           | 15 minutes      |
| <input type="checkbox"/> | Smart Scan Agent Pattern                             | 11.209.00            | 9.3.239.00           | 15 minutes      |

Managed Services

| Hostname            | Connection                          | Scanner Service                          | Policy Service                           | EUQ Management Console                   |
|---------------------|-------------------------------------|------------------------------------------|------------------------------------------|------------------------------------------|
| test58.imsstest.com | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> Stop | <input checked="" type="checkbox"/> Stop | <input checked="" type="checkbox"/> Stop |

### 2. Click **Stop**.

After a moment, the EUQ management console stops.

### 3. Click **Start** under **EUQ Management Console**.

After a moment, the EUQ management console starts.

## Enabling End-User Access

Enable end user access to allow the users to access quarantined spam items that IMSVA might have misidentified as spam. The clients use LDAP or SMTP authentication to access the IMSVA EUQ service.



### Note

To allow users to manage messages on the EUQ management console, add their individual and distribution list email addresses to the list of users on your LDAP server.

When using SMTP authentication, you do not need to configure LDAP settings.

---

## Procedure

1. Go to **Administration > End-User Quarantine**.

The **EUQ Management** tab appears.

2. Click the **User Quarantine Access** tab.

The **User Quarantine Access** screen appears. The displayed screen depends on the authentication method you selected during the enabling process.

### End-User Quarantine

These groups can access quarantined spam items and will use LDAP authentication with the designated IMSVA server.

**EUQ Management** **User Quarantine Access**

☒ Enable access ⓘ

☐ Enable management of distribution list EUQ ⓘ

☐ Allow end user to deliver quarantined mail in EUQ directly ⓘ

☒ Control the 'auto-add' approved Sender behavior when end user reprocess a message ⓘ

Always Add ▾

Keep quarantined spam for: 7 days ▾

**Single Sign On Configuration**

☐ Enable NTLM ⓘ

☐ Enable Kerberos ⓘ

keytab  Browse... Upload

**Set maximum number of approved senders**

Maximum approved senders per end-user: 50 ▾

**Specify the logon notice**

Specify the greeting displayed to users on the EUQ logon page. The maximum length is 2,000 characters. For better security, Trend Micro recommends not using HTML. To configure the administrator logon notice, refer to the [Logon Notice](#) page.

**Select LDAP groups to enable access**

☒ Enable All

Select groups from LDAP Search below.

Search LDAP groups ▾

Search

Selected Groups

>> <<

Save Cancel

**FIGURE 30-1. LDAP**

3. Select **Enable access**.
4. Select **Enable management of distribution list EUQ** to allow users to manage the EUQ of distribution lists that they belong to.
5. Select **Allow end user to deliver quarantined mail in EUQ directly** to allow end users to deliver quarantined messages directly to the recipient. The message bypasses all rules except virus scanning rules.
6. Select **Control the "auto-add" approved sender behavior when an end user reprocesses a message** and select a value from the drop-down list.
7. Select **Enable NTLM** to allow end users single sign-on access the EUQ management console using the NTLM authentication protocol.
8. To enable Kerberos single sign-on:
  - a. Select **Enable Kerberos** to allow end users single sign-on access to the EUQ management console using Kerberos authentication protocol.
  - b. Create a new user account in your domain for the host on which IMSVA is installed.
  - c. On the Active Directory domain controller, use the following command to generate a keytab file for IMSVA:

```
C:\>ktpass.exe -out filename -princ HTTP/instance@REALM
-mapuser account -ptype KRB5_NT_PRINCIPAL -pass password
```

Where:

`filename` is where the generated keytab file will be stored. For example, `C:\test.keytab`.

`instance` is the hostname of the computer where IMSVA is installed. For example, `imsva.test.com`.

`REALM` is the uppercase name of the realm you want to authenticate with, normally the same with the domain name on DNS server. For example, `TEST.COM`.

`account` is the account created for IMSVA. For example, `user@test.com`.



password is the password of the account.

- d. Click **Browse...** to locate the generated keytab file.
- e. Click **Upload** to upload the keytab file to IMSVA.

If `ktpass.exe` is not found, you can install support tools using the Windows server installation CD/DVD or download the file from the Microsoft website.

If Kerberos single sign-on is enabled, use the hostname for IMSVA when accessing the EUQ management console.

- 9. Select the number of days to keep quarantined spam.
- 10. Select the maximum number of approved senders for each end-user.
- 11. Specify a logon notice that appears on the user's browser when he/she starts to access the quarantined messages.
- 12. Under Select LDAP groups, select the check box next to **Enable all** to allow all LDAP group users to access quarantined spam.
- 13. To add individual LDAP groups, clear the **Enable all** check box and do either of the following:
  - **Search for groups:**
    - a. From the drop-down list, select **Search LDAP groups**.
    - b. Specify the group name.
    - c. Click **Search**. The groups appear in the table below.
    - d. Click the LDAP groups to add.
    - e. Click **>>**. The groups appear in the Selected Groups table.
  - **Browse existing groups:**
    - a. From the drop-down list, select **Browse LDAP groups**. The groups appear in the table below.
    - b. Click the LDAP groups to add.
    - c. Click **>>**. The groups appear in the Selected Groups table.

#### 14. Click **Save**.

---

## Opening the End-User Quarantine Management Console Remotely

You can view the EUQ management console remotely across the network or from the computer where the program was deployed. Ensure that JavaScript is enabled on your browser.

### **Primary EUQ service**

`https://<target server IP address>:8447`

An alternative to using the IP address is to use the target server's fully qualified domain name (FQDN).

### **Logon Name Format**

The format of the logon name used when accessing the EUQ management console depends on the selected authentication type.

**TABLE 30-1. EUQ Logon Name Formats**

| AUTHENTICATION TYPE | LOGON NAME FORMAT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| LDAP                | <p>The format of the logon name depends on the type of LDAP server you selected when configuring LDAP settings. The following are examples of valid logon name formats.</p> <ul style="list-style-type: none"> <li>• <b>Domino:</b> user1/domain</li> <li>• <b>Microsoft Active Directory</b> <ul style="list-style-type: none"> <li>• Without Kerberos: user1@domain.com (UPN) or domain\user1</li> <li>• With Kerberos: user1@domain.com</li> </ul> </li> <li>• <b>Microsoft Active Directory Global Catalog</b> <ul style="list-style-type: none"> <li>• Without Kerberos: user1@domain.com (UPN) or domain\user1</li> <li>• With Kerberos: user1@domain.com</li> </ul> </li> <li>• <b>OpenLDAP:</b> cn=manager,dc=test1,dc=com</li> <li>• <b>Sun iPlanet Directory:</b> uid=user1,ou=people,dc=domain,dc=com</li> </ul> |
| SMTP                | <p>Use any valid email address for the logon name.</p> <hr/> <div data-bbox="565 938 622 987"></div> <div data-bbox="637 935 686 956"><b>Note</b></div> <div data-bbox="637 971 1085 1027">IMSVa supports auth login, auth plain and starttls.</div> <hr/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## Distribution List EUQ Management

IMSVa enables users to manage the EUQ of distribution lists that they belong to.



### Note

Note: You can enable distribution list EUQ management only when using LDAP authentication.

This feature supports the following LDAP server types:

- Domino
- Microsoft Active Directory
- Microsoft AD Global Catalog

When a user requests management rights, IMSVA sends a notification to the distribution list address. The notification contains the following information:

- Requesting user's address
- Distribution list address
- Unique, single-use authentication code
- Authentication code expiration date

**Note**

Authentication codes expire after five minutes by default. To specify a new expiration period, add the following section in the `imss.ini` file:

```
[EUQ]
expired_interval=5
```

---

Only one user can manage the EUQ at any given time. IMSVA forces the current user to log off if another user:

- Requests management rights
- Chooses to force the current user to log off

## Managing Distribution List EUQ

Provide the following instructions to the user.

**Note**

The **Distribution List EUQ Management** link displays only if you enable this feature.

---

---

### Procedure

1. Log on to your personal Email Quarantine.

2. Click **Distribution List EUQ Management**.

A new screen appears.

3. Specify the email address of the distribution list.

4. Click **Next**.

A new screen appears and the system sends a notification to the distribution list.

5. Specify the authentication code provided in the notification.

The authentication code can be used only:

- By the requesting user
- Once
- Before the specified expiration date

6. Click **Log On**.

---

## Disabling EUQ

Before disabling EUQ, inform your users that they should manage their quarantined spam.

---

### Procedure

1. Go to **Administration > End-User Quarantine**.

The **EUQ Management** screen appears.

2. Clear the **End-User Quarantine** check box.

3. Optional: Remove all EUQ data from each device to save disk space. To do so, click **Remove** on the **EUQ Management** tab.

4. Click **Save**.

## Managing EUQ Databases

By default, IMSVA installs an EUQ database on the IMSVA server. The default EUQ database name is **imsseuq**, user name is **sa**, and password is **postgreSQL**.

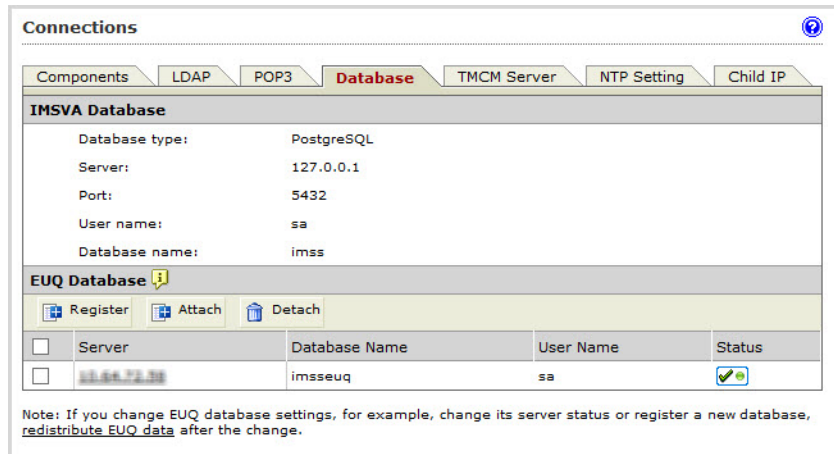
In addition, you can manually register, attach, disable and detach EUQ databases if necessary.

### Procedure

1. Go to **Administration > IMSVA Configuration > Connections**.

The **Components** tab displays by default.

2. Click the **Database** tab.



**Connections**

Components | LDAP | POP3 | **Database** | TCM Server | NTP Setting | Child IP

**IMSVa Database**

Database type: PostgreSQL  
 Server: 127.0.0.1  
 Port: 5432  
 User name: sa  
 Database name: imss

**EUQ Database**

Register | Attach | Detach

| <input type="checkbox"/> | Server    | Database Name | User Name | Status |
|--------------------------|-----------|---------------|-----------|--------|
| <input type="checkbox"/> | 127.0.0.1 | imsseuq       | sa        |        |

Note: If you change EUQ database settings, for example, change its server status or register a new database, redistribute EUQ data after the change.

3. To register an EUQ database to IMSVA, click **Register** under **EUQ Database**. Type the EUQ database server IP address, port number, administrator user name, password and database name.

**Note**

The administrator account you use for registering and attaching EUQ databases must have the superuser role.

---

4. To attach an EUQ database, click **Attach**. Type the EUQ database server IP address, port number, administrator user name, password and database name.
- 

**Note**

The attach function is used to restore a detached database. Make sure that the database you want to attach has an initialized schema.

---

5. To detach an EUQ database from IMSVA, disable the database, select the check box next to a database, and then click **Detach**.
- 

**Note**

The detach function will remove a database from the EUQ database list. It is used to stop an EUQ database.

You can attach the database again if necessary. Detaching the database does not delete or otherwise affect the actual database server; IMSVA just stops using the database.

---

6. To disable an EUQ database, click the green check mark for that database in the **Status** column.
- 

**Note**

The disable function is used to temporarily stop an EUQ database. For example, you can stop an EUQ database for maintenance for a certain period of time.

---

### What to do next

Redistribute data among multiple EUQ-enabled devices in a group to improve EUQ performance. Redistribute data:

- After you register, attach or disable a database
- Before you use the command line interface to remove an EUQ-enabled device



**Tip**

Trend Micro recommends that you do the following after redistributing EUQ data:

- Verify that the newly added approved senders are still available.
  - Instruct end users not to add approved senders to the list while you are adding a child device and redistributing EUQ.
-



# Chapter 31

## Administrative Tasks

This chapter explains how to perform important administrative tasks, such as managing accounts, configuring connection settings, and managing product licenses.

Topics include:

- *Configuring Connection Settings on page 31-2*
- *Configuring Database Maintenance Schedule on page 31-20*
- *Managing Product Licenses on page 31-21*
- *Activating Products on page 31-25*
- *Configuring Smart Protection Network Settings on page 31-26*

## Configuring Connection Settings

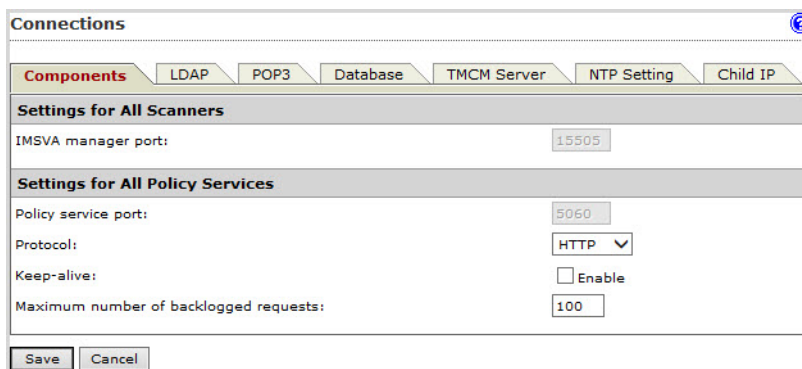
To enable the scanner to receive messages, configure the connection settings.

---

### Procedure

1. Go to **Administration > IMSVA Configuration > Connections**.

The **Components** tab appears by default.



The screenshot shows the 'Connections' configuration window with the 'Components' tab selected. The window has a title bar 'Connections' and a help icon. Below the title bar are tabs: 'Components' (selected), 'LDAP', 'POP3', 'Database', 'TMC Server', 'NTP Setting', and 'Child IP'. The main content area is divided into two sections: 'Settings for All Scanners' and 'Settings for All Policy Services'. Under 'Settings for All Scanners', there is a field 'IMSVA manager port:' with a value of '15505'. Under 'Settings for All Policy Services', there are four fields: 'Policy service port:' with a value of '5060', 'Protocol:' with a dropdown menu showing 'HTTP', 'Keep-alive:' with an unchecked checkbox and the text 'Enable', and 'Maximum number of backlogged requests:' with a value of '100'. At the bottom of the window are 'Save' and 'Cancel' buttons.

2. Under **Settings for All Policy Services**, configure the following:
    - **Protocol:** Select the type of protocol the scanner uses to communicate with the policy service (HTTP or HTTPS).
    - **Keep-alive:** Select the check box to enhance policy retrieval by maintaining a constantly active connection between the scanner and policy services.
    - **Maximum number of backlogged requests:** Specify a number that represents the maximum number of requests IMSVA will preserve until it can process them later.
  3. Click **Save**.
-

## About LDAP Settings

Configure LDAP settings for user-group definition, administrator privileges, or end-user quarantine authentication.

Configure multiple and mixed type LDAP servers from the **Administration > IMSVA Configuration > Connections | LDAP** screen. You cannot configure more than one LDAP server from the Configuration Wizard.

If more than one LDAP server is used, IMSVA synchronizes the account information from the LDAP servers to the IMSVA local cache. The time required for synchronization between the servers depends on the number of accounts on your LDAP servers. When synchronization completes, the time and date appear in the **Last Synchronized** column. IMSVA automatically synchronizes the accounts daily. You can manually trigger synchronization by clicking **Save & Synchronize**.



### Note

If you configure only one LDAP server, IMSVA directly queries data from the remote LDAP server. If you have multiple LDAP servers configured, IMSVA synchronizes all data from the remote LDAP servers to the local OpenLDAP server. In this case, the LDAP settings cannot support End-User Quarantine authentication, and performance issues may occur during data synchronization when there is a large number of LDAP servers.

Therefore, Trend Micro recommends you configure no more than 5 LDAP servers. If you want to configure more than 5 LDAP servers, use unified directory services such as Global Catalog to manage queries so that IMSVA does not need to synchronize data to the local server.

If more than one LDAP server is enabled, End-User Quarantine using LDAP authentication and EUQ single sign-on cannot be enabled.

---

If the LDAP settings on the **Administration > Connections > LDAP** screen are not configured, the following LDAP related features will not work:

- **Policy > Internal Addresses > [Search for LDAP groups]**

- **Policy > [any rule] > [Sender to Recipient] > [Search for LDAP user and groups]**
- **Administration > End-User Quarantine > User Quarantine Access > [Select LDAP groups to enable access]**
- **Administration > Admin Accounts > Add > [LDAP authentication]**

## LDAP Server Types

**TABLE 31-1. LDAP Server Types**

| LDAP SERVER                     | LDAP ADMIN ACCOUNT (EXAMPLES)                                                                            | BASE DISTINGUISHED NAME (EXAMPLES)                                            | AUTHENTICATION METHOD                  |
|---------------------------------|----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------|
| Active Directory                | Without Kerberos:<br>user1@domain.com (UPN) or<br>domain\user1<br><br>With Kerberos:<br>user1@domain.com | dc=domain, dc=com                                                             | Simple<br><br>Advanced (with Kerberos) |
| Active Directory Global Catalog | Without Kerberos:<br>user1@domain.com (UPN) or<br>domain\user1<br><br>With Kerberos:<br>user1@domain.com | dc=domain, dc=com<br><br>dc=domain1,dc=com (if multiple unique domains exist) | Simple<br><br>Advanced (with Kerberos) |
| OpenLDAP                        | cn=manager, dc=test1, dc=com                                                                             | dc=test1, dc=com                                                              | Simple                                 |
| Lotus Domino                    | user1/domain                                                                                             | Not applicable                                                                | Simple                                 |
| Sun iPlanet Directory           | uid=user1, ou=people, dc=domain, dc=com                                                                  | dc=domain, dc=com                                                             | Simple                                 |

## Adding LDAP Servers

---

### Procedure

1. Go to one of the following to access the **LDAP** tab:
  - **Administration > IMSVA Configuration > Connections | LDAP**
  - **Administration > IMSVA Configuration > Configuration Wizard | Step 6: LDAP Settings**
2. Click **Add**.

The **LDAP Settings** screen appears.
3. Specify a meaningful description for the LDAP server.
4. Next to **LDAP server type**, select the type of LDAP servers on your network:
  - **Domino**
  - **Microsoft Active Directory**
  - **Microsoft AD Global Catalog**
  - **OpenLDAP**
  - **Sun iPlanet Directory**
5. Next to **Enable LDAP 1**, select the check box.
6. Next to **LDAP server**, specify the server name or IP address.
7. Next to **Listening port number**, specify the port number that the LDAP server uses to listen to access requests.
8. Configure the settings under **LDAP 2** if necessary.
9. Under **LDAP cache expiration for policy services and EUQ services**, specify the **Time to live** in minutes.

**Time To Live:** Determines how long IMSVA retains the LDAP query results in the cache. Specifying a longer duration enhances LDAP query during policy execution. However, the policy server will be less

responsive to changes in the LDAP server. A shorter duration means that IMSVA has to perform the LDAP query more often, thus reducing performance.

10. Under **LDAP admin**, specify the administrator account, the corresponding password and the base distinguished name.

Refer to [LDAP Server Types on page 31-4](#) for assistance.

11. Select an authentication method:

- **Simple**
- **Advanced:** Uses Kerberos authentication for Active Directory. Configure the following:
  - **Kerberos authentication default realm:** Default Kerberos realm for the client. For Active Directory use, the Windows domain name must be upper case (Kerberos is case-sensitive).
  - **Default domain:** The Internet domain name equivalent to the realm.
  - **KDC and admin server:** Hostname or IP address of the Key Distribution Center for this realm. For Active Directory, it is usually the domain controller.
  - **KDC port number:** The associated port number.

12. Select the **Enable encrypted communication between IMSVA and LDAP** check box and click **Browse** to upload a CA certificate file to verify the certificate used by the LDAP server.

13. Click **Add**.

If you are using the Configuration Wizard, click **Next**.

**Note**

Only Active Directory and Active Directory Global Catalog support Kerberos Authentication.

---

14. Under **LDAP Email Address Attribute**, select the LDAP attribute from which IMSVA retrieves user email addresses.

- **mail:** This is the default LDAP attribute that stores email addresses.
- **proxyAddresses:** This is the recommended attribute to choose if you use Microsoft Exchange Server.
- **Other attribute:** Specify an LDAP attribute that stores email addresses.

**15. Click **Save & Synchronize**.**

---

## Enabling and Disabling LDAP Servers

LDAP servers can be enabled or disabled depending on the requirements for your network.

---

### Procedure

1. Go to **Administration > IMSVA Configuration > Connections > LDAP** to access the LDAP tab.
2. Click a server that you want to enable or disable in the LDAP server table.

The **LDAP Settings** screen appears.

3. Under **LDAP server type**, select or clear the **Enable LDAP 1** and **Enable LDAP 2** check boxes to enable or disable the LDAP server.



#### Note

LDAP 1 and LDAP 2 refers to backup servers for each other. If you select only one check box, the LDAP server status is enabled, but its backup server is not enabled.

---

4. Click **Save**.
- 

## Configuring POP3 Settings

In addition to SMTP traffic, IMSVA can scan POP3 messages at the gateway as your clients retrieve them.

**Tip**

To use the POP3 message filter, enable **Accept POP3 connection** from **System Status** screen. This option is not selected by default.

---

**Procedure**

1. Go to **Administration > IMSVA Configuration > Connections**.

The **Components** tab displays by default.

2. Click the **POP3** tab.
3. To configure a connection from unknown POP3 servers on the Internet, specify the port number IMSVA uses for incoming POP3 connections under **Generic POP3 Connection**.
4. To configure connections from specific POP3 servers, do the following:
  - a. Click **Add** under **Dedicated POP3 Connections**.  
The **Dedicated POP3 Connection** window appears.
  - b. Specify the port IMSVA uses for incoming POP3 connections, the POP3 server IP address, and the POP3 server port number.
  - c. Click **OK**.
  - d. To modify an existing connection, click the connection name.
5. Under **Message Text**, modify the message that IMSVA sends to users if messages that they are trying to receive trigger a filter and are quarantined or deleted.
6. Click **Save**.

**Note**

The incoming port on your scanners must be idle or the IMSVA daemon might not function properly.

---



## Configuring POP3 Generic Services

For a generic POP3 service, the POP3 client logs on using the USER command and specifies the actual POP3 server and optional port number along with the user's name using the UserServerSeparator character to separate the values.

Example 1: To connect user "User1" to server "Server1", and the UserServerSeparator character is "#", the client issues the following USER command:

```
USER User1#Server1
```

Example 2: To connect to port 2000 on Server1, the following command is used:

```
USER User1#Server1#2000
```



### Note

If you do not specify a port number, IMSVA uses the default value of 110.

---

The following example shows how to configure generic POP3 settings for Outlook:

---

### Procedure

1. Specify the POP3 server address with IMSVA scanner IP 192.168.11.147.
  2. Specify user name test123#192.168.11.252.
  3. Set POP3 port to 110.
- 

## Configuring POP3 Dedicated Services

For a POP3 dedicated service, the POP3 service always connects to a specific POP3 server. IMSVA uses this service for a POP3 logon and for any type of logon using the AUTH command. For this service, a separate port on the proxy

has to be set up for each specific POP3 server that any client might want to connect.

The following example shows how to configure dedicated POP3 settings in Microsoft Outlook:

---

**Procedure**

1. Specify the POP3 server address with IMSVA scanner IP 192.168.11.147.
  2. Specify user name `test123`.
  3. Set the POP3 port to `1100`, which is the port that the IMSVA dedicated POP3 service is listening on.
- 

## Configuring Database Settings

Configure the database connection settings so IMSVA can save messages and data.

---

**Procedure**

1. Go to **Administration > IMSVA Configuration > Connections**.  
The **Components** tab displays by default.
2. Click the **Database** tab.

The IMSVA admin database type, server IP address, port number, user name and database name appear at the top of the table.

Connections

Components

LDAP

POP3

Database

TMC Server

NTP Setting

Child IP

IMSSVA Database

Database type:

PostgreSQL

Server:

127.0.0.1

Port:

5432

User name:

sa

Database name:

imss

EUQ Database

Register

Attach

Detach

|                          | Server    | Database Name | User Name | Status |
|--------------------------|-----------|---------------|-----------|--------|
| <input type="checkbox"/> | 127.0.0.1 | imsseuq       | sa        |        |

Note:

If you change EUQ database settings, for example, change its server status or register a new database, redistribute EUQ data after the change.



**Note**  
If you want to change the password for the admin database, run the following script:  

```
/opt/trend/imss/script/dbupdate.sh setpw newPassword
```

3. Under **EUQ Database**, perform operations to manage EUQ databases as required.



**Note**  
For detailed operations, see [Managing EUQ Databases on page 30-16](#).

### Configuring TCMC Settings

To use Trend Micro Control Manager (TMC) to manage IMSVA, enable the Control Manager/MCP agent on the IMSVA server and configure Control Manager server settings. If a proxy server is between the Control Manager server and IMSVA, configure proxy settings. If a firewall is between the

Control Manager server and IMSVA, configure port forwarding to work with the firewall's port-forwarding functionality.



**Note**

For additional information about Control Manager, see the Control Manager documentation.

---

---

**Procedure**

1. Go to **Administration > IMSVA Configuration > Connections**.

The **Components** tab displays by default.

2. Click the **TMC Server** tab.

**Connections**

Components | LDAP | POP3 | Database | **TMC Server** | NTP Setting | Child IP

---

**Connection Status**

test58.imsstest.com Registered Control Manager server: 10.64.73.192

---

**TMC Server Settings**

To manage IMSVA with Control Manager, enable the Control Manager MCP agent and configure all Control Manager server settings.

Un-register All Agents

☒ Enable MCP Agent

Server: 10.64.73.192

Communication protocol: ☒ HTTP port: 80 ☐ HTTPS port: 443

Web server authentication:

User name:   
 Password:

---

**Proxy Settings**

☐ Enable proxy

Proxy type: HTTP

Proxy server:   
 Port:   
 User name:   
 Password:

---

**Suspicious Object List Settings**

☐ Suspicious file list ☐ Suspicious URL list

Save Cancel

3. Under **TMC Server Settings**, specify the following parameters:

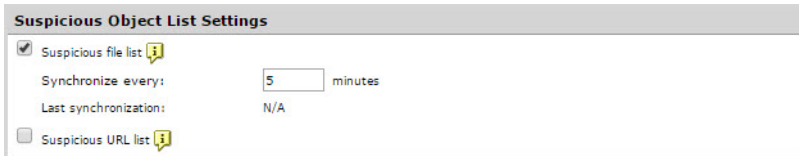
| OPTION                    | DESCRIPTION                                                                                                                                                  |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Enable MCP Agent          | Select the check box to enable the agent.                                                                                                                    |
| Server                    | Specify the Control Manager IP address or FQDN.                                                                                                              |
| Communication protocol    | Select HTTP or HTTPS and specify the corresponding port number. The default port number for HTTP access is 80, and the default port number for HTTPS is 443. |
| Web server authentication | Specify the credentials to access the Control Manager web server.                                                                                            |

4. Under **Proxy Settings**, specify the following parameters:

| OPTION       | DESCRIPTION                                                                                      |
|--------------|--------------------------------------------------------------------------------------------------|
| Enable proxy | Select the check box to enable the proxy server.                                                 |
| Proxy type   | Select the protocol that the proxy server uses: <b>HTTP</b> , <b>SOCKS4</b> , or <b>SOCKS5</b> . |
| Proxy server | Specify the proxy server FQDN or IP address, port number, and the user name and password.        |
| Port         | Specify the port for the proxy server.                                                           |
| User name    | Specify the user name to access the proxy server.                                                |
| Password     | Specify the password for the user name.                                                          |

5. Under **Suspicious Object List Settings**, do the following:

- If you want IMSVA to detect suspicious files, select the **Suspicious file list** check box and specify the interval to synchronize the suspicious file list from Control Manager. The default synchronization interval is 5 minutes, and the minimum interval is 1 minute.



**Suspicious Object List Settings**

☒ Suspicious file list ⓘ

Synchronize every:  minutes

Last synchronization: N/A

☐ Suspicious URL list ⓘ

- If you want IMSVA to detect suspicious URLs, select the **Suspicious URL list** check box.



**Note**

IMSVA detects suspicious URLs based on Web Reputation Services available through Smart Protection Servers. Make sure you have properly configured Web Reputation settings and Smart Protection Servers.

6. Click **Save**.

If you are using the Configuration Wizard, click **Next**.

If you enabled the agent, it will soon register to the Control Manager server. If you disabled the agent, IMSVA will soon log off from the Control Manager server. Verify the change on the Control Manager management console.



**Note**

In addition, make sure that your Control Manager version is 6.0 SP3 Patch 1 or later and the Smart Protection Server version is 3.0 Patch 1 or later.

---

## Providing IMSVA Logon Credentials in Control Manager

To make your settings effective, provide your IMSVA logon credentials for authentication on the Control Manager management console.

---

### Procedure

1. Log on to the Control Manager management console.
2. Go to **Administration > Manager Servers**.
3. Next to **Server Type**, select **InterScan Messaging Security Virtual Appliance**.
4. Find your IMSVA server and click the **Edit** icon in the **Actions** column.  
The **Edit Server** screen appears.
5. Under **Authentication**, provide your IMSVA logon credentials.



**Note**

Trend Micro recommends that you create a separate administrator account other than the default "admin" account for Control Manager to manage IMSVA. The account is required for authentication on the Control Manager management console.

---

6. Click **Save**.
- 

## Unregistering from Control Manager

---

### Procedure

1. Go to **Administration > IMSVA Configuration > Connections**.

The **Components** tab displays by default.

2. Click the **TCMC Server** tab.
  3. Click the **Un-register All Agents** button.
- 

## Trend Vision One Integration Settings

Trend Vision One extends detection and response beyond the endpoint to offer broader visibility and expert security analytics, leading to more detections and an earlier, faster response. With Trend Vision One, you can respond more effectively to threats, minimizing the severity and scope of a breach.

Integration with Trend Vision One allows IMSVA to forward policy event logs to Trend Vision One for correlated detection and other advanced analytics.

### Integrating IMSVA with Trend Vision One

Integrate IMSVA with Trend Vision One to forward policy event logs to Trend Vision One. You can integrate with Trend Vision One using one of the following connection methods:

- Direct connection
- Through a Service Gateway
- Through the system proxy server



#### Important

Before you can configure integration settings, apply the latest hotfix.

---



---

## Procedure

1. Generate an enrollment token in Trend Vision One.
  - a. On the Trend Vision One console, go to **Service Management > Product Instance** or **Service Management > Product Connector**.
  - b. Click **Add Existing Product** or **Connect**.
  - c. In the **Instance type** or **Product** field, select InterScan Messaging Security Virtual Appliance.
  - d. Click the link to generate an enrollment token.
  - e. Copy the enrollment token for use on the IMSVA management console.
  - f. Click **Save**.
2. On the IMSVA management console, go to **Administration > IMSVA Configuration > Connections > Trend Vision One**.
3. Next to **Trend Vision One token**, paste the enrollment token you obtained in [this step on page 31-17](#).
4. Complete additional settings if you want to integrate through a Service Gateway or the system proxy server.
  - Through a Service Gateway
    - a. On the Trend Vision One console, go to **Workflow and Automation > Service Gateway Management**.
    - b. If you do not have an existing Service Gateway deployed, install a Service Gateway.

For detailed instructions, see [Deployment Guides](#).
    - c. Click the Service Gateway name.
    - d. Click **Manage Services**.
    - e. Click the install icon to install, and then enable the **Forward proxy** service.

- f. Record the Service Gateway IP address for use on the IMSVA management console.
  - g. On the IMSVA management console, go to **Administration > IMSVA Configuration > Connections > Trend Vision One**.
  - h. Select **Enable Service Gateway connection**.
  - i. Specify the Service Gateway IP address you obtained in [this step on page 31-18](#).
- Through the system proxy server
    - a. Select **Connect using a proxy server**.
    - b. Click the link to configure the proxy server settings in IMSVA.
5. Select **Forward policy event logs to Trend Vision One**.
  6. Click **Register**.
- 

## Unregistering IMSVA from Trend Vision One

---



### Important

After unregistering IMSVA from Trend Vision One, you must obtain a new enrollment token to register to Trend Vision One again.

---

### Procedure

---

1. Go to **Administration > IMSVA Configuration > Connections > Trend Vision One**.
2. Click **Unregister**.

IMSVA disconnects from Trend Vision One and stops sending data to Trend Vision One.

---

## Configuring NTP Settings

The Network Time Protocol (NTP) synchronizes the clocks of computer systems across the Internet. To synchronize the computer clock of an IMSVA device with the clock of an NTP server, configure the NTP setting.

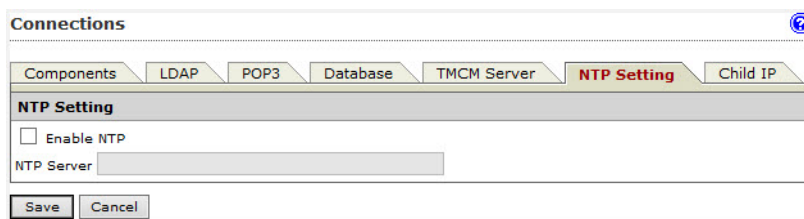
---

### Procedure

1. Go to **Administration > IMSVA Configuration > Connections**.

The **Components** tab displays by default.

2. Click the **NTP Setting** tab.



The screenshot shows a window titled "Connections" with a help icon in the top right corner. Below the title bar are several tabs: "Components", "LDAP", "POP3", "Database", "TMC Server", "NTP Setting" (which is highlighted in red), and "Child IP". The "NTP Setting" tab is active, displaying a section with a checkbox labeled "Enable NTP" and a text input field labeled "NTP Server". At the bottom of the window are "Save" and "Cancel" buttons.

3. Select the **Enable NTP** check box.
4. Specify the domain name or IP address of the NTP server.
5. Click **Save**.

---

## Configuring Child IP Settings

Devices in the Child IP address list can access each other for internal communications in a group. Add all IP addresses of child devices in the current group to this list before you register these child devices to the parent.

---

### Procedure

1. Go to **Administration > IMSVA Configuration > Connections**.

The **Components** tab displays by default.

2. Click the **Child IP** tab.

3. Under **Add IP Address**, specify the child device IP address.
4. Click >>.

The address appears in the table.

5. Click **Save**.
- 

## Configuring Database Maintenance Schedule

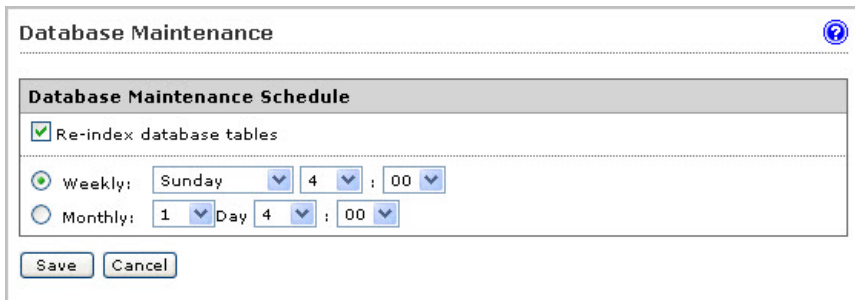
You may want to re-index the IMSVA database tables if you encounter slow performance when performing queries. As re-indexing can impact the scanner performance, Trend Micro recommends that you do this during off-peak hours.

---

### Procedure

1. Go to **Administration > Database Maintenance**.

The **Database Maintenance Schedule** screen appears.

The screenshot shows a web-based configuration window titled "Database Maintenance" with a help icon in the top right. Inside the window is a section titled "Database Maintenance Schedule". It contains a checked checkbox labeled "Re-index database tables". Below this, there are two radio button options: "Weekly" and "Monthly". The "Weekly" option is selected and has three dropdown menus set to "Sunday", "4", and "00". The "Monthly" option is unselected and has three dropdown menus set to "1", "Day 4", and "00". At the bottom of the section are "Save" and "Cancel" buttons.

Database Maintenance

**Database Maintenance Schedule**

☒ Re-index database tables

☒ Weekly: Sunday 4 : 00

☐ Monthly: 1 Day 4 : 00

Save Cancel

2. Select the **Re-index database tables** check box.
  3. Select the weekly or monthly schedule from the drop-down boxes.
  4. Click **Save**.
-

## Managing Product Licenses

You can activate IMSVA products through the management console. If a product license expires, renew the license, obtain a new Activation Code, and specify the code through the management console. If the product remains inactive, its features are disabled.

### Component Descriptions

IMSVA can use the following components:

| COMPONENT                                       | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cloud Pre-Filter</b>                         | Provides message approved and blocked list filters and scanning for spam, viruses, and other threats before the messages reach your network.                                                                                                                                                                                                                                                     |
| <b>Trend Micro Antivirus and Content Filter</b> | Basic scanning and filtering functionality. You can think of this product as the IMSVA program itself.                                                                                                                                                                                                                                                                                           |
| <b>Spam Prevention Solution (SPS)</b>           | A built-in filter that helps IMSVA identify content typically found in spam.                                                                                                                                                                                                                                                                                                                     |
| <b>Email Reputation</b>                         | <p>Email Reputation shares the same Activation Code with IP Profiler.</p> <p>Trend Micro Email Reputation technology was designed to be used to identify and block spam before it enters a computer network by routing Internet Protocol (IP) addresses of incoming mail connections to Trend Micro Smart Protection Network server for verification against extensive reputation databases.</p> |

| COMPONENT                           | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>IP Profiler</b>                  | <p>IP Profiler allows you to configure threshold settings and determine the action IMSVA performs when it detects any of the four potential Internet threats:</p> <ul style="list-style-type: none"><li>• <b>Spam:</b> Messages with unwanted advertising content.</li><li>• <b>Viruses:</b> Various virus threats, including Trojan programs.</li><li>• <b>Directory Harvest Attack (DHA):</b> A method spammers use to add your user's email addresses to spam databases.</li><li>• <b>Bounced Mail:</b> Messages returned to the sender because the messages were sent with the sender's domain in the sender address.</li></ul> |
| <b>Trend Micro Email Encryption</b> | <p>Trend Micro Email Encryption integrates with IMSVA to encrypt and decrypt messages and to block messages that cannot be decrypted.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Regulatory Compliance</b>        | <p>Compliance templates provide administrators with regulatory compliance. For a detailed list of available templates, see <a href="http://docs.trendmicro.com/en-us/enterprise/data-protection-reference-documents.aspx">http://docs.trendmicro.com/en-us/enterprise/data-protection-reference-documents.aspx</a>.</p>                                                                                                                                                                                                                                                                                                             |

## Viewing Your Product Licenses

Monitor your product licenses from the **Product Licenses** screen.

---

### Procedure

1. Go to **Administration > Product Licenses**.

A brief summary of each license appears:

- **Product**
- **Version**

- **Full:** Indicates that you have purchased the full licensed product.
- **Evaluation:** Indicates that you are using an evaluation version of the product that expires after an elapsed time. The evaluation period varies according to the Activation Code you have obtained.

Fourteen (14) days before the expiration of the evaluation period, you will see a warning message on the management console.

To continue using IMSVA after the evaluation period, purchase a licensed version of IMSVA and specify the new Activation Code.

- **Activation Code:** A 31 alphanumeric character code in the format: `xx-xxxx-xxxxx-xxxxx-xxxxx-xxxxx`.

Trend Micro will send you an Activation Code by email when you register a product online. You can then copy and paste this Activation Code on the **Product License** page.

- **Seats:** The number of endpoints/servers the license supports.
  - **Status:** Indicates whether the product has expired or has been activated.
  - **Maintenance expiration:** The date when you will no longer be able to download the latest scan engine and virus pattern files from the Trend Micro ActiveUpdate server. To ensure that your network is protected against the latest web threats, contact your sales representative to renew your license.
2. Click **View detailed license online** for the license you want to view.
  3. Click **Check Status Online** to check the status of your license agreement on the Trend Micro website.
  4. Click **Hide Notifications for Inactive Components** on the top of license summary to hide notifications for inactivate components.

## Renewing or Activating a License

There are two ways to renew a license:

### Obtain a new Activation Code

Contact your sales representative to obtain a new Activation Code, and then specify the code on the **Product Licenses** screen.

### Extend the life of an existing Activation Code

Contact your sales representative to extend the lifetime of your Activation Code, and then either manually update the license status or wait until IMSVA automatically updates it.

## Renewing a License Using a New Activation Code

---

### Procedure

1. Go to **Administration > Product Licenses**.

A brief summary of each license appears.

2. Click **Enter a new code** next to Activation Code.

The **Enter a New Code** screen appears.

3. Next to **New Activation Code**, specify the new code.

4. Click **Activate**.

The management console might access the Trend Micro website to activate the license.

If you are unable to reach the Trend Micro website, verify your network settings and try again.

---

## Renewing a License Using an Existing Activation Code

---

### Procedure

1. Go to **Administration > Product Licenses**.

A brief summary of each license appears.



2. Click **View detailed license online** to view detailed information about the license.
3. Click **Check Status Online**. The management console accesses the Trend Micro web site to activate the license.

If you are unable to reach the Trend Micro website, verify your network settings and try again.

IMSPA checks the status of your license 90, 60, 30, and 0 days before the expiration of the current license, and every day after the expiration of the current license. Once renewed, IMSPA automatically updates the stored license information.

**Tip**

You can wait for IMSPA to automatically update the license status. However, Trend Micro recommends that you manually update it as soon as you extend the lifetime of the Activation Code.

---

## Activating Products

If you do not have an Activation Code, use the Registration Key that came with your product to register online.

Activate products from one of the following screens:

- Go to **Product Activation** in the Configuration Wizard
- Go to **Administration > Product Licenses**

## Activating from the Configuration Wizard

---

### Procedure

1. If you do not have an Activation Code, click **Register Online**.

Upon successful registration, Trend Micro will send you the Activation Code in an email message.

2. Specify the Activation Code to activate any of the following:

- Cloud Pre-Filter
- Trend Micro Antivirus and Content Filter
- Spam Prevention Solution
- Trend Micro Email Encryption
- Regulatory Compliance

3. Click **Next**.



**Note**

The Activation Code comes in the format: XX-XXXX-XXXXX-XXXXX-XXXXX-XXXXX-XXXXX.

---

## Activating from the Product Licenses

---

### Procedure

1. Go to **Administration > Product Licenses**.

A brief summary of each license appears.

2. Click **Enter a new code** next to Activation Code.

The **Enter a New Code** screen appears.

3. Specify the new code next to New Activation Code.

4. Click **Activate**.

The management console may access the Trend Micro website to activate the license. If you are unable to reach the Trend Micro website, verify your network settings and try again.

---

## Configuring Smart Protection Network Settings

Enable Trend Micro Smart Feedback to share threat information with the Trend Micro Smart Protection Network. This provides better protection for

your network because Trend Micro is able to quickly identify and address new threats.

**Note**

Email Reputation, File Reputation, and Web Reputation are all part of the Smart Protection Network.

---

---

**Procedure**

1. Go to **Administration > Smart Protection Network**.

The **Smart Protection Network Settings** screen appears.

2. Select **Enable Trend Micro Smart Feedback**.
  3. Click **Save**.
-



# Chapter 32

## Command Line Interface

This chapter describes the Command Line Interface (CLI) commands that you can use in the IMSVA product to perform monitoring, debugging, troubleshooting, and configuration tasks.

Topics include:

- *[Using the CLI on page 32-2](#)*
- *[Entering the CLI on page 32-2](#)*
- *[CLI Overview on page 32-3](#)*
- *[Entering the OS Shell on page 32-3](#)*
- *[Command Line Interface Commands on page 32-4](#)*

## Using the CLI

Use the CLI to do the following:

- Configure initial settings, such as the device IP address and host name
- Restart the device
- Rescue the application
- View device status
- Debug and troubleshoot the device



### Note

Do not enable scroll lock on your keyboard when using HyperTerminal. If scroll lock is enabled, you cannot enter data.

---

## Entering the CLI

If the IMSVA becomes a child device, the passwords for admin and enable that were set during installation are not available. Use the password for the parent device.

---

### Procedure

1. Verify the computer you are using can ping IMSVA's IP address.
  2. Use an SSH client to connect to IMSVA's IP address and TCP port 22.
  3. Log on with the following:
    - User name: **admin**
    - Password: The password used for logging on to the management console
  4. Type logout and press ENTER to terminate the SSH session.
-



- **Password:** The password used for the OS shell when installing the product
- 

## Command Line Interface Commands

IMSVa's CLI commands are separated into two categories: root and privileged commands. Root commands are basic commands that allow the administrator to obtain specific low security risk information and to perform simple tasks. Privileged commands provide full configuration control and advanced monitoring and debugging features. Privileged commands are protected by an additional layer of credentials: the Enable account and password.

### Entering Privileged Mode

---

#### Procedure

1. Enter CLI.
    - a. Verify the computer you are using can ping IMSVa's IP address.
    - b. Use a SSH client to connect to IMSVa's IP address and TCP port 22.
    - c. Log on with the following:
      - User name: **admin**
      - Password: The password used when logging on to the management console
  2. At the prompt `>`, type `enable` and press ENTER. The prompt changes from `>` to `#`.
  3. Type the password used for the CLI when installing the product and press ENTER.
-



## CLI Command Reference

The following tables provide information regarding the CLI commands available for IMSVA.

### configure module IMSVA adminUI disable

|                                                                                                             |            |
|-------------------------------------------------------------------------------------------------------------|------------|
| Disables the IMSVA management console on all network interface cards (NIC).                                 |            |
| <b>Syntax:</b><br><code>configure module IMSVA adminUI disable</code>                                       |            |
| <b>View</b>                                                                                                 | Privileged |
| <b>Parameters</b>                                                                                           | None       |
| <b>Examples:</b>                                                                                            |            |
| To disable the IMSVA management console on all NICs:<br><code>configure module IMSVA adminUI disable</code> |            |

### configure module IMSVA adminUI enable

|                                                                                                                     |                              |
|---------------------------------------------------------------------------------------------------------------------|------------------------------|
| Enables the IMSVA management console on one specific network interface card (NIC).                                  |                              |
| <b>Syntax:</b><br><code>configure module IMSVA adminUI enable &lt;interface&gt;</code>                              |                              |
| <b>View</b>                                                                                                         | Privileged                   |
| <b>Parameters</b>                                                                                                   | <interface>: Name of the NIC |
| <b>Examples:</b>                                                                                                    |                              |
| To enable the IMSVA management console for the NIC eth0:<br><code>configure module IMSVA adminUI enable eth0</code> |                              |

## configure module IMSVA adminUI enable all

|                                                                                                                               |            |
|-------------------------------------------------------------------------------------------------------------------------------|------------|
| Enables the IMSVA management console on all network interface cards (NIC).                                                    |            |
| <b>Syntax:</b><br><br>configure module IMSVA adminUI enable all                                                               |            |
| <b>View</b>                                                                                                                   | Privileged |
| <b>Parameters</b>                                                                                                             | None       |
| <b>Examples:</b><br><br>To enable the IMSVA management console for all NICs:<br><br>configure module IMSVA adminUI enable all |            |

## configure system date

|                                                                                                                                      |                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Configures the time and date and saves the data in CMOS.                                                                             |                                                                                                                                                                 |
| <b>Syntax:</b><br><br>configure system date <date> <time>                                                                            |                                                                                                                                                                 |
| <b>View</b>                                                                                                                          | Privileged                                                                                                                                                      |
| <b>Parameters</b>                                                                                                                    | <b>&lt;date&gt;:</b> Set the date using the following format: <b>yyyy-mm-dd</b><br><b>&lt;time&gt;:</b> Set the time with the following format: <b>hh:mm:ss</b> |
| <b>Examples:</b><br><br>To set the date to August 12, 2010 and the time to 3:40 PM:<br><br>configure system date 2010-08-12 15:40:00 |                                                                                                                                                                 |

## configure network dns

**TABLE 32-1. configure network dns ipv4**

|                                                    |
|----------------------------------------------------|
| Configures IPv4 DNS settings for the IMSVA device. |
|----------------------------------------------------|

**Syntax:**

```
configure network dns ipv4 <dns1> <dns2>
```

**View**

Privileged

**Parameters****<dns1>**: Primary IPv4 DNS server**<dns2>**: Secondary IPv4 DNS server**Note**

Use a space to separate the primary and secondary DNS value.

**Examples:**

To configure the primary DNS with an IP address of 192.168.10.21:

```
configure network dns ipv4 192.168.10.21
```

To configure the primary and secondary DNS with the following values:

- Primary DNS: 192.168.10.21
- Secondary DNS: 192.168.10.22

```
configure network dns ipv4 192.168.10.21 192.168.10.22
```

**TABLE 32-2. configure network dns ipv6**

Configures IPv6 DNS settings for the IMSVA device.

**Syntax:**

```
configure network dns ipv6 <dns1> <dns2>
```

**View**

Privileged

**Parameters****<dns1>**: Primary IPv6 DNS server**<dns2>**: Secondary IPv6 DNS server**Note**

Use a space to separate the primary and secondary DNS value.

**Examples:**

To configure the primary DNS with an IP address of 2001:db8::21:

```
configure network dns ipv6 2001:db8::21
```

To configure the primary and secondary DNS with the following values:

- Primary DNS: 2001:db8::21
- Secondary DNS: 2001:db8::22

```
configure network dns ipv6 2001:db8::21 2001:db8::22
```

### configure network hostname

Configures the host name for the IMSVA device.

**Syntax:**

```
configure network hostname <hostname>
```

**View**

Privileged

**Parameters**

**<hostname>**: The host name or fully qualified domain name (FQDN) for the IMSVA device

**Examples:**

To change the host name of the IMSVA device to test.imsva.com:

```
configure network hostname test.imsva.com
```

### configure network interface

**TABLE 32-3. configure network interface ipv4**

Configures the IPv4 address for the network interface card (NIC).

**Syntax:**

```
configure network interface ipv4 <interface> <ip> <mask>
```

**View**

Privileged

|                                                                                                                                                                                                                                                                        |                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Parameters</b>                                                                                                                                                                                                                                                      | <b>&lt;interface&gt;</b> : NIC name<br><b>&lt;ip&gt;</b> : IPv4 address for the interface<br><b>&lt;mask&gt;</b> : Network mask for the NIC |
| <b>Examples:</b>                                                                                                                                                                                                                                                       |                                                                                                                                             |
| To configure an NIC with the following values: <ul style="list-style-type: none"><li>• Interface: eth0</li><li>• IP address: 192.168.10.10</li><li>• Subnet mask: 255.255.255.0</li></ul> <pre>configure network interface ipv4 eth0 192.168.10.10 255.255.255.0</pre> |                                                                                                                                             |

**TABLE 32-4. configure network interface ipv6**

|                                                                                                                                                                                                                                            |                                                                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Configures the IPv6 address for the network interface card (NIC).                                                                                                                                                                          |                                                                                                                                             |
| <b>Syntax:</b><br><pre>configure network interface ipv6 &lt;interface&gt; &lt;ip&gt; &lt;mask&gt;</pre>                                                                                                                                    |                                                                                                                                             |
| <b>View</b>                                                                                                                                                                                                                                | Privileged                                                                                                                                  |
| <b>Parameters</b>                                                                                                                                                                                                                          | <b>&lt;interface&gt;</b> : NIC name<br><b>&lt;ip&gt;</b> : IPv6 address for the interface<br><b>&lt;mask&gt;</b> : Network mask for the NIC |
| <b>Examples:</b>                                                                                                                                                                                                                           |                                                                                                                                             |
| To configure an NIC with the following values: <ul style="list-style-type: none"><li>• Interface: eth0</li><li>• IP address: 2001:db8::</li><li>• Subnet mask: 64</li></ul> <pre>configure network interface ipv6 eth0 2001:db8:: 64</pre> |                                                                                                                                             |

**configure system password enable**

|                                                           |
|-----------------------------------------------------------|
| To change the password required to enter Privileged mode. |
|-----------------------------------------------------------|

|                                                                                                                                   |            |
|-----------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>Syntax:</b><br><code>configure system password enable</code>                                                                   |            |
| <b>View</b>                                                                                                                       | Privileged |
| <b>Parameters</b>                                                                                                                 | None       |
| <b>Examples:</b><br><br>To change the password required to enter Privileged mode<br><code>configure system password enable</code> |            |

## configure module IMSVA role unregister

|                                                                                                                                               |            |
|-----------------------------------------------------------------------------------------------------------------------------------------------|------------|
| Unregisters a child IMSVA device from a parent IMSVA device.                                                                                  |            |
| <b>Syntax:</b><br><code>configure module IMSVA role unregister</code>                                                                         |            |
| <b>View</b>                                                                                                                                   | Privileged |
| <b>Parameters</b>                                                                                                                             | None       |
| <b>Examples:</b><br><br>To unregister a child IMSVA device from a parent IMSVA device:<br><code>configure module IMSVA role unregister</code> |            |

## configure network route add

**TABLE 32-5. configure network route ipv4 add**

|                                                                                                              |            |
|--------------------------------------------------------------------------------------------------------------|------------|
| Adds a new route entry                                                                                       |            |
| <b>Syntax:</b><br><code>configure network route ipv4 add &lt;ip_prefixlen&gt; &lt;via&gt; &lt;dev&gt;</code> |            |
| <b>View</b>                                                                                                  | Privileged |

|                                                                                                               |                                                                                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Parameters</b>                                                                                             | <p><b>&lt;ip_prefixlen&gt;</b>: Destination network ID with format IPv4_Address/Prefixlen</p> <p><b>&lt;via&gt;</b>: IPv4 address of the next hop</p> <p><b>&lt;dev&gt;</b>: Device name</p> |
| <b>Example:</b>                                                                                               |                                                                                                                                                                                              |
| <p>To add a new route entry:</p> <pre>configure network route ipv4 add 172.10.10.0/24 192.168.10.1 eth1</pre> |                                                                                                                                                                                              |

**TABLE 32-6. configure network route ipv6 add**

|                                                                                                                      |                                                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Adds a new route entry                                                                                               |                                                                                                                                                                                              |
| <p><b>Syntax:</b></p> <pre>configure network route ipv6 add &lt;ip_prefixlen&gt; &lt;via&gt; &lt;dev&gt;</pre>       |                                                                                                                                                                                              |
| <b>View</b>                                                                                                          | Privileged                                                                                                                                                                                   |
| <b>Parameters</b>                                                                                                    | <p><b>&lt;ip_prefixlen&gt;</b>: Destination network ID with format IPv6_Address/Prefixlen</p> <p><b>&lt;via&gt;</b>: IPv6 address of the next hop</p> <p><b>&lt;dev&gt;</b>: Device name</p> |
| <b>Example:</b>                                                                                                      |                                                                                                                                                                                              |
| <p>To add a new route entry:</p> <pre>configure network route ipv6 add 2001:db8:10ff::ae:4/64 2001:db8::1 eth1</pre> |                                                                                                                                                                                              |

## configure network route default

**TABLE 32-7. configure network route ipv4 default**

|                                                                                       |            |
|---------------------------------------------------------------------------------------|------------|
| Sets the default route for an IMSVA device                                            |            |
| <p><b>Syntax:</b></p> <pre>configure network route ipv4 default &lt;gateway&gt;</pre> |            |
| <b>View</b>                                                                           | Privileged |

|                                                                |                                                          |
|----------------------------------------------------------------|----------------------------------------------------------|
| <b>Parameter</b>                                               | <b>&lt;gateway&gt;</b> : IPv4 address of default gateway |
| <b>Example:</b>                                                |                                                          |
| To set the default route for an IMSVA device:                  |                                                          |
| <code>configure network route ipv4 default 192.168.10.1</code> |                                                          |

**TABLE 32-8. configure network route ipv6 default**

|                                                                   |                                                          |
|-------------------------------------------------------------------|----------------------------------------------------------|
| Sets the default route for an IMSVA device                        |                                                          |
| <b>Syntax:</b>                                                    |                                                          |
| <code>configure network route ipv6 default &lt;gateway&gt;</code> |                                                          |
| <b>View</b>                                                       | Privileged                                               |
| <b>Parameter</b>                                                  | <b>&lt;gateway&gt;</b> : IPv6 address of default gateway |
| <b>Example:</b>                                                   |                                                          |
| To set the default route for an IMSVA device:                     |                                                          |
| <code>configure network route ipv6 default 2001:db8::1</code>     |                                                          |

## configure network route del

**TABLE 32-9. configure network route ipv4 del**

|                                                                                            |                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Deletes a route for an IMSVA device                                                        |                                                                                                                                                                                      |
| <b>Syntax:</b>                                                                             |                                                                                                                                                                                      |
| <code>configure network route ipv4 del &lt;ip_prefixlen&gt; &lt;via&gt; &lt;dev&gt;</code> |                                                                                                                                                                                      |
| <b>View</b>                                                                                | Privileged                                                                                                                                                                           |
| <b>Parameters</b>                                                                          | <b>&lt;ip_prefixlen&gt;</b> : Destination network ID with format IPv4_Address/<br>Prefixlen<br><b>&lt;via&gt;</b> : IPv4 address of the next hop<br><b>&lt;dev&gt;</b> : Device name |
| <b>Example:</b>                                                                            |                                                                                                                                                                                      |



To delete a route for an IMSVA device:

```
configure network route ipv4 del 172.10.10.0/24 192.168.10.1 eth1
```

**TABLE 32-10. configure network route ipv6 del**

|                                                                                                                               |                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Deletes a route for an IMSVA device                                                                                           |                                                                                                                                                                                  |
| <b>Syntax:</b><br><pre>configure network route ipv6 del &lt;ip_prefixlen&gt; &lt;via&gt; &lt;dev&gt;</pre>                    |                                                                                                                                                                                  |
| <b>View</b>                                                                                                                   | Privileged                                                                                                                                                                       |
| <b>Parameters</b>                                                                                                             | <b>&lt;ip_prefixlen&gt;</b> : Destination network ID with format IPv6_Address/Prefixlen<br><b>&lt;via&gt;</b> : IPv6 address of the next hop<br><b>&lt;dev&gt;</b> : Device name |
| <b>Example:</b>                                                                                                               |                                                                                                                                                                                  |
| To delete a route for an IMSVA device:<br><pre>configure network route ipv6 del 2001:db8:10ff::ae:4/64 2001:db8::1 eth1</pre> |                                                                                                                                                                                  |

## configure service ssh disable

|                                                                         |            |
|-------------------------------------------------------------------------|------------|
| Disables SSH on all network interface cards (NIC).                      |            |
| <b>Syntax:</b><br><pre>configure service ssh disable</pre>              |            |
| <b>View</b>                                                             | Privileged |
| <b>Parameters</b>                                                       | None       |
| <b>Examples:</b>                                                        |            |
| To disable SSH on all NICs:<br><pre>configure service ssh disable</pre> |            |

## configure service ssh enable

|                                                                               |                                                |
|-------------------------------------------------------------------------------|------------------------------------------------|
| Enables SSH on one specific network interface card (NIC).                     |                                                |
| <b>Syntax:</b><br><code>configure service ssh enable &lt;interface&gt;</code> |                                                |
| <b>View</b>                                                                   | Privileged                                     |
| <b>Parameters</b>                                                             | <b>&lt;interface&gt;</b> : The name of the NIC |
| <b>Examples:</b>                                                              |                                                |
| To enable SSH on NIC eth0:<br><code>configure service ssh enable eth0</code>  |                                                |

## configure service ssh enable all

|                                                                             |            |
|-----------------------------------------------------------------------------|------------|
| Enables SSH on all network interface cards (NIC).                           |            |
| <b>Syntax:</b><br><code>configure service ssh enable all</code>             |            |
| <b>View</b>                                                                 | Privileged |
| <b>Parameters</b>                                                           | None       |
| <b>Examples:</b>                                                            |            |
| To enable SSH on all NICs:<br><code>configure service ssh enable all</code> |            |

## configure system timezone

|                                                                                      |            |
|--------------------------------------------------------------------------------------|------------|
| Configures the time zone used by the IMSVA device.                                   |            |
| <b>Syntax:</b><br><code>configure system timezone &lt;region&gt; &lt;city&gt;</code> |            |
| <b>View</b>                                                                          | Privileged |

|                                                                                                                                                                                |                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| <b>Parameters</b>                                                                                                                                                              | <b>&lt;region&gt;</b> : Region name<br><b>&lt;city&gt;</b> : City name |
| <b>Examples:</b>                                                                                                                                                               |                                                                        |
| To configure the IMSVA device to use the time zone for the following location:<br>Region: America<br>City: New York<br><code>configure system timezone America New_York</code> |                                                                        |

**TABLE 32-11. Time Zone Setting Examples**

| REGION/COUNTRY | CITY         |
|----------------|--------------|
| Africa         | Cairo        |
|                | Harare       |
|                | Nairobi      |
| America        | Anchorage    |
|                | Bogota       |
|                | Buenos_Aires |
|                | Caracas      |
|                | Chicago      |
|                | Chihuahua    |
|                | Denver       |
|                | Godthab      |
|                | Lima         |
|                | Los_Angeles  |
|                | Mexico_City  |
|                | New_York     |

| REGION/COUNTRY | CITY         |
|----------------|--------------|
|                | Noronha      |
|                | Phoenix      |
|                | Santiago     |
|                | St_Johns     |
|                | Tegucigalpa  |
| Asia           | Almaty       |
|                | Baghdad      |
|                | Baku         |
|                | Bangkok      |
|                | Calcutta     |
|                | Colombo      |
|                | Dhaka        |
|                | Hong_Kong    |
|                | Irkutsk      |
|                | Jerusalem    |
|                | Kabul        |
|                | Karachi      |
|                | Katmandu     |
|                | Krasnoyarsk  |
|                | Kuala_Lumpur |
|                | Kuwait       |
|                | Magadan      |
|                | Manila       |

| REGION/COUNTRY | CITY      |
|----------------|-----------|
|                | Muscat    |
|                | Rangoon   |
|                | Seoul     |
|                | Shanghai  |
|                | Singapore |
|                | Taipei    |
|                | Tehran    |
|                | Tokyo     |
|                | Yakutsk   |
| Atlantic       | Azores    |
| Australia      | Adelaide  |
|                | Brisbane  |
|                | Darwin    |
|                | Hobart    |
|                | Melbourne |
|                | Perth     |
| Europe         | Amsterdam |
|                | Athens    |
|                | Belgrade  |
|                | Berlin    |
|                | Brussels  |
|                | Bucharest |
|                | Dublin    |

| REGION/COUNTRY | CITY         |
|----------------|--------------|
|                | Moscow       |
|                | Paris        |
| Pacific        | Auckland     |
|                | Fiji         |
|                | Guam         |
|                | Honolulu     |
|                | Kwajalein    |
|                | Midway       |
| US             | Alaska       |
|                | Arizona      |
|                | Central      |
|                | East-Indiana |
|                | Eastern      |
|                | Hawaii       |
|                | Mountain     |
|                | Pacific      |

## enable

Enters privileged mode so privileged commands can be provided.

**Syntax:**

enable

**View**

Root

**Parameters**

None

**Examples:**

To enter privileged mode:

```
enable
```

## exit

Exits privileged mode.

Exits the session for those not in privileged mode.

**Syntax:**

```
exit
```

**View**

Root/Privileged

**Parameters**

None

**Examples:**

To exit privileged mode or to exit the session when not in privileged mode:

```
exit
```

## help

Displays the CLI help information.

**Syntax:**

```
help
```

**View**

Privileged/Root

**Parameters**

None

**Examples:**

To display the CLI help information:

```
help
```

## history

Displays the current session's command line history.

**Syntax:**

```
history [limit]
```

**View**

Privileged/Root

**Parameters**

**[limit]:** Specifies the size of the history list for the current session  
Specifying "0" retains all commands for the session.

**Examples:**

To specify six commands for the size of the history list:

```
history 6
```

## logout

Logs out of the current CLI session.

**Syntax:**

```
logout
```

**View**

Root

**Parameters**

None

**Examples:**

To logout from the current session:

```
logout
```

## ping

Pings a specified host.

**Syntax:**

```
ping [-c num_echos] [-i interval] <dest>
```



|                                     |                                                                                                                                                                                                                                                                                                       |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>View</b>                         | Root                                                                                                                                                                                                                                                                                                  |
| <b>Parameters</b>                   | <p><b>[-c num_echos]:</b> Specifies the number of echo requests to be sent. Default value is 5.</p> <p><b>[-i interval]:</b> Specifies the delay interval in seconds between each packet. Default value is 1 second.</p> <p><b>&lt;dest&gt;:</b> Specifies the destination hostname or IP address</p> |
| <b>Examples:</b>                    |                                                                                                                                                                                                                                                                                                       |
| To ping the IP address 192.168.1.1: |                                                                                                                                                                                                                                                                                                       |
| <code>ping 192.168.1.1</code>       |                                                                                                                                                                                                                                                                                                       |
| To ping the host remote.imsva.com:  |                                                                                                                                                                                                                                                                                                       |
| <code>ping remote.imsva.com</code>  |                                                                                                                                                                                                                                                                                                       |

## ping6

|                                      |                                          |
|--------------------------------------|------------------------------------------|
| Pings a specified host.              |                                          |
| <b>Syntax:</b>                       |                                          |
| <code>ping6 &lt;host&gt;</code>      |                                          |
| <b>View</b>                          | Root                                     |
| <b>Parameter</b>                     | <code>&lt;host&gt;</code> : IPv6 address |
| <b>Example:</b>                      |                                          |
| To ping the IP address 2001:db8::21: |                                          |
| <code>ping6 2001:db8::21</code>      |                                          |

## start task postfix drop

|                                                                         |  |
|-------------------------------------------------------------------------|--|
| Deletes a specified message or all messages in the email message queue. |  |
| <b>Syntax:</b>                                                          |  |
| <code>start task postfix drop { &lt;mail_id&gt;   all }</code>          |  |

|                                                                                                                     |                                                                    |
|---------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| <b>View</b>                                                                                                         | Privileged                                                         |
| <b>Parameters</b>                                                                                                   | <mail_id>: Specifies the message ID in the postfix queue to delete |
| <b>Examples:</b>                                                                                                    |                                                                    |
| To delete email message D10D4478A5 from the email message queue:<br><code>start task postfix drop D10D4478A5</code> |                                                                    |
| To delete all email messages from the email message queue:<br><code>start task postfix drop all</code>              |                                                                    |

## start task postfix flush

|                                                                                |            |
|--------------------------------------------------------------------------------|------------|
| Attempts to deliver all queued email messages.                                 |            |
| <b>Syntax:</b><br><code>start task postfix flush</code>                        |            |
| <b>View</b>                                                                    | Privileged |
| <b>Parameters</b>                                                              | None       |
| <b>Examples:</b>                                                               |            |
| To deliver all queued email messages:<br><code>start task postfix flush</code> |            |

## start task postfix queue

|                                                         |            |
|---------------------------------------------------------|------------|
| Displays all email messages queued in postfix.          |            |
| <b>Syntax:</b><br><code>start task postfix queue</code> |            |
| <b>View</b>                                             | Privileged |
| <b>Parameters</b>                                       | None       |
| <b>Examples:</b>                                        |            |

To display all postfix queued email messages:

```
start task postfix queue
```

## start service postfix

Starts the postfix mail system

**Syntax:**

```
start service postfix
```

**View**

Privileged

**Parameters**

None

**Examples:**

To start the postfix mail system:

```
start service postfix
```

## stop service postfix

Stops the postfix mail system.

**Syntax:**

```
stop service postfix
```

**View**

Privileged

**Parameters**

None

**Examples:**

To stop the postfix mail system:

```
stop service postfix
```

## reboot

Reboots the IMSVA device immediately or after a specified delay.

|                                                                      |                                                                             |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------|
| <b>Syntax:</b><br><code>reboot [time]</code>                         |                                                                             |
| <b>View</b>                                                          | Privileged                                                                  |
| <b>Parameters</b>                                                    | <b>[time]</b> : Specifies the delay, in minutes, to reboot the IMSVA device |
| <b>Examples:</b>                                                     |                                                                             |
| To reboot the IMSVA device immediately:<br><code>reboot</code>       |                                                                             |
| To reboot the IMSVA device after 5 minutes:<br><code>reboot 5</code> |                                                                             |

## start task rescue

|                                                                       |            |
|-----------------------------------------------------------------------|------------|
| Rescues the application software.                                     |            |
| <b>Syntax:</b><br><code>start task rescue</code>                      |            |
| <b>View</b>                                                           | Privileged |
| <b>Parameters</b>                                                     | None       |
| <b>Examples:</b>                                                      |            |
| To rescue the application software:<br><code>start task rescue</code> |            |

## resolve

|                                                                                       |            |
|---------------------------------------------------------------------------------------|------------|
| Resolves an IPv4 address from a hostname or resolves a hostname from an IPv4 address. |            |
| <b>Syntax:</b><br><code>resolve &lt;dest&gt;</code>                                   |            |
| <b>View</b>                                                                           | Privileged |

|                                                           |                                                                         |
|-----------------------------------------------------------|-------------------------------------------------------------------------|
| <b>Parameter</b>                                          | <b>&lt;dest&gt;</b> : Specifies the IPv4 address or hostname to resolve |
| <b>Examples:</b>                                          |                                                                         |
| To resolve the hostname from IP address 192.168.10.1:     |                                                                         |
| <code>resolve 192.168.10.1</code>                         |                                                                         |
| To resolve the IP address from hostname parent.imsva.com: |                                                                         |
| <code>resolve parent.imsva.com</code>                     |                                                                         |

## resolve6

|                                                       |                                               |
|-------------------------------------------------------|-----------------------------------------------|
| Resolves a hostname from an IPv6 address.             |                                               |
| <b>Syntax:</b>                                        |                                               |
| <code>resolve6 &lt;dest&gt;</code>                    |                                               |
| <b>View</b>                                           | Privileged                                    |
| <b>Parameter</b>                                      | <b>&lt;dest&gt;</b> : IPv6 address to resolve |
| <b>Example:</b>                                       |                                               |
| To resolve the hostname from IP address 2001:db8::21: |                                               |
| <code>resolve6 2001:db8::21</code>                    |                                               |

## service IMSVA

|                                                            |                                                                                                                                    |
|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Starts, stops, or restarts all IMSVA application services. |                                                                                                                                    |
| <b>Syntax:</b>                                             |                                                                                                                                    |
| <code>{start   stop   restart} service IMSVA</code>        |                                                                                                                                    |
| <b>View</b>                                                | Privileged                                                                                                                         |
| <b>Parameters</b>                                          | <b>start</b> : Starts all IMSVA services<br><b>stop</b> : Stops all IMSVA services<br><b>restart</b> : Restarts all IMSVA services |

**Examples:**

To start all IMSVA services:

```
start service IMSVA
```

To stop all IMSVA services:

```
stop service IMSVA
```

To restart all IMSVA services:

```
restart service IMSVA
```

## show module IMSVA service-status

Displays the current status of all IMSVA application services.

**Syntax:**

```
show module IMSVA service-status
```

**View**

Root

**Parameters**

None

**Examples:**

To display the status for all IMSVA services:

```
show module IMSVA service-status
```

## show storage statistic

Displays the file system disk space usage.

**Syntax:**

```
show storage statistic [partition]
```

**View**

Root

**Parameters**

**[partition]:** Specify a partition. This is optional.

**Examples:**

To display the file system disk space usage of the IMSVA device:

```
show storage statistic
```

## show network

Displays various IMSVA network configurations.

### Syntax:

```
show network [arp | connections | dns | firewall | hostname | interface
| open-ports | route]
```

### View

Root

### Parameters

**arp:** Displays the Address Resolution Protocol (ARP) tables.

**connections:** Displays the IMSVA device's current network connections.

**dns:** Displays the IMSVA device's IP address.

**dns primary:** Displays the IMSVA device's primary IP address.

**dns secondary:** Displays the IMSVA device's secondary IP address.

**firewall:** Displays firewall's configuration.

**hostname:** Displays the IMSVA device's hostname.

**interface:** Displays the network interface card (NIC) status and configuration.

**open-ports:** Displays the listening ports on the IMSVA device.

**route:** Displays IP address route table

### Examples:

To display the ARP tables:

```
show network arp
```

To display the IMSVA device's current network connections:

```
show network connections
```

|                                                                     |
|---------------------------------------------------------------------|
| To display the DNS configuration:                                   |
| <code>show network dns</code>                                       |
| To display the firewall configuration settings of the IMSVA device: |
| <code>show network firewall</code>                                  |
| To display the hostname of the IMSVA device:                        |
| <code>show network hostname</code>                                  |
| To display the NIC status and configuration:                        |
| <code>show network interface</code>                                 |
| To display the listening ports of the IMSVA device:                 |
| <code>show network open-ports</code>                                |
| To display the IP address route table:                              |
| <code>show network route</code>                                     |

show kernel

|                                                                                       |                                                                                                                                                                                                                               |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Displays the IMSVA device's OS kernel information.                                    |                                                                                                                                                                                                                               |
| <b>Syntax:</b><br><code>show kernel {messages   modules   parameters   iostat}</code> |                                                                                                                                                                                                                               |
| <b>View</b>                                                                           | Root                                                                                                                                                                                                                          |
| <b>Parameters</b>                                                                     | <b>messages:</b> Displays kernel messages<br><b>modules:</b> Displays kernel modules<br><b>parameters:</b> Displays kernel parameters<br><b>iostat:</b> Displays CPU statistics and I/O statistics for devices and partitions |
| <b>Examples:</b>                                                                      |                                                                                                                                                                                                                               |
| To display the OS kernel's messages:<br><code>show kernel messages</code>             |                                                                                                                                                                                                                               |



To display the OS kernel's modules:

```
show kernel modules
```

To display the OS kernel's parameters:

```
show kernel parameters
```

To display IMSVA device CPU statistics and I/O statistics:

```
show kernel iostat
```

## show module IMSVA log

Displays various IMSVA log data.

### Syntax:

```
show module IMSVA log {imssd | imssmgr | imssps | postfix} [num]
```

### View

Root

### Parameters

**imssd**: Displays IMSVA scanner logs

**imssmgr**: Displays IMSVA manager logs

**imssps**: Displays IMSVA policy server logs

**postfix**: Displays postfix logs

**[num]**: Displays the specified number of latest log entries. Default value is 25

### Examples:

To display the latest 25 IMSVA scanner logs:

```
show module IMSVA log imssd
```

To display the latest 50 IMSVA policy server logs:

```
show module IMSVA log imssps 50
```

## show service

Displays the IMSVA service status.

|                                                                        |                                                                                                                                                                                                     |
|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Syntax:</b>                                                         |                                                                                                                                                                                                     |
| <code>show service [ntp &lt;enabled   server-address&gt;   ssh]</code> |                                                                                                                                                                                                     |
| <b>View</b>                                                            | Root                                                                                                                                                                                                |
| <b>Parameters</b>                                                      | <p><b>ntp enabled:</b> Displays the system NTP service status.</p> <p><b>ntp server-address:</b> Displays the system NTP service server address.</p> <p><b>ssh:</b> Displays the status of SSH.</p> |
| <b>Examples:</b>                                                       |                                                                                                                                                                                                     |
| To display the NTP service status:                                     |                                                                                                                                                                                                     |
| <code>show service ntp</code>                                          |                                                                                                                                                                                                     |
| To display the SSH status:                                             |                                                                                                                                                                                                     |
| <code>show service ssh</code>                                          |                                                                                                                                                                                                     |

## show process

|                                                             |                                                                                                     |
|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| Displays the status of IMSVA processes currently running.   |                                                                                                     |
| <b>Syntax:</b>                                              |                                                                                                     |
| <code>show process [top]</code>                             |                                                                                                     |
| <b>View</b>                                                 | Root                                                                                                |
| <b>Parameters</b>                                           | <b>[top]:</b> Displays the status of IMSVA processes currently running and system related processes |
| <b>Examples:</b>                                            |                                                                                                     |
| To display the status of IMSVA processes currently running: |                                                                                                     |
| <code>show process</code>                                   |                                                                                                     |

## show module IMSVA role

Displays the role (parent or child) of the IMSVA device in a group.

**Syntax:**

```
show module IMSVA role
```

**View**

Root

**Parameters**

None

**Examples:**

To display the role of the IMSVA device:

```
show module IMSVA role
```

## show memory

Displays the IMSVA device's system memory information.

**Syntax:**

```
show memory [vm | statistic]
```

**View**

Root

**Parameters****vm:** Displays virtual memory statistics**statistic:** Displays system memory statistics**Examples:**

To display IMSVA device virtual memory statistics:

```
show memory vm
```

To display IMSVA system memory statistics:

```
show memory statistic
```

## show module IMSVA status adminUI

Displays the status of the IMSVA management console.

**Syntax:**

```
show module IMSVA status adminUI
```

|                                                |      |
|------------------------------------------------|------|
| <b>View</b>                                    | Root |
| <b>Parameters</b>                              | None |
| <b>Examples:</b>                               |      |
| To display the IMSVA management console status |      |
| <code>show module IMSVA status adminUI</code>  |      |

## show system

|                                                               |                                                                                                                                                                                                                                                                               |
|---------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Displays various IMSVA system settings.                       |                                                                                                                                                                                                                                                                               |
| <b>Syntax:</b>                                                |                                                                                                                                                                                                                                                                               |
| <code>show system [date   timezone   uptime   version]</code> |                                                                                                                                                                                                                                                                               |
| <b>View</b>                                                   | Root                                                                                                                                                                                                                                                                          |
| <b>Parameters</b>                                             | <p><b>date:</b> Displays the current time and date.</p> <p><b>timezone:</b> Displays the IMSVA device's timezone settings.</p> <p><b>uptime:</b> Displays how long the IMSVA device has been running</p> <p><b>version:</b> Displays version number for the IMSVA device.</p> |
| <b>Examples:</b>                                              |                                                                                                                                                                                                                                                                               |
| To display the current time and date of the IMSVA device:     |                                                                                                                                                                                                                                                                               |
| <code>show system date</code>                                 |                                                                                                                                                                                                                                                                               |
| To display the IMSVA device's timezone settings:              |                                                                                                                                                                                                                                                                               |
| <code>show system timezone</code>                             |                                                                                                                                                                                                                                                                               |
| To display how long IMSVA has been running:                   |                                                                                                                                                                                                                                                                               |
| <code>show system uptime</code>                               |                                                                                                                                                                                                                                                                               |
| To display IMSVA's version number:                            |                                                                                                                                                                                                                                                                               |
| <code>show system version</code>                              |                                                                                                                                                                                                                                                                               |

## shutdown

Specifies shutting down the IMSVA device immediately or after a specified delay.

**Syntax:**

```
shutdown [time]
```

**View**

Privileged

**Parameters**

**[time]:** Shuts down the IMSVA device after a specified delay in minutes

**Examples:**

To shut down the IMSVA device immediately:

```
shutdown
```

To shut down the IMSVA device after a 5 minute delay:

```
shutdown 5
```

## stop process

Stops a specific IMSVA process.


**Note**

Use the command [show process on page 32-30](#) to display the <pid> for each process.

**Syntax:**

```
stop process [core] <process name>
```

**View**

Privileged

**Parameters**

**[core]:** Stops a specific process and generates a core file

**<process name>:** Specifies the process to stop

**Examples:**

To stop the IMSVA process imssmgr:

```
stop process imssmgr
```

## traceroute

|                                                                                                                        |                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Displays the tracking route to a specified destination.                                                                |                                                                                                                                                                             |
| <b>Syntax:</b><br><code>traceroute [-h hops] &lt;dest&gt;</code>                                                       |                                                                                                                                                                             |
| <b>View</b>                                                                                                            | Root                                                                                                                                                                        |
| <b>Parameters</b>                                                                                                      | <p><b>[-h hops]:</b> Specifies the maximum number of hops to the destination. The minimum number is 6.</p> <p><b>&lt;dest&gt;:</b> Specifies the remote system to trace</p> |
| <b>Examples:</b>                                                                                                       |                                                                                                                                                                             |
| To display the route to IP address 172.10.10.1 with a maximum of 6 hops:<br><code>traceroute 172.10.10.1</code>        |                                                                                                                                                                             |
| To display the route to IP address 172.10.10.1 with a maximum of 30 hops:<br><code>traceroute -h 30 172.10.10.1</code> |                                                                                                                                                                             |

## traceroute6

|                                                                                                                    |                                                                                                                                                                             |
|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Displays the tracking route to a specified destination.                                                            |                                                                                                                                                                             |
| <b>Syntax:</b><br><code>traceroute6 [-h hops] &lt;dest&gt;</code>                                                  |                                                                                                                                                                             |
| <b>View</b>                                                                                                        | Root                                                                                                                                                                        |
| <b>Parameters</b>                                                                                                  | <p><b>[-h hops]:</b> Specifies the maximum number of hops to the destination. The minimum number is 6.</p> <p><b>&lt;dest&gt;:</b> Specifies the remote system to trace</p> |
| <b>Examples:</b>                                                                                                   |                                                                                                                                                                             |
| To display the route to IP address 2001:db8::21 with a maximum of 6 hops:<br><code>traceroute6 2001:db8::21</code> |                                                                                                                                                                             |

To display the route to IP address 2001:db8::21 with a maximum of 30 hops:

```
tracert6 -h 30 2001:db8::21
```





# Chapter 33

## Modifying IMSVA Deployment

This chapter explains how to modify IMSVA deployment, such as changing device role (parent to child or child to parent), changing a device IP address, and using the backup data port.

Topics include:

- *[Internal Communication Port on page 33-2](#)*
- *[Adding and Removing Devices on page 33-2](#)*
- *[Changing Device Roles on page 33-5](#)*
- *[Changing IP Addresses on page 33-5](#)*

## Internal Communication Port

IMSVA supports multiple network interface cards (NIC) as data ports, which means one IMSVA device can have several IP addresses. In a group scenario, for communication to occur between an IMSVA parent device and child devices, each IMSVA device must specify a single IP address. The single IP address is used to identify each IMSVA device. With each device capable of having multiple IP addresses, this creates a problem for communication.

In order to resolve this issue, the concept of Internal Communication Port has been introduced. Once an Internal Communication Port is specified on an IMSVA device, the IP address of the port identifies the IMSVA device.

### For example:

A parent device has two NICs installed with the following IP addresses:

- **eth0**: 192.168.10.1
- **eth1**: 192.168.20.1

With **eth0** specified as the Internal Communication Port, a child IMSVA device registering to the parent must specify the parent IP address as 192.168.10.1.

Child devices also have an Internal Communication Port. Both parent and child devices must communicate with each other through their Internal Communication Port.



### Note

The default Internal Communication Port for all IMSVA devices is **eth0**.

---

## Adding and Removing Devices

This section explains how to add or remove a device from a group.

---

## Adding a Child Device to a Group

---

### Procedure

1. Determine the device settings for the new device (IP address, net mask, gateway IP address, DNS server IP address, NTP server IP address if necessary).
  2. Follow the instructions in [Setting Up a Child Device on page 2-3](#).
- 

## Removing a Child Device from a Group

This section explains how to remove a device from a group. If the device is active, you must first stop all services running on it. If it is inactive, you can unregister it directly.



### Note

When you remove a device that has EUQ enabled, all messages in the EUQ quarantine area are deleted. Trend Micro suggests notifying your users to handle the messages in the EUQ quarantine area before you remove the device.

---

---

### Procedure

1. Go to **Dashboard**.  
The **Dashboard** appears.
2. Check the **Mail Queues** widget on the **System Overview** tab. Verify that there are no messages in the delivery queue or deferred queue for the device you want to remove. If there are messages in the delivery queue or deferred queue, wait momentarily for IMSVA to process them.
3. Click **System Status**.  
The **System Status** screen appears.
4. Under **Managed Services**, stop all services on the device you want to remove. When the services stop, the **Unregister** button appears.

**Note**

If the device was using EUQ, redistribute the data across the remaining EUQ databases before you unregister the child device:

- a. Go to **Administration > End-User Quarantine**.
- b. Click **Redistribute**.

- 
5. Click **Unregister**. The child will be automatically removed from the group.

**Tip**

Trend Micro recommends that you notify your users to not add members to the EUQ approved list while you are adding a child device and redistributing EUQ data.

---

## Resetting Child Devices When the Parent-Child Connection is Broken

If the parent device is broken, you must reset all child devices and select one of them as the parent. Then register all other devices to the parent.

---

### Procedure

1. Connect to the child devices through an SSH connection.
  2. Back up the folder `opt/trend/imss/queue` to another machine so that all messages quarantined or archived will not be deleted during rescue.
  3. Use the `clish` command to enter the CLI.
  4. Use the `enable` command to enter privilege mode.
  5. Use the `start task postfix flush` command to flush postfix queue.
  6. Use the `configure module IMSVA role unregister` to unregister the child device. The child device then changes to a parent automatically.
-

## Changing Device Roles

This section explains how to change device roles.

### Changing the Device Role from Parent to Child

---

#### Procedure

1. Remove all child devices from the group (see [Removing a Child Device from a Group on page 33-3](#)).
  2. Register the former parent device to another parent device.
- 

### Changing the Device Role from Child to Parent

To change a device from a child to a parent, simply unregister it from its parent. The device automatically becomes a parent.

#### Procedure

1. Unregister the child from the parent by doing one of the following:
    - Use the management console (see [Removing a Child Device from a Group on page 33-3](#)).
    - Use the CLI:
      - a. Connect to the child device through an SSH connection.
      - b. Log on to the CLI as **admin**.
      - c. Use the `enable` command to enter privilege mode.
      - d. Use the `configure module IMSVA role unregister` command to unregister from the parent.
  2. Register other child devices to this device if necessary.
- 

## Changing IP Addresses

This section explains how to change the IP addresses of child devices.

**Note**

When changing IP addresses in the Command Line Interface (CLI) through Secure Shell (SSH), do not close the SSH client until the connection times out. Otherwise, the IP change script may not execute completely, causing inconsistencies in the settings.

---

## Changing the Child Internal Communication Port IP Address

If the parent or child devices have multiple network interface cards (NIC), check the route table on the parent and child device using the command `show network route` in the CLI. Verify that parent-child communication uses the Internal Communication Port.

---

### Procedure

1. On the parent device, do the following from the IMSVA management console:
    - a. Go to **Administration > IMSVA Configuration > Connections**.
    - b. Click the **Child IP** tab.
    - c. Under **Add IP Address**, add the new IP address.
  2. Connect to the child device through an SSH connection and do the following from the CLI:
    - a. Log on to the CLI as **admin**.
    - b. Use the `enable` command to enter privilege mode.
    - c. Change the IP address using the `configure network interface` command.
  3. On the parent device, do the following:
    - a. Go to **Administration > IMSVA Configuration > Connections**.
    - b. Click the **Child IP** tab.
    - c. Under **Add IP Address**, remove the old child IP address.
-

## Chapter 34

### Updating and Rescuing the System and Application

This chapter explains how to update and rescue the system and application files when Trend Micro releases patches, service packs, and other updates.

Topics include:

- *[Updating the System and Application on page 34-2](#)*
- *[Rescuing IMSVA on page 34-4](#)*

## Updating the System and Application

When new operating system and application files become available from Trend Micro, deploy them to a parent IMSVA device and all of its child devices. By default, child devices will be updated before the parent device.

Topics include:

- [\*Updating the System and Application on page 34-2\*](#)

## Uploading a New System or Application File

---

### Procedure

1. Go to **Administration > Updates > System & Applications**.
2. Under **Upload**, click **Browse** and locate the file.
3. Click **Upload**.

After the file finishes uploading, the package type, build number, and title appear under **Latest uploaded package**.

---

## Deploying the System or Application File

---

### Procedure

1. Select the check boxes next to the devices to which you want to deploy the update.
2. Click **Update**.
3. Accept the license agreement.

After an operating system update or upgrade, IMSVA reboots. An application upgrade might force IMSVA to automatically reboot.

4. If IMSVA rebooted, wait for it to start up and log on again.
5. Go to **Administration > Updates > System & Applications** to view the summary screen.



**Note**

- a. During an update, do not modify any other settings. If you are updating several devices, you can click **Cancel** to stop the update of the next device.
  - b. If you have applied some patches on a child device, and later unregister this child device from the parent device, IMSVA automatically rescues the system and application files, but you need to re-apply the patches again.
- 

If a device check box is grayed out, you cannot deploy the files to the device because the device:

- Already has the updated files.
  - Has more up-to-date files than the ones you are trying to deploy.
  - Is a child device and the patch requires you to upload the files and deploy them to the parent first, or vice versa.
- 

## Viewing the Update History for Any Device or Rolling Back an Update

---

### Procedure

1. Under **Host Name**, click the name of the device you want to view.

A summary screen appears showing the updates and related log information.

2. To remove an update, click **Rollback**.

You can only roll back the latest application updates.

3. To go back to the main screen, click **OK**.
-

## Rescuing IMSVA

Rescuing IMSVA means that you reinstall the application.

### Application Rescue Overview

You might need to rescue the application if application files become corrupt. Rescuing the application reinstalls the IMSVA application that instructs IMSVA to scan traffic, carry out filter actions, and create logs.

Rescuing the application is not the same as applying a patch.

- **Rescuing:** Replaces all application files and deletes all settings.
- **Applying a patch:** Updates the existing application files to enhance features.



#### **WARNING!**

All settings you configure through the management console are deleted when you rescue the application. Before rescuing the application, create a backup of your settings.

---

## Rescuing the Application

---

### Procedure

1. Log on to the IMSVA management console as **admin** and export your current settings.
2. Enter the CLI as admin (see [Entering the OS Shell on page 32-3](#)).
3. Type `enable` and provide the password to enter privileged mode.
4. Type `start task rescue`.
5. Type `y` to confirm. IMSVA rescue begins, and will take several minutes.
6. After the rescue process completes, log on to the IMSVA management console and import your saved settings.

**7. Re-activate components using the Activation Code.**

---



# Chapter 35

## Troubleshooting and FAQs

This chapter explains how to troubleshoot common IMSVA issues.

Topics include:

- *[Troubleshooting on page 35-2](#)*
- *[Frequently Asked Questions on page 35-21](#)*
- *[Troubleshooting Cloud Pre-Filter on page 35-30](#)*

## Troubleshooting

This section helps to resolve common issues that you might encounter when configuring or administering IMSVA. If you have additional problems, check the Trend Micro Knowledge Base.

For troubleshooting and FAQ information pertaining to the deployment of IMSVA, refer to the *IMSVa Installation Guide*.

### General

#### Troubleshooting Management Console or Component Access

The target port is not in the firewall approved list. Open the ports as shown in [IMSVa Ports on page 35-15](#) in the firewall.

If you are unable to access the management console, do the following:

---

##### Procedure

1. If the management console URL is not a trusted site in Internet Explorer, add the URL to the trusted sites.
2. Start the database process, `dbctl.sh`, before starting the Central Controller process, `S99ADMINUI`.
3. If you are still unable to access the management console, restart the Central Controller process, `S99ADMINUI`.

For more details, see [IMSVa Scripts on page C-1](#).

---

#### Troubleshooting Product Activation

If a proxy server is on your network, verify your proxy settings.

To activate Email Reputation, IMSVA needs to connect to Trend Micro. This process requires a DNS query. Therefore, if a DNS server is not available or has connection problems, activation will fail.

---

## Procedure

- Verify your DNS server settings through the CLI.
    - a. Enter the command line interface through a serial or SSH connection.
    - b. Use the command `show network dns` to verify the current DNS setting.
    - c. Use the command `configure network dns <dns IP address>` to modify the IP address of your DNS server if necessary.
  - Verify your DNS server settings through the management console.
    - a. Go to **Administration > Configuration Wizard > Local System Settings > Network Settings**.
    - b. Modify the IP address of your DNS server if necessary.
- 

## Troubleshooting Component Updates

IMSVa uses the HTTP protocol to connect to the update source (by default, the Trend Micro ActiveUpdate server). If a firewall is located between IMSVa and the Internet, and IMSVa must use a proxy server, verify that your proxy settings are correct.

---

## Procedure

1. Verify your proxy setting by going to one of the following locations:
  - **Administration > Configuration Wizard > Update Source > Proxy Setting**
  - **Administration > Proxy**
2. Modify the proxy server settings if necessary.
3. If you update the components manually and **Unknown** appears under **Availability** on the **Update Now** screen, IMSVa is unable to connect to the update source.

4. Verify your network settings and connections and try again.
- 

## Troubleshooting Email Notifications

If your computer is running a non-English operating system and the notification message was not written in English, it may appear distorted. Modify the character set through the management console.

### To modify the character set:

---

#### Procedure

1. Go to **Administration > Notifications > Delivery Settings**.
  2. Next to **Preferred Charset**, select the character set in which the messages will be encoded.
- 

## Troubleshooting Configuration File Exports

You will not be able to export configuration files if:

- Your computer is running Windows 2003 SP1 or Windows XP SP2
- Internet Explorer (IE) 6.0 or 7.0 has default security settings

You must change the default security settings on Internet Explorer.

### To change the IE security settings:

---

#### Procedure

1. On the Internet Explorer menu, navigate to **Tools > Internet Options**.
2. Click the **Security** tab.
3. Click **Custom Level**.
4. Under **Downloads > Automatic prompting for file downloads**, select **Enable**.



5. Click **OK** and save your settings.
- 

## Troubleshooting Message Log Queries

IMSVa scanner records the log with local time.

---

### Procedure

- To query message logs, synchronize the date/time on all computers with IMSVa.
- 

## Troubleshooting System Status Screen

A managed server could become disconnected for any of the following reasons:

- The scanner was removed from your network.
  - The IMSVa manager service has stopped.
  - Network connection issue has occurred.
- 

### Procedure

- Check your firewall settings for the Manager Service listening port.
- 

## Troubleshooting Attachment Information

When viewing detailed information for quarantined or archived messages, attachment information is sometimes not available.

IMSVa records attachment information only when the scanning conditions for a policy is set to attachment.

This issue occurs under the following circumstances:

1. When there is no attachment in the quarantined or archived messages.
2. When attachment is not specified as a scanning condition.

3. Even when you have selected attachment as one of the scanning conditions, this issue will also occur if the number of attachments in the quarantined or archived messages has exceeded the maximum number specified in the conditions.

---

**Procedure**

- Check the reason why IMSVA quarantined the message.
- 

**Troubleshooting Scan Time After Enabling Web Reputation**

Web Reputation needs to query the Trend Micro Web Reputation servers.

---

**Procedure**

1. Verify the HTTP connectivity from the IMSVA scanner to the external network.
  2. For Web Reputation issues, check the `wrsagent.*` files under the `{Installation_Path}\imss\log` folder.
- 

**Troubleshooting Network Connectivity**

If a network connectivity problem occurs on your virtual machine, check whether the MAC address assigned to your NIC card changes.

Sometimes the MAC address automatically assigned to a virtual machine changes dynamically. However, the MAC address recorded either in the interface configuration files or in the udev persistent network rule files does not change. As a result, the NIC card might be unavailable.

Trend Micro recommends that you use a static MAC address. If your MAC address changes, do the following to make sure your NIC card works properly:

---

**Procedure**

1. Remove the udev rule file using the following command:

```
rm -rf /etc/udev/rules.d/70-persistent-net.rules
```

2. Remove the following lines from the `/etc/sysconfig/network-scripts/ifcfg-eth<X>` file:

```
HWADDR=<MAC>
```

```
UUID=<UUID>
```



#### Note

The interface configuration files are named `/etc/sysconfig/network-scripts/ifcfg-eth<X>`, where `<X>` is a unique number corresponding to a specific card.

---

3. In the `/lib/udev/rules.d/75-persistent-net-generator.rules` file, find the line that contains the following information:

```
ATTR{addr_assign_type}=="0"
```

4. Add the following information before the line you found:

```
ignore VMWare virtual interfaces
```

```
ENV{MATCHADDR}=="00:0c:29:*|00:50:56:*",
GOTO="persistent_net_generator_end"
```

```
ignore Hyper-V virtual interfaces
```

```
ENV{MATCHADDR}=="00:15:5d:*",
GOTO="persistent_net_generator_end"
```

5. Restart your virtual machine to verify your network connectivity.
- 

## End-User Quarantine Issues

### Troubleshooting EUQ Access

To view the console from another computer on the network, go to:

---

## Procedure

- Verify that you are using the correct URL and port number.

`https://<target server IP address>:8447`

---

## Troubleshooting User Access to EUQ

---

### Procedure

1. On the LDAP server, verify that the user accounts are in the correct group. Only user accounts in the approved group can access EUQ.
  2. Verify LDAP and User Quarantine Access settings through the IMSVA management console.
    - a. Go to **Administration > IMSVA Configuration > Connections > LDAP**.
    - b. Verify all settings, especially the LDAP type and server information. If you are using Kerberos authentication, ensure that the time for all IMSVA computers and the LDAP server is synchronized.
    - c. Go to **Administration > End-User Quarantine**.
    - d. Select **Enable User Quarantine Access**.
    - e. Verify that the correct LDAP groups appear under Selected Groups and that the user account belongs to the selected groups.
  3. Verify that users are using the correct logon name and password.
  4. Ensure the LDAP 1 and LDAP 2 servers are synchronized. If a user's account exists only on one of the LDAP servers, users will not be able to consistently log on to the EUQ management console. IMSVA uses LDAP2 servers as backup for LDAP 1 servers.
  5. If the issue persists even after verifying the above settings, send the log file to Trend Micro.
-

## Troubleshooting EUQ Using NTLM SSO

This procedure explains how to troubleshoot users unable to log on to EUQ management console using NTLM single sign-on (SSO).



### Note

Logging on to the EUQ management console using SSO requires that LMCapabilityLevel of Active Directory is configured to support NTLMv1.

---

### Procedure

1. Configure the LMCapabilityLevel.
    - a. Go to **Start > Run** and type `secpol.msc`.
    - b. Go to **Security Settings > Local Policies > Security Options > Network security: LAN Manager authentication level > Local Security Setting**.
    - c. Select **Send LM & NTLM responses** and save.
  2. Enable the LDAP1 or LDAP2 servers and specify them as in use for Active Directory (IP or domain name or FQDN).
  3. Verify that the endpoint operating system supports (and enables) NTLMv1 in LMcapabilityLevel settings.
    - Using Firefox: The `about:config` link is configured to add the NTLM trusted host list.
    - Using Internet Explorer: The EUQ management console is added to the internal site list.
    - Using Internet Explorer: The Windows integrated authentication setting in Internet Explorer is enabled.
- 

## Troubleshooting EUQ Digest Message Display

The EUQ digest may not correctly display quarantined message information if the correct character set is not selected.

---

### Procedure

1. Go to **Administration > Notifications > Delivery Settings**.
  2. Next to **Preferred charset**, select the character set that will properly display the digest information.
- 

## Troubleshooting Messages Appearing on EUQ

On the EUQ management console, users can only access the quarantined messages if the administrator configures EUQ to allow access.

**To make quarantine areas visible to end users:**

---

### Procedure

1. Go to **Mail Areas & Queues > Settings**.
2. Click the link of the quarantine area that you want to synchronize to EUQ.
3. Select the check box next to **Synchronize all messages that do not violate virus, phishing, Web Reputation, advanced threat, and social engineering attack rules or violate virtual analyzer scanning exceptions, to the EUQ database (for this area only)**.

After enabling this option, all non-malicious messages (messages that do not violate virus, phishing, Web Reputation, advanced threat, and social engineering attack rules or violate virtual analyzer scanning exceptions) quarantined in this area synchronize with the EUQ database. This allows end users to view and manage the messages from the EUQ management console.

End users cannot access malicious messages.

---

## Troubleshooting LDAP with Kerberos Authentication

Kerberos protocol requires time synchronization between the Kerberos server and IMSVA.

---

### Procedure

1. Synchronize the date/time for all computers with IMSVA.
  2. Check whether the DNS server is configured correctly.
- 

## Troubleshooting Kerberos SSO to EUQ

Logging on to the EUQ management console using SSO requires the following:

---

### Procedure

1. Verify that LDAP1 or LDAP2 servers are enabled and specified as in use for Active Directory (IP address or domain name or FQDN).
2. Verify that the DNS server is configured for IMSVA contains the record of the Kerberos service.
3. Verify that the endpoint operating system supports (and enables) Kerberos authentication:
  - Time should be synchronized between IMSVA and the Kerberos authentication service.
  - Using FireFox: The `about:config` link is configured to add the negotiate-auth trusted url list.
  - Using Internet Explorer: The EUQ management console is added to the internal site list.
  - The Windows integrated authentication setting in Internet Explorer is enabled.
  - Using Windows Vista or above, use the hostname as the instance when generating a keytab file.
4. Verify that only one EUQ management console instance is mapped to one user account. If the instance is mapped to more than one user, SSO will not work.

5. If EUQ is deployed in a parent-child deployment, verify that you are using the parent device's 8447 port to access EUQ. SSO will not work if a child's port is used.
  6. Verify that the account provided on the LDAP Settings screen has permission to look up all accounts for authentication.
- 

## Sender Filtering Issues

### Troubleshooting FoxyProxy Startup

There are several reasons why FoxyProxy might not start. To find out the reason, view the IP Profiler logs.

---

#### Procedure

1. Go to the directory where IP Profiler is installed (by default: `/opt/trend/imss/config`).
  2. Open `foxyproxy.ini`.
  3. Change the value for `log_level` to 4.
  4. Restart FoxyProxy by typing the following:  

```
/opt/trend/imss/script/foxyproxyd restart
```
  5. Open the log file by typing the following:  

```
/opt/trend/imss/log/foxyproxy-general.****
```
- 

### Troubleshooting FoxyProxy Connectivity

#### Procedure

1. Verify that FoxyProxy is running and that it binds on port 10020.
-



## Troubleshooting FoxyProxy Message Processing Speed

When FoxyProxy receives messages, it performs a DNS query on FoxDNS. If Bind is not running, FoxyProxy continues to wait until the DNS query times out.

---

### Procedure

- Verify that the bind service is running on the computer where FoxDNS is installed:
  - a. Type the following command:  

```
ps -ef | grep named
```
  - b. Start the service if it is not running.

---

## Troubleshooting Viewing FoxyProxy Blocked Connections

Every five (5) minutes, FoxyProxy sends information about blocked connections to the IMSVA server.

Wait for at least five minutes before viewing the connection information.

To change this time value:

---

### Procedure

1. Open `foxyproxy.ini`.
2. Modify the value for `report_send_interval`.
3. Restart FoxyProxy by typing the following:  

```
/opt/trend/imss/script/foxyproxyd restart
```

---

## Troubleshooting FoxDNS

Verify that the BIND service is running:

---

**Procedure**

1. Specify the following command:

```
ps -ef | grep named
```

2. Start the service if it is not running.
- 

**Troubleshooting IP Profiler Logs**

The following IP Profiler-related log files are in the IMSVA admin database:

- foxmsg.\*\*\*\*
- foxnullmsg.\*\*\*\*
- foxreport.\*\*\*\*

This procedure explains how to verify that the log files exist.

---

**Procedure**

1. Go to the log directory where IMSVA is installed (by default: /opt/trend/imss/log/).
2. If the files are not present, use the following command to check if imssmgr is running:

```
ps -ef | grep imssmgr
```

3. Check if FoxProxy is running:

```
ps -ef | grep foxproxy
```

4. Verify that IP Profiler is enabled. In the table `t_foxhuntersetting`, the following should exist:

```
record: 'Type' = 1 and 'enable' = TRUE
```

---

**Troubleshooting Email Reputation After Enabling the Management Console**

Email Reputation may not work due to the following reasons:

- Email Reputation has not been activated.
- The computer on which the scanning service is installed cannot access the Internet. MTA cannot get a response for the DNS query for Activation Code validation. Confirm that the computer where the scanner service is installed has access to the Internet.

---

### Procedure

1. Activate Email Reputation and confirm IMSVA can access the Internet.
- 

## Troubleshooting IP Profiler Blocked List

The changes require about one (1) minute to take effect.

---

### Procedure

1. Wait one (1) minute before checking the list again.
- 

## Troubleshooting Blocked IP Addresses in Overview Page

The Overview page displays the top 10 blocked IP addresses by type for the last 24 uninterrupted hours. For example, at 16:12 today the Overview page displays data from 16:00 yesterday to 16:00 today.

---

### Procedure

1. View the **Overview** page after an hour.
- 

## IMSVA Ports

The following table outlines all ports used by IMSVA in their default configuration.

**TABLE 35-1. IMSVA Ports**

| PORT NUMBER | COMPONENT AND ROLE                                                                                                                                                      | CONFIGURATION LOCATION                                                                    |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| 25          | The MTA service port. The mail server will listen at this port to accept messages. This port must be opened at the firewall, or the server is not able to accept mails. | Go to <b>Administration &gt; IMSVA Configuration &gt; SMTP Routing &gt; Connections</b> . |
| 110         | IMSVA scanner generic POP3 port. The scanner uses this port to accept POP3 request and scan POP3 mails for all POP3 servers.                                            | Go to <b>Administration &gt; IMSVA Configuration &gt; Connections &gt; POP3</b> .         |
| 5060        | Policy Server listening port. The scanner will connect to this port to query matched rules for every message.                                                           | Go to <b>Administration &gt; IMSVA Configuration &gt; Connections &gt; Components</b> .   |
| 8005        | IMSVA management console server (Tomcat) management port that can handle Tomcat management command.                                                                     | {IMSVA}\UI\adminUI\conf\ ../server.xml: Server\port                                       |
| 8009        | EUQ management console Tomcat AJP port. This port is used to perform load balancing between several Tomcat servers and the Apache HTTP server.                          | {IMSVA}\UI\euqUI\conf\ ../server.xml:<br>Server\Service\Connector (protocol=AJP\1.3)\port |
| 8015        | Tomcat management port that can handle Tomcat management command.                                                                                                       | {IMSVA}\UI\euqUI\conf\ ../server.xml:Server\port                                          |
| 8442        | Management console Tomcat port. This port is used to handle requests sent to Tomcat.                                                                                    | {IMSVA}\UI\adminUI\conf\ ../server.xml:<br>Server\Service\Connector\port                  |

| PORT NUMBER | COMPONENT AND ROLE                                                                                                                                                              | CONFIGURATION LOCATION                                                                |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 8445        | Management console listening port. You need to open this port to log on to the management console using a web browser.                                                          | Apache listen port:<br><br>{IMSVa}<br>\UI\php\conf\widget.conf:<br>Listen\VirtualHost |
| 8446        | EUQ service listening port.                                                                                                                                                     | {IMSVa}\UI\euqUI\conf\../<br>server.xml:Server\Service\Connector\port                 |
| 8447        | EUQ service listening port with load balance.                                                                                                                                   | {IMSVa}<br>\UI\euqUI\conf\EUQ.conf:Listen\<br>VirtualHost\ServerName                  |
| 10020       | FoxProxy listening port.                                                                                                                                                        | foxproxy.ini\[proxy]\proxy_port                                                       |
| 10021       | MTA service port. The mail server will listen at this port to accept messages that have been processed by FoxProxy.                                                             | foxproxy.ini\[backend_server]<br>\backend_server_port                                 |
| 10024       | IMSVa scanner reprocessing port. Messages released from the central quarantine area in the admin database and from the EUQ database will be sent to this port for reprocessing. | imss.ini\[Socket_3]\proxy_port                                                        |
| 10025       | IMSVa scanner SMTP service listening port.                                                                                                                                      | imss.ini\[socket_1]\proxy_port                                                        |

| PORT NUMBER                                                     | COMPONENT AND ROLE                                                                                                                                                                                                                                                                                                                                                                                        | CONFIGURATION LOCATION                   |
|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| 10026                                                           | The IMSVA "passthrough" SMTP port for internal use (such as the delivery of notification messages generated by IMSVA.) All messages sent to this port will not be scanned by IMSVA. Due to security considerations, the port is only bound at IMSVA server's loopback interface (127.0.0.1). It is therefore not accessible from other computers. You are not required to open this port at the firewall. | IMSVa_HOME/postfix/etc/postfix/master.cf |
| 998                                                             | Sender-based traffic throttling port.                                                                                                                                                                                                                                                                                                                                                                     | IMSVa_HOME/postfix/etc/postfix/main.cf   |
| 999                                                             | TLS setting server listening port. The TLS setting server uses this port to accept TLS setting query connections from Postfix and return results to Postfix.                                                                                                                                                                                                                                              | IMSVa_HOME/postfix/etc/postfix/main.cf   |
| 15505                                                           | IMSVa Manager listening port. The manager uses this port to accept management commands (such as service start/stop) from the management console. The manager also provides quarantine/archive query results to the management console and the EUQ management console through this port.                                                                                                                   | Not configurable on the IMSVA server.    |
| IMSVa uses the following ports when you enable related service: |                                                                                                                                                                                                                                                                                                                                                                                                           |                                          |

| PORT NUMBER | COMPONENT AND ROLE                                                                                                                                                                                                       | CONFIGURATION LOCATION                                                                   |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 389         | LDAP server listening port.                                                                                                                                                                                              | Go to <b>Administration &gt; IMSVA Configuration &gt; Connections &gt; LDAP</b> .        |
| 80          | Microsoft IIS HTTP listening port. Use this port if you are using Control Manager to manage IMSVA, as the Control Manager Server depends on Microsoft IIS.                                                               | Go to <b>Administration &gt; IMSVA Configuration &gt; Connections &gt; TCMC Server</b> . |
| 443         | Microsoft IIS HTTPS listening port. Use this port if you are using Control Manager to manage IMSVA, as the Control Manager Server depends on Microsoft IIS.                                                              | Go to <b>Administration &gt; IMSVA Configuration &gt; Connections &gt; TCMC Server</b> . |
| 88          | KDC port for Kerberos realm.                                                                                                                                                                                             | Not configurable on the IMSVA server.                                                    |
| 53          | <p>The Bind service listening port.</p> <hr/> <div>  <b>WARNING!</b><br/>           Do not modify the port number.         </div> <hr/> | Not configurable on the IMSVA server.                                                    |
| 10030       | The delivery setting server listening port. MTAs connect to this port and query the destination of email messages based on message recipients.                                                                           | imss.ini\<br>[delivery_policy_server]<br>\listen_port                                    |

| PORT NUMBER | COMPONENT AND ROLE                                                                                                                                                                                                                                                                                                                | CONFIGURATION LOCATION                                |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| 8891        | DKIM signature service listening port. All outgoing messages are delivered to this port to decide whether to add DKIM signatures.<br><br>For security, the port is bound only to the IMSVA server's loopback interface (127.0.0.1). It is not accessible from other computers. You do not need to open this port at the firewall. | IMSSVA_HOME/postfix/ect/postfix/master.cf             |
| 10039       | The local server management service listening port.                                                                                                                                                                                                                                                                               | imss.ini\[server_mgmt_service]<br>\listen_port        |
| 10040       | Listening port of the SMTP Traffic Throttling statistics agent.                                                                                                                                                                                                                                                                   | imss.in\[smtp_traffic_throttling]<br>\smtp_agent_port |

## How do I Open an IMSVA Port?

---

### Procedure

1. Log on the operating system with the root account using the SSH Client Tool.
2. Go to the following directory: /opt/TrendMicro/GoldenGate/bin.
3. Use the following command to add or delete a port in the firewall:

```
./fwPortConf [add/del] [tcp/udp] [port_num]
```

#### Example:

```
./fwportconf add udp 161 or ./fwportconf del udp 161
```

---



## Frequently Asked Questions

This section answers various Frequently Asked Questions.

### Email Reputation

#### How do I configure Email reputation not to block certain IP addresses or domains?

Add the IP addresses/domains to the Email reputation approved list by doing the following:

**Note**

If the domain cannot be resolved by the DNS service, the domain will not work in the approved list.

---

#### Procedure

1. Log on to the management console.
  2. Click **Sender Filtering** > **Approved List**.
  3. Add the IP addresses or domains that you do not want blocked to the Approved List.
- 

### IP Profiler

#### Why is the domain name of an IP address that was added to the blocked/approved list always N/A?

IMSVa does not determine the domain name of an IP address that was added to the blocked/approved list (IMSVa does resolve the IP address of an added domain name).

## Why does the Sender Filtering Suspicious IP screen also display the connection information of blocked IP addresses?

The **Sender Filtering > Suspicious IP** screen shows all information for successful connections. Therefore, although an IP address is now in the blocked list, the previous connections for this IP address, which have not been blocked, are shown.

## Mail Areas & Queues

### Can I use special characters to perform queries?

Yes, you can use the following special characters to perform queries:

- **Asterisk (\*)**: Used as a wildcard character to search for characters. You can use the asterisk (\*) to search for email addresses or file names.

To search for email addresses, refer to the following examples:

**TABLE 35-2. Search for email addresses**

| EXAMPLE                  | DESCRIPTION                                                                            |
|--------------------------|----------------------------------------------------------------------------------------|
| *                        | Valid representation of all email addresses.                                           |
| *@domain.tld, name@*.tld | Valid representation of the whole name or the domain (not the top level domain (TLD)). |
| *@*.tld                  | Valid representation of both the name and the domain (not the TLD).                    |

To search for file names, refer to the following examples:

**TABLE 35-3. Search for file names**

| EXAMPLE     | DESCRIPTION                                                              |
|-------------|--------------------------------------------------------------------------|
| *.*         | Valid representation of all files.                                       |
| *.extension | Valid representation of all files of a certain extension.                |
| name.*      | Valid representation of files with a specific name but of any extension. |

- **Semicolon (;):** Used as a separator when searching for multiple recipients or attachments.

## End-User Quarantine

### If I am using Kerberos, why are users unable to log on to the EUQ console with a short name: “domain\user\_name”?

Kerberos servers cannot accept user names in the format:

Domain\user\_name. Kerberos requires the format:

user\_name@domain.xxx

### If I installed Microsoft Exchange Server and have set multiple mail addresses for each user, how do I enable EUQ to check multiple mail addresses for one user?

If you installed one Microsoft Exchange Server together with Active Directory, you can do the following:

---

#### Procedure

1. Open the table **tb\_global\_setting** in IMSVA administrator database and replace the value of LDAP-->mail\_attr from "mail" to "proxyAddresses".
  2. Restart all IMSVA services.
- 

### How can I speed up LDAP access if the LDAP server is Active Directory?

There are two methods to speed up access. The method you use depends on the port number you can use: port 389 or port 3268.

Active Directory uses port 3268 for the Global Catalog. LDAP queries directed to the global catalog are faster because they do not involve referrals to different domain controllers.

**Note**

Trend Micro recommends using port 3268 for LDAP queries to Active Directory.

---

Active Directory uses port 389 for LDAP query. If one item cannot be queried in one domain controller, it uses the LDAP referral mechanism to query another domain controller. Use port 389 if your company has only one domain or if port 3268 is unavailable.

### Using Port 3268 for LDAP Queries

---

#### Procedure

1. Click **Administration** > **IMSVa Configuration** > **Connections**.

The **Connections** screen appears.

2. Click the **LDAP** tab.
  3. Select the LDAP server to modify.
  4. Configure the LDAP listening port value: 3268.
- 

### Using Port 389 for LDAP Queries

---

#### Procedure

1. Click **Administration** > **IMSVa Configuration** > **Connections**.

The **Connections** screen appears.

2. Click the **LDAP** tab.
  3. Select the LDAP server to modify.
  4. Configure the LDAP listening port value: 389.
-

## What user logon name formats does IMSVA support for Active Directory?

Active Directory supports the following logon name formats:

- Example 1: bob@imsstest.com



### Note

The logon name is not an email address (though it appears as one).

---

- Example 2 (pre-Windows 2000): IMSSTEST\bob



### Note

The pre-Windows 2000 format is not supported by Kerberos authentication.

---

## Why are some users unable to use Kerberos SSO?

Users who are bound to SPN (Service Principal Name) cannot use Kerberos SSO.

## Spam Protection Service

### How is the spam catch rate determined?

Specify a threshold value between 3.0 and 10.0 for IMSVA to classify a message as spam. A high threshold value means that a message must be very "spam-like" to be classified as spam (this decreases the spam catch rate but reduces the likelihood of false positives). A lower threshold value means that a message only needs to be slightly "spam-like" to be classified as spam (this increases the spam catch rate and may lead to more false positives).

## ActiveUpdate

### How do I roll back a pattern file?

Click the **Rollback** button on the **System Status** screen.

## Control Manager

### How do I verify that IMSVA is registered to Control Manager? Unregistered from Control Manager?

There are three ways to verify:

- From the Control Manager management console
- From the OS shell
- From the IMSVA management console

#### Verifying that IMSVA is registered from the Control Manager management console

---

##### Procedure

1. Log on to the Control Manager management console.
2. Click **Products**.  
The **Product Directory** screen appears.
3. Check the Product Directory **Local Folder** for IMSVA.

---

#### Verifying that IMSVA is registered from the OS shell

---

##### Procedure

1. Log on to the OS shell.
2. Type the following command:  

```
/opt/trend/imss/script/S99CMAGENT isregistered
```

## Verifying that IMSVA is registered from IMSVA management console

---

### Procedure

1. Log on to the IMSVA web console.
  2. Go to **Administration > Connections > TCM Server**.
  3. Check the **Connections Status**.
- 

## LDAP

### I cannot add an LDAP server using the correct admin account. Why?

First, verify that the LDAP server can be connected to IMSVA. Next, verify the LDAP server type and logon name format are configured correctly.

### Active Directory 2008 cannot use Kerberos authentication. Why?

First, verify that the DNS server is configured correctly. Then check the ServicePrincipalName of Active Directory 2008 Kerberos. If the ServicePrincipalName has changed, modify the value in `/opt/trend/imss/config/imss.ini`.

For example:

```
[LDAP-Setting]
```

```
server-spn=ad2008@domain.com
```

### I use Sun iPlanet as my LDAP server, but my accounts are not synchronizing correctly to Cloud Pre-Filter. Why?

If you have more than 2000 accounts on Sun iPlanet LDAP server you need to make some changes to the Sun iPlanet LDAP server. Increase the value of "nsslapd-lookthroughlimit" on the **Directory Server > Directory > cn=config > Plugins > ldbm database > config > General Editor** screen.

## Other FAQs

### How does IMSVA process a partial message?

The key `BypassMessagePartial` in the IMSVA configuration file `imss.ini` controls how IMSVA processes partial messages.

IMSVA rejects partial messages as a malformed message if `BypassMessagePartial=no` in the `imss.ini` file.

If the key is set to yes (default setting), IMSVA will bypass partial messages.

### Why are changes to the IMSVA configuration settings not applied immediately?

There is a lapse between the time you modify the configuration settings from the management console and the time modifications are actually updated on the IMSVA server.

Policy settings will be reloaded in no longer than three (3) minutes. If you want the settings to load faster, modify the `policy_server=>dbChangePollIntervalInSecs` setting in the `tb_global_setting` table of the IMSVA administrator database as desired.

For other general settings, `imssmgr` will take no longer than one (1) minute to reload the new settings modified from the management console.



#### Note

Trend Micro recommends that you do not send mail to IMSVA immediately after modifying the configuration settings from the management console.

---

### Are there limits on the following items?

- Senders and recipients for each rule
- Mail addresses in one address group
- Approved/Block Senders for SPS rule



The total size of each rule cannot exceed 640KB. The total size includes the rule route (senders/recipients), rule filter (scanning condition), and rule action. Assuming that each email address/LDAP account consists of 20 characters, IMSVA can support at least 10,000 senders/recipients for the rule route.

The maximum number of mail addresses for one address group is 10,000.

The maximum number of Approved/Block Senders for SPS rule is 5000.

### **Why are messages from some senders always received as attachments? Why is the message body replaced by the disclaimer or stamp?**

When the character set of the stamp is different from the character set of the message content, IMSVA will encounter issues inserting the stamp into the message body after scanning the message. In this situation, IMSVA will create a new message, insert the stamp into the message body, and attach the original message. The message content, however, will not be changed.

### **How can I specify a keyword expression to represent a blank header for matching fields such as "From", "To", or "Subject" when creating rules with the content filter?**

If you are going to use a regular keyword expression to represent a blank header, Trend Micro recommends that you use "^(\s)\*\$" (without the quotation marks). The expression "^(\s)\*\$" (without the quotation marks) represents a blank header or whitespace characters.

For example, if you want to check if a message's **From** header is blank, edit a rule's scanning condition as follows:

---

#### **Procedure**

1. Go to **Policy > Policy List**.
2. Click the link for an existing rule to edit the rule.
3. Click **And scanning conditions match**.

4. Click **Header keyword expressions** under the **Content** section.
  5. Click **Add** to create a new keyword expression.
  6. Add the content as "`^(\\s)*$`" (without the quotation marks).
- 

### Why does the message size scan condition not work for encrypted messages?

IMSVa treats encrypted messages as a special type of message. Most scan conditions do not apply. IMSVa requires the use of the encrypted message scan condition to scan or perform actions on encrypted messages.

## Troubleshooting Cloud Pre-Filter

### Unable to Connect to Cloud Pre-Filter

If you cannot connect to Cloud Pre-filter, try the following:

- If there is a firewall on your test segment, verify that the firewall allows access through port 9000. Port 9000 is the default port that Cloud Pre-Filter uses to connect to the Cloud service. Open port 9000 if the firewall does not allow connection to the port.
- If you do not use a proxy server for connection to Cloud Pre-Filter, use the following command from IMSVa to verify that IMSVa can connect to Cloud Pre-Filter:

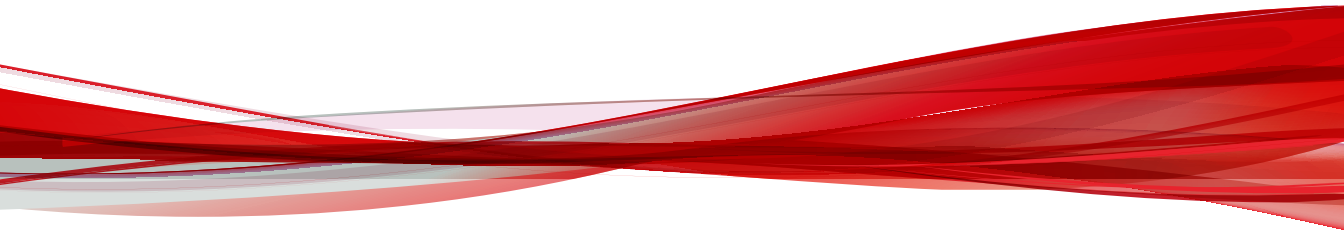
```
telnet ws.emailsecurity.trendmicro.com 9000
```

- If you use a proxy server to connect to Cloud Pre-Filter, verify the proxy server allows access through port 9000.

# Appendices

## Appendices

---





# Appendix A

## Technical Support

Learn about the following topics:

- *[Troubleshooting Resources on page A-2](#)*
- *[Contacting Trend Micro on page A-3](#)*
- *[Sending Suspicious Content to Trend Micro on page A-4](#)*
- *[Other Resources on page A-5](#)*

## Troubleshooting Resources

Before contacting technical support, consider visiting the following Trend Micro online resources.

### Using the Support Portal

The Trend Micro Support Portal is a 24x7 online resource that contains the most up-to-date information about both common and unusual problems.

---

#### Procedure

1. Go to <https://success.trendmicro.com>.
2. Select from the available products or click the appropriate button to search for solutions.
3. Use the **Search Support** box to search for available solutions.
4. If no solution is found, click **Contact Support** and select the type of support needed.



#### Tip

To submit a support case online, visit the following URL:

<https://success.trendmicro.com/smb-new-request>

---

A Trend Micro support engineer investigates the case and responds in 24 hours or less.

---

### Threat Encyclopedia

Most malware today consists of blended threats, which combine two or more technologies, to bypass computer security protocols. Trend Micro combats this complex malware with products that create a custom defense strategy. The Threat Encyclopedia provides a comprehensive list of names and symptoms for various blended threats, including known malware, spam, malicious URLs, and known vulnerabilities.

Go to <https://www.trendmicro.com/vinfo/us/threat-encyclopedia/#malware> to learn more about:

- Malware and malicious mobile code currently active or "in the wild"
- Correlated threat information pages to form a complete web attack story
- Internet threat advisories about targeted attacks and security threats
- Web attack and online trend information
- Weekly malware reports

## Contacting Trend Micro

In the United States, Trend Micro representatives are available by phone or email:

|               |                                                                                                      |
|---------------|------------------------------------------------------------------------------------------------------|
| Address       | Trend Micro, Incorporated<br>225 E. John Carpenter Freeway, Suite 1500<br>Irving, Texas 75062 U.S.A. |
| Phone         | Phone: +1 (817) 569-8900<br>Toll-free: (888) 762-8736                                                |
| Website       | <a href="https://www.trendmicro.com">https://www.trendmicro.com</a>                                  |
| Email address | <a href="mailto:support@trendmicro.com">support@trendmicro.com</a>                                   |

- Worldwide support offices:  
<https://www.trendmicro.com/us/about-us/contact/index.html>
- Trend Micro product documentation:  
<https://docs.trendmicro.com>

## Speeding Up the Support Call

To improve problem resolution, have the following information available:

- Steps to reproduce the problem

- Appliance or network information
- Computer brand, model, and any additional connected hardware or devices
- Amount of memory and free hard disk space
- Operating system and service pack version
- Version of the installed agent
- Serial number or Activation Code
- Detailed description of install environment
- Exact text of any error message received

## **Sending Suspicious Content to Trend Micro**

Several options are available for sending suspicious content to Trend Micro for further analysis.

### **Email Reputation Services**

Query the reputation of a specific IP address and nominate a message transfer agent for inclusion in the global approved list:

<https://www.ers.trendmicro.com/>

Refer to the following Knowledge Base entry to send message samples to Trend Micro:

<https://success.trendmicro.com/solution/1112106>

### **File Reputation Services**

Gather system information and submit suspicious file content to Trend Micro:

<https://success.trendmicro.com/solution/1059565>

Record the case number for tracking purposes.



## Web Reputation Services

Query the safety rating and content type of a URL suspected of being a phishing site, or other so-called "disease vector" (the intentional source of Internet threats such as spyware and malware):

<https://global.sitesafety.trendmicro.com/>

If the assigned rating is incorrect, send a re-classification request to Trend Micro.

## Other Resources

In addition to solutions and support, there are many other helpful resources available online to stay up to date, learn about innovations, and be aware of the latest security trends.

## Download Center

From time to time, Trend Micro may release a patch for a reported known issue or an upgrade that applies to a specific product or service. To find out whether any patches are available, go to:

<https://www.trendmicro.com/download/>

If a patch has not been applied (patches are dated), open the Readme file to determine whether it is relevant to your environment. The Readme file also contains installation instructions.

## Documentation Feedback

Trend Micro always seeks to improve its documentation. If you have questions, comments, or suggestions about this or any Trend Micro document, please go to the following site:

<https://docs.trendmicro.com/en-us/survey.aspx>



# Appendix B

## Default Directory Locations

This appendix provides information on the default directory locations that IMSVA uses for email processing.

Topics include:

- *Default Mail Queues on page B-2*
- *eManager, Virus, and Program Logs on page B-4*
- *Temporary Folder on page B-4*
- *Notification Pickup Folder on page B-4*

## Default Mail Queues

The following table shows the various mail directories that store the mail messages managed by IMSVA.

**TABLE B-1. Default Mail Locations**

| QUEUES FOR REGULAR<br>MAILS                                | QUEUES FOR LARGE MAILS                                         | DESCRIPTIONS                             |
|------------------------------------------------------------|----------------------------------------------------------------|------------------------------------------|
| queue_malform=<br>/opt/trend/imss/queue/<br>malform        | N/A                                                            | Stores malformed messages.               |
| queue_archive=<br>/opt/trend/imss/queue/<br>archive        | N/A                                                            | Stores archived messages.                |
| queue_quarantine =<br>/opt/trend/imss/queue/<br>quarantine | N/A                                                            | Stores quarantined<br>messages.          |
| queue_notify=<br>/opt/trend/imss/queue/<br>notify          | queue_notify_big=<br>/opt/trend/imss/queue/<br>notifybig       | Stores notification messages.            |
| queue_postpone=<br>/opt/trend/imss/queue/<br>postpone      | queue_postpone_big=<br>/opt/trend/imss/queue/<br>postponebig   | Stores postponed messages.               |
| queue_deliver=<br>/opt/trend/imss/queue/<br>deliver        | queue_deliver_big=<br>/opt/trend/imss/queue/<br>deliverbig     | Stores messages for final<br>delivery.   |
| queue_reprocess=<br>/opt/trend/imss/queue/<br>reprocess    | queue_reprocess_big=<br>/opt/trend/imss/queue/<br>reprocessbig | Stores messages pending<br>reprocessing. |

| QUEUES FOR REGULAR<br>MAILS                                     | QUEUES FOR LARGE MAILS                                     | DESCRIPTIONS                                                                                        |
|-----------------------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| queue_handoff=<br>/opt/trend/imss/queue/<br>handoff             | queue_handoff_big=<br>/opt/trend/imss/queue/<br>handoffbig | Stores messages pending<br>handoff.                                                                 |
| queue_undeliverable=<br>/opt/trend/imss/queue/<br>undeliverable | N/A                                                        | Stores undeliverable<br>messages.                                                                   |
| queue_unnotify=<br>/opt/trend/imss/queue/<br>unnotify           | N/A                                                        | Stores undeliverable<br>notification messages.                                                      |
| /var/spool/postfix/<br>incoming                                 | N/A                                                        | Stores incoming mail from<br>the network, or from<br>the /var/spool/postfix/<br>maildrop directory. |
| /var/spool/postfix/<br>active                                   | N/A                                                        | Stores messages that the<br>queue manager has opened<br>for delivery.                               |
| /var/spool/postfix/<br>deferred                                 | N/A                                                        | Stores messages that could<br>not be delivered on the first<br>attempt.                             |
| /var/spool/postfix/<br>corrupt                                  | N/A                                                        | Unreadable or damaged<br>queue files are moved here<br>for inspection.                              |
| /var/spool/postfix/hold                                         | N/A                                                        | Stores messages that are<br>kept "on hold" until someone<br>releases them.                          |
| /var/app_data/imss/<br>dtas_upload                              | N/A                                                        | Stores messages pending<br>analysis or being analyzed by<br>Virtual Analyzer.                       |

## eManager, Virus, and Program Logs

Many modules in IMSVA write log information for troubleshooting purposes to the following folder:

`/opt/trend/imss/log`

and

`/var/log`

## Temporary Folder

IMSVa stores all application-generated temporary files in the temporary folder:

`/opt/trend/imss/temp/`

and

`/tmp`



### Note

This directory is not configurable.

---

## Notification Pickup Folder

IMSVa stores all notification messages, picks them up from the following folders, and then delivers them to a specified SMTP notification server:

`/opt/trend/imss/queue/notify/`

and

`/opt/trend/imss/queue/notifybig`

## Configuring the SMTP Notification Server

For details, see [Configuring Delivery Settings on page 28-2](#).

# Appendix C

## IMSVA Scripts

This appendix provides you with a list of IMSVA scripts and their respective parameters that you can invoke from the command line.

Topic includes:

- *Using IMSVA Scripts on page C-2*

## Using IMSVA Scripts

IMSVa scripts provide a convenient and alternative means of performing administrative tasks from the command line.

The following table lists the IMSVa scripts, the respective parameters and the functions that the scripts perform.



### Note

All scripts listed in the table are located in:

`/opt/trend/imss/script`

**TABLE C-1. IMSVa Scripts**

| SCRIPT         | PARAMETERS                                                                                                                                                                                                                                          | DESCRIPTION                                                                                                                                                                                                                   |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| dbctl.sh       | start / stop / status /<br>reload / restart                                                                                                                                                                                                         | Postgres database service                                                                                                                                                                                                     |
| db_maintain.sh | {vacuum reindex analyze <br>all}<br><br>[vacuum] - Vacuum admin<br>db and all euq db.<br><br>[reindex] - Reindex admin<br>db and all euq db.<br><br>[analyze] - Analyze admin<br>db and all euq db.<br><br>[all] - Vacuum && Reindex<br>&& Analyze. | Used by S99SCHEDULED for database<br>maintenance.<br><br><div>  <b>Note</b><br/>           Do not run this script on its own.         </div> |
| euqtrans       | all / approved sender                                                                                                                                                                                                                               | Transfers EUQ database data or<br>approved senders                                                                                                                                                                            |
| forceUpdate.sh | DBDSN username<br>password                                                                                                                                                                                                                          | Notifies the policy server to reload the<br>policy settings                                                                                                                                                                   |
| foxproxyd      | start / stop / restart                                                                                                                                                                                                                              | IP Profiler service                                                                                                                                                                                                           |



| SCRIPT         | PARAMETERS                                                           | DESCRIPTION                                                                                                                                                                                          |
|----------------|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ibe_server.sh  | start / stop / restart                                               | Trend Micro Email Encryption service                                                                                                                                                                 |
| imssctl.sh     | start / stop / stop_others /<br>restart / restart_others /<br>status | Controls all IMSS services                                                                                                                                                                           |
| imssstop.sh    | stop                                                                 | Forces all IMSVA services to stop.                                                                                                                                                                   |
| imssstart.sh   |                                                                      | Start all IMSS services                                                                                                                                                                              |
| openldap.sh    | start / stop / restart                                               | Open LDAP local cache service                                                                                                                                                                        |
| postfix        | start / stop / reload / restart                                      | Postfix daemon                                                                                                                                                                                       |
| regippro.sh    | reg / unreg                                                          | Register or unregister IP Profiler to or<br>from the admin database.                                                                                                                                 |
| S99ADMINUI     | start / stop / restart                                               | Central Controller                                                                                                                                                                                   |
| S99CLEANEUQ    |                                                                      | Removes expired quarantined data from<br>the EUQ and admin databases as<br>configured under the <b>Administration</b> ><br><b>User Quarantine Access</b> area of the<br>management console.          |
| S99CLEANEXPIRE |                                                                      | Removes expired quarantined and<br>archived data from the EUQ and admin<br>databases as configured under the<br><b>Quarantine &amp; Archive</b> > <b>Settings</b> area<br>of the management console. |
| S99CMAGENT     | start / stop / restart /<br>unregister / isregistered                | CMAGENT service                                                                                                                                                                                      |
| S99DIGEST      |                                                                      | Sends the EUQ digest message                                                                                                                                                                         |
| S99DTASAGENT   | start / stop / restart                                               | Virtual Analyzer agent service                                                                                                                                                                       |
| S99EUQ         | start / stop / restart                                               | EUQ service                                                                                                                                                                                          |
| S99FOXDNS      | start / stop / restart                                               | Foxdns service                                                                                                                                                                                       |
| S99IMSS        | start / stop / restart                                               | IMSS scanner service                                                                                                                                                                                 |

| SCRIPT                          | PARAMETERS                                                                                                                                                                                                                                                                                                                                                                           | DESCRIPTION                                                                                                                                                                                                        |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| S99MANAGER                      | start / stop / restart                                                                                                                                                                                                                                                                                                                                                               | Manager service                                                                                                                                                                                                    |
| S99MONITOR                      | start / stop / restart                                                                                                                                                                                                                                                                                                                                                               | Manager monitor service                                                                                                                                                                                            |
| S99MSGTRACING                   | start / stop / restart                                                                                                                                                                                                                                                                                                                                                               | Message Tracing service                                                                                                                                                                                            |
| S99POLICY                       | start / stop / restart                                                                                                                                                                                                                                                                                                                                                               | Policy service                                                                                                                                                                                                     |
| S99REPORT                       | <p>[option] start / stop / restart</p> <p>[option]:</p> <ul style="list-style-type: none"> <li>• -s: generates centralized reports (covers all one-time and scheduled reports configured on the management console)</li> <li>• -h: generates hourly individual traffic data</li> <li>• -t: generates hourly traffic data</li> <li>• -d: performs database log maintenance</li> </ul> | <p>Used by S99SCHEDULED to generate related reports.</p> <hr/> <p> <b>Note</b><br/>Do not run this script on its own.</p> <hr/>   |
| S99SCHEDULED                    | start / stop                                                                                                                                                                                                                                                                                                                                                                         | Starts the scheduled task.                                                                                                                                                                                         |
| S99UPDATE                       | start / stop / restart                                                                                                                                                                                                                                                                                                                                                               | <p>Used by S99SCHEDULED to run the scheduled update.</p> <hr/> <p> <b>Note</b><br/>Do not run this script on its own.</p> <hr/> |
| S99WRSAGENT                     | start / stop / restart                                                                                                                                                                                                                                                                                                                                                               | WRS agent service                                                                                                                                                                                                  |
| S99TLSAGENT                     | start / stop / restart / reload                                                                                                                                                                                                                                                                                                                                                      | TLS setting server service                                                                                                                                                                                         |
| certificate_validation_check.sh | start / stop / restart                                                                                                                                                                                                                                                                                                                                                               | Certificate validation check tool                                                                                                                                                                                  |

| SCRIPT             | PARAMETERS                                                               | DESCRIPTION                      |
|--------------------|--------------------------------------------------------------------------|----------------------------------|
| S99DELIVERY        | start / stop / reload / restart                                          | Message delivery setting service |
| S99DKIM            | start / stop / restart /<br>reload / status                              | DKIM signature service           |
| S99LOGTRANSFER     | start stop restart                                                       | Syslog transfer service          |
| S99LOCALSERVERMGMT | start/stop/restart/reload                                                | Local server management service  |
| S99SMTPCONNAGENT   | /opt/trend/imss/script/<br>S99SMTPCONNAGENT<br>start stop restart reload | SMTP Traffic Throttling service  |



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