

# What's New in Fireware v12.0

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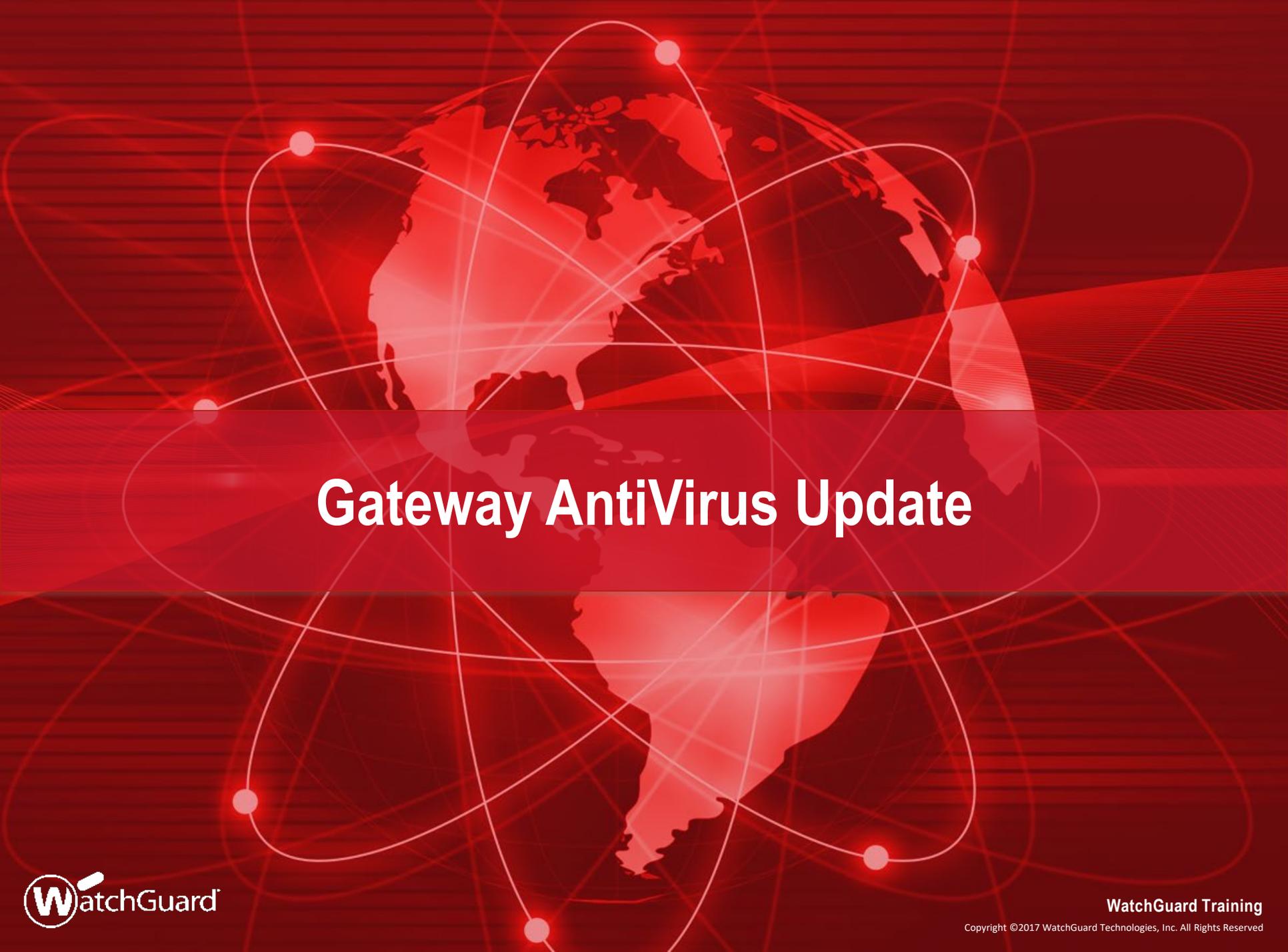
- Gateway AntiVirus Update
- Content Actions for HTTP and HTTPS
- IMAP Proxy
- OS Compatibility Setting Enhancement
- Gateway Wireless Controller Enhancements
- Mobile VPN with PPTP Feature Removed
- Updated Default VPN Security Settings
- Removed Obsolete Security Settings for Mobile VPN with SSL



# What's New in Fireware v12.0

- APT Blocker Enhancements
  - Javascript Scanning of Email Attachments
  - SMTP and IMAP Zero-Day Protection
- WebBlocker Enhancements
- Larger IPS Signature Set
- WatchGuard Cloud on your Firebox
- ConnectWise Integration Enhancements
- Multicast Routing





# Gateway AntiVirus Update

# Gateway AntiVirus Update

- Gateway AntiVirus has been updated to use a scan engine and signature set from Bitdefender
  - In previous releases, the scan engine and signature set was provided by AVG
  - WatchGuard used virus samples to compare the detection capability of several vendors
    - Bitdefender had the highest detection rate
  - Bitdefender offers high performance and frequent signature updates

# Gateway AntiVirus Update

- Gateway AntiVirus signature set sizes vary by model

Gateway AntiVirus Signature Set	Firebox Models
Standard	T10, T30 XTM 25, 26, 33, 330
Enterprise	T50, T70, M200, M300 M370, M400, M440, M470, M500, M570, M670, M4600, M5600 XTM 515, 525, 535, 545, 810, 820, 830, 870, XTM 1050, 1500, 2050, 2520

- Virtual Fireboxes (FireboxV, XTMv, Firebox Cloud) get the Enterprise set if the instance has 2GB or more of memory

# Gateway AntiVirus Update

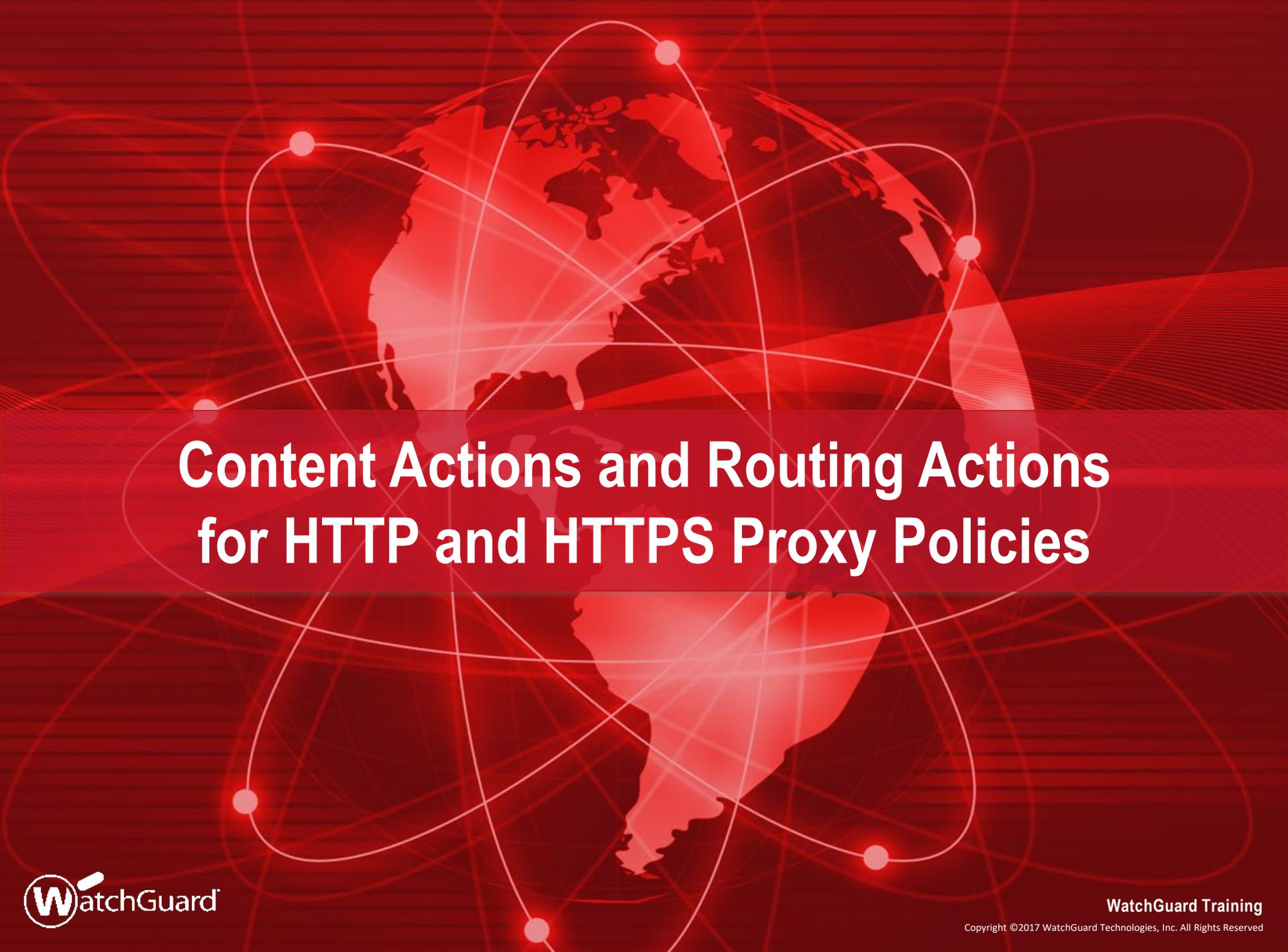
- There are no changes to Gateway AntiVirus configuration settings
- Signature updates are now faster and are all incremental
  - Reduces the download time
  - Reduces the time for FireCluster synchronization of signatures

# Gateway AntiVirus Update

- For increased effectiveness, Gateway AV no longer supports partial file scanning
- Gateway AV now automatically uses a scan limit that is much higher than the previous default values so more files get a complete security scan
  - 5 MB — Firebox T10, T30, XTM 25, 26, 33
    - If the Gateway AV File Scan limit is set to less than 5 MB, Gateway AV scans files up to 5 MB in size
  - 10MB — All other Firebox models
    - If the Gateway AV File Scan limit is set to less than 10 MB, Gateway AV scans files up to 10 MB in size

# Gateway AntiVirus — Upgrade

- When you upgrade to Fireware v12.0, the old AVG files are removed and the Firebox downloads the new Bitdefender engine and signature set
  - It can take 7–10 minutes to download the files the first time
  - It takes another 5–7 minutes to synchronize a FireCluster
- To minimize downtime, we recommend that you do not schedule the upgrade during business hours



# Content Actions and Routing Actions for HTTP and HTTPS Proxy Policies

# Content Actions and Routing Actions

- A *content action* is a new type of proxy action for inbound HTTP proxy policies and HTTPS Server proxy actions
- Select a content action to use the same public IP address for multiple public web servers that are behind the Firebox
  - A content action enables the Firebox to route incoming HTTP and HTTPS requests for one public IP address to more than one internal web server
  - This reduces the number of public IP addresses you need for public web servers on your network
- To redirect HTTPS requests based on the domain name without content inspection, you can specify a *routing action* in a domain name rule in the HTTPS Server proxy action

# Content Actions and Routing Actions

- Content actions have two main functions:
  - Host Header Redirect
    - Sends inbound HTTP and inspected HTTPS requests to different internal servers based on the path and domain in the HTTP request
  - TLS/SSL Offloading
    - Relieves an internal web server of the processing burden for encryption and decryption of TLS and SSL connections
      - Encrypted (HTTPS) traffic between external clients and the Firebox
      - Clear-text (HTTP) traffic between the Firebox and the internal server
- In an HTTPS Server proxy action, routing actions send inbound HTTPS requests to different servers based on the domain name, without content inspection

# Content Actions and Routing Actions

- Content actions
  - Match the host header/path for each HTTP request
  - Send an HTTP request to a specific server IP address and port
  - Content actions do not rewrite data in the request or response
- Use cases for content actions:
  - Redirect HTTP requests based on the domain and host
  - Redirect HTTPS requests with content inspection
  - SSL offloading for HTTPS requests with content inspection
- Use case for routing actions in the HTTPS Server proxy:
  - Redirect HTTPS without content inspection

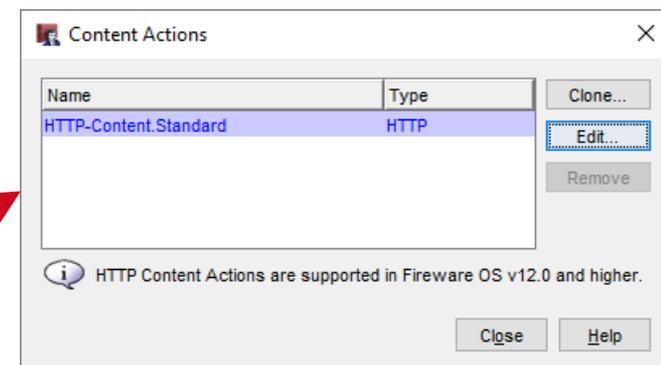
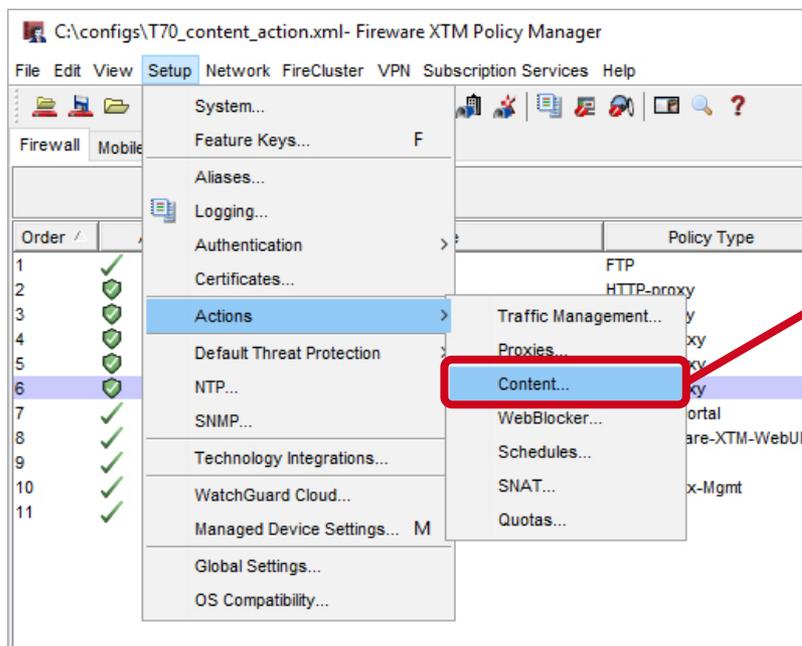
# HTTP Requests and Content Actions

- When a user browses to a URL, the web browser sends the URL as an HTTP request
- The HTTP request includes:
  - A request method (GET or PUT) that specifies the path
  - A host header that specifies the domain name
  - For example, if you browse to the Support section of watchguard.com, the HTTP request includes this information:

```
GET /wgrd-support/overview HTTP/1.1
Host: www.watchguard.com
```
- Content actions review the combination of the domain name and path in the HTTP request to determine which content rule to apply

# Content Action Configuration

- Content actions are separate from other proxy actions
- From Policy Manager, select **Setup > Actions > Content**
- To create a new content action, clone or edit the predefined content action



# Content Action Configuration

- In a content action, you can configure:
  - Content rules to define the action for each destination, based on whether content in the host header or SNI matches the specified domain and path
  - The action to take if no content rule is matched

Clone HTTP Content Action Configuration

Name:

Description:

The rule settings you specify are compared to the absolute URI (the HTTP host header and URI path) in the request. The TLS/SSL Offload setting is only applied to HTTPS proxy policies with Content Inspection enabled.

Enabled	Name	Match Type	Value	Proxy Action	Routing Action	Ports (HTTP/HTTPS)	TLS/SSL Offload	Log
<input checked="" type="checkbox"/>	example.com	Pattern Match	example.com*	HTTP-Server.custom	10.0.40.80	80/443	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Action to take if no rule above is matched

Proxy Action:

Routing Action:  Use Policy Default  Use

HTTP Port:  Use Policy Default  Use

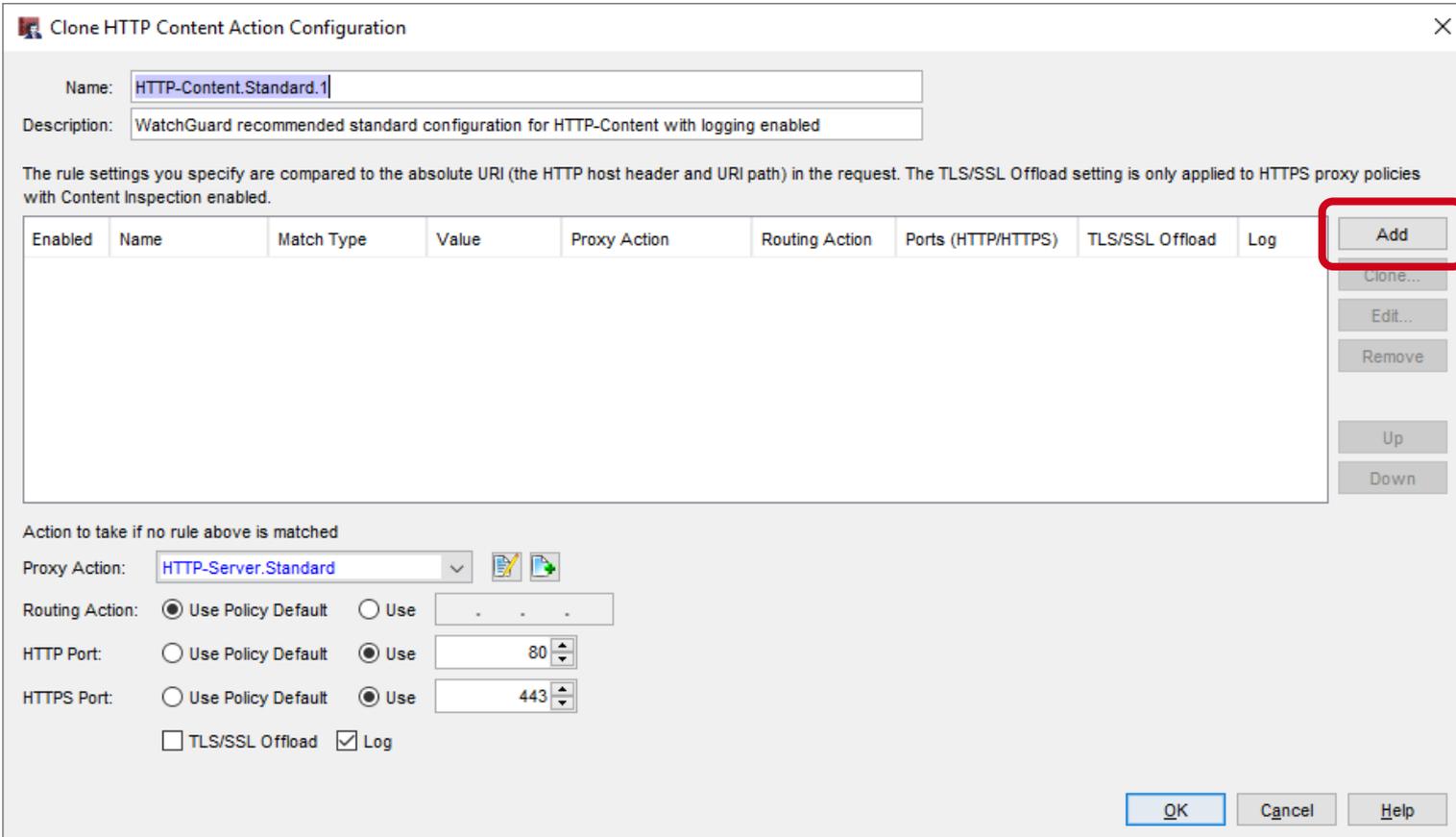
HTTPS Port:  Use Policy Default  Use

TLS/SSL Offload  Log

OK Cancel Help

# Content Action Configuration

- In a content action, click **Add** to create a new content rule



**Clone HTTP Content Action Configuration** [X]

Name:

Description:

The rule settings you specify are compared to the absolute URI (the HTTP host header and URI path) in the request. The TLS/SSL Offload setting is only applied to HTTPS proxy policies with Content Inspection enabled.

Enabled	Name	Match Type	Value	Proxy Action	Routing Action	Ports (HTTP/HTTPS)	TLS/SSL Offload	Log	Add
									Clone...
									Edit...
									Remove
									Up
									Down

Action to take if no rule above is matched

Proxy Action:  [v] [i] [c]

Routing Action:  Use Policy Default  Use

HTTP Port:  Use Policy Default  Use

HTTPS Port:  Use Policy Default  Use

TLS/SSL Offload  Log

[OK] [Cancel] [Help]

# Content Rules

- Each content rule specifies:
  - A pattern to match
  - HTTP proxy action
  - Routing action (IP address)
  - HTTP and HTTPS ports
  - TLS/SSL Offload setting
  - Log setting
  
- Pattern match against domain and host:
  - Domain only                      `wiki.example.net/*`
  - Path                                `*/blog/*`
  - Domain and path                `blog.example.net/resource/*`

# TLS/SSL Offloading

- To enable TLS/SSL offloading for HTTPS, in the content rule action, select the **TLS/SSL Offload** check box
- With TLS/SSL offloading:
  - HTTPS is used between external clients and the Firebox
  - HTTP is used between the Firebox and the internal server

**New Content Rule**

Rule Name:

Rule Settings

Pattern Match:   
(\*.[.] Wildcards)  
Use "%0x[hex-data]%" for binary data

Rule Actions

Proxy Action:

Routing Action:  Use Policy Default  Use

HTTP Port:  Use Policy Default  Use

HTTPS Port:  Use Policy Default  Use

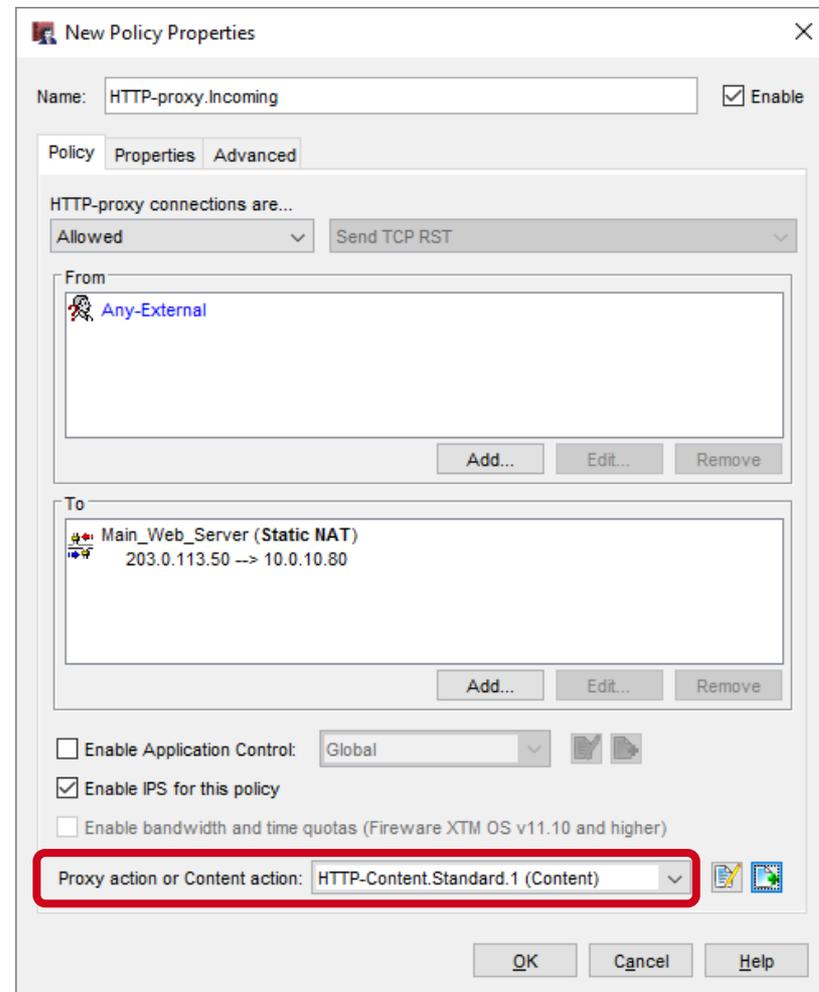
TLS/SSL Offload  Log

# TLS/SSL Offloading

- If you use TLS/SSL offloading, you might need to change configuration settings on your server application
  - Some server applications must be configured to use HTTPS in links/redirects even if incoming requests use HTTP
    - `$_SERVER['HTTPS']='on';` (Wordpress)
  - Some server applications recognize the *Upgrade-Insecure-Requests* Header
    - Upgrade-Insecure-Requests: 1

# Content Action in an HTTP Proxy

- In an HTTP proxy policy, select a content action
  - The drop-down list includes both proxy actions and content actions
- In the policy **To** list, add a **Static NAT** rule, or use 1-to-1 NAT
  - Policy NAT settings are not used unless a routing action in the content action specifies *Use Policy Default*



# Content Action in an HTTPS Server Proxy

- To use a content action in a Domain Name rule or in the action to take if no rule is matched:
  1. Select the **Inspect** action
  2. Select a content action

# Content Action in an HTTPS Server Proxy

Clone HTTPS Proxy Action Configuration

Name:

Description:

Categories

- Content Inspection
- General Settings

**Content Inspection Summary**

Inspection **On** SSLv3 **Disabled** OCSP **Disabled** PFS Ciphers **Allowed** SSL Compliance **Enforced** Google Apps **Unrestricted**

**Domain Names**

Control access to protected servers based on Server Name Indication (SNI) in the incoming TLS client hello, if SNI is present. You must enable content inspection and configure Domain Name rules with the **Inspect** action for the content inspection action to take effect. To bypass content inspection, use the **Allow** action.

Enabled	Action	Name	Match Type	Value	Proxy Action	Routing A...	Port	Alarm	Log
<input checked="" type="checkbox"/>	Inspect	example.com	Pattern Match	example.com*	HTTP-Content.Standard.2 (...)	N/A	N/A	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Action to take if no rule above is matched

Action:   Alarm  Log

Proxy Action or Content Action:

# Routing Action in an HTTPS Server Proxy

- To route HTTPS requests without content inspection, in a Domain Name Rule or in the action to take if no rule is matched:
  1. Select the **Allow** action
  2. Configure a Routing Action and Port

The screenshot shows the 'New Domain Name Rule' configuration window. The 'Rule Name' is 'example\_web.com'. Under 'Rule Settings', the 'Pattern Match' is 'example\_web.com'. Under 'Rule Actions', the 'Action' is 'Allow', 'Alarm' is unchecked, and 'Log' is checked. The 'Routing Action' is 'Use' with the IP address '10.0.60.80'. The 'Port' is 'Use' with the port number '443'. The 'OK' button is highlighted with a red box.

# Routing Action in an HTTPS Server Proxy

- The routing action compares the domain name you specify in a domain name action with the domain name in the TLS Server Name Indication (SNI), or the Common Name of a server in the server certificate
  - For HTTPS requests, the SNI in the TLS handshake specifies the domain and path of the destination server
  - SNI is described in RFC 6066 TLS Extensions

# Routing Action in an HTTPS Server Proxy

**Edit HTTPS Proxy Action Configuration**

Name:

Description:

Categories: **Content Inspection**, General Settings

**Content Inspection Summary**

Inspection **Off** SSLv3 **N/A** OCSP **N/A** PFS Ciphers **N/A** SSL Compliance **Not enforced** Google Apps **N/A**

**Domain Names**

Control access to protected servers based on Server Name Indication (SNI) in the incoming TLS client hello, if SNI is present. You must enable content inspection and configure Domain Name rules with the **Inspect** action for the content inspection action to take effect. To bypass content inspection, use the **Allow** action.

Enabled	Action	Name	Match Type	Value	Proxy Action	Routing Action	Port	Alarm	Log
<input checked="" type="checkbox"/>	Allow	example.com	Pattern Match	example.com	N/A	Policy Default	Policy Default	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Allow	example_web.com	Pattern Match	example_web.com	N/A	10.0.60.80	Policy Default	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Action to take if no rule above is matched

Action:   Alarm  Log

Routing Action:  Use Policy Default  Use

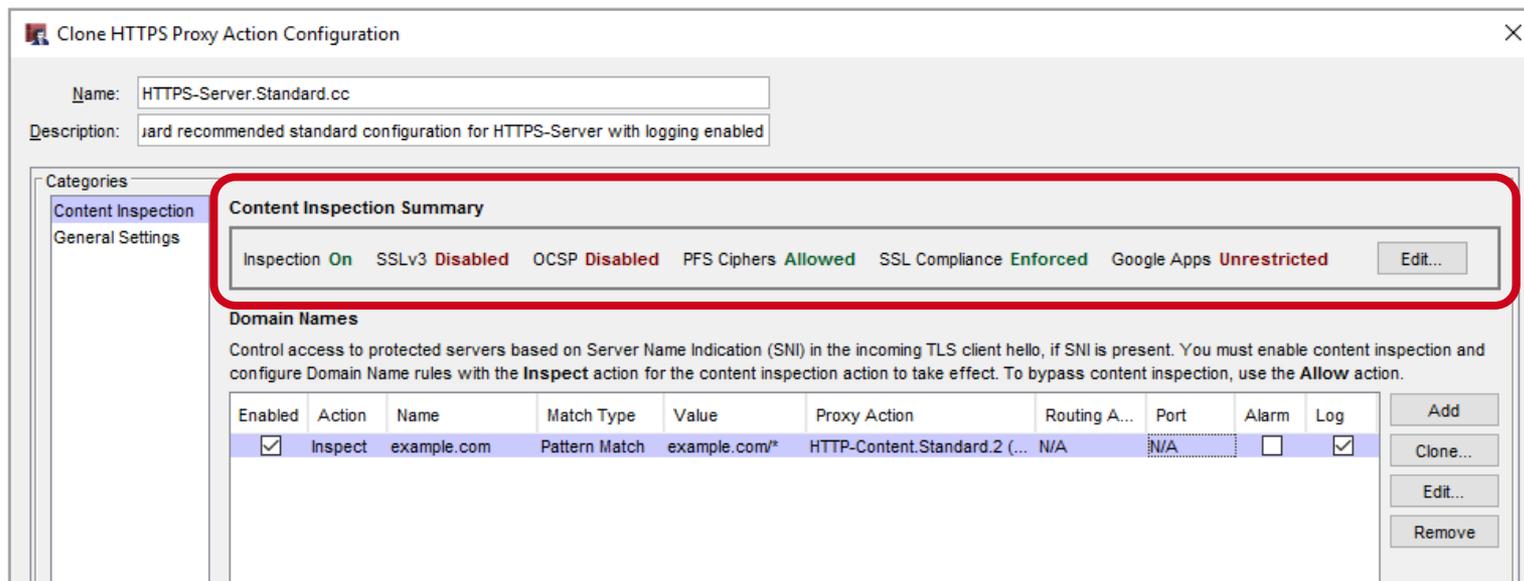
Port:  Use Policy Default  Use

# Proxy Action Changes

- Some proxy action settings were removed from the HTTP Server and HTTPS Server proxy actions because they are not applicable to inbound connections to a web server
  - HTTP Server proxy actions now do not include:
    - WebBlocker
    - Reputation Enabled Defense
  - HTTPS Server proxy actions now do not include:
    - WebBlocker
    - OCSP (Online Certificate Status Protocol)
      - No certificate validation in HTTPS proxy server actions

# HTTPS Proxy Action Changes

- WebBlocker is removed from the **Categories** list
- Content Inspection and Domain Names settings are now combined in the **Content Inspection** category
- To change content inspection settings, in the **Content Inspection Summary** section, click **Edit**



Clone HTTPS Proxy Action Configuration

Name: HTTPS-Server.Standard.cc

Description: IARD recommended standard configuration for HTTPS-Server with logging enabled

Categories

- Content Inspection
- General Settings

**Content Inspection Summary**

Inspection **On** SSLv3 **Disabled** OCSP **Disabled** PFS Ciphers **Allowed** SSL Compliance **Enforced** Google Apps **Unrestricted** [Edit...](#)

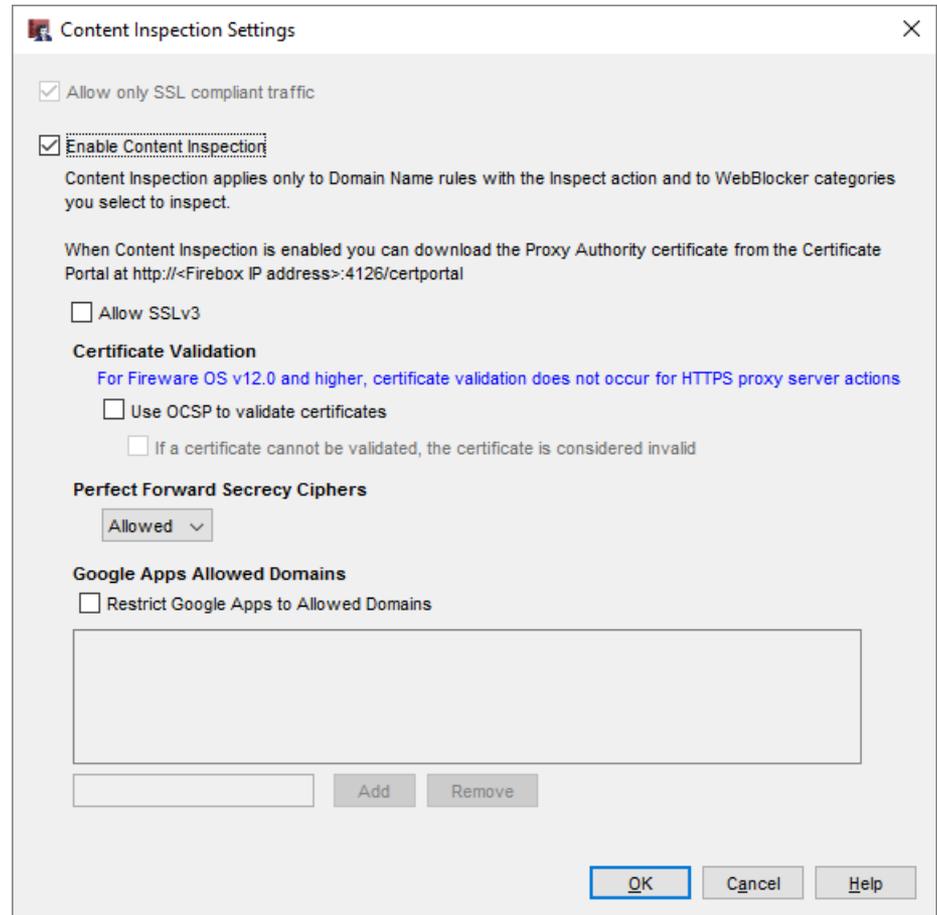
**Domain Names**

Control access to protected servers based on Server Name Indication (SNI) in the incoming TLS client hello, if SNI is present. You must enable content inspection and configure Domain Name rules with the **Inspect** action for the content inspection action to take effect. To bypass content inspection, use the **Allow** action.

Enabled	Action	Name	Match Type	Value	Proxy Action	Routing A...	Port	Alarm	Log	
<input checked="" type="checkbox"/>	Inspect	example.com	Pattern Match	example.com/*	HTTP-Content.Standard.2 (...	N/A	N/A	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<a href="#">Add</a> <a href="#">Clone...</a> <a href="#">Edit...</a> <a href="#">Remove</a>

# HTTPS Proxy Action Changes

- Content inspection settings are the same as in Fireware v11.x, except that you do not select an HTTP Client proxy action
- Now you specify an HTTP Client proxy action each time you select the **Inspect** action
  - You can use different HTTP proxy actions for each domain name rule and for WebBlocker

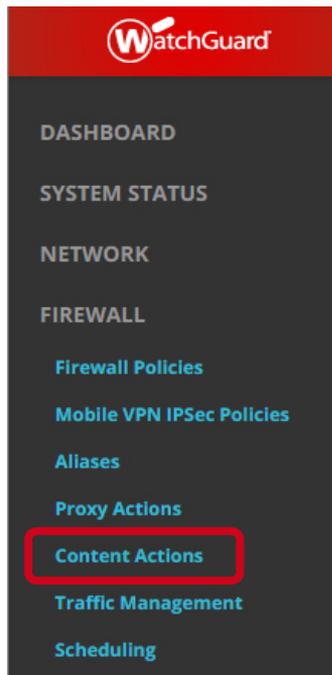


The screenshot shows the 'Content Inspection Settings' dialog box. It contains the following options and sections:

- Allow only SSL compliant traffic
- Enable Content Inspection
  - Content Inspection applies only to Domain Name rules with the Inspect action and to WebBlocker categories you select to inspect.
  - When Content Inspection is enabled you can download the Proxy Authority certificate from the Certificate Portal at <http://<Firebox IP address>:4126/certportal>
  - Allow SSLv3
- Certificate Validation**
  - For Fireware OS v12.0 and higher, certificate validation does not occur for HTTPS proxy server actions
  - Use OCSP to validate certificates
    - If a certificate cannot be validated, the certificate is considered invalid
- Perfect Forward Secrecy Ciphers**
  - Allowed ▾
- Google Apps Allowed Domains**
  - Restrict Google Apps to Allowed Domains
  - [Empty text box]
  - [Empty text box] [Add] [Remove]
- [OK] [Cancel] [Help]

# Content Actions in Fireware Web UI

- To configure content actions in Fireware Web UI, select **Firewall > Content Actions**



Content Actions / Edit

### HTTP Content Action Settings

Name:

Description:

The rule settings you specify are compared to the absolute URI (the HTTP host header and URI path) in the request. The TLS/SSL Offload setting is only applied to HTTPS proxy policies with Content Inspection enabled.

ENABLED	NAME	MATCH TYPE	VALUE	PROXY ACTION	ROUTING ACTION	PORTS (HTTP/HTTPS)	TLS/SSL OFFLOAD	LOG
<input checked="" type="checkbox"/>	example.com	Pattern Match	example	HTTP-Server.Standard	10.0.50.80	80/443	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Action to take if no rule above is matched

Proxy Action:

Routing Action:  Use Policy Default  Use

HTTP Port:  Use Policy Default  Use

HTTPS Port:  Use Policy Default  Use

TLS/SSL Offload  Log

# Content Actions in Fireware Web UI

- Select a content action when you add an HTTP-proxy policy

Firewall Policies / Add Firewall Policy

Select a policy type

Packet Filter

Proxies

Custom

--Select a packet filter--

HTTP-proxy

--Select a policy type--

PORT ↕	PROTOCOL
80	TCP

Hypertext Transfer Protocol.

--Select a Proxy action or Content action--

--Select a Proxy action or Content action--

- HTTP-Client.Standard
- HTTP-Server.Standard
- HTTP-Client
- HTTP-Server
- Default-HTTP-Client
- HTTP-Content.Standard (Content)
- HTTP-Content.Custom (Content)

ADD POLICY CANCEL

# Content Actions in Firewall Web UI

- The content action is on the HTTP-proxy **Proxy Action** tab

Firewall Policies / Add

Name   Enable

Settings Application Control Traffic Management **Proxy Action** Scheduling Advanced

Proxy Action or Content Action

HTTP Content Action Settings

Name

Description

The rule settings you specify are compared to the absolute URI (the HTTP host header and URI path) in the request. The TLS/SSL Offload setting is only applied to HTTPS proxy policies with Content Inspection enabled.

ENABLED	NAME	MATCH TYPE	VALUE	PROXY ACTION	ROUTING ACTION	PORTS (HTTP/HTTPS)	TLS/SSL OFFLOAD	LOG
<input checked="" type="checkbox"/>	example.com	Pattern Match	example.c	HTTP-Server.Standard	10.0.50.80	80/443	<input type="checkbox"/>	<input checked="" type="checkbox"/>

ADD CLONE EDIT REMOVE MOVE UP MOVE DOWN

Action to take if no rule above is matched

Proxy Action

Routing Action  Use Policy Default  Use

HTTP Port  Use Policy Default  Use

HTTPS Port  Use Policy Default  Use

TLS/SSL Offload  Log

# Content Actions in Fireware Web UI

- HTTPS proxy action with routing actions and a content action

Proxy Actions / Edit

## HTTPS Proxy Action Settings

Name:

Description:

**Content Inspection** | Proxy Alarm | General

### Content Inspection Summary

Inspection **On** SSLv3 **Disabled** PFS Ciphers **Allowed** SSL Compliance **Enforced** Google Apps **Unrestricted** [EDIT](#)

### Domain Names

Control access to protected servers based on Server Name Indication (SNI) in the incoming TLS client hello, if SNI is present. You must enable content inspection and configure Domain Name rules with the **Inspect** action for the content inspection action to take effect. To bypass content inspection, use the **Allow** action.

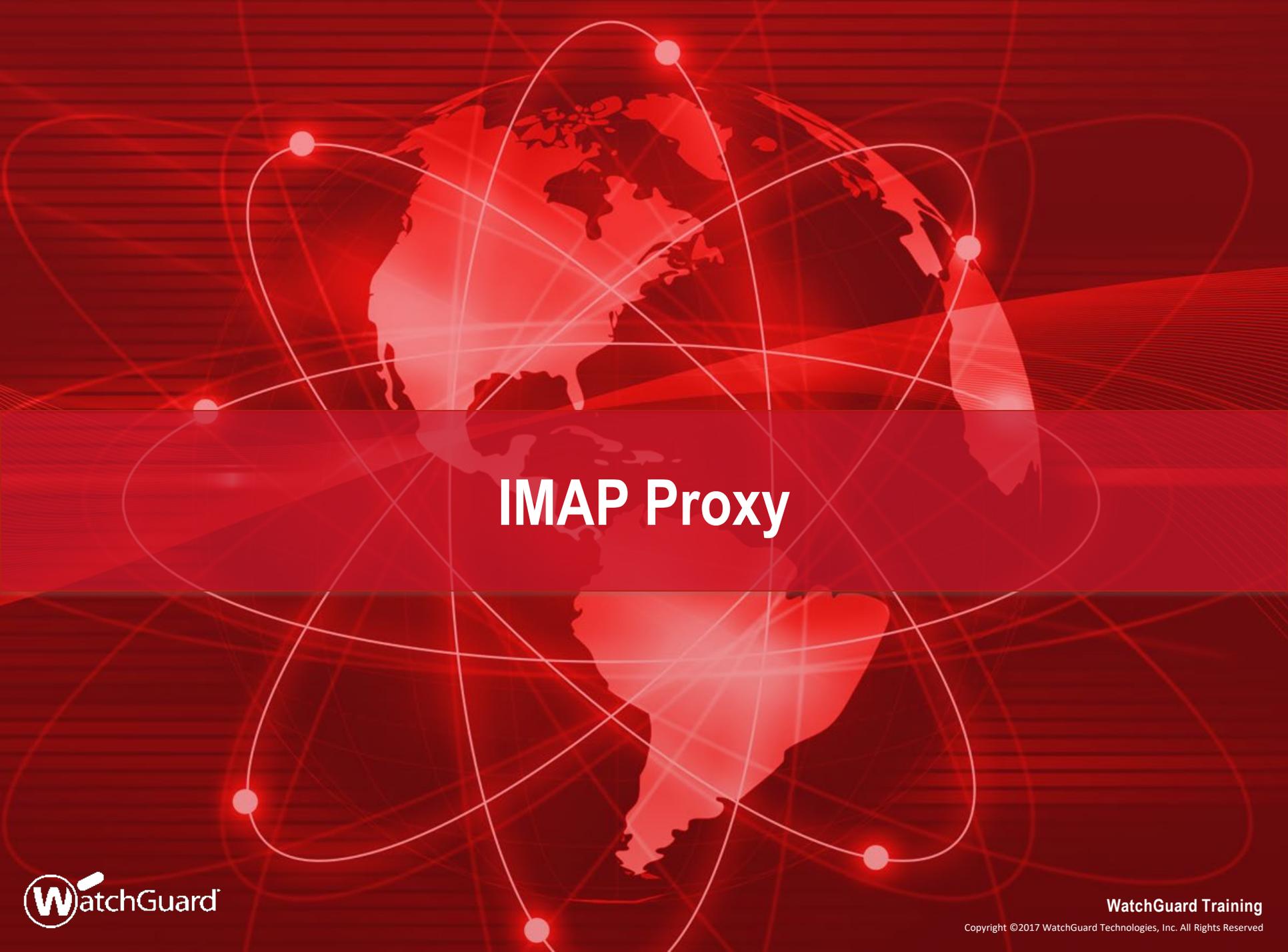
ENABLED	ACTION	NAME	MATCH TYPE	VALUE	PROXY ACTION	ROUTING ACTION	PORT	ALARM	LOG
<input checked="" type="checkbox"/>	Allow	example.com	Pattern Match	example.com	N/A	Policy Default	Policy Default	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>	Allow	example_web.com	Pattern Match	example_web.com	N/A	10.0.60.80	Policy Default	<input type="checkbox"/>	<input checked="" type="checkbox"/>

[ADD](#) [CLONE](#) [EDIT](#) [REMOVE](#) [MOVE UP](#) [MOVE DOWN](#)

Action to take if no rule above is matched:

Action:   Alarm  Log

Proxy Action or Content Action:



# IMAP Proxy

# IMAP Protocol

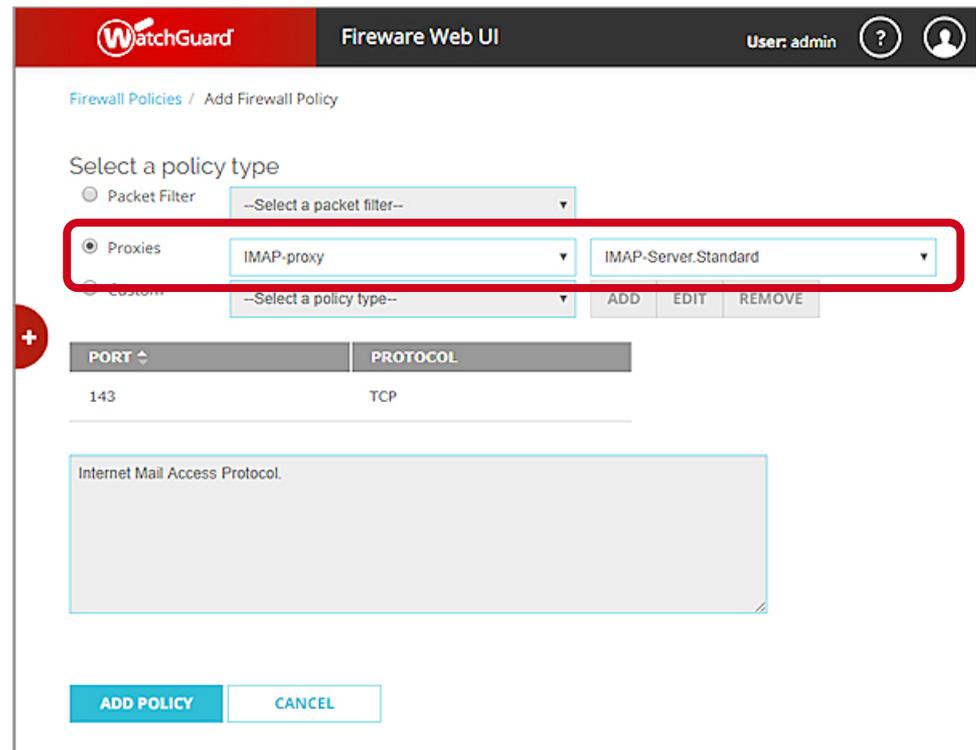
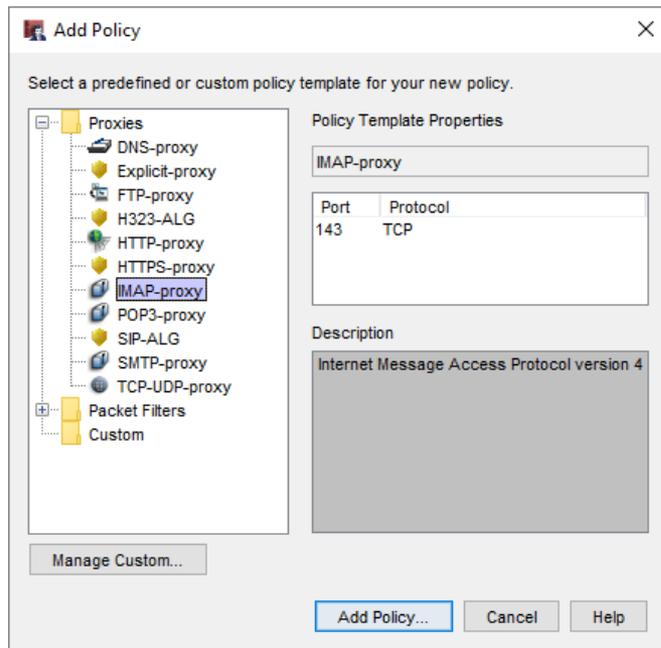
- Firewall now includes an IMAP proxy policy
- The IMAP proxy policy supports IMAP v4 on TCP port 143
- The IMAP proxy does **not** support IMAP over SSL/TLS

# IMAP Proxy Policy

- The IMAP proxy settings are similar to the POP3 proxy
- IMAP supports more complex actions than POP3
  - IMAP clients synchronize changes to the IMAP server
  - IMAP clients can request many types of information: headers, envelope information, message text, and more
  - Multiple IMAP clients can connect to the same IMAP server
    - All clients must stay in sync with the server
- The IMAP proxy applies only to clients that connect to the IMAP server through the IMAP proxy

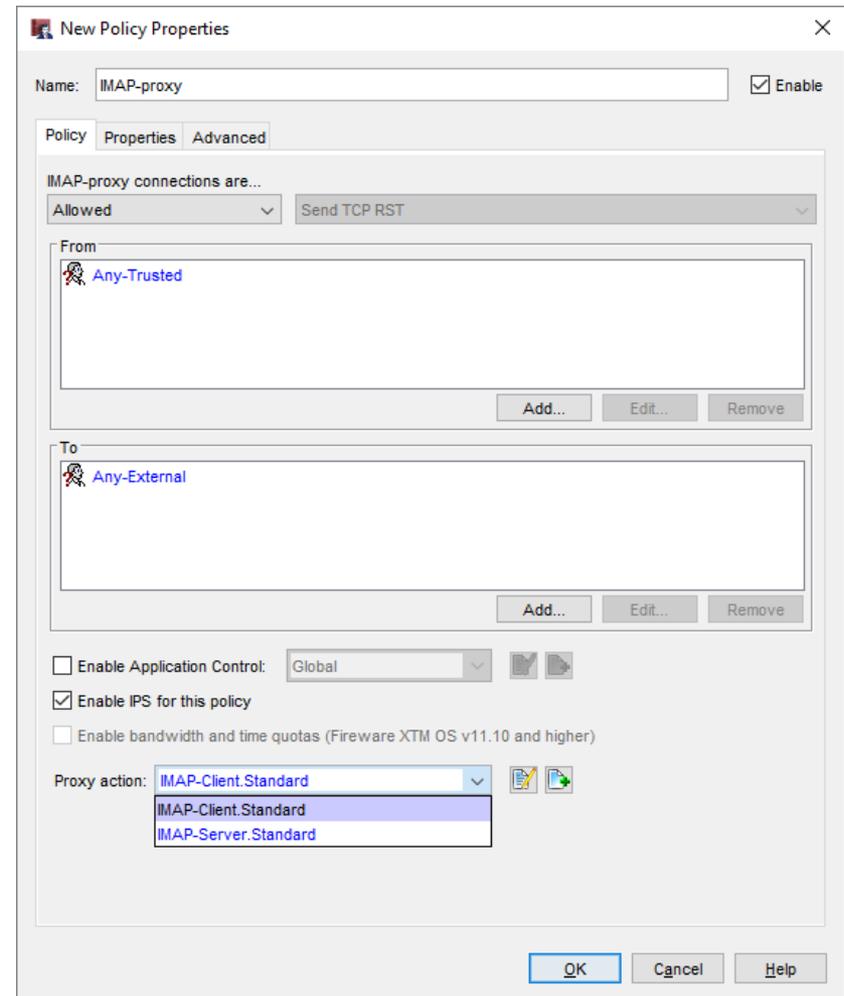
# IMAP Proxy Policy

- To add an IMAP proxy policy, select the **IMAP-proxy** policy template



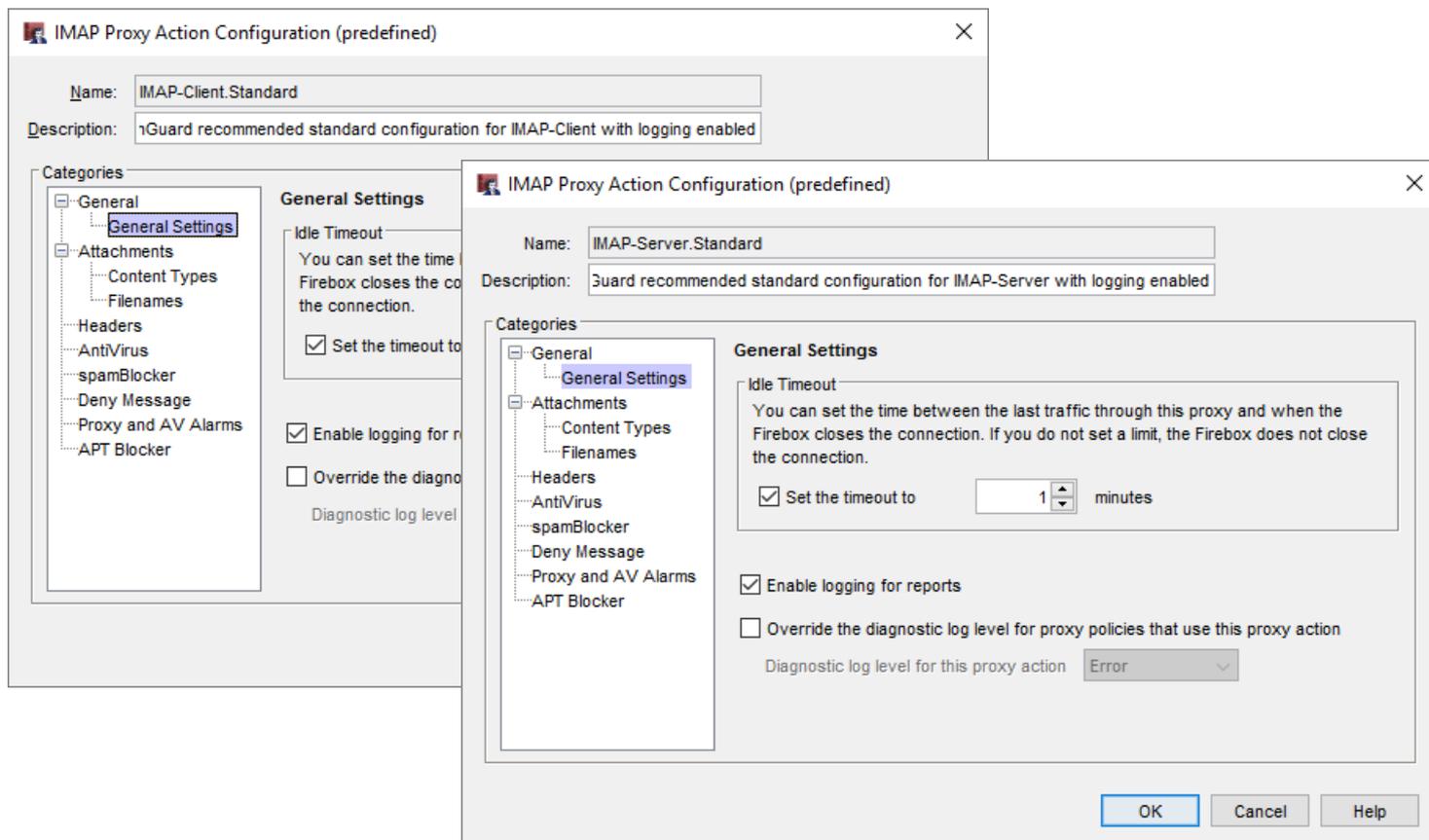
# IMAP Proxy

- There are two new predefined proxy actions:
  - **IMAP-Client.Standard** for outbound IMAP client connections
  - **IMAP-Server.Standard** for inbound connections to an IMAP server



# IMAP Proxy Action Settings

- Settings in IMAP proxy actions are similar to the settings in POP3 proxy actions

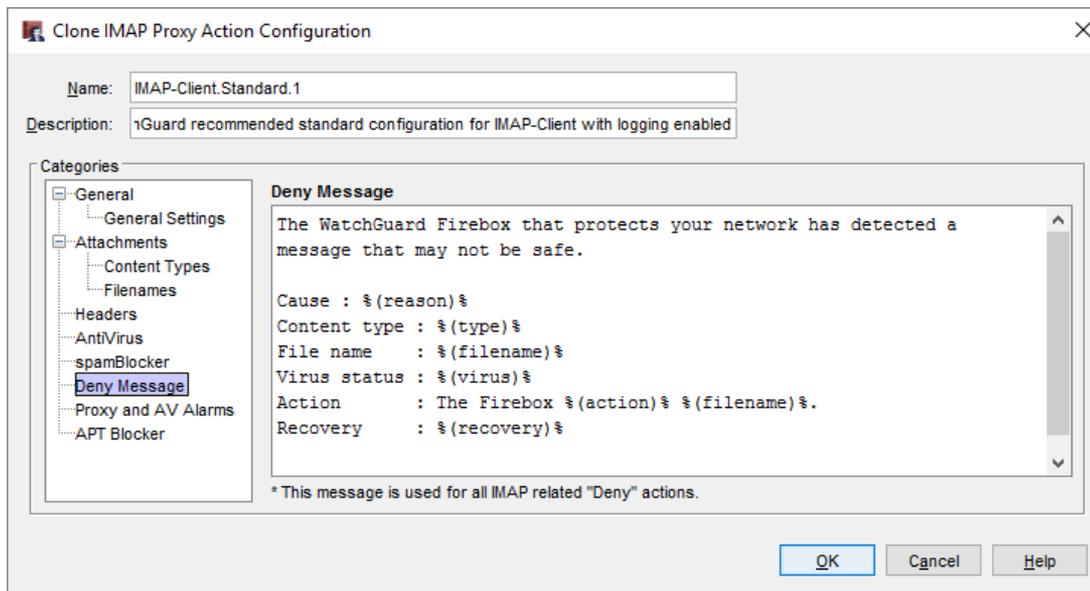


# IMAP Proxy — Subscription Services

- The IMAP proxy supports these Subscription Services:
  - Application Control
  - Intrusion Prevention Service (IPS)
  - Gateway AntiVirus
  - spamBlocker
  - APT Blocker

# IMAP Proxy — Deny Message

- If the IMAP proxy locks or removes an attachment, it adds a text file with the Deny Message as a message attachment
  - The text file attachment file name starts with: `wgrd_deny_msg`
  - The Deny Message text file includes the content you configure in the IMAP proxy action



# IMAP Proxy — Message Scan Cache

- There can be a brief delay while a message is scanned
- To avoid rescanning, the IMAP proxy stores a local cache of email message actions and scan results
- The cached information includes:
  - Message UID and Envelop hash value (to identify the message)
  - spamBlocker score result and action
  - Virus Outbreak Detection and action
  - Final action for the message and the reason:
    - Filename, Content Type, and Header filtering
    - Gateway AV and APT Blocker scans

# IMAP Proxy — Local Message Scan Cache

- If a requested message is in the cache, the IMAP proxy uses the prior message handling/scanning result
- If a requested message is not in the cache, the IMAP proxy:
  - Gets the full email message for scanning
  - Stores the handling/scanning results to the cache
- The cache size varies by Firebox model and is not configurable



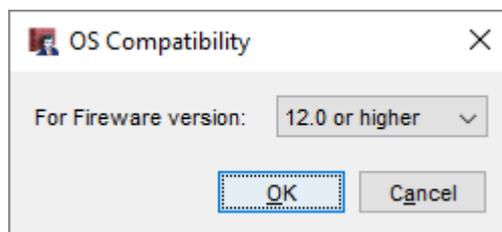
# New OS Compatibility Setting

# Fireware OS Compatibility Setting

- You can use Policy Manager to configure Fireboxes that use different versions of Fireware
  - Some Fireware features are supported only in specific Fireware versions or have different settings in different Fireware versions
  - If you use Policy Manager to create a new Firebox configuration, you must select the OS Compatibility setting to one of these options:
    - 11.4 - 11.8.x
    - 11.9 - 11.12.x
    - 12.0 or higher (*new*)
  - If you open a configuration from a Firebox, the OS Compatibility is automatically set, based on the installed version of Fireware

# New OS Compatibility Setting

- To configure the OS Compatibility setting, in Policy Manager, select **Setup > OS Compatibility**
- To configure features that require Fireware v12.0, the OS Compatibility must be set to **12.0 or higher**
- The Fireware version is automatically set to v12.0 or higher when you open a configuration from a Firebox that runs Fireware v12.0





# Gateway Wireless Controller Enhancements

# AP Firmware Updates

- Updated AP firmware includes stability and security enhancements
  - AP100, AP102, AP200 — 1.2.9.13
  - AP300 — 2.0.0.8
  - AP120, AP320, AP322, AP420 — 8.3.0
    - Version 8.3.0 firmware for AP120, AP320, AP322, and AP420 is only supported for Fireboxes that run Fireware v11.12.4 or higher

# Improved Discovery and Pairing Times

- Much faster initial discovery and pairing times for AP120, AP320, AP322, and AP420 devices with v8.3.0 firmware
- It now only takes a few minutes for new AP devices to be discovered and paired to the Gateway Wireless Controller

# Increased Wireless Maps Scan Interval

- The default **Wireless Scan Interval** in the Gateway Wireless Controller settings is now set to every 4 hours instead of 1 hour, which reduces resource usage
- The wireless scan interval is used for AP channel selection, wireless deployment maps, and rogue access point detection

Management VLAN tagging

Enable Management VLAN tagging

Management VLAN ID

Discovery Broadcasts

Broadcast on all interfaces

Only discover WatchGuard AP devices on these broadcast IP addresses

**BROADCAST IP ADDRESS**

Disable automatic discovery of WatchGuard AP devices

**Wireless Scan Interval**

Hours between automatic wireless scans

Alarms

Send alarm notification when an Access Point goes offline

Send alarm notification when a Rogue Access Point is detected

# Rate Shaping Enhancements

- You can now configure separate upload and download rate limits for each SSID and for each user in an SSID configuration
  - AP100, AP102, AP200, and AP300 devices only support the download rate limits

Restrict download bandwidth on the SSID to  
 Kbps (0 for unlimited)

Restrict upload bandwidth on the SSID to  
 Kbps (0 for unlimited)

Enable per user bandwidth control

Restrict download bandwidth on the SSID to  Kbps (0 for unlimited)

Restrict upload bandwidth on the SSID to  Kbps (0 for unlimited)

# Deprecated Wireless Options

- **Restart Wireless**
  - You can now only complete a reboot action for an AP device
  - When you reboot an AP device manually or as a scheduled restart, the configuration is reloaded and auto-channel selection occurs
- **Outdoor only channels** — Outdoor models AP102 and AP322 will continue to enforce channel restrictions according to outdoor-only channel availability
- **Disable DFS channels** — You can no longer disable the use of DFS channels on any AP device model
- **Rate option** — The Rate control option for a radio is removed; the default setting is now **Auto**

# Wireless Option Terminology Updates

- Improved parity between Wi-Fi Cloud and local Gateway Wireless Controller (GWC) feature terminology

	Previous Name	New Name
<b>AP device and GWC Settings</b>	Management VLAN	Communication VLAN
<b>Radio Settings</b>	Channel HT Mode	Channel Width
	TX Power	Transmit Power
	Country	Country of Operation
	Band	Frequency Band
<b>SSID Settings</b>	Broadcast SSID and respond to SSID queries	Broadcast SSID
	Station Isolation	Client Isolation
<b>Monitoring</b>	Foreign BSSIDs	External BSSIDs



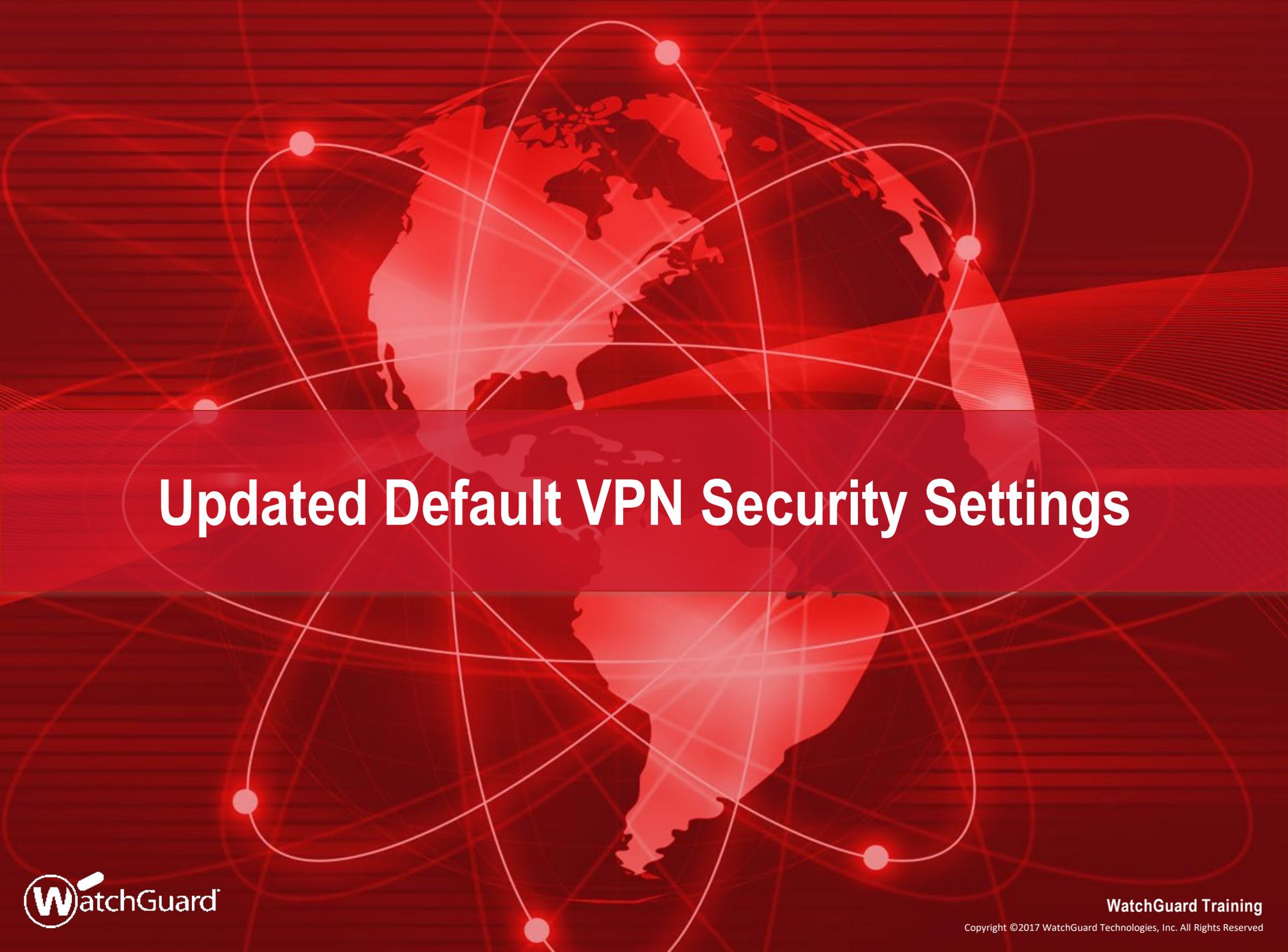
# Mobile VPN with PPTP Removed

# Mobile VPN with PPTP Removed

- In Fireware v12.0, Mobile VPN with PPTP is no longer available
  - PPTP is an older VPN protocol that is not considered secure
- If your configuration includes Mobile VPN with PPTP, we recommend that you use a different Mobile VPN solution before you upgrade
  - To compare mobile VPN solutions, see [Select the Type of Mobile VPN to Use](#) in *Fireware Help*
  - For minimal changes to your Firebox and mobile clients, we recommend that you select the Mobile VPN with L2TP solution
  - For more information, see [How do I migrate from PPTP to L2TP?](#) in the WatchGuard Knowledge Base

# Mobile VPN with PPTP Removed

- After you upgrade to Fireware v12.0:
  - If the built-in *PPTP-Users* group includes users, or if an alias or policy includes the *PPTP-Users* group, this group is renamed to *PPTP-Users-Legacy*
  - You can view and delete the *PPTP-Users-Legacy* group
  - You cannot view the Mobile VPN with PPTP configuration in the WebUI, Policy Manager, or the CLI



# Updated Default VPN Security Settings

# Updated Default VPN Security Settings

- New VPN connections created in Fireware v12.0 have stronger default authentication and encryption settings
- The new default settings apply to all VPN products:
  - Manual BOVPN
  - BOVPN virtual interfaces
  - Mobile VPN with IPSec
  - Mobile VPN with SSL
  - Mobile VPN with L2TP

# Updated Default VPN Security Settings

- If you use Policy Manager v12.0 to open an XML configuration file for Fireware v11.12.4 or lower, the new default settings for BOVPN, BOVPN virtual interfaces, Mobile VPN with IPsec, and Mobile VPN with L2TP do not appear for new VPN connections
  - To convert the configuration file to v12.0, select **Setup > OS Compatibility**
  - After the file is converted, the default settings appear for new VPN connections

# Updated Default VPN Security Settings

- For BOVPN, BOVPN virtual interfaces, and Mobile VPN with IPSec, the new Phase 1 and 2 defaults are:
  - Authentication — **SHA-2 (256)**
  - Encryption — **AES (256)**
  - Diffie-Hellman Group — **14**
  - Perfect Forward Secrecy (PFS) — **Enabled**
- For BOVPN and BOVPN virtual interfaces, the new SA Life value is **24 hours**
- The Traffic option for Force Key Expiration is now disabled for Mobile VPN with IPSec

# Updated Default VPN Security Settings

- Phase 1 settings for BOVPN and BOVPN virtual interfaces

Transform Settings

Authentication: SHA2-256

Encryption: AES(256-bit)

SA Life: 24 hours

Key Group: Diffie-Hellman Group 14

OK CANCEL

Version: IKEv1

Mode: Main

NAT Traversal

Keep-alive Interval: 20 seconds

IKE Keep-alive

Message Interval: 30 seconds

Max failures: 5

Dead Peer Detection (RFC3706)

Traffic idle timeout: 20 seconds

Max retries: 5

Transform Settings

PHASE 1 TRANSFORM	KEY GROUP
SHA2-256-AES(256-bit)	Diffie-Hellman Group 14

# Updated Default VPN Security Settings

- Phase 2 settings for BOVPN and BOVPN virtual interfaces



Perfect Forward Secrecy

Enable Perfect Forward Secrecy Diffie-Hellman Group 14

IPSec Proposals

**PHASE 2 PROPOSALS**

ESP-AES256-SHA256

The screenshot shows a configuration interface for VPN settings. A red rounded rectangle highlights the 'Perfect Forward Secrecy' section, which includes a checked checkbox for 'Enable Perfect Forward Secrecy' and a dropdown menu set to 'Diffie-Hellman Group 14'. Below this, the 'IPSec Proposals' section is visible, featuring a grey bar with the text 'PHASE 2 PROPOSALS' and the proposal name 'ESP-AES256-SHA256' listed underneath.

# Updated Default VPN Security Settings

- Phase 1 and 2 settings for Mobile VPN with IPsec

Phase 1 Settings

Authentication

Encryption

**ADVANCED**

Phase 2 Settings

PFS

Type

Authentication

Encryption

Force Key Expiration  Time

Traffic

# Updated Default VPN Security Settings

- For Mobile VPN with SSL, the new defaults are:
  - Authentication — **SHA-2 (256)**
  - Encryption — **AES (256)**

General	Authentication	Advanced
Authentication	SHA-256	▼
Encryption	AES (256-bit)	▼
Data channel	TCP	▼ 443
Configuration channel (TCP)	443	
Keep-Alive Interval	10	seconds
Keep-Alive Timeout	60	seconds
Renegotiate Data Channel	61	minutes

# Updated Default VPN Security Settings

- For Mobile VPN with L2TP, the new Phase 1 defaults are:
  - SHA2(256)–AES(256) and Diffie-Hellman 14
  - SHA1–AES(256) and Diffie-Hellman 20
  - SHA1–AES(256) and Diffie-Hellman 2
- Phase 2 defaults:
  - ESP–AES(256)–SHA1
  - ESP–AES(128)–SHA1
  - ESP – AES(256)–SHA2(256)

# Updated Default VPN Security Settings

- Phase 1 and 2 settings for Mobile VPN with L2TP

Transform Settings

PHASE 1 TRANSFORM	KEY GROUP
SHA1-AES(256-bit)	Diffie-Hellman Group 2
SHA1-AES(256-bit)	Diffie-Hellman Group 20
SHA2-256-AES(256-bit)	Diffie-Hellman Group 14

[ADD](#) [EDIT](#) [REMOVE](#) [MOVE UP](#) [MOVE DOWN](#)

IPSec Proposals

PHASE 2 PROPOSALS
ESP-AES-SHA1
ESP-AES128-SHA1
ESP-AES256-SHA256

ESP-AES-SHA1 [ADD](#) [REMOVE](#) [MOVE UP](#) [MOVE DOWN](#)

[SAVE](#) [CANCEL](#)

# Updated Default VPN Security Settings

- The **Phase 2 Proposals** list now includes the ESP-AES256-SHA256 transform

Phase 2 Proposals

NAME ↕	DESCRIPTION	EDITABLE
ESP-AES-SHA1		No
ESP-AES-MD5		No
ESP-3DES-SHA1		No
ESP-3DES-MD5		No
ESP-DES-SHA1		No
ESP-DES-MD5		No
ESP-AES256-SHA256		No
ESP-AES128-SHA1		No

ADD EDIT REMOVE

# Updated Default VPN Security Settings

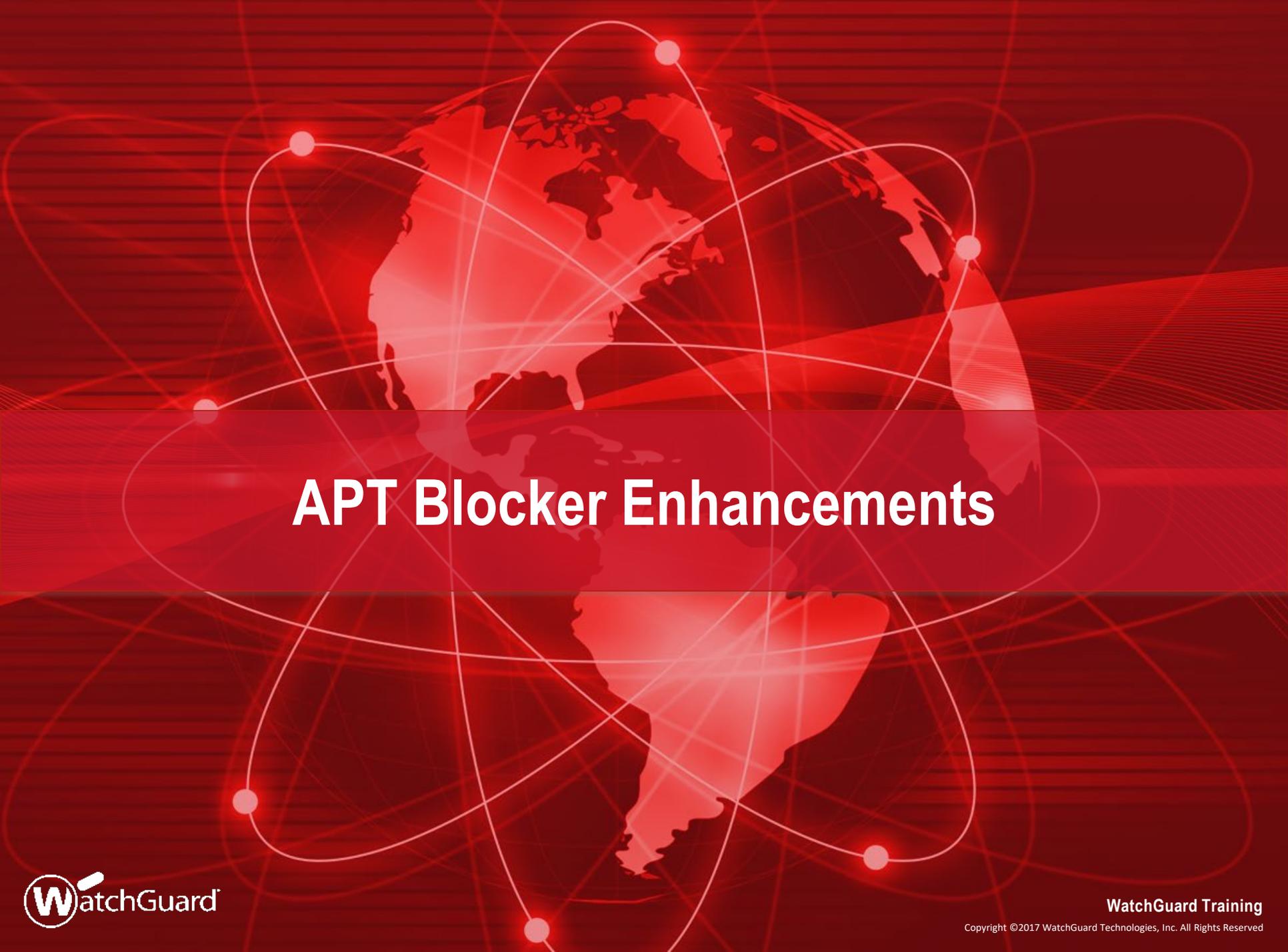
- SHA-2 is supported on these Firebox and XTM device models:
  - All Fireboxes
  - XTM devices with hardware cryptographic acceleration for SHA-2
- SHA-2 is not supported on XTM 505, 510, 520, 530, 515, 525, 535, 545, 810, 820, 830, 1050, and 2050 devices
- If your XTM device does not support SHA-2, the available proposals on your device do not include SHA-2



# Removed Mobile VPN with SSL Settings

# Removed Mobile VPN with SSL Settings

- These obsolete security settings were removed from Mobile VPN with SSL:
  - Encryption — Blowfish and DES
  - Authentication — MD5
- If your configuration includes MD5, this setting changes to SHA-256 after the upgrade
- If your configuration includes Blowfish or DES, this setting changes to AES-256 after the upgrade



# APT Blocker Enhancements

# APT Blocker JavaScript Scanning in Email

- APT Blocker now detects and scans JavaScript (.JS) files in email attachments
- This can help protect your network from a recent trend in ransomware delivered through JavaScript email attachments

# APT Blocker JavaScript Scanning in Email

- APT Blocker now scans these file types:
  - Windows PE (Portable Executable) files, such as: .CPL, .EXE, .DLL, .OCX, .SYS, .SCR, .DRV, and .EFI
  - Adobe PDF documents
  - Microsoft Office documents
  - Rich Text Format (.RTF) documents
  - Android executable files (.APK)
  - Apple Mac application files (.APP)
  - **JavaScript files (.JS) — New in v12.0 (email attachments only)**

# APT Blocker Zero-Day Protection for Email

- A zero-day attack is a new attack that has not yet been analyzed and identified
- APT Blocker can help protect your network from zero-day attacks that are sent in email attachments
- When APT Blocker is enabled, the SMTP or IMAP proxy can delay delivery of the message while it submits the file attachment to the Lastline data center for analysis
  - APT Blocker analysis can take up to a few minutes for each file
  - If the Firebox cannot connect to the Lastline data center, APT Blocker releases the message
- Zero-day protection is always enabled in the IMAP proxy and is a configurable option in the SMTP proxy

# APT Blocker Zero-Day Protection — SMTP

- The SMTP proxy has a new APT Blocker configuration option to enable zero-day protection
  - In previous Fireware versions, the SMTP proxy delivered a message while APT Blocker analysis of all attachments was in progress; this is still the default behavior
    - The default setting enables immediate message delivery, but does not provide protection against zero-day attacks in email attachments
  - You can now configure the SMTP proxy to delay delivery of a message until APT Blocker analysis of all attachments is complete
    - This protects against zero-day attacks, but can introduce a delay in message delivery while APT Blocker analysis is in progress

# APT Blocker Zero-Day Protection — SMTP

- To enable APT Blocker zero-day protection, in the APT Blocker settings clear the **Release messages immediately when attachments are submitted for APT Blocker analysis** check box

Proxy Actions / Edit

### SMTP Proxy Action Settings

Name: SMTP-Incoming.Standard

Description: WatchGuard recommended standard configuration for SMTP-Incoming with logging enabled

General | ESMTMP | Attachments | Address | Headers | Deny Messages | Gateway AV | Data Loss Prevention

Proxy and AV Alarms | **APT Blocker**

#### APT Blocker

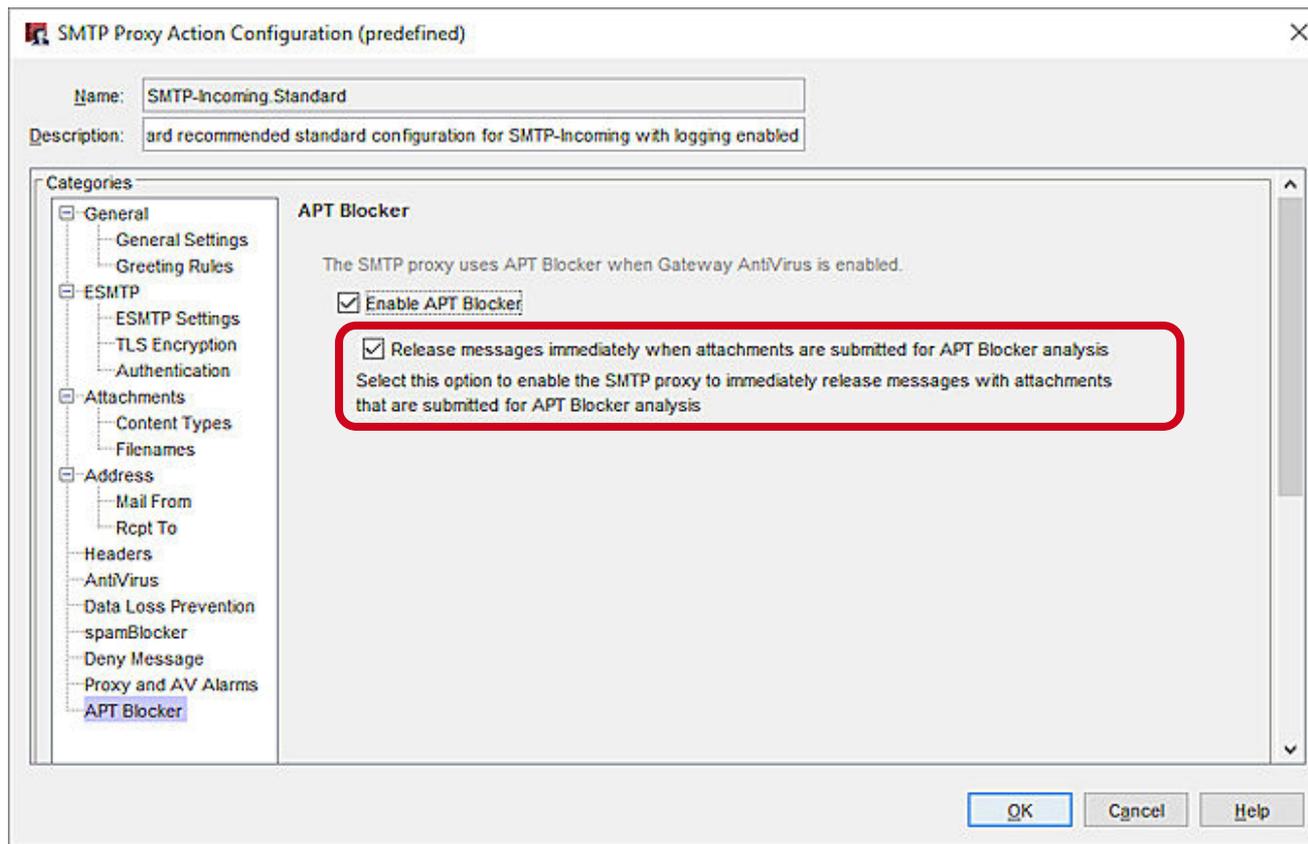
Enable APT Blocker  
The SMTP proxy uses APT Blocker when Gateway AntiVirus is enabled.

Release messages immediately when attachments are submitted for APT Blocker analysis.  
Select this option to enable the SMTP proxy to immediately release messages with attachments that are submitted for APT Blocker analysis.

SAVE CANCEL

# APT Blocker Zero-Day Protection — SMTP

- The new APT Blocker zero-day protection option in Policy Manager



# APT Blocker Zero-Day Protection — SMTP

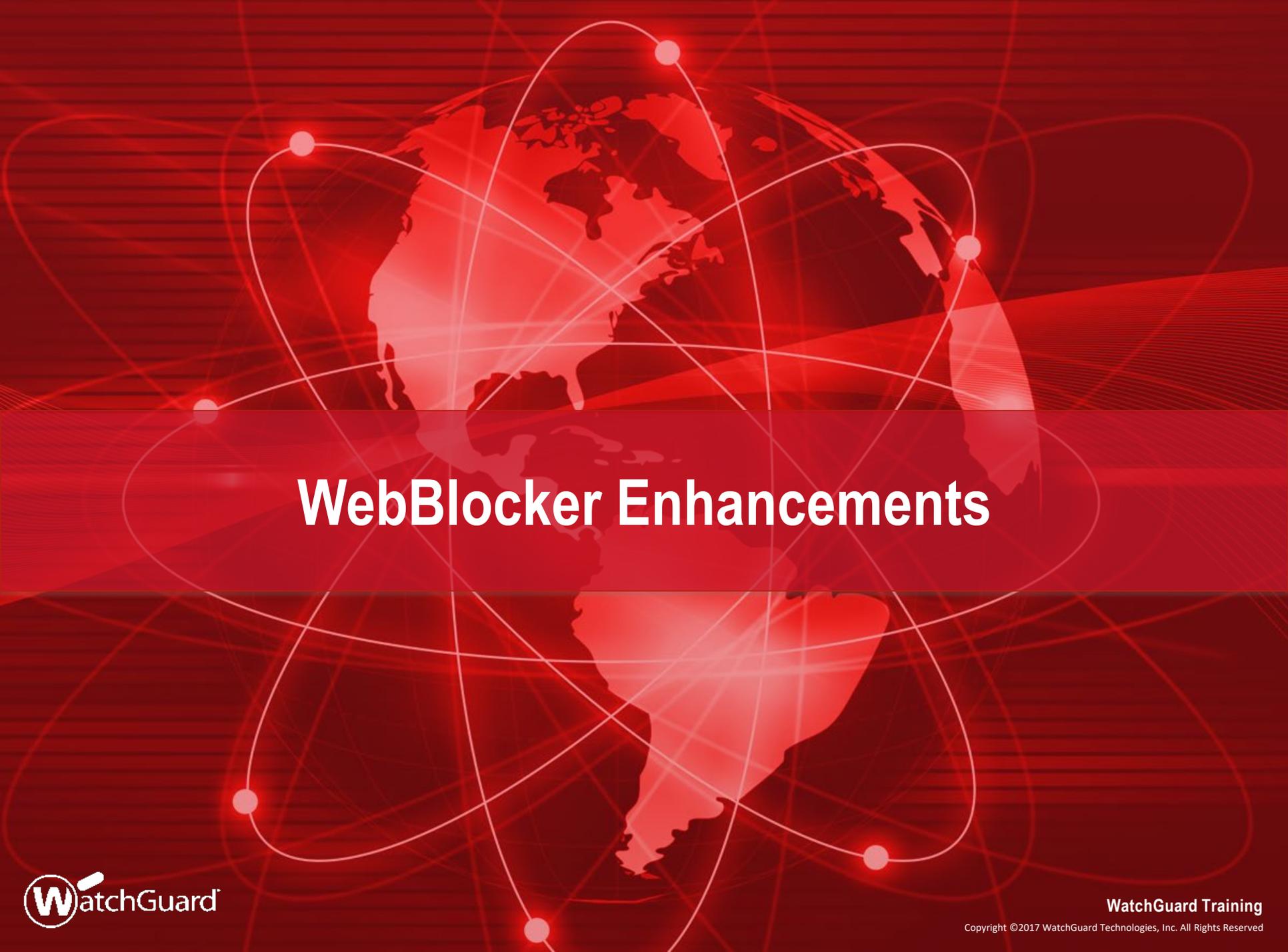
- When you enable zero-day protection in the SMTP proxy, if the MD5 value of an SMTP file attachment does not match the MD5 value of a previously analyzed file, the SMTP proxy delays delivery of the message while it submits the file attachment to the Lastline data center for analysis
  - If the SMTP proxy receives the result from Lastline before the sending MTA times out, the proxy takes the configured APT Blocker action based on the result
  - If the sending MTA times out before the transaction is completed, the message is not delivered
  - If the sending MTA resends the message, the SMTP proxy takes the configured APT Blocker action based on the APT Blocker analysis result

# APT Blocker Zero-Day Protection — IMAP

- Zero-day protection is always enabled in the IMAP proxy
- If the MD5 value of an IMAP file attachment does not match the MD5 value of a previously analyzed file, the IMAP proxy delays delivery of the message while it submits the file attachment to the Lastline data center for analysis
  - If the IMAP proxy receives the result from Lastline before the IMAP server times out, the proxy takes the configured APT Blocker action based on the result
  - If the IMAP server times out before the transaction is completed, the IMAP client cannot retrieve the message
  - When the IMAP client requests the message again, the IMAP proxy takes the configured APT Blocker action based on the APT Blocker analysis result

# APT Blocker Zero-Day Protection in Email

- Zero-day protection can cause a delay in message delivery, especially for messages that contain multiple attachments
- The IMAP proxy submits all file attachments for APT Blocker analysis at the same time
- The SMTP proxy submits file attachments for APT Blocker analysis one at a time
  - To reduce delivery delays, senders can attach multiple files as a single archive file
  - The SMTP proxy submits the archive for APT Blocker analysis, all files are analyzed at the same time



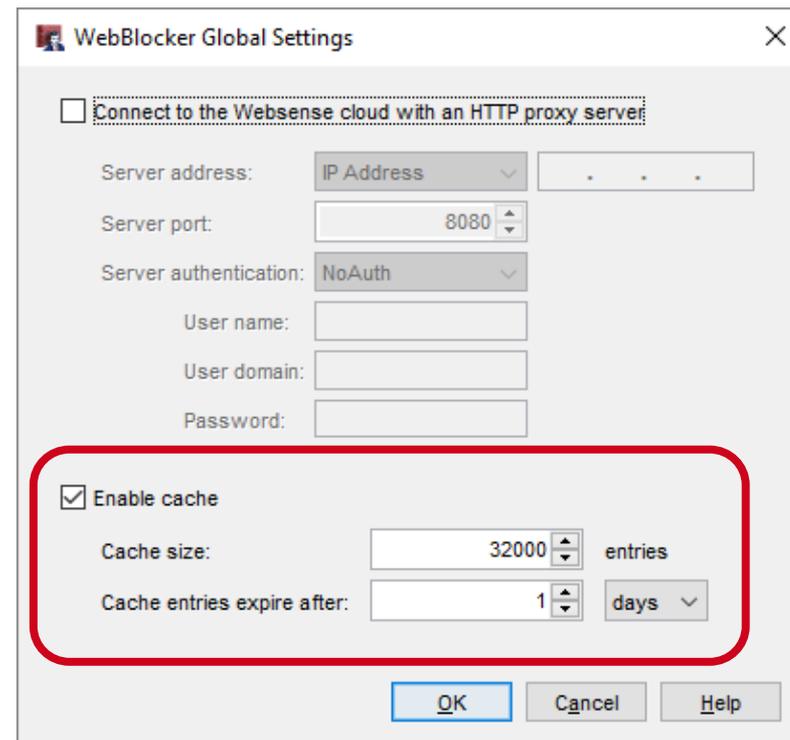
# WebBlocker Enhancements

# WebBlocker Encrypted Lookups

- Lookup requests from the Firebox to the Websense cloud are now encrypted with HTTPS
  - Websense is now Forcepoint
- If your Firebox uses a web proxy server for connections to Websense cloud, make sure the proxy server can handle HTTPS connections

# WebBlocker Configurable Cache Settings

- To improve performance, WebBlocker stores recent URL lookups in a local cache on the Firebox
- You can now set the WebBlocker cache settings in **WebBlocker Global Settings**
- We recommend that you start with the default cache size and expiration settings



WebBlocker Global Settings

Connect to the Websense cloud with an HTTP proxy server

Server address: IP Address . . .

Server port: 8080

Server authentication: NoAuth

User name:

User domain:

Password:

Enable cache

Cache size: 32000 entries

Cache entries expire after: 1 days

OK Cancel Help

# WebBlocker Configurable Cache Settings

- Two new WebBlocker Global settings:
  - **Cache Size**
    - Controls how many recent URL lookups are stored in the cache
    - You can change the cache size to balance WebBlocker lookup performance with memory use on the Firebox
    - The maximum cache size varies by Firebox model
  - **Expiration**
    - Controls how long URL lookups remain in the cache
    - The default expiration setting is 1 day
    - Previously, the cache expiration was not configurable



# Larger IPS Signature Set

# Larger IPS Signature Set

- Intrusion Prevention Service (IPS) now includes a larger signature set for some Firebox models
- Signature sets include both IPS and Application Control rules; only the quantity of IPS rules changed
  - Standard signature set with approximately 1800 signatures:
    - Firebox T10, XTM 2 Series, FireboxV, XTMv, Firebox Cloud with less than 4 GB memory
  - Enhanced signature set with approximately 6000 signatures:
    - Firebox T30, T50, T70, M200, M300, XTM 33, 330, 5 Series, 810, 820, 830, 1050, and 2050

# Larger IPS Signature Set

- Full signature set with approximately 8000 signatures (new in v12.0):
  - M370, M400, M440, M470, M500, M570, M670 M4600, M5600, XTM 870, 1500, 2520, FireboxV, XTMv, Firebox Cloud with 4 GB or more of memory



# WatchGuard Cloud

# WatchGuard Cloud

- WatchGuard Cloud is WatchGuard's forthcoming Cloud platform, where you can connect to Dimension Cloud for visibility and management of Fireboxes that run Fireware v12.0 or higher
- Fireboxes that run v12.0 or higher now include a menu option for WatchGuard Cloud
  - Fireware Web UI — **Setup > WatchGuard Cloud**
  - Policy Manager — **System > WatchGuard Cloud**
- For the Fireware v12.0 release, you cannot enable WatchGuard Cloud on your Firebox

# WatchGuard Cloud

WatchGuard Cloud

Click the lock to make changes

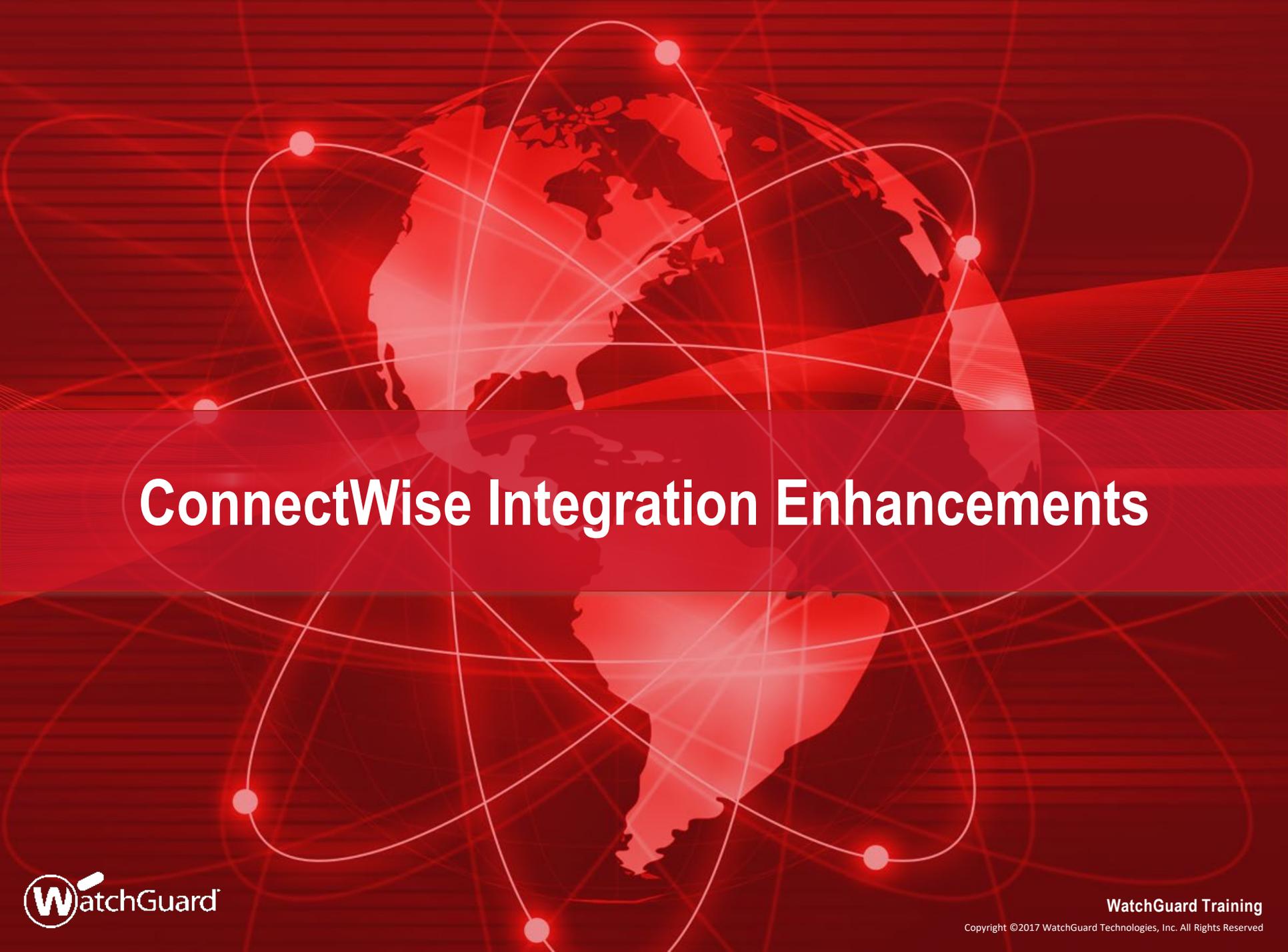
To use this feature, the feature key on the device must include a current version of LiveSecurity Service and Dimension Basic or Dimension Total.

File Edit View **Setup** Network FireCluster VPN Subscription Services Help

- System...
- Feature Keys...
- Aliases...
- Logging...
- Authentication
- Certificates...
- Actions
- Default Threat Protection
- NTP...
- SNMP...
- Technology Integrations...
- WatchGuard Cloud...**
- Managed Device Settings...
- Global Settings...
- OS Compatibility...

Order	Policy Type	From
1	P-proxy	Any
2	TP-proxy	Any-External
3	TP-proxy	Any
4	P3-proxy	Any-Trusted
5	TPS	AP Users (Firebox-DE
6	TPS-proxy	Any
7	3-Gateway-Wireless-Co...	Any-Trusted, Any-Op
8	PLICIT-proxy	Any-Trusted, Any-Op
9	P	Any
10	3-Auth	Any-Trusted, Any-Op
11	3-Auth	Any-Trusted, Any-Op
12	3-PAC-File-Download	Any-Trusted, Any-Op
13	3-Cert-Portal	Any-Trusted, Any-Op
14	3-Fireware-XTM-WebUI	Any
15	g	Any-Trusted, Any-Op
16	DNS-proxy	Any-External
17	WG-Firebox-Mgmt	Any-External, Any-Tr

Fireware XTM v12.0.0



# ConnectWise Integration Enhancements

# Service Ticket Priority

- You can now configure the default ticket priority for service tickets generated by a Firebox
- To choose the priority from your ConnectWise configuration, click **Lookup**
- You can customize these priority levels in ConnectWise

Enable ConnectWise

Site

Login Company

Public API Key

Private API Key

You must associate the Firebox with an active Company defined in ConnectWise.

Company ID  [LOOKUP](#)

Ticket priority to use for Service Tickets created by the Firebox.

Service Ticket Priority  [LOOKUP](#)

[TEST SETTINGS](#)

**Service Ticket Priority Lookup**

**SERVICE TICKET PRIORITY**

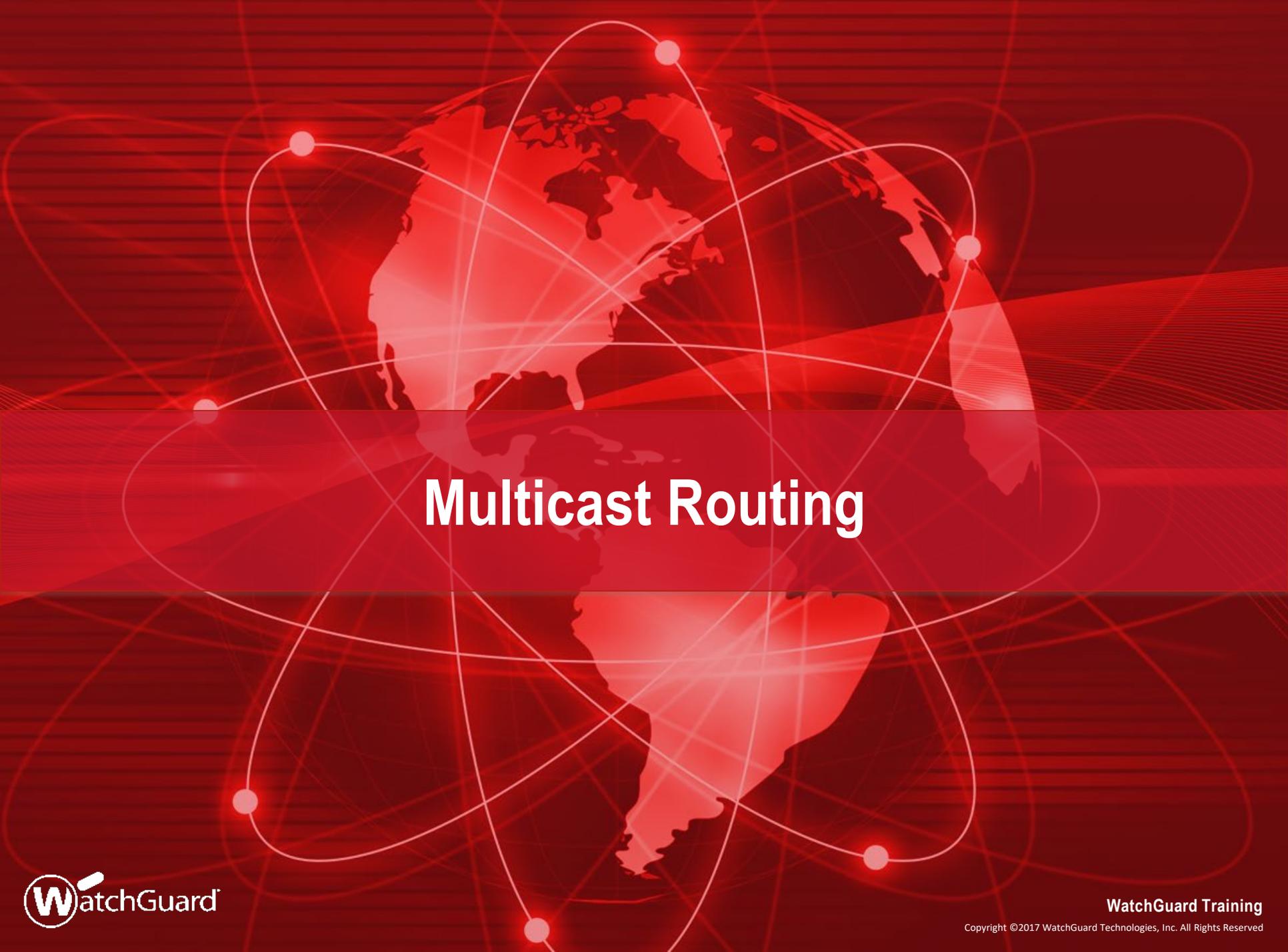
Priority 1 - Emergency Response

**Priority 2 - Quick Response**

Priority 3 - Normal Response

Priority 4 - Scheduled Maintenance

[OK](#) [CANCEL](#)



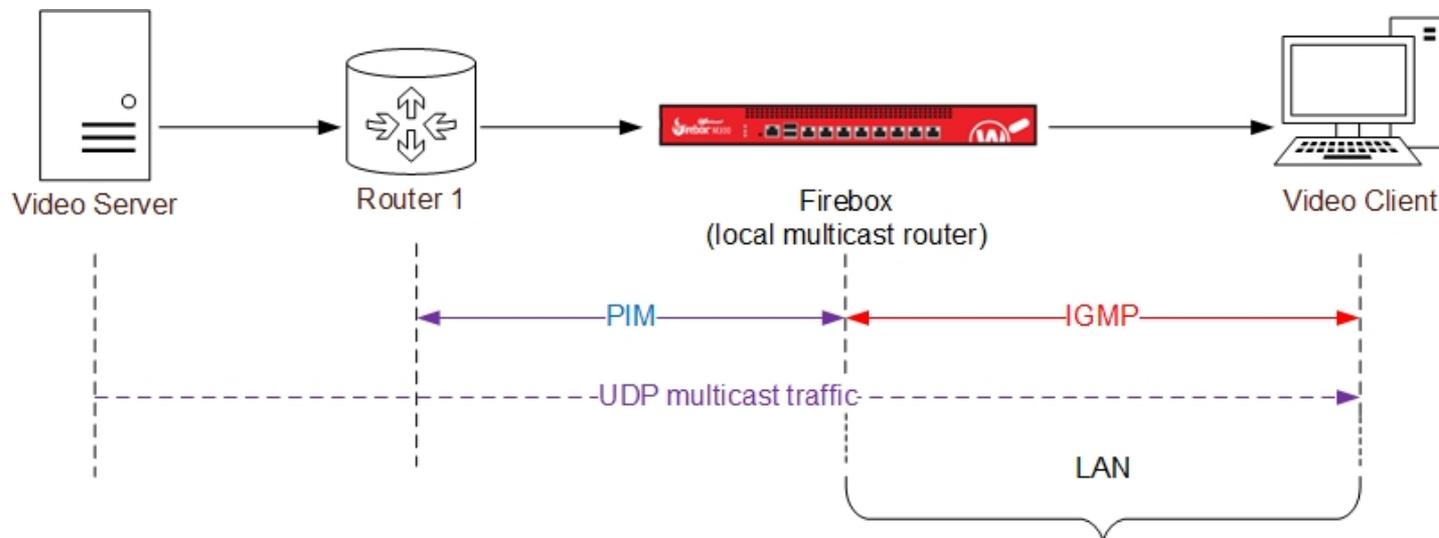
# Multicast Routing

# Multicast Routing

- Fireware now includes support for multicast routing, a networking method for efficient distribution of one-to-many traffic
- Common uses include VOIP, video on demand (VOD), video conferencing, and IP television (IPTV)
- The Firebox acts as a local multicast router to forward multicast traffic from the source to receivers on your network
  - Receivers are nodes, such as workstations, that join the multicast group

# Multicast Routing — Topology

- The Firebox is the local multicast router in this diagram



# Multicast Routing

- Multicast routing on the Firebox has these configurable options:
  - Enable multicast globally
  - Select up to 31 interfaces for multicast
  - Select one or more Rendezvous Points (RPs)
- The most common multicast protocols are supported

# Multicast Routing — Support Details

Supported Protocols	Unsupported Protocols
PIM Sparse Mode (PIM-SM)	Static multicast routes
Basic IGMP	PIM-DM
IGMPv2 and v3	IGMP snooping
IPv4	IGMP proxy
	IPv6

Supported Firebox Features	Unsupported Firebox Features
Mixed Routing mode	Bridge mode
BOVPN virtual interfaces	Drop-in mode
FireCluster Active/Passive	FireCluster Active/Active
	Manual BOVPN

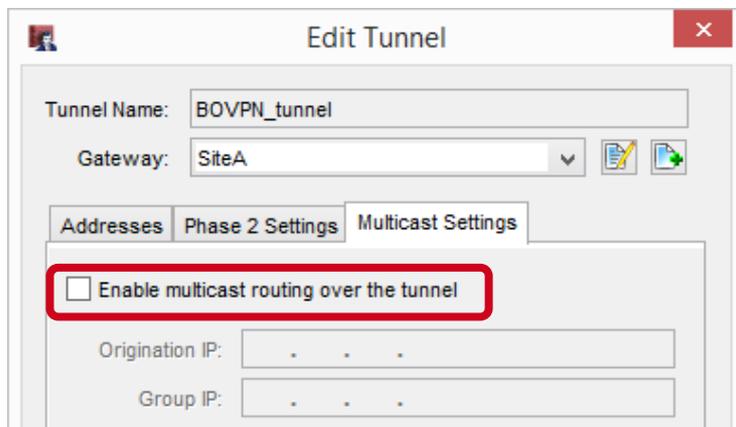
# Multicast Routing — Support Details

Supported Interfaces	Unsupported Interfaces
Physical	Modem
VLAN	Mobile VPN
Bridge	Loopback
Link aggregation	
Wireless	
BOVPN virtual interfaces	

Supported Zones
External
Trusted
Optional
Custom

# Multicast Routing — BOVPN Support Details

- The Firebox includes a legacy multicast setting for BOVPN that is supported in Fireware v12.0
- Before you can use the new multicast feature, you must disable the legacy BOVPN multicast setting



Edit Tunnel

Tunnel Name: BOVPN\_tunnel

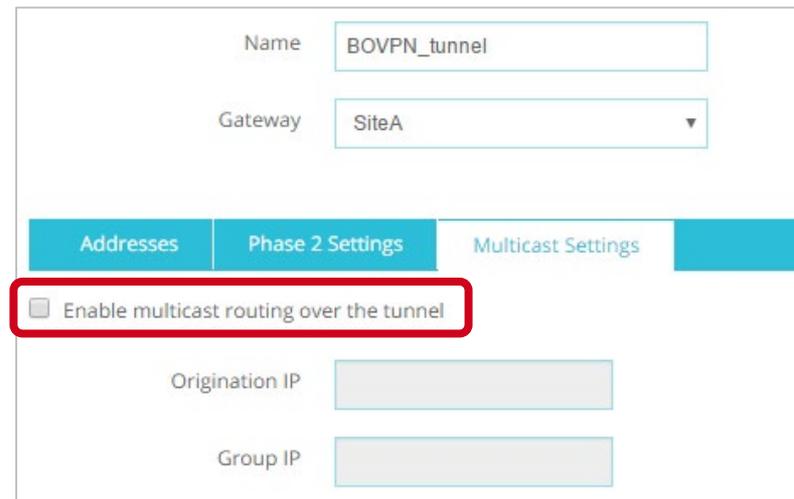
Gateway: SiteA

Addresses Phase 2 Settings Multicast Settings

Enable multicast routing over the tunnel

Origination IP: . . .

Group IP: . . .



Name: BOVPN\_tunnel

Gateway: SiteA

Addresses Phase 2 Settings Multicast Settings

Enable multicast routing over the tunnel

Origination IP

Group IP

# Multicast Routing — Configuration (Web UI)

**DASHBOARD**

**SYSTEM STATUS**

**NETWORK**

- Interfaces
- ARP Entries
- Link Aggregation
- VLAN
- Bridge
- Loopback
- Multi-WAN
- Dynamic DNS
- NAT
- Routes
- Dynamic Routing
- Multicast Routing**

Multicast Routing

Enable Multicast Routing

Multicast Interfaces

NAME	RP CANDIDATE
Trusted	<input type="checkbox"/>
BovpnVif.1	<input checked="" type="checkbox"/>
Optional-1	<input type="checkbox"/>

**ADD** **REMOVE**

**SAVE**

# Multicast Routing — Configuration (PM)

C:\My WatchGuard\configs\M400\_50.xml- Fireware XTM Policy Manager

File Edit View Setup **Network** FireCluster VPN Subscription Services Help

Configuration...  
Modem...  
NAT...  
Arp Entries...  
Routes...  
Dynamic Routing...  
Gateway Wireless Controller...  
**Multicast...**

Order	Action	From	To
1		Any	Any
2		Any-Externa203.	
3		Any	Any
4		Any-TrustedAny-	
5		AP Users (F*.wa	
6		Any	Any
7	WatchGuard	WG-Gateway-Wi...	Any-TrustedFiret
8	Explicit-proxy	Explicit-proxy	Any-TrustedFiret
9	RDP_2_Win...	RDP	Any 203.
10	WatchGuard	WG-Auth	Any-TrustedFiret
11	WG-Auth-W...	WG-Auth	Any-TrustedFiret
12	WG-PAC-Fil...	WG-PAC-File-Do...	Any-TrustedFiret
13	WatchGuard	WG-Cert-Portal	Any-TrustedFiret
14	WatchGuard	WG-Fireware-XT...	Any Firet
15	Ping	Ping	Any-TrustedAny
16	DNS-proxy...	DNS-proxy	Any-ExternaAny
17	WatchGuard	WG-Firebox-Mgmt	Any-ExternaFiret
18	Outgoing	TCP-UDP	Any-TrustedAny-
19	BOVPN-Allo...	Any	Any tunn
20	BOVPN-Allo...	Any	tunnel.tucso Any

Filter: None

### Multicast Setup

Enable Multicast Routing (Fireware OS v12.0 and higher)

Multicast Interfaces

Name	RP Candidate
BovpnVif.1	<input checked="" type="checkbox"/>
Optional-1	<input type="checkbox"/>
Trusted	<input type="checkbox"/>

Buttons: Add... Remove OK Cancel Help

# Multicast Routing — Policies and Aliases

- When you enable multicast routing, new policies for the PIM and IGMP protocols are added to your configuration
- The alias *Any-Multicast* is added to your configuration

<input type="checkbox"/>	ORDER	ACTION	POLICY NAME	TYPE	FROM	TO	PORT
<input type="checkbox"/>	1	✓	MR-PIM-Allow	PIM	Any-Multicast	224.0.0.13, Firebox, Any-Multicast	PIM
<input type="checkbox"/>	11	✓	MR-IGMP-Allow	IGMP	Any-Multicast	224.0.0.0/24	IGMP

# Multicast Routing — Policies and Aliases

- You can specify only these options in a multicast policy:
  - Incoming interfaces
  - Source IP addresses
  - Destination IP addresses
  - Protocols and ports



# What Else is New

# What Else is New

- The WatchGuard Mobile VPN app for iOS has been removed from the Apple Store (not related to Fireware v12.0)
  - If you have this app on your mobile device, we recommend that you use the native iOS VPN client instead



# Thank You!

***NOTHING GETS  
PAST RED.***



**WatchGuard Training**

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