

Private Cloud Quick Start

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CHAPTER 1 INTRODUCTION

FireAMP not only detects viruses, but also gives you features to clean up viruses that were missed by us and other vendors. You can create Custom Whitelists to avoid False Positives (FPs), Simple Custom Detections to control malware outbreaks, and Advanced Custom Signatures for writing your own detections for tracking and removing Advanced Persistent Threats. The reporting lets you know the general security health of your computers, highlights the source of viruses entering your network and attempts to surface security issues in your environment. You can also track a series of different file types traversing your systems to provide powerful timelines for understanding the impact of malware outbreaks in your environment. To get started with FireAMP you will need to log in at the URL you assigned to the FireAMP portal during installation of your Private Cloud device, download a Connector, and configure a policy. Afterwards, you may want to explore the console's abilities to restore quarantined files, add to Custom Whitelists, create Simple Custom Detections,

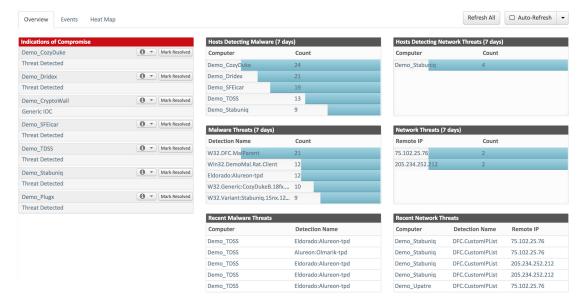
First Use Wizard

The first time you log into the FireAMP console you will be presented with the first use wizard. This wizard can walk you through some of the steps to quickly configure your FireAMP environment by Creating Exclusions for Antivirus Products, setting up Proxies, Configuring a Policy, and Creating Groups.

and push installs of Connectors to your computers.

Dashboard

The FireAMP Dashboard gives you a quick overview of trouble spots on devices in your environment along with updates about malware and network threat detections. From the dashboard page you can drill down on events to gather more detailed information and remedy potential compromises.



Creating Exclusions for Antivirus Products

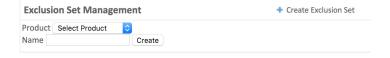
To prevent conflicts between the FireAMP Connector and antivirus or other security software, you must create exclusions so that the Connector doesn't scan your antivirus directory and your antivirus doesn't scan the Connector directory. This can create problems if antivirus signatures contain strings that the Connector sees as malicious or issues with quarantined files.

Creating Antivirus Exclusions in the FireAMP Connector

The first step is to create an exclusion by navigating to **Management > Exclusions** in the FireAMP console.



Click on **Create Exclusion Set** to create a new list of exclusions. Enter a name for the list, select whether it will be for FireAMP Windows or FireAMP Mac Connectors, and click **Create**.





Next click Add Exclusion to add an exclusion to your list.

You will then be prompted to enter a path for the exclusion. Enter the CSIDL of the security products you have installed on your endpoints then click **Create**.



Repeat this procedure for each path associated with your security applications. Common CSIDLs are:

Kaspersky

CSIDL_COMMON_APPDATA\Kaspersky Lab\AVP8\Data

McAfee VirusScan Enterprise

- CSIDL_PROGRAM_FILES\McAfee
- CSIDL_PROGRAM_FILESX86\McAfee
- CSIDL_PROGRAM_FILES\Common Files\McAfee
- CSIDL_COMMON_APPDATA\McAfee
- CSIDL_PROGRAM_FILES\VSE
- CSIDL COMMON APPDATA\VSE
- CSIDL_PROGRAM_FILES\Common Files\VSE

Microsoft ForeFront

- CSIDL_PROGRAM_FILES\Microsoft Forefront
- CSIDL_PROGRAM_FILESX86\Microsoft Forefont

Microsoft Security Client

- CSIDL_PROGRAM_FILES\Microsoft Security Client
- CSIDL_PROGRAM_FILESX86\Microsoft Security Client

Sophos

- CSIDL_PROGRAM_FILES\Sophos
- CSIDL_PROGRAM_FILESX86\Sophos
- CSIDL_COMMON_APPDATA\Sophos\Sophos Anti-Virus\

Splunk

CSIDL_PROGRAM_FILES\Splunk

Symantec Endpoint Protection

- CSIDL_COMMON_APPDATA\Symantec
- CSIDL_PROGRAM_FILES\Symantec\Symantec End Point Protection
- CSIDL_PROGRAM_FILESX86\Symantec\Symantec Endpoint Protection

Once you have added all the necessary exclusions for your endpoints, you will need to add the exclusion set to a policy.

IMPORTANT! CSIDLs are case sensitive.

Creating Exclusions for the FireAMP Connector in Antivirus Soft-

ware

In addition to creating exclusions for antivirus products in the FireAMP Connector, you must also create exclusions for the FireAMP Connector in antivirus products running on your endpoints. The following are the steps for doing this in common antivirus products.

Creating Exclusions in McAfee ePolicy Orchestrator 4.6

- 1. Log in to ePolicy Orchestrator.
- 2. Select Policy > Policy Catalog from the Menu.
- 3. Select the appropriate version of VirusScan Enterprise from the Product pulldown.
- 4. Edit your On-Access High-Risk Processes Policies.
- 5. Select the Exclusions tab click the Add button.
- In the By Pattern field enter the path to your FireAMP Connector install (C:\Program Files\Sourcefire by default) and check the Also exclude subfolders box.

- 7. Click OK.
- 8. Click Save.
- 9. Edit your On-Access Low-Risk Processes Policies.
- 10. Repeat steps 5 through 8 for this policy.

Creating Exclusions in McAfee VirusScan Enterprise 8.8

- 1. Open the VirusScan Console.
- 2. Select On-Access Scanner Properties from the Task menu.
- 3. Select All Processes from the left pane.
- 4. Select the Exclusions tab.
- 5. Click the Exclusions button.
- 6. On the Set Exclusions dialog click the Add button.
- Click the Browse button and select your FireAMP Connector install directory (C:\Program Files\Sourcefire by default) and check the Also exclude subfolders box.
- 8. Click OK.
- 9. Click OK on the Set Exclusions dialog.
- 10. Click OK on the On-Access Scanner Properties dialog.

Creating Exclusions in Managed Symantec Enterprise Protection 12.1

- 1. Log into Symantec Endpoint Protection Manager.
- 2. Click Policies in the left pane.
- 3. Select the Exceptions entry under the Policies list.
- 4. You can either add a new Exceptions Policy or edit an existing one.
- 5. Click Exceptions once you have opened the policy.
- Click the Add button, select Windows Exceptions from the list and choose Folder from the submenu.
- 7. In the Add Security Risk Folder Exception dialog choose [PROGRAM_FILES] from the Prefix variable dropdown menu and enter Cisco in the Folder field. Ensure that Include subfolders is checked.
- 8. Under Specify the type of scan that excludes this folder menu select All.
- 9. Click OK.
- 10. Make sure that this Exception is used by all computers in your organization with the FireAMP Connector installed.

Creating Exclusions in Unmanaged Symantec Enterprise Protection 12.1

- 1. Open SEP and click on Change Settings in the left pane.
- 2. Click Configure Settings next to the Exceptions entry.

- 3. Click the Add button on the Exceptions dialog.
- 4. Select Folders from the Security Risk Exception submenu.
- 5. Select your FireAMP Connector installation folder (C:\Program Files\Sourcefire\FireAMP by default) from the dialog and click OK.
- 6. Click the Add button on the Exceptions dialog.
- 7. Select Folder from the SONAR Exception submenu.
- Select your FireAMP Connector installation folder (C:\Program Files\Sourcefire\FireAMP by default) from the dialog and click OK.
- 9. Click the Close button.

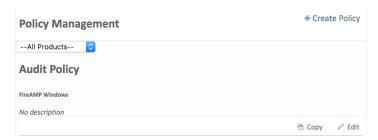
Creating Exclusions for the FireAMP Connector in Microsoft Security Essentials

- 1. Open Microsoft Security Essentials and click on the Settings tab.
- 2. Select Excluded files and locations in the left pane.
- 3. Click the Browse button and navigate to your FireAMP Connector installation folder (C:\Program Files\Sourcefire\FireAMP by default) and click OK.
- Click the Add button then click Save changes.
- 5. Select Excluded processes in the left pane.
- 6. Click the Browse button and navigate to the sfc.exe file (C:\Program Files\Sourcefire\FireAMP\x.x.x\sfc.exe by default where x.x.x is the FireAMP Connector version number) and click OK.
- 7. Click the Add button then click Save changes.

IMPORTANT! Because the process exclusions in Microsoft Security Essentials require a specific path to the sfc.exe file you will need to update this exclusion whenever you upgrade to a new version of the FireAMP Connector.

Configuring a Policy

Policies are configuration settings that are set up for each group that you deploy the FireAMP Connector to. From the menu select **Management > Policies** to be taken to the Policy creation and configuration page.



Click **Create Policy** to create a new policy or **Copy** to create a new policy based on an existing one. Make sure to add the Custom Exclusion Set you created with your antivirus exclusions to this policy.

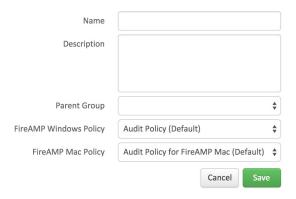
The Protection tab is where the majority of the configuration settings are made. For detailed information see our online documentation.

After you have chosen your configuration settings click the **Create Policy** button to create the policy.

Creating Groups

Now that you have a policy you can create a group that the policy will apply to. Groups allow the computers in an organization to be managed according to their function, location, or other criteria determined by the administrator.

Click **Create Group** to create a new group. Assign the group a name and give it a description, then make sure to assign the policy you previously created to it.



You can repeat this for as many groups as you would like to have in your deployment.

Deploying a Connector

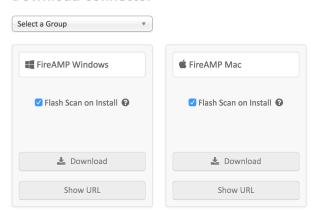
To deploy the FireAMP Connector on endpoints use the FireAMP Connector Installer. Access the installer by going to **Management > Download Connector**.



Downloading the Connector Installer

This takes you to the Download the Connector screen. Select one of the Groups you created in the previous step and click on the **Download** button to download the FireAMP Connector Installer.

Download Connector



Flash Scan on Install

Checking this option will have the FireAMP Connector automatically perform a Flash Scan after it is installed and connected to the cloud. The Flash Scan is a quick scan of running processes and associated registry entries.

Redistributable

Download an installer that contains both 32-bit and 64-bit versions of the FireAMP Connector. This file can be placed on a network share or pushed to all the computers in a group via a tool like System Center Configuration Manager in order to install the FireAMP Connector on multiple computers.

Click the **Download** button once you have selected the Installer options. Save the file to the local computer or a network share accessible by the computers you want to install the Connector on.

IMPORTANT! When using Microsoft System Center Configuration Manager (SCCM) to deploy the Connector to Windows XP computers, you must perform an additional step. Right-click on the FireAMP Connector installer and select Properties from the context menu. Under the Environment tab, check the Allow users to interact with this program box and click OK.

Installing the Connector

Double-click the installer from the computer you want to install the Connector on. If you have your own deployment software, you may want to use command line switches to automate the deployment. Here are the available switches:

/S - Used to put the installer into silent mode.

IMPORTANT! This must be specified as the first parameter.

- /desktopicon 0 A desktop icon for the Connector will not be created.
- /desktopicon 1 A desktop icon for the Connector will be created.
- /startmenu 0 Start Menu shortcuts are not created.
- /startmenu 1 Start Menu shortcuts are created.
- /contextmenu 0 Disables Scan Now from the right-click context menu.
- /contextmenu 1 Enables Scan Now in the right-click context menu.
- /remove 0 Uninstalls the Connector but leaves files behind useful for reinstalling later.
- /remove 1 Uninstalls the Connector and removes all associated files.
- /uninstallpassword [Connector Protection Password] Allows you to uninstall
 the Connector when you have Connector Protection enabled in your policy. You
 must supply the Connector Protection password with this switch.
- /skipdfc 1 Skip installation of the DFC driver.

WARNING! Any Connectors installed using this flag must be in a group with a policy that has **Network > Device Flow Correlation (DFC) > Enable DFC** unchecked.

/skiptetra 1 - Skip installation of the TETRA driver.

WARNING! Any Connectors installed using this flag must be in a group with a policy that has **File > Engines > Offline Engine** set to **Disabled**.

 /D=[PATH] - Used to specify which directory to perform the install. For example /D=C:\tmp will install into C:\tmp.

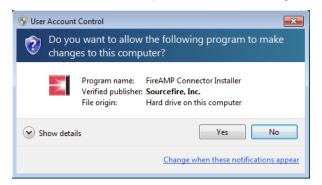
IMPORTANT! This must be specified as the last parameter.

Running the command line installer without specifying any switches is equivalent to / desktopicon 0 /startmenu 1 /contextmenu 1 /skipdfc 0 /skiptetra 0.

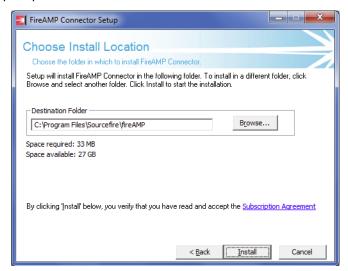
If you use the command line switches to install the FireAMP Connector you should also be aware of the exit codes. They can be found in the immpro_install.log file in the %TEMP% folder.

- 0 Success
- 1500 Installer already running
- 1618 Another installation is already in progress.
- 1633 Unsupported Platform (i.e. installing 32 on 64 and vice versa)
- 1638 This version or newer version of product already exists.
- 1801 invalid install path
- 3010 Success (Reboot required will only be used on upgrade)
- 16001 Your trial install has expired.

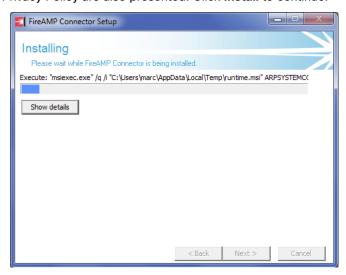
- 16002 A reboot is pending on the users' system that must be completed before installing.
- 16003 Unsupported Operating System (i.e. XP SP2, Win2000)
- 16004 invalid user permissions (not running as admin)

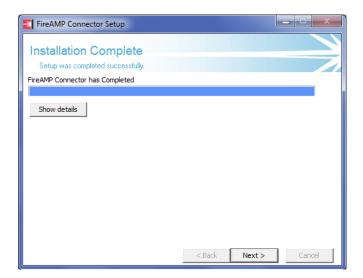


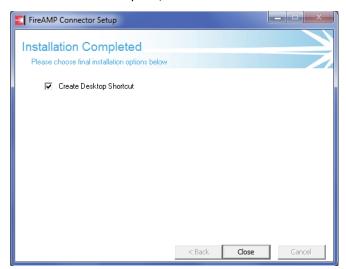
If Windows User Access Control (UAC) is enabled, the user will be presented with a prompt. Click on **Yes** to continue.



Next the user is presented with the install location dialog. In most cases the default location is the best choice. Links to the Connector End User License Agreement and Privacy Policy are also presented. Click **Install** to continue.







When the install is complete, click the **Next** button to continue.

You can leave the box checked to have an icon for the Connector created on the desktop. Click the **Close** button to complete the install. If the option to run a Flash Scan on install was selected, that scan will now execute. The Windows System Tray icon will also indicate that you are now connected to the Cisco Cloud if you selected Cloud Notifications in the policy applied to the Connector.



IMPORTANT! At this point it is extremely important to make sure you have created folder exclusions in all installed security products such as antivirus, intrusion prevention, etc. for the FireAMP Connector directories. See your antivirus software documentation for instructions. Conversely, exclusions should be created within the FireAMP Connector by adding Custom Exclusion Sets to the FireAMP Default Policy for all security and backup applications.

Firewall Connectivity

To allow the FireAMP Connector to communicate with Cisco systems, the firewall must allow the clients to connect to certain servers over specific ports. There are two sets of servers depending on where you are located - one for the European Union and one for the rest of the world.

Firewall Exceptions

The firewall must allow connectivity from the Connector to the following servers over HTTPS (TCP 443):

- Event Server enterprise-event.amp.sourcefire.com
- Management Server enterprise-mgmt.amp.sourcefire.com
- Policy Server policy.amp.sourcefire.com.s3.amazonaws.com
- · Error Reporting crash.immunet.com
- Endpoint IOC downloads https://endpoint-ioc-prod-us.s3.amazonaws.com

To allow the Connector to communicate with Cisco cloud servers for file and network disposition lookups the firewall must allow the clients to connect to the following server over TCP 443 by default or TCP 32137:

· Cloud Host - cloud-ec.amp.sourcefire.com

In order to upload files for analysis, clients must be able to access the following server over TCP 80:

Submission Server - submit.amp.sourcefire.com

If you have TETRA enabled on any of your FireAMP Connectors you must allow access to the following server over TCP 80 for signature updates:

Update Server - update.immunet.com

European Union Firewall Exceptions

Companies located in the European Union must allow connectivity from the Connector to the following servers over HTTPS:

- Event Server enterprise-event.eu.amp.sourcefire.com
- Management Server enterprise-mgmt.eu.amp.sourcefire.com
- Policy Server policy.eu.amp.sourcefire.com.s3.amazonaws.com
- Error Reporting crash.eu.amp.sourcefire.com
- Endpoint IOC Downloads https://endpoint-ioc-prod-eu.s3.amazonaws.com

To allow the Connector to communicate with Cisco cloud servers for file and network disposition lookups the firewall must allow the clients to connect to the following server over TCP 443 by default or TCP 32137:

• Cloud Host - cloud-ec.eu.amp.sourcefire.com

In order to upload files for analysis, clients must be able to access the following server over TCP 80:

Submission Server - submit.eu.amp.sourcefire.com

If you have TETRA enabled on any of your FireAMP Connectors you must allow access to the following server over TCP 80 for signature updates:

Update Server - update.immunet.com

Proxies

The Connector is able to use multiple mechanisms to support proxy servers. A specific proxy server or path to a proxy auto-config (PAC) file can be defined in policy, or the Connector can discover the endpoint proxy settings from the Windows registry.

The FireAMP Connector can be set to discover endpoint proxy settings automatically. Once the Connector detects proxy setting information it attempts to connect to sourcefire.com to confirm the proxy server settings are correct. The Connector will first use the proxy settings specified in the policy. If the Connector is unable to establish a connection to sourcefire.com it will attempt to retrieve proxy settings from the Windows registry on the endpoint. The Connector will attempt to retrieve the settings only from system-wide settings and not per-user settings.

If the Connector is unable to retrieve proxy settings from the Windows registry, it attempts to locate the proxy auto-configuration (PAC) file. This can be specified in policy settings or determined using Web Proxy Auto-Discovery protocol (WPAD). If the PAC file location is specified in policy it has to begin with http or https. Note that PAC files supported are only ECMAScript-based. Since all Connector communications are already encrypted, https proxy is not supported. For version 3.0.6 of the Connector, a socks proxy setting cannot be specified using a PAC file.

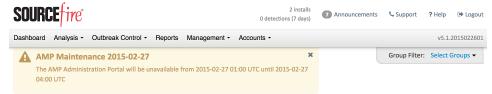
The Connector will attempt to rediscover proxy settings after a certain number of cloud lookups fail. This is to ensure that when laptops are outside of the enterprise network the Connector is able to connect when network proxy settings are changed.

CHAPTER 2 EXPLORING FIREAMP

Now that you have configured a policy and installed a Connector we will highlight some of the other FireAMP features.

Console Menu

The menu bar at the top indicates the total number of installs, the number of detecting Connectors in the last 7 days, and the number of detections in the last 7 days. Menu items to take you to the Dashboard, Analysis, Outbreak Control, Reports, Management, and Accounts as indicated below. It also has a link to the Help system and a Logout link to end your session.



- Dashboard The Dashboard provides current information about malicious file detections and quarantines occurring within your FireAMP Connector deployment.
- Analysis The Analysis menu contains items related to analysis of threats in your environment.
- Outbreak Control The Outbreak Control section provides tools an administrator will need to manage malicious file outbreaks that are occurring within your FireAMP deployment.
- Reports The Reports link allows you to create PDF reports based on your data.
- Management The Management menu contains items that allow you to manage your FireAMP Connectors.
- Accounts The purpose of the Accounts section is for managing users that have access to the FireAMP Web Interface.

Events

Events refer to all activity within your FireAMP deployment that is being tracked and recorded. Information such as detections, quarantines, and software installs can be viewed here. This information is also the basis for much of the reporting functionality that exists within the system. You can apply filters to the events to narrow your view.



From the menu select **Analysis > Events** and you will be taken to the Event View page.

Detections / Quarantine

Detections and Quarantines are a specific type of Event that tracks each time a malicious file is detected within your deployment. It will also show you whether or not the quarantine attempt of the malicious file succeeded or failed. You can apply filters to the list to narrow your view.



From the menu select **Analysis > Detections / Quarantine** and you will be taken to the Detections and Quarantine Events Page.

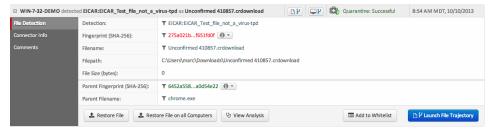
Restore a File From Quarantine

Once a malicious file detection and quarantine has occurred it may be necessary to restore the file if the detection was a false positive. This can only be done from the FireAMP Web Interface.

An example event is shown below.



Clicking on the event shows the specific details of the quarantined file. Clicking on the event shows the specific details of the quarantined file.



In order to restore the file on the computer named in the even, click on **Restore File** in the event entry. To restore the file on all computers that have quarantined the file, click **Restore File on all Computers**.

IMPORTANT! There is a time lag of up to 30 minutes between submitting the restore request and when the file is actually restored on the computer.

Outbreak Control

FireAMP offers a variety of lists, classified as Outbreak Control, that allow you to customize it to your needs. The main lists are Simple Custom Detections, Application Blocking, Custom Whitelists, Advanced Custom Signatures, and Exclusion Sets.

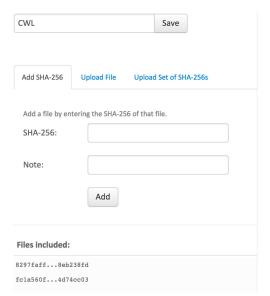
Whitelisting

Custom Whitelists are user defined lists of files that the FireAMP system is instructed to assume as safe or not malicious.

Select **Outbreak Control > Whitelisting** to be taken to the Custom Whitelist creation and configuration screen.



To create a Custom Whitelist click the **Create** button seen below, fill in the Name information and click **Save**.



Click **Edit** to configure the Custom Whitelist. The options below show the configuration selections for the Custom Whitelist.

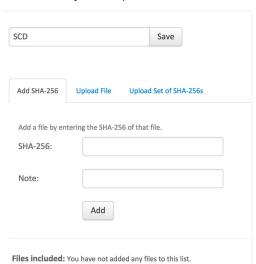
If you want to create a baseline of files on your computers to be whitelisted, use an application like sha256deep to extract the hashes to a file that you can upload. Suggested usage is:

 $sha256deep.exe -q -s -r -oe c:*.*$

Simple Custom Detections

A Simple Custom Detection list is synonymous to a blacklist. These are files that a user wants to quarantine. Not only will an entry on the Simple Custom Detection quarantine future files, but through Cloud Recall™ it will quarantine the file on the PCs that the service has already seen it on.

To create a Simple Custom Detection list, go to **Outbreak Control > Simple**. Once there click **Create** to create a new Simple Custom Detection, give it a name, and click on **Save**.



Click **Edit** to add detections to your list. The options below show the configuration selections for your Simple Custom Detection.

Advanced Custom Signatures

Advanced Custom Signatures are like traditional antivirus signatures, but they are written by the user. These signatures can inspect various aspects of a file and have different signature formats. Some of the available signature formats are:

- MD5 Signatures
- MD5, PE section based Signatures
- · File Body-based Signatures
- Extended Signature Format (offsets, wildcards, regular expressions)
- Logical Signatures
- Icon Signatures

For information on signature formats, please look at http://www.clamav.net/doc/latest/signatures.pdf. These signatures are compiled into a file downloaded to the endpoint.

In order to create Advanced Custom Signatures, go to **Outbreak Control > Advanced**. Once there click on **Create Signature Set** to create a new Advanced Custom Signature set, give it a name, and click **Create**.

After you create the Advanced Custom Signature set, click on **Edit** and you will see the **Add a signature** link. Enter the name of your signature and click **Create**.



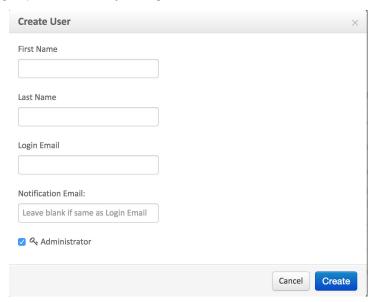
Once all your signatures are listed, select **Build a Database from Signature Set**. If you accidentally add a signature you didn't want, you can delete it by clicking **Remove**.

IMPORTANT! Any time you add or remove a signature you MUST click on **Build a Database from Signature Set**.

Creating Additional User Accounts

The Users screen allows you to manage accounts and view notifications and subscriptions for that account as well as create additional user accounts. To create a new user go to **Accounts > Users** from the menu.

Click on New User to create a new FireAMP console user account. A valid email address is required for them to receive an account activation email. You can also add a different email address to receive notifications, for example if you want all notifications you create to go to a distribution list You must also decide if the user will be an Administrator or an unprivileged user. An Administrator has full control over all groups in the organization. If you uncheck the Administrator box the user will only be able to view data for groups you assign to them. You can also change the user's privileges and group access later by editing their account.



The new user should receive an activation email asking them to click on a link to activate the account and set up their password.

Filters and Subscriptions

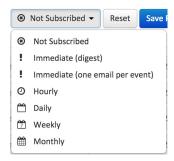
The filters are shown at the top of the Events tab. You can select a previously saved filter from the drop down on the right side or add event types, groups, or specific filters from existing events. To remove a filter criteria, click the x next to the item you want to remove. You can also sort the Events list in ascending or descending order based on

criteria from the drop down list. Click the **Reset** button to remove all filter criteria or click the **Save Filter As** button to save the current filtered view.

When viewing a saved filter you can update the filter and click **Save New** to save the changes as a new filter or click **Update** to overwrite the existing filter.



To subscribe to a filter view click the Not Subscribed button to show a menu with subscription timing options. You can subscribe to events with immediate, hourly, daily, weekly, or monthly notifications.



Once you have selected the notification frequency click Update to save your settings. If you no longer want to receive notifications for a filter view, switch the notification frequency to Not Subscribed and click Update.

Demo Data

Demo Data allows you to see how FireAMP works by populating your Console with replayed data from actual malware infections. This is useful for evaluating the product and demonstrating its capabilities without having to infect computers yourself.

Enabling Demo Data will add computers and events to your FireAMP Console so you can see how the Dashboard, File Trajectory, Device Trajectory, Threat Root Cause, Detections, and Events behave when malware is detected. Demo Data can coexist with live data from your FireAMP deployment, however, because of the severity of some of the Demo Data malware it may obscure real events in certain views such as the Dashboard Indications of Compromise widget.

Click on Enable Demo Data to populate your Console with the Demo Data.

When the Demo Data has been enabled you can click **Disable Demo Data** to remove it again.

Refresh Demo Data is similar to enabling it. When the Demo Data is enabled, refreshing it will simply refresh all the events so that they appear in the current day's events.

APPENDIX A THREAT DESCRIPTIONS

FireAMP has unique network detection event types and Indications of Compromise. Descriptions of these detection types are found in this section.

IMPORTANT! For descriptions of threat names, see AMP Naming Conventions.

Indications of Compromise

FireAMP calculates devices with Indications of Compromise based on events observed over the last 7 days. Events such as malicious file detections, a parent file repeatedly downloading a malicious file (Potential Dropper Infection), or multiple parent files downloading malicious files (Multiple Infected Files) are all contributing factors. Indications of compromise include:

- Threat Detected One or more malware detections were triggered on the computer.
- Potential Dropper Infection Potential dropper infections indicate a single file is repeatedly attempting to download malware onto a computer.
- Multiple Infected Files Multiple infected files indicate multiple files on a computer are attempting to download malware.
- Executed Malware A known malware sample was executed on the computer.
 This can be more severe than a simple threat detection because the malware potentially executed its payload.
- Suspected botnet connection The computer made outbound connections to a suspected botnet command and control system.
- [Application] Compromise A suspicious portable executable file was downloaded and executed by the application named, for example Adobe Reader Compromise.

- [Application] launched a shell The application named executed an unknown application, which in turn launched a command shell, for example Java launched a shell.
- Generic IOC Suspicious behavior that indicates possible compromise of the computer.
- Suspicious download An executable file was downloaded from an IP address using a non-standard port. This is often indicative of malware droppers.
- Suspicious Cscript Launch Internet Explorer launched a Command Prompt, which executed cscript.exe (Windows Script Host). This sequence of events is generally indicative of a browser sandbox escape ultimately resulting in execution of a malicious Visual Basic script.
- Suspected ransomware File names containing certain patterns associated with known ransomware were observed on the computer. For example, files named help_decrypt.<filename> were detected.
- Possible webshell the IIS Worker Process (w3wp) launched another process such as powershell.exe. This could indicate that the computer was compromised and remote access has been granted to the attacker.

IMPORTANT! In certain cases the activities of legitimate applications may trigger an Indication of Compromise. The legitimate application is not quarantined or blocked, but to prevent another Indication of Compromise being triggered on future use you can add the application to Application Control - Whitelisting.

DFC Detections

Device Flow Correlation allows you to flag or block suspicious network activity. You can use Policies to specify FireAMP Connector behavior when a suspicious connection is detected and also whether the Connector should use addresses in the Cisco Intelligence Feed, custom IP lists you create, or a combination of both. DFC detections include:

- DFC.CustomIPList The computer made a connection to an IP address you have defined in a DFC IP Black List.
- Infected.Bothost.LowRisk The computer made a connection to an IP address thought to belong to a computer that is a known participant in a botnet.
- CnC.Host.MediumRisk The computer made a connection to an IP address that
 was previously known to be used as a bot command and control channel. Check
 the Device Trajectory for this computer to see if any files were downloaded and
 subsequently executed from this host.
- ZeroAccess.CnC.HighRisk The computer made a connection to a known ZeroAccess command and control channel.
- Zbot.P2PCnC.HighRisk The computer made a connection to a known Zbot peer using its peer-to-peer command and control channel.
- Phishing.Hoster.MediumRisk The computer made a connection to an IP address that may host a phishing site. Often, computers phishing sites also host many other websites and the connection may have been made to one of these other benign sites.

APPENDIX A SUPPORTING DOCUMENTS

The following supporting documents are available for download.

Cisco FireAMP Private Cloud Console User Guide

The current version of the FireAMP Console User Guide can be downloaded here. Download the User Guide

Cisco FireAMP Private Cloud User Guide

The current version of the Administration Portal User Guide can be downloaded here. Download the Administration Portal User Guide

Cisco FireAMP Private Cloud Quick Start Guide

This guide walks through setting up groups, policies, and exclusions then deploying FireAMP Connectors. This guide is useful for evaluating FireAMP.

Download the Quick Start Guide

Cisco FireAMP Private Cloud Deployment Strategy Guide

This guide provides a more detailed look at preparing and planning for a production deployment of FireAMP along with best practices and troubleshooting tips.

Download the Deployment Strategy Guide

Cisco Endpoint IOC Attributes

The Endpoint IOC Attributes document details IOC attributes supported by the Endpoint IOC scanner included in the FireAMP Connector. Sample IOC documents that can be uploaded to your FireAMP Console are also included.

Download the Endpoint IOC Attributes

Cisco FireAMP Private Cloud Release Notes

The Release Notes contain the FireAMP change log.

Download the Release Notes

Cisco FireAMP Demo Data Stories

The Demo Data stories describe some of the samples that are shown when Demo Data is enabled in FireAMP.

Download the SFEICAR document

Download the ZAccess document

Download the ZBot document

Download the CozyDuke document

Download the Upatre document

Download the PlugX document

Download the Cryptowall document

Download the Low Prevalence Executable document