Setup Guide

McAfee Endpoint Suite Installer

For use with the McAfee Endpoint Protection and Endpoint Protection Advanced Suites

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Contents

Before You Begin…

Thank you for downloading the McAfee Endpoint Suite Installer. This guide is organized so you can evaluate McAfee Endpoint in a pilot environment consisting of a McAfee ePolicy Orchestrator® (McAfee ePO™) server and a number of client computers. The guide contains step-by-step instructions for many of the common configuration and policy options of the McAfee Endpoint Suites. It also brings you the benefit of pre-built best practice policies and configurations for various products used by millions of ePolicy Orchestrator-managed systems, from SMB to largest enterprises.

Many links throughout the document lead to short, instructional videos or specific KB articles that provide additional information on relevant topics. Video links referencing ePolicy Orchestrator 4.5 and 4.6 are generally applicable to version 5.0.

What's Included

Components of McAfee Endpoint Protection Suite (EPS) included in this installation:

- McAfee ePolicy Orchestrator (ePO) 5.0.1
- McAfee Agent 4.8
- McAfee VirusScan® Enterprise 8.8
- McAfee Host Intrusion Prevention Firewall 8.0 for Desktops
- McAfee SiteAdvisor® Enterprise 3.5
- McAfee Web Filtering for Endpoint 3.5
- McAfee Device Control 9.3 for Desktops
- McAfee Endpoint Protection for Mac 2.1
- McAfee VirusScan Enterprise for Linux 1.9
- McAfee Security for Microsoft Exchange 8.0
- McAfee Quarantine Manager 7.0.1
- McAfee Real Time for ePO 1.0

If you are evaluating McAfee Endpoint Protection Suite Advanced (EPA), the installation includes the components above, plus the following:

- McAfee Host Intrusion Prevention (IPS) 8.0 for Desktops
- McAfee Policy Auditor 6.2 for Desktops

Important Notes

Arrangement of the Setup Guide

The first several sections of this guide deal with VirusScan, Host IPS, SiteAdvisor, the McAfee Agent, as well as general usage of ePO to familiarize you with the basic workflows. Details on deploying additional products follow later in the document in their respective sections.

Active Directory

Although ePolicy Orchestrator does not require a Windows Active Directory Domain, AD is required for some of the more advanced management features, such as user-based policies, or using AD credentials for ePolicy Orchestrator user accounts.

McAfee Global Threat Intelligence (GTI)

Throughout this document you will see references to McAfee's Global Threat Intelligence, or GTI. Today's changing threat landscape requires an advanced security solution that can proactively counter new threats. McAfee GTI hosts an extensive threat intelligence system in the cloud with visibility across all threat vectors — file, web, message, and network — and a view into the latest vulnerabilities across the IT industry. McAfee correlates real-world data collected from millions of sensors around the globe and delivers real-time, and often predictive, protection via its security products. Several products in the McAfee Endpoint Suites utilize GTI to protect McAfee customers every day. Policy examples in this guide cover how to take advantage of GTI technology.

McAfee Application Control

Looking to lock down and protect fixed-function devices, ATMs, cash registers, or SCADA systems? Consider McAfee Application Control, also managed by ePolicy Orchestrator.

Configure the McAfee ePO Server

Log in to ePolicy Orchestrator

Log in with the User Name of **Admin** and the password that you designated during the installation.

On first login, you are presented with the Guided Configuration dashboard. Since the installer automated many of the basic configuration steps, including creation of a system tree plus client policies and tasks, we will bypass the Guided Configuration and dive straight in.

Proxy Configuration

NOTE: If you use a proxy server in your environment, you will need to specify the configuration in the ePolicy Orchestrator Server Settings, so it can retrieve client updates and other content. If no proxy settings are required, skip to the following task, entitled The ePO Software Repository.

Configuring Proxy Settings

1 Click **Menu** | **Configuration** | **Server Settings**, select **Proxy Settings** from the Setting Categories, and then click **Edit**.
2 Select **Configure the proxy settings manually**, provide the specific configuration information your proxy server uses for each set of options, then click **Save**.

The ePO Software Repository

The McAfee ePO server is the central software repository for all McAfee product installations, updates, and other content. The modular design of ePolicy Orchestrator allows new products to be added as extensions. This includes new or updated versions of McAfee and McAfee-compatible solutions from the Security Innovation Alliance. Packages are components that are checked in to the master repository, and then deployed to client systems. ePolicy Orchestrator also allows for replication to distributed repositories at remote locations for bandwidth optimization.

For McAfee ePO to keep your client systems up-to-date, a repository task that retrieves updates from a McAfee site (HTTP or FTP) was created to run daily at 1:00 am. The steps below show you how to modify the task so that it checks the McAfee update site every 12 hours instead.

Editing the Repository Pull Task

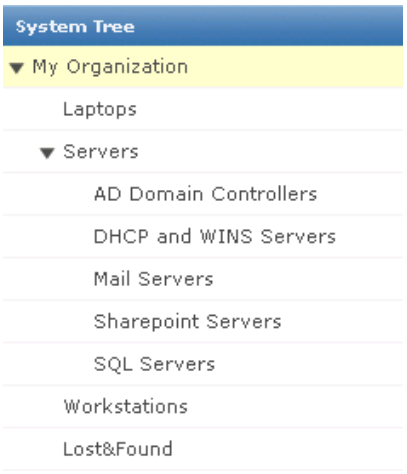
1 Click **Menu** | **Automation** | **Server Tasks**.
2 In the list, find the task named **Update Master Repository** and, under the **Actions** column, click **Edit** to open the Server Task Builder.
3 On the Description page, make sure **Schedule status** is set to **Enabled**, then click **Next**.
4 Select **Move existing packages to Previous branch**, then click **Next**.
NOTE: Checking this option allows ePolicy Orchestrator to maintain more than one set of signature files. When the task runs next, the current updates are moved to a directory on the server called Previous. This allows you to roll back updates if necessary.
5 On the Schedule page, choose when you want ePolicy Orchestrator to check the McAfee site for updates.
• Schedule the task to run **Hourly**, with **No End Date**.
• Set **Schedule** to every **12** hours.
6 Click **Next**.
7 On the Summary page, click **Save**. The console returns to the Server Tasks page.

You can set any update schedule you desire. There are generally two approaches — the standard approach similar to that described above, and a more advanced methodology to use if you are required to test signatures (DATs) on a subset of your systems prior to deployment to the remainder of your population. The standard approach is appropriate for most evaluations. Information on the advanced approach is detailed in the white paper Validating DAT and Other Content Files with McAfee ePolicy Orchestrator located on the McAfee Customer Portal.

Systems and the System Tree

The ePolicy Orchestrator System Tree organizes managed systems in units for monitoring, assigning policies, scheduling tasks, and taking actions. These units are called groups, which are created and administered by Global Administrators or users with the appropriate permissions. Groups may contain both systems and other groups.

As shown in the graphic below, the installer created a sample system tree during setup. Three groups were created under the default My Organization group; **Laptops**, **Servers**, and **Workstations**. The Servers group also has several subgroups for different server types based on function or role. These sample groups were created for your convenience. You are not required to use them, but they are referenced in the instructional exercises that follow. If you wish to test system & group creation using Active Directory, detailed steps are provided in the McAfee Quick Tips video Active Directory Synchronization in ePO.



Adding Systems to your System Tree Groups

If you chose Automatic Discovery of systems during the installation, use the following steps to organize your test systems in the System Tree. If you did not select Automatic Discovery, skip to the following task, entitled Adding Systems Manually.

Systems Added with Automatic Discovery

1 Click the **System Tree** button on the favorites bar.
2 Click on the **My Organization** group on the left. The systems are displayed on the right.
3 If there are any systems discovered that you do not want to be included in your testing, you can remove them from the tree. Place a check in the box next to all the systems you want to remove (you can use Shift+Click to select more than one), click **Actions | Directory Management | Delete**, and then click **OK**. You do NOT need to check the box for **Remove Agent on Next Agent-to-Server Communication**.
4 Drag and drop the remaining systems to their appropriate groups. You can drag multiple systems by placing a check mark by each first. A dialog box will appear asking "Are you sure you want to move the system(s)?". Click **OK**. You can check the box if you do not wish to see this dialog in the future.

Adding Systems Manually

1 In the **System Tree**, highlight the **Workstations** group and click **System Tree Actions | New Systems**.
2 For **How to Add Systems**, select **Add systems to the current group, but do not push agents**.
3 For **Target Systems**, type the NetBIOS name for each system in the text box, separated by commas, spaces, or line breaks. You can also click **Browse** to select systems.
4 Verify that **System Tree sorting** is disabled.
5 Click **OK**.
6 As needed, repeat these steps to add any servers to your Laptops or Servers group or its subgroups.

There are several methods of organizing and populating the System Tree:

- Manually structure your System Tree by creating your own groups and adding individual systems.
- Synchronize with Active Directory or NT domain as a source for systems. In the case of using Active Directory, synchronization mirrors AD and automatically provides System Tree structure.
- Create your own groups and sort based on IP ranges or subnets. This is called criteria-based sorting.
- Import a text file of groups and systems.

Set Policies for Endpoints

Policies are used to set the configuration for the various McAfee Endpoint products, such as Host IPS, Endpoint Encryption, and many other products. Several pre-built best practice policies have been included as part the installer. They differ somewhat from the default policies in that some are designed for optimization and others for tighter security. Note that these policies are not yet in effect. Within this guide we will discuss and assign several of these policies, and cover policy creation as well. All additional policies are denoted with a "POC" prefix to aid you in your proof of concept or evaluation.

In a production environment one would normally create and assign required policies in the System Tree before software is ever deployed. As such, the same approach will be used for this test deployment and evaluation.

The McAfee Agent Policies

The McAfee Agent is the client-side component providing secure communication with ePolicy Orchestrator. It downloads and enforces policies, and executes client-side tasks such as deployment and updating. The Agent also uploads events and provides additional data regarding each system's status.

Assigning a McAfee Agent Policy Globally

The following policy allows for remote viewing of the McAfee Agent log via browser and increases the Agent to Server Connection Interval (ASCI) from the default of 60 minutes to 120 minutes.

One reason to modify the Agent to Server Connection Interval on a group of systems might be to lessen the impact on already taxed WAN connections to remote sites, or simply because you are managing many thousands of systems. See more information on the McAfee Agent in the Quick Tips video Controlling Agent Communication.

1 Click the **System Tree** button on the favorites bar.
2 Highlight **My Organization**.
3 Click the **Assigned Policies** tab.
• From the **Product** drop-down menu, select **McAfee Agent**.
• On the line that lists **General**, click **Edit Assignment**.
• For **Inherit from**, select **Break inheritance and assign the policy and settings below**.
• From the **Assigned Policy** drop-down menu, select **POC – General**.
• Click **Save**. The policy is now assigned to that group and all its subgroups.

NOTE: To view the McAfee Agent Log on a remote system, type the following your web-browser: http://<computer_name_or_IP_address>:8081 where 8081 is the default port for the Agent Wake Up call. If you changed this port number during ePolicy Orchestrator installation, then use the port you specified. This can be very useful when you need to view the log for a system on the other side of the country. You can test this function after deploying the Agent.

VirusScan Enterprise Policies

Assigning a VirusScan Policy to a Group

Having assigned a policy globally, the following applies policies to a specific group. Do you have one group of systems that has a higher probability of being exposed to malware than others? You are likely thinking of your laptop community and the common concerns around issues such as non-standard images, use of unsecured wireless networks, or who is using the laptop and where they are surfing when off the corporate network. Setting GTI File Reputation to High is used for systems that have greater susceptibility to being attacked.

Follow these steps to set GTI File Reputation to **High** for the **Laptops** group.

1 Click the **System Tree** button on the favorites bar.
2 Highlight the **Laptops** group.
3 Click the **Assigned Policies** tab.
• From the **Product** drop-down menu, select **VirusScan Enterprise 8.8.0**.
• On the line that lists **On-Access General Policies**, click **Edit Assignment**.
• For **Inherit from**, select **Break inheritance and assign the policy and settings below**.
• From the **Assigned Policy** drop-down menu, select **POC - Enable GTI for On-Access (High)**.
• Click **Save**.
For additional information on this feature, see the FAQs for Global Threat Intelligence File Reputation**.**

Assigning Best Practice VirusScan Policies to the SQL Servers Group

The installer includes many best practice server policies used by customers where the standard default of "scan everything" may not be applicable. For instance, it is common practice to create AV exclusions on database servers, Microsoft Exchange Servers, Domain Controllers, and so on. An extensive list of common exclusions can be found here: VirusScan Enterprise exclusions (Master Article). Details on available syntax are found in the VirusScan Enterprise 8.8 Product Guide.

The following policy example was specifically chosen to illustrate McAfee VirusScan's unique ability to vary scan settings based on the process in play at any given time. In the specific example below, *Sqlserver.exe* and *Sqlwriter.exe* are considered "low-risk" processes for spreading malware (unlike Explorer.exe or Iexplore.exe, for example). Hence the policies are configured such that *scan on read* and *scan on write* are not active for those two select low-risk processes. Real customers combine this approach with traditional file and directory exclusions to provide the best server performance possible while limiting the threat of malware infection at the file system level. As such, a set of "Low Risk" and "Default" policies are used in concert.

Follow these steps to first assign the Default Processes Policy to the SQL Servers group.

1 Click the **System Tree** button on the favorites bar.
2 Highlight the **SQL Servers** group.
3 Click the **Assigned Policies** tab.
4 From the **Product** drop-down menu, select **VirusScan Enterprise 8.8.0**.
5 On the line that lists **On-Access Default Processes Policies**, click **Edit Assignment**.
6 For **Inherit from**, select **Break inheritance and assign the policy and settings below**.
7 From the **Assigned Policy** drop-down menu, select **POC – Default: MS SQL Servers**.
8 Click **Save**.

Follow these steps to also assign the Low-Risk Processes Policy to the SQL Servers group.

1 Click the **System Tree** button on the favorites bar.
2 Highlight the **SQL Servers** group.
3 Click the **Assigned Policies** tab.
4 From the **Product** drop-down menu, select **VirusScan Enterprise 8.8.0**.

5 On the line that lists **On-Access Low-Risk Processes Policies**, click **Edit Assignment**.
6 For **Inherit from**, select **Break inheritance and assign the policy and settings below**.
7 From the **Assigned Policy** drop-down menu, select **POC – Low: MS SQL Servers**.
8 Click **Save**.

Here's another way of considering the type of policies you just assigned:

- A Low Risk Processes policy has process exclusions specific to the system type to which it is being deployed. In other words, VirusScan might scan little or nothing for a select group of low-risk processes as configured, such as sqlserver.exe and sqlwriter.exe.
- A Default Processes policy has common file & directory exclusions specific to the system type to which it is being deployed. File reads and writes by any process not classified as Low-Risk will trigger normal file scanning, except on the database and other key files and directories, i.e., your standard AV exclusions.

Quick Tip: Standard desktops and file servers might use a Default-only policy, as process exclusions are not typically required. You can get additional information on Risk-Based Scanning from the McAfee Knowledgebase articles KB55139 and KB66036, and the McAfee Quick Tips video What is Risk Based Scanning?.

Host IPS Policies

Please note that McAfee Host IPS has two main components: kernel-level IPS protection and a firewall. The McAfee EPS suite contains the firewall only, while the EPA suite contains both components. If you are evaluating the EPS suite, skip to the section entitled Host IPS Firewall.

The main function of McAfee Host IPS is to protect systems against known and unknown attacks. This is often achieved without an update to the software, by use of patented buffer overflow and other behavioral protection. It has the additional benefit reducing the urgency and frequency of patching by protecting vulnerabilities from exploit even before a patch has been applied. Consider the time spent on patching within your organization. By deploying Host IPS, many of those vulnerabilities would be protected from exploit, allowing you to patch on a more reasonable schedule. For example, McAfee Host IPS protected against 60% of all exploits against Microsoft vulnerabilities, and nearly 75% of all exploits against Adobe vulnerabilities, disclosed between 2006 and 2011. Also consider the Host IPS ability to protect systems against exploit on those occasions when a new vulnerability exists but the corresponding patch is not yet available.

Kernel Level Host IPS

For the initial stages of this evaluation, you will assign a policy that instructs Host IPS to block High severity, and log Medium and Low events. Blocking on High severity events is a minimum if you plan to use attack tools to test the product's effectiveness. This is combined with logging of Medium and Low severity events. To accomplish more than simply log events, a policy such as this is often used in implementation in live environments.

Enabling Host IPS

Follow these steps to assign a policy that enables Host IPS on your client systems.

1 Click the **System Tree** button on the favorites bar.
2 Highlight the **Workstations** group.
3 Click the **Assigned Policies** tab.

• From the **Product** drop-down menu, select **Host Intrusion Prevention 8.0: IPS**.
• On the line that lists **IPS Options**, click **Edit Assignment**.
• For **Inherit from**, select **Break inheritance and assign the policy and settings below**.
• From the **Assigned Policy** drop-down menu, select **POC - Host and Network IPS enabled**.
• Click **Save**. The policy is now assigned to that group and all its subgroups.
4 Repeat the above steps for your **Laptops** group.

Setting Protection Level

Follow these steps to assign a policy that blocks High severity events, and logs any of Medium and Low severity. Logging provides detailed advanced knowledge of which signatures may require exclusions prior to enforcing block on Medium events, thus guiding accurate policy tuning. One can elevate select Low severity signatures to Medium later if desired, instead of maintaining all Lows active.

1 Click the **System Tree** button on the favorites bar.
2 Highlight the **Workstations** group.
3 Click the **Assigned Policies** tab.
• From the **Product** drop-down menu, select **Host Intrusion Prevention 8.0: IPS**.
• On the line that lists **IPS Protection**, click **Edit Assignment**.
• For **Inherit from**, select **Break inheritance and assign the policy and settings below**.
• From the **Assigned Policy** drop-down menu, select **POC - Block High events; Log Medium and Low**.
• Click **Save**. The policy is now assigned to that group and all its subgroups.
4 Repeat the above steps for your **Laptops** group.

Assigning IPS Rules

As virtual systems are often used for evaluations, assigning this policy uses the standard signature set, but facilitates testing by changing VMWare protection and VNC detection signatures to a severity of Low. The McAfee Default policy maintains these signatures at their normal severity levels and should be considered before staging in a live environment.

1 Click the **System Tree** button on the favorites bar.
2 Highlight the **Workstations** group.
3 Click the **Assigned Policies** tab.
• From the **Product** drop-down menu, select **Host Intrusion Prevention 8.0: IPS**.
• On the line that lists **IPS Rules**, click **Edit Assignment**.
• For **Inherit from**, select **Break inheritance and assign the policy and settings below**.
• From the **Assigned Policy** drop-down menu, select **POC - VMware and VNC exception policy**.
• Click **Save**. The policy is now assigned to that group and all its subgroups.
4 Repeat the above steps for your **Laptops** group.

Host IPS Firewall

The Host IPS Firewall is stateful and offers location awareness and other advanced features, including IP Reputation filtering, part of McAfee's Global Threat Intelligence (GTI). The firewall uses GTI to protect endpoints from botnets, distributed denial-of-service (DDoS) attacks, advanced persistent threats, and risky web connections.

McAfee collects data from billions of IP addresses and network ports, and calculates a reputation score based on network traffic, including port, destination, protocol, and inbound and outbound connection requests. The score reflects the likelihood that a network connection poses a threat, such as a connection associated with botnet control.

Coupling a single firewall rule with a GTI-only policy lets you immediately receive the benefit of cloud intelligence on known botnets and their command and control centers. This is achieved with little effort, minimal overhead, and no interference with your existing host or network firewall rules.

Enabling the Firewall

Follow these steps to assign a policy that simply enables the firewall and sets the sensitivity level for GTI at Medium risk or higher. At this point, no firewall ruleset is active or assigned.

1 Click the **System Tree** button on the favorites bar.
2 Highlight the **Workstations** group.
3 Click the **Assigned Policies** tab.
• From the **Product** drop-down menu, select **Host Intrusion Prevention 8.0: Firewall**.
• On the line that lists **Firewall Options**, click **Edit Assignment**.
• For **Inherit from**, select **Break inheritance and assign the policy and settings below**.
• From the **Assigned Policy** drop-down menu, select **POC – Enable FW and GTI**.
• Click **Save**. The policy is now assigned to that group and all its subgroups.
4 Repeat the above steps for your **Laptops** group.

Assigning the GTI–Only Ruleset

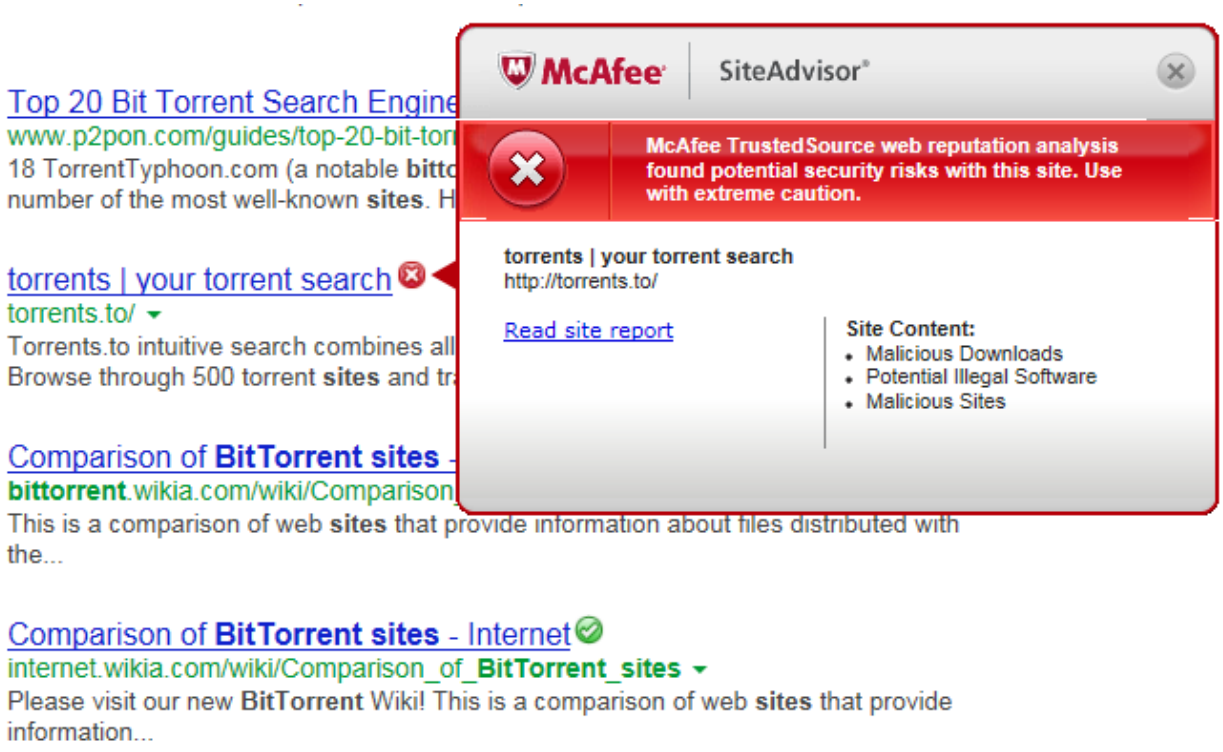
The steps below assign a policy that allows all traffic, but uses GTI to perform lookups of IP reputations and block connections to any external addresses posing a threat.

1 Click the **System Tree** button on the favorites bar.
2 Highlight the **Workstations** group.
3 Click the **Assigned Policies** tab.
• From the **Product** drop-down menu, select **Host Intrusion Prevention 8.0: Firewall**.
• On the line that lists **Firewall Rules**, click **Edit Assignment**.
• For **Inherit from**, select **Break inheritance and assign the policy and settings below**.
• From the **Assigned Policy** drop-down menu, select **POC - GTI-Only Rule Set**.
• Click **Save**. The policy is now assigned to that group and all its subgroups.
4 Repeat the above steps for your **Laptops** group.

Perhaps you have shied away from Host IPS, feeling that it would be a complex or lengthy process to deploy, or had concern about blocking legitimate processes. By following a logical, systematic approach, you can quickly realize the benefits of deploying Host IPS in your environment. While the policies applied here are sufficient for initial testing, prior to full production deployment you are strongly encouraged to read over the deployment methodology discussed in detail in the Host IPS 8.0 Installation Guide, pp. 11-26. Answers to many common questions can be found in the FAQ for Host Intrusion Prevention 8.0.

SiteAdvisor Enterprise and Web Filtering for Endpoint policies

McAfee SiteAdvisor Enterprise leverages McAfee Global Threat Intelligence to provide reputation ratings for web sites using a color-coded system — primarily Red, Yellow, and Green, based on the risk associated with a given site (for example, "Red sites" hosting malware). Annotations are made in the browser, in search engine results (shown below), as well as links in IM and email programs such as Microsoft Outlook and Outlook Express.



SiteAdvisor also contains a Web Filtering component administrators can use to enforce policies regarding the content of categories such as pornography, gambling, and other undesired sites. Administrators can set policies that determine which sites managed systems can access, create customized block messages, and prevent users from disabling the client software on managed systems.

NOTE: By default SiteAdvisor will block access to Red sites, display a warning message for Yellow sites but allow access, and allow access to Green and unrated (Gray) sites. By default Web Filtering for Endpoint does not block any sites based on their content categorization. We'll see how to create a sample URL filtering policy below.

Ratings Enforcement on File Downloads

The following SiteAdvisor policy enables file download rating and email annotations. In other words, SiteAdvisor will enforce the Red\Yellow\Green rating on file downloads, as well as on the web sites themselves. For instance a "Yellow site" may have both Red and Green downloads. This policy would block the download of Red (dangerous) files, but allow the download of Green (safe) files.

1 Click the **System Tree** button on the favorites bar.
2 Highlight **My Organization**.
3 Click the **Assigned Policies** tab.
• From the **Product** drop-down menu, select **SiteAdvisor Enterprise Plus 3.5**.
• On the line that lists **General**, click **Edit Assignment**.
• For **Inherit from**, select **Break inheritance and assign the policy and settings below**.
• From the **Assigned Policy** drop-down menu, select **POC General Policy**.
• Click **Save**. The policy is now assigned to that group and all its subgroups.

Create Custom Policies

So far, we have assigned preconfigured policies that were created for you. At some point, you will have to create policies to accommodate some requirements on your network. In this section, we will create and assign two policies from scratch. This will show you the process from start to finish, and provide a better understanding of policy creation and management in ePolicy Orchestrator.

Locking the Local VirusScan Console

Follow these steps to create a new policy that prevents end users from tampering with the local VirusScan interface on their systems. VirusScan Enterprise runs on both workstations and servers; therefore, the VirusScan policies have separate settings for each platform. In this case, you want to make changes only to the workstation settings.

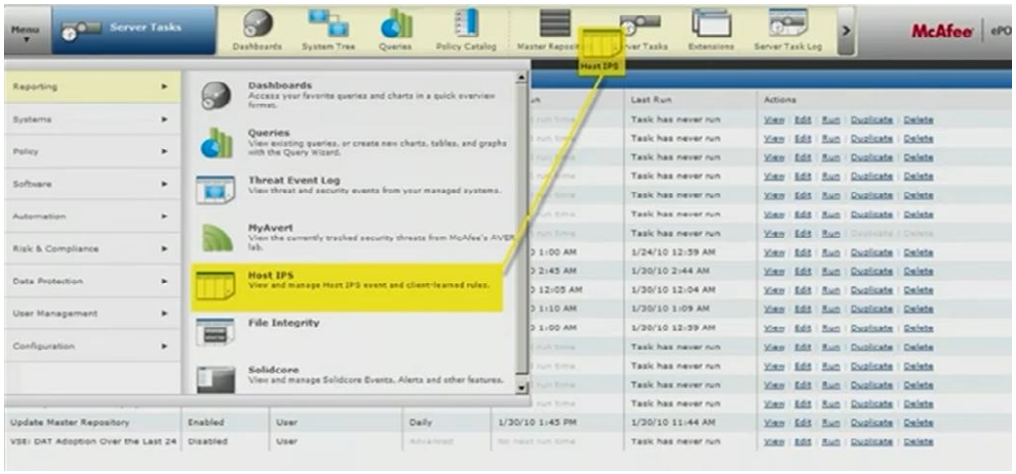
1 Click **Menu** | **Policy** | **Policy Catalog**.
2 From the **Product** drop-down menu, select **VirusScan Enterprise 8.8.0**.
3 From the **Category** drop-down menu, select **General Options Policies**.
4 On the line that lists **McAfee Default**, click **Duplicate**.
5 For **Name**, type Lock VSE Console, then click **OK**.
Note: It is wise to name policies in a way that describes their function. Use of "named policies" then makes it easier to assign them based on the role or function of systems.
6 Click **Lock VSE Console**, which now appears in the list of policies.
7 On the menu bar, click **Password Options**.
8 Make sure the **Settings for** option in the upper left is set to **Workstation**.
9 For **User interface password**, select **Password protection for all items listed**.
10 Type a password in the two boxes provided, then click **Save**.

As you might have noticed, the new policy was created by duplicating a default policy. Every policy you have assigned up to this point also began as a duplicate of the McAfee Default policy from the Policy Catalog. This new policy can now be assigned in the same manner as the policies above.

1 Click the **System Tree** button on the favorites bar.
2 Highlight **My Organization**.
3 Click the **Assigned Policies** tab.
• From the **Product** drop-down menu, select **VirusScan Enterprise 8.8.0**.
• On the line that lists **General Options Policies**, click **Edit Assignment**.
• For **Inherit from**, select **Break inheritance and assign the policy and settings below**.
• From the **Assigned Policy** drop-down menu, select **Lock VSE Console**.
• Click **Save**. The policy is now assigned to that group and all its subgroups.

As noted, the above policy was designed specifically for systems with a workstation operating system. The local VirusScan console on servers will be accessible without a password.

Note: You can drag and drop commonly used items from the **Menu** onto the Favorites Bar at the top of the ePolicy Orchestrator interface, as shown in the figure below.



Variation on a Theme for Policy Creation and Application

In the previous example, you created the new policy in the **Policy Catalog**, then assigned it within the **System Tree**. In this example you will create and assign the new policy from the **System Tree**, achieving the same end result through an alternate workflow.

Blocking inappropriate websites with SiteAdvisor

The steps below guide you through the creation and assignment of a policy that blocks access to sites dealing with pornography or nudity and is applied to all systems.

1 Click the **System Tree** button on the favorites bar.
2 Highlight **My Organization**.
3 Click the **Assigned Policies** tab.
4 From the **Product** drop-down menu, select **SiteAdvisor Enterprise Plus 3.5**.
5 To the right of **Content Actions**, click **Edit Assignment**.
6 For **Inherit from**, select **Break inheritance and assign the policy and settings below**.
7 For **Assigned policy**, click **New Policy**.
8 Click the drop-down menu for **Create a policy based on this existing policy** and select **McAfee Default**.
9 For **Policy Name**, type My Blocked Categories, and then click **OK**. This opens the policy editor.
10 If prompted, click **OK** on the dialog box that says **Unsaved changes to this policy Assignment will be lost. Are you sure you wish to continue?**
11 Click the **Functional Group** drop-down menu and select **Pornography/Nudity**.
12 Click the check box beside **Content Category** to select all, then click the **Reputation** drop-down and choose **All** from the list.
13 Click **Block**, then click **Save**.
14 For **Assigned policy**, click the drop down and select **My Blocked Categories**, then click **Save** again on the **Policy Assignment** page.
15 Looking at the **Assigned Policies** column again, you will notice this policy has been assigned to the **My Organization** group and all its subgroups.

Remember you can break inheritance further down in the System Tree, as required, and assign a different policy at the subgroup level.

At some point you should take a little time to further explore the Policy Catalog. In addition to the McAfee Default policies, there are other preconfigured POC policies that you can use. You can perform

tests by duplicating any policy and then make changes to the copy, thus keeping the original policy intact.

Set Tasks for Endpoints

So far we have created a System Tree, added some client systems, and created and assigned several policies. Next, we will schedule the deployment of VirusScan Enterprise and other security products. Product deployment is accomplished using a client task that the McAfee Agent retrieves and executes. Client tasks are also used for scheduled scans, updating, etc.

The tasks themselves reside in the Client Task Catalog. Client tasks are independent, reusable objects. As such you can manage client task objects separately from their assignments and schedules. For example, you can assign a single client task to multiple locations, each with a unique schedule. Similar to the way ePolicy Orchestrator manages policies, you can create tasks in the Client Task Catalog and assign them in the System Tree. Likewise you can create and assign client tasks directly from the System Tree.

Before Client Installation

Check if any other third party anti-virus product exists on your client systems. McAfee VirusScan Enterprise will check for the existence of 200+ anti-virus products from various vendors, including previous versions of McAfee products. When VirusScan recognizes one of these programs, it will invoke the uninstaller for that software. To successfully deploy VirusScan and remove any third-party anti-virus software, ensure that you:

- Remove any client "uninstall password" option that is set in the third-party anti-virus software management console.
- Disable any client self-protection features set in the third-party anti-virus software management console.

While McAfee updates the list of anti-virus products regularly, some products might not be recognized and removed automatically. In such cases, you should use native tools or scripts from your current vendor that will help you automate the removal.

Assigning the Deployment Tasks

In this section, you will assign the **POC - Deploy Protection Suite - Endpoint** task to both the Workstations and Laptops groups. The task **POC - Deploy Protection Suite – Server** will be assigned to the Servers group.

Note: A Deployment Task can be used to install one or more products. Deployment tasks are also used to upgrade existing products to newer versions, as well as uninstall McAfee products.

Assigning the Endpoint Deployment Task

The installer provided a pre-built Deployment Task for your Workstations and Laptops groups. The deployment includes ViursScan, Host IPS, and SiteAdvisor. Follow these steps to assign the task to your groups.

1 Click the **System Tree** button**,** select the **Workstations** group, and then click **Assigned Client Tasks**.
2 Click **Actions**, then click **New Client Task Assignment**.
3 Under **Product**, select **McAfee Agent**.
4 Under **Task Type**, select **Product Deployment**.
5 Under **Task Name**, select the **POC - Deploy Protection Suite - Endpoint**, and then click **Next**.
6 On the **Schedule** page, set the following options:

- Schedule status **Enabled**
- Schedule type **Run Immediately**

7 Click **Next**.
8 On the **Summary** page, click **Save**.
9 Repeat the above process for the **Laptops** group as well.

Assigning the Server Deployment Task

The installer provided a pre-built Deployment Task for your Servers group. The deployment includes VirusScan and SiteAdvisor. Follow these steps to assign the task to your Servers group.

1 Click the **System Tree** button**,** select the **Servers** group, and then click **Assigned Client Tasks**.
2 Click **Actions**, then click **New Client Task Assignment**.
3 Under **Product**, select **McAfee Agent**.
4 Under **Task Type**, select **Product Deployment**.
5 Under **Task Name**, select the **POC - Deploy Protection Suite - Server**, and then click **Next**.
6 On the **Schedule** page, set the following options:

- Schedule status **Enabled**
- Schedule type **Run Immediately**

7 Click **Next**.
8 On the **Summary** page, click **Save**.

Note: When deploying to a large number of systems in a production environment, McAfee recommends scheduling a time window by using the **Randomization** option on the previous **Schedule** page. Task randomization allows you to deploy to a large number of nodes by staggering the time over which the task runs, thus preventing a flurry of simultaneous network requests. In a production environment, you might want to schedule deployments at specific times of the day. Setting the schedule here to **Run Immediately** simply speeds up the deployment process for evaluation purposes.

Assigning a Scheduled Scan Task

In this section, we will configure VirusScan to run a weekly scan for the Workstations group. There are two ways to do this. One can create tasks in the Task Catalog and assign them in the System Tree, as with the previous examples; we assigned the prebuilt Deployment and Update tasks above. Alternatively, the workflow below allows for both the creation and assignment of the client task directly from the System Tree.

1 Click the **System Tree** button**,** select the **Workstations** group, and then click **Assigned Client Tasks**.
2 Click **Actions**, then click **New Client Task Assignment**.
3 Under **Product,** select **VirusScan Enterprise 8.0.0**.
4 Under **Task Type,** select **On Demand Scan**.
5 Under **Task Name,** select the **POC – Full System Scan**, and then click **Next**.
6 On the **Schedule** page, set the following options:

- Schedule status **Enabled**
- Schedule type **Weekly**, and select the day(s) the scan should run.
- Start time is **12:00 AM**
- Select **Run once at that time**
- Select **Run Missed Task** with a delay of **10** minutes

7 Click **Next**.
8 On the **Summary** page, click **Save**.

You should subsequently assign this task for the Laptops group also, but provide additional flexibility, such as deferring scans while on battery power. One would also typically establish specific exclusions and separate schedules for off-peak scans of your various servers based on services they support (e.g., Exchange, SharePoint, SQL, Domain Controller, DHCP, etc.).

Assigning the Patch Update Task

As all software vendors release patches and service packs for their products, it is important to schedule their deployment on a regular basis. The steps below simply walk you through assigning a pre-built task that deploys any available patches on a weekly basis.

1 Click the **System Tree** button**,** select the **Workstations** group, and then click **Assigned Client Tasks**.
2 Click **Actions**, then click **New Client Task Assignment**.
3 Under **Product,** select **McAfee Agent**.
4 Under **Task Type,** select **Product Update**.
5 Under **Task Name,** select the **POC –Patch Update**, and then click **Next**.
6 On the **Schedule** page, set the following options:

- Schedule status **Enabled**
- Schedule type **Weekly**, and select the day(s) the scan should run.
- For **Effective Period**, choose a start date of your preference
- Start time is **10:00 PM**
- Select **Run once at that time**
- Select **Run Missed Task** with a delay of **10** minutes

7 Click **Next**.
8 On the **Summary** page, click **Save**.

Create Client Tasks

Creating an Update Task

While a pre-built Product Update task was provided, it is important to walk through the process once in order to see the whole process.

In this section, you will create a client task that updates the signatures or content for VirusScan for Windows, Mac, Linux, as well for Host IPS and other products. In a production deployment you may prefer separate schedules for groups containing servers vs. workstations. The schedule below is only a sample. Feel free to set a different schedule if desired.

1 Click the **System Tree** button on the favorites bar.
2 Highlight the **My Organization** group.
Click the **Assigned Client Tasks** tab.
3 Click **Actions**, and then click **New Client Task Assignment**.
4 Under **Product**, select **McAfee Agent**. Under **Task Type**, select **Product Update**, and then click **Create New Task**.
5 For **Name**, type Daily Client Update.
6 Next to **Package Types**, make sure the following boxes are checked:

- **Linux Engine**
- **Mac Engine**
- **Engine**
- **Buffer Overflow DAT for VirusScan**
- **Host Intrusion Prevention Content**
- **DAT**

7 Click **Save.**
8 When returned to the Client Task Assignment Builder page, highlight **Daily Client Update** on the right under **Task Name**, and then click **Next**.
9 On the **Schedule** page, set the following options:

- Set Schedule Type to **Daily**
- Set Start Time to
- Set Start Time to **4:00 pm** and any Repeat if desired.
- Select **Run Missed Task** with a **5 minute** delay.

10 Click **Next**.
11 On the **Summary** page, click **Save**.

A Note Regarding Laptops

Laptops that temporarily disconnect from your network continue to run their assigned update tasks. By default, laptops retrieve updates from the McAfee site while on the road with an available Internet connection. If you have a large number of laptops that you'd like to have visibility of, and manage them when they are on the road, whether a VPN is present or not, consider placing an ePolicy Orchestrator "Agent Handler" in your DMZ. Additional information on Agent Handler is located in the ePolicy Orchestrator product guide and in the ePolicy Orchestrator Agent Handler White Paper.

Policy and Task Inheritance in the System Tree

Policies

By now you have noticed a recurring phrase when assigning policies and tasks. Namely "*The policy (or task) is now assigned to that group and all its subgroups*." In short, child objects (subgroups and individual systems) inherit settings from their parent container unless you break inheritance at a specific point in the tree. Recall the File Reputation policies for VirusScan that you applied earlier. We broke inheritance on the Laptops group, and assigned the *High* protection level instead, since those systems are often more exposed than those on the internal network.

Note: If you assign policies for a product to a group of systems where that product is not installed, there is a zero sum effect. Since that particular product is not installed, the policy has no effect on those systems.

Client Tasks

The inheritance concept is similar to that of Client Tasks when breaking inheritance at the subgroup or individual system level. At that point, your choices range from selecting a different task from the Client Task Catalog, to making a simple scheduling change without affecting the rest of the task's settings.

Viewing Broken Inheritance

ePolicy Orchestrator provides easy visibility of broken inheritance within the System Tree.

1 Click the **System Tree** button on the favorites bar.
2 Highlight **My Organization**.
3 Click the **Assigned Policies** tab.
4 From the **Product** drop-down menu, select **VirusScan Enterprise 8.8.0**.
5 On the line that lists **On-Access General Policies**, note the **Broken Inheritance** column states **1 doesn't inherit**. The ability to drill down on broken inheritances provides a way to both view and reset any policies that may have been applied in incorrectly.

6 Click on the **1 doesn't inherit** link to see the list of objects that do not inherit that policy from the My Organization container. In this case, it is just the Laptops group. Note that the **Actions** button provides an option to reset inheritance if that is ever required.
7 Click **Close**.

Deploy the McAfee Agent

The McAfee Agent is the distributed component of ePolicy Orchestrator. It must be installed on each system in your network that you wish to manage. The agent collects and sends event information at intervals to the ePolicy Orchestrator server. It also installs and updates the endpoint products, and applies your endpoint policies. Systems cannot be managed by ePolicy Orchestrator unless the McAfee Agent is installed.

The steps taken so far have focused on populating the System Tree, as well as creating and assigning policies and tasks. With those now in place you can begin to deploy protection on your systems. Again, based on their location in the tree, managed systems will inherit the policies and tasks of their parent container. With the Deployment tasks assigned, you will now push the McAfee Agent. By installing the Agent, your clients will begin communicating with ePolicy Orchestrator, download and install protection based on configured tasks, and enforce policies assigned to their respective groups.

Before deploying the McAfee Agent, you should verify both communication between the server and systems, and access to the default Admin$ share directory on the client. If your test systems are not part of a domain, you can simply copy **Framepkg.exe** to your client systems and execute it locally when we reach that step. **Framepkg.exe** is located on the ePolicy Orchestrator server in one of the following directories:
C:|Program Files|McAfee|ePolicy Orchestrator|DB|Software|Current|EPOAGENT3000|Install|0409
or
C:|Program Files(x86)|McAfee|ePolicy Orchestrator|DB|Software|Current|EPOAGENT3000|Install|0409

1 Check that you can ping client systems by name. This demonstrates that the server can resolve client names to an IP address.
2 Assuming Active Directory Domain, check for remote access to the default Admin$ share on the client systems:

- From the ePolicy Orchestrator server click **Start | Run**, then type \\computer-name\admin$, where *computer-name* is the NetBIOS name of one of the client systems. If the systems are properly connected over the network, your credentials have sufficient rights, and the Admin$ shared folder is present, a Windows Explorer dialog box opens.

3 If an active firewall is running on any client systems, you may need to create an exception for **Framepkg.exe**. Alternatively, you can disable the client firewall temporarily.

Deploying the McAfee Agent

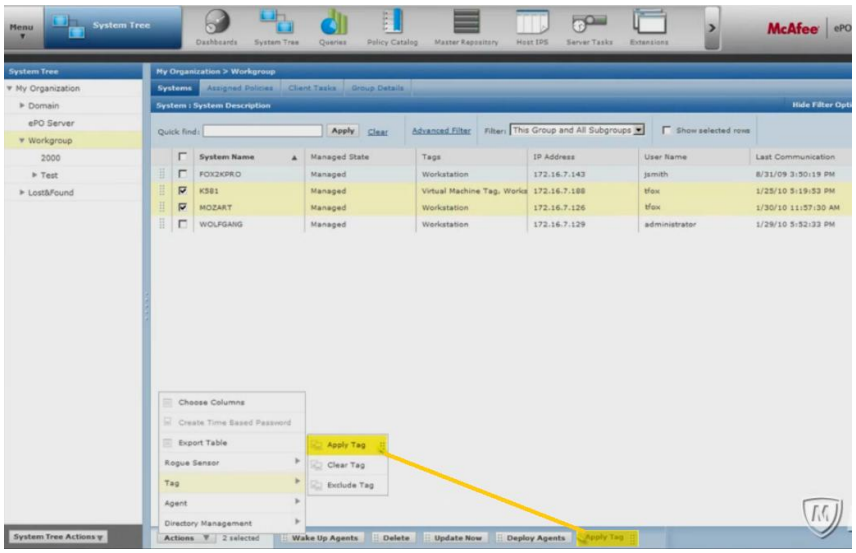
As previously mentioned, a Windows domain is not a requirement to use ePolicy Orchestrator, but there are certain advantages when used in the context of a domain. One of those is the push installation of the management agent known as the McAfee Agent. ePolicy Orchestrator pushes this installer to Admin$ share on your test systems and installs with Domain Admin credentials you specify. In fact this is the only installation that uses a push method. Once the Agent is installed, clients will pull the various endpoint protection components for installation.

It is assumed you have a limited number of test systems (under 50), so we will push the Agent to all the machines in the System Tree.

1 Click the **System Tree** button on the favorites bar.
2 Highlight the **My Organization** group.
3 Click the **Systems** tab.
4 Change the **Preset** drop-down to **This Group and All Subgroups** to view all the systems.
5 Check the box next to the column heading **System Name**. This selects all the systems.
6 Click **Actions** | **Agent** | **Deploy Agents**.
7 For **Credentials for agent installation:** type credentials that have rights to install software on client systems, such as a Domain Administrator account (domain\administrator), and click **OK**. If desired, you can select the option **Remember my credentials for future deployments**.
8 The **Server Task Log** appears showing the status of the Agent push.

It will take a few minutes for the McAfee Agent to install and for client systems to retrieve and execute the installation packages for the endpoint products. When first installed, the Agent determines a random time up to 10 minutes before its initial communication to the ePolicy Orchestrator server to retrieve policies and tasks.

Note: You can drag and drop commonly used items from the **Actions** button onto the taskbar at the bottom of the ePolicy Orchestrator interface, as shown in the following figure.



Verifying Agent Communication with ePolicy Orchestrator

Once the initial agent-server communication has occurred, the agent polls the server once every 60 minutes by default. This is known as the Agent to Server Communication Interval or ASCI. Earlier we applied a policy that changed that interval to 120 minutes. At each interval the Agent polls ePolicy Orchestrator to upload client events and retrieve any policy or task changes, or new installation instructions.

With an ASCI of 120 minutes, an agent that polled the server 30 minutes ago will not pick up any new policies for another 90 minutes. However, you can always force systems to poll the server with an **Agent Wake Up Call**. The Wake Up Call is useful when you need to force a policy change sooner than the next communication would occur. It can also be used to force clients to run tasks on demand, such as an immediate update or scan.

Sending an Agent Wake Up Call

Send a Wake Up Call to force polling by clients who have not yet communicated with the ePolicy Orchestrator server.

1 Click the **System Tree** button on the favorites bar.
2 Highlight the **My Organization** group.
3 Click the **Systems** tab.
4 Change the **Preset** drop-down to **This Group and All Subgroups** to view all the systems.
5 If the IP addresses and user names are listed, the agent on the client system is communicating with the server.
6 If five to ten minutes pass and systems do not display an IP address and user name, select all systems, click **Actions** | **Agent** | **Wake Up Agents,** and click **OK**.
7 You may need to click the **Refresh** button in the ePolicy Orchestrator console to view status change for your systems.

ePolicy Orchestrator Refresh button

Note: If sending a Wake Up Call fails to populate the client's IP address and user name, other environmental factors might be preventing the initial agent deployment. If this happens, simply copy the agent installer, **Framepkg.exe**, located on the ePolicy Orchestrator server, and run it locally on your test systems. Verify that a host or network firewall is not blocking agent communication to the server.

There are many additional ways to deploy the McAfee Agent, such as login scripts or third-party deployment tools. See the ePolicy Orchestrator Product Guide for additional information.

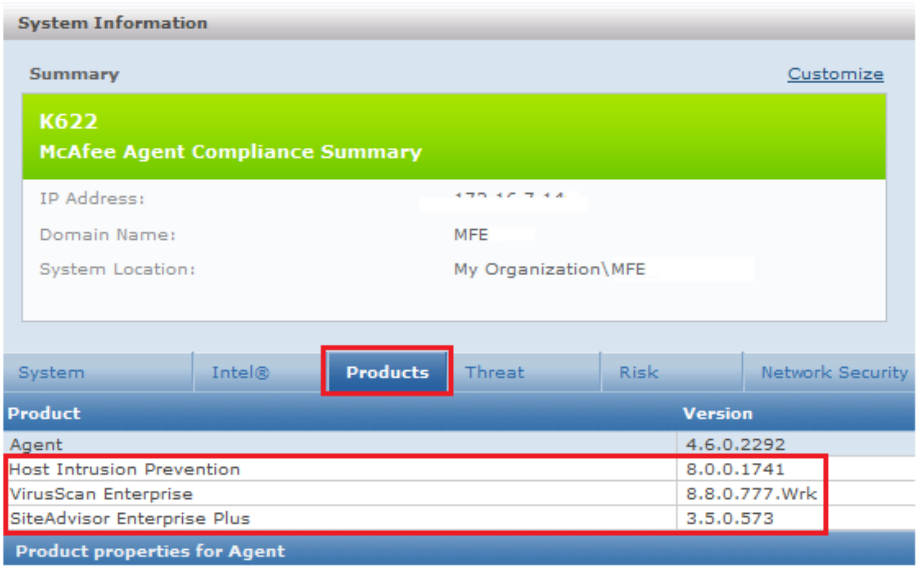
Quick Tip: The following video provides a short overview of the Agent Wake Up Call: Purpose of the Agent Wakeup Call.

Verifying Endpoint Protection Installation

Depending on how many products you deployed, the client installation process will take several minutes to complete. Soon after completion you can verify client installations from the ePolicy Orchestrator server, or from the client systems themselves by right-clicking the McAfee system tray icon.

Follow these steps to verify client installations from the ePolicy Orchestrator server. You should allow several minutes for the client installations to complete.

1 Click the **System Tree** button on the favorites bar.
2 Highlight the **My Organization** group.
3 Click the **Systems** tab.
4 Change the **Preset** drop-down to **This Group and All Subgroups** to view all the systems.
5 Click on one of your systems to view its **System Information** page.
6 Click the **Products** tab on the System Information page to view information about McAfee components installed on this node, similar to the example below.



Revisiting the Deployment Task Assignment at Some Point

The intent of the pre-built Deployment Tasks is to install the endpoint protection modules on a few test clients and servers. We configured the Deployment tasks to *Run Immediately*, since bandwidth impact is minimal for deployment to a small number of test systems. If you decide to use this installation of ePolicy Orchestrator in a production environment, you should revisit the setting of those task assignments at some point. Whether you choose a specific time of day for installations or leave the schedule as *Run Immediately*, you should add a window of Randomization to stagger the installations over a period of several minutes or hours, based on your environment. The randomization window chosen is dependent on several factors, but primarily the number of systems to which you are deploying, the number of products, and whether the installations are occurring from a remote repository.

Quick Tip: As opposed to performing a large number of remote installations to systems in different sites, ePolicy Orchestrator allows you replicate the files necessary for installations and updates to "distributed repositories" at strategic locations across your network. See the Quick Tip video Why and How to Create Distributed Repositories. One preferred type of distributed Repository is the Super Agent. Also see the Quick Tip video The Use of Super Agents. If applicable, an Agent Handler may be used.

Using Dashboards and Queries

Dashboards and queries provide various types of status information about your environment. Each product in the Endpoint Protection suites has predefined queries that you can run individually. Often the queries cover recent events, such as detections in the last 24 hours or 7 days, or they might provide trending information over time. ePolicy Orchestrator also includes several predefined dashboards. Dashboards are comprised of multiple queries or other objects. You can also create custom dashboards and queries. By default, there are several active dashboards available for viewing. You can also create custom dashboards by using default queries or ones that you create. In the sections below, we will examine some of the default dashboards and queries, create a custom query, and create a custom dashboard.

Dashboard Overview

While there may not yet be much event data to report, this is a good opportunity to examine some of the default dashboards and understand how they are created.

1 Click the **Dashboards** button on the favorites bar.
2 From the **Dashboard** drop-down, choose **VSE: Current Detections**.
This dashboard breaks down various types of detections made by VirusScan Enterprise, specifically viruses, spyware, and other unwanted programs for the last 24 hours and last 7 days. You likely don't have any detections showing yet, but now you know where to find that data. (You can use the well known anti-virus test string **EICAR.COM** file from http://www.eicar.org for testing and generating immediate detections.)
3 From the **Dashboard** drop-down, choose **Host IPS: Signatures Triggered**.
Elements of this dashboard will be helpful when tuning Host IPS. It provides a breakdown of triggered signatures by severity for both workstations and servers.
4 From the **Dashboard** drop-down, under **Public Dashboards**, choose **ePO Summary**.

Query Overview

In this section we will run a predefined query and view the results.

1 Click the **Queries & Reports** button on the favorites bar.
2 Expand the **Shared Groups** on the left. Each group contains a number of predefined queries.
3 Highlight the **VirusScan Enterprise** group.
4 Scroll down the alphabetical list of queries, locate **VSE: DAT Deployment**, and click **Run** at the far right. Assuming VirusScan has been installed and has performed its initial DAT (signature) update, you will see a pie chart. If all test systems are running the same DAT, the pie chart will display only one color. However, this is an important query to watch going forward, so you will know at a glance if all your clients are current on their virus signatures.
5 Click **Close**. We will revisit this query again.

Creating a Custom Query

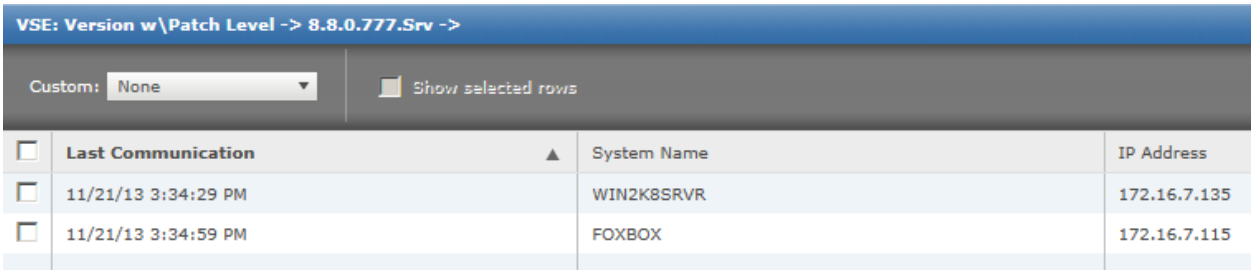
ePolicy Orchestrator also provides a wizard allowing you to create custom queries, which can also be used in a dashboard. In this section, you will create a more advanced query that displays both the version and patch level of VirusScan installations, broken down by servers and workstations. The resulting data will be from systems that have polled the server and reported their current status.

1 Click the **Queries & Reports** button on the favorites bar.
2 At the bottom of the page, click **New**.
3 Make sure **System Management** is highlighted on the left, select **Managed Systems** under Result Types, and then click **Next**.
4 Select **Stacked Bar Chart** on the left, under Display Results As.
5 For **Stack Labels Are**, scroll down and select **Product Version (VirusScan Enterprise)** under VirusScan Enterprise Properties.
6 For Bar Labels Are, scroll down and select **Hotfix/Patch Version (VirusScan Enterprise)** under VirusScan Enterprise Properties, and then click **Next**.
7 Under Available Columns on the left, click the arrow next to **IP Address** under Computer Properties to add it to the column list on the right, and then click **Next**.
8 On the Filter page, click **Run**. Your results will appear homogeneous, as all your test machines are running the same version and patch level of VirusScan. As future product patches are released, it is helpful to be able to report on any unpatched systems. This report will provide that visibility at a glance, as well as display any systems where VirusScan is not installed.
9 Click **Save**.
10 On the Save Query page, provide a name for the query, such as VSE: Version w\Patch Level.

11 Select **VirusScan Enterprise** from the Existing Group drop-down, then click **Save**. Your new query is now listed alphabetically in the VirusScan query group. You can run this query at any time or use it in a dashboard.

Here's the output of this sample query, showing several systems running different versions of VirusScan. On the far right are two servers running VirusScan 8.8 with no patch. The middle bar shows two workstations with VirusScan 8.8 Patch 2. The last bar shows a server running which also has Patch 2.

Drilling down on the first bar provides details regarding those specific systems still running VSE 8.8 with no patch. As mentioned, new product patches and product versions can be deployed using ePolicy Orchestrator. This sample query is provided to give you an idea of the level of detail available for reporting. Note that it is not necessary to upgrade the version of ePolicy Orchestrator in order to upgrade client versions.



Creating a Custom Dashboard

In this section you will create a new dashboard utilizing the query just created along with some other useful default queries.

1 Click the **Dashboards** button on the favorites bar.
2 Click the **Dashboard Actions** drop-down and choose **New**.
3 Provide a name for the dashboard, such as Endpoint Status, select **Public** for *Dashboard Visibility*, and then click **OK**.
4 You are then presented with a blank dashboard. Click the **Add Monitor** button.

5 Use the arrows to scroll through the Monitor Gallery toolbar above and locate **Queries**. Drag the **Queries** object down on to the blank dashboard.
6 In the New Monitor box that appears, select your new query **VSE: Version w\Patch Level** under Shared Groups-VirusScan Enterprise, and then click **OK**.
7 Repeat this process by again dragging the **Queries** object to a gray area either below or to the side of the first monitor. Note that the box is shaded as you drag it. It will state "Monitor will not fit here" if you attempt to place it on top of another monitor. Choose the query titled **VSE: DAT Deployment**. Note the monitors will resize themselves automatically. Repeat this process adding two additional queries: **Host IPS: Desktop High Triggered Signatures** and **Host IPS: Desktop Medium Triggered Signatures**. You can add additional monitors as desired, but note the more monitors you add, the smaller they will appear on the dashboard. Optionally, you may choose to create distinct dashboards per product showing the installation count, update status, and recent detections for VirusScan, and a similar, separate dashboard for Host IPS.
8 Click **Save** in the upper right corner, and then click **Close** in the upper left to return to the main Dashboards page.
9 From the **Dashboard** drop-down, you can now choose your *VirusScan Status* dashboard, listed under Private Dashboards. It is only visible under your login. By clicking the **Dashboard Actions** drop-down and choosing **Edit**, you can make your dashboard Public and, therefore, usable by other users of ePolicy Orchestrator.

Quick Tip: These videos provide additional examples and use cases around ePolicy Orchestrator queries and as well as customizing and scheduling reports:
Quick Tips: Dashboard Reports
Quick Tips: Advanced Reporting

Review

Congratulations! If you've reached this page you have completed many of the common tasks used in creating and maintaining a secure endpoint environment with ePolicy Orchestrator. Subsequent pages of this guide provide details regarding other components of this suite such as McAfee Device Control and Real Time for ePO. So far we have covered the following:

1 Installed the core components of the McAfee Endpoint Protection suites
2 Enabled and ran a task that updates the ePolicy Orchestrator master repository from the McAfee site
3 Leveraged the pre-built System Tree structure and added test systems into groups
4 Applied a new policy that enables remote access to the Agent Log on client systems
5 Created and\or applied new endpoint policies for the following:

- McAfee Agent
- VirusScan Enterprise
- SiteAdvisor Enterprise
- Host Intrusion Prevention – IPS (EPA Suite only) and Host Firewall

6 Assigned a deployment task to install VirusScan, Host Intrusion Prevention, and SiteAdvisor Enterprise on your test systems
7 Created an update task to keep your systems current
8 Assigned a VirusScan scheduled scan task
9 Deployed the McAfee Agent, verified agent-server communication, and verified client installs
10 Viewed some of the available default dashboards, and ran a predefined query
11 Ran a default query and created custom one
12 Created a custom dashboard from default and custom queries

Additional Topics

- Scheduling reports
- Role based access
- A deeper dive on queries and reports
- Tags and tag based management
- Setting up alerts with Automatic Responses
- Utilizing Software Manager to download additional licensed or evaluation software
- Distributed Repositories to provide installation and updating points for remote locations
- Using an Agent Handler for ePolicy Orchestrator load balancing or to manage mobile users when no VPN is present
- Management of other McAfee offerings such as full disk encryption for Windows and Mac
- Management of McAfee-compatible products from Security Innovation Alliance partners

There's a lot more to see…

Real Time for ePO

A unique offering in system security, Real Time for McAfee ePO gathers up to the minute data about your managed systems so you can take action based on the real time condition of these systems. Before Real Time for McAfee ePO, the status of managed systems had a period of delay. With Real Time for McAfee ePO there is little to no delay in gathering system data, allowing for an instant analysis of the health of systems and a quick response to events. Real Time for McAfee ePO collects data from all systems in an enterprise in seconds, even if your enterprise network has hundreds of thousands of systems, and even if they are geographically distributed over networks with slow connections.

During the installation of this McAfee endpoint suite, the Real Time for ePO client and associated management files were checked into your ePO server. A deployment task was automatically created for you as well.

Before you can utilize Real Time for ePO, you will need to install the server-side component. The installation files are found in the \PostInstall directory where you unzipped the installer. Extract the ZIP file to locate the Setup.exe file. Before installation, please see the notes in the section just below.

Real Time for McAfee ePO Server Database Considerations

We recommend that you install the Real Time for McAfee ePO server on a dedicated system, but these scenarios are supported:

- Deployment with fewer than 100 clients: ePolicy Orchestrator, Real Time for McAfee ePO server, McAfee ePO database, and the Real Time for McAfee ePO database can exist on one server.
- Deployment for up to 1,000 users: Real Time for McAfee ePO server and Real Time for McAfee ePO database can be installed on the same server.

For installations with more clients, the Real Time for McAfee ePO server and the Real Time for McAfee ePO database must be installed on separate dedicated servers. Please refer to the Real Time for ePO Product Guide for additional details regarding large deployments

Real Time for ePO server installation instructions are also found in the Product Guide. A video covering both server and client installation, plus usage examples, has been created for your convenience. The video can be viewed here.

Installation of the McAfee Real Time for ePO Client

Note: A minimum of two clients are required for testing. The questions posed to Real Time for ePO will timeout without returning an answer if you don't have a minimum of two clients.

1 Click the **System Tree** button**,** select the **My Organization** group (or another group of your choosing), and then click **Assigned Client Tasks**.
2 Click **Actions**, then click **New Client Task Assignment**.
3 Under **Product**, select **McAfee Agent**.
4 Under **Task Type**, select **Product Deployment**.
5 Under **Task Name**, select the **POC - Deploy Real Time for ePO client**, and then click **Next**.
6 On the **Schedule** page, set the following options:

- Schedule status **Enabled**
- Schedule type **Run Immediately**

7 Click **Next**.
8 On the **Summary** page, click **Save**.
9 Repeat the above process for the **Laptops** group as well.

VirusScan Enterprise for Linux

VirusScan Enterprise for Linux (VSEL) detects and removes viruses and other potentially unwanted software on Linux-based systems. VirusScan Enterprise for Linux uses a web-browser interface and a powerful McAfee scanning engine — the engine common to all our anti-virus products.

Although a few years ago, the Linux operating system was considered a secure environment, it is now seeing more occurrences of software specifically written to attack or exploit security weaknesses in Linux-based systems. Increasingly, these systems interact with Windows-based computers. Although viruses written to attack Windows-based systems do not directly attack Linux systems, a Linux server can harbor these viruses, ready to infect any client that connects to it.

During the installation of this McAfee endpoint suite, the VirusScan Enterprise for Linux client and associated management files were checked into your ePO server. A deployment task was automatically created for you as well.

The McAfee Agent for Linux

Before you can utilize VSEL, you will need to deploy the McAfee Agent for Linux to provide communication with the ePO server. On most Linux systems, the agent can be installed manually using an installation script (install.sh) that McAfee ePO created when the agent was checked into the McAfee ePO Master Repository. The agent can also be installed from ePolicy Orchestrator on Red Hat Enterprise and Ubuntu client systems. Once the agent is in place on client systems, you can run the deployment task to install the software, and schedule updates and scans as well.

Manual Installation of the McAfee Agent

The install script (install.sh) for the McAfee Agent for Macintosh is in the following directory on the ePO server:
C:|Program Files (x86)|McAfee|ePolicy Orchestrator|DB|Software|Current|EPOAGENT3700LYNX|Install|0409
Instructions for manual installation of the Agent are located in the McAfee Agent 4.8 Product Guide.

McAfee Agent Deployment

The following operating systems support installing the agent from ePolicy Orchestrator:
• Red Hat Enterprise Linux versions 4 and later
• Ubuntu Linux 8.04 and later

***Enable SSH on the Linux systems before installing agent from McAfee ePO.**

***Comment the following line in the /etc/sudoers file on Red Hat operating systems.**
Default requiretty

1 Click **Menu** | **Systems** | **System Tree**, then select the group to which you wish to deploy the agent.
2 Click **Actions** | **Agent** | **Deploy Agents**.
3 Select the appropriate **Agent version** drop-down list given the target operating system, and select an agent version from that list.
You can only install one version of the agent onto one type of operating system with this task. If you need to install on multiple operating systems or versions, repeat this task for each additional target operating system or version.
4 Select **Install only on systems that do not already have an agent managed by this ePO server**.
5 Type valid credentials in the **User name**, and **Password** and **Confirm password** fields.
If you want these entries to be the default for future deployments, select **Remember my credentials for future deployments**.
6 If you do not want the defaults, enter appropriate values into the **Number of attempts**, **Retry interval**, and **Abort after** options.

Deploying VirusScan Enterprise for Linux

In this section you will assign the deployment task for VirusScan for Linux.

1 Click the **System Tree** button**,** select the group containing your Linux systems, and then click **Assigned Client Tasks**.
2 Click **Actions**, then click **New Client Task Assignment**.
3 Under **Product**, select **McAfee Agent**.
4 Under **Task Type**, select **Product Deployment**.
5 Under **Task Name**, select the **POC - Deploy VirusScan for Linux**, and then click **Next**.
6 On the **Schedule** page, set the following options:

- Schedule status **Enabled**
- Schedule type **Run Immediately**

7 Click **Next**.
8 On the **Summary** page, click **Save**.

Clients will retrieve and run this task the next time they poll the server and install VirusScan Enterprise for Linux.

Endpoint Protection for Mac

McAfee Endpoint Protection is suite-based and offers enhanced security for your Mac. In addition to anti-virus, it includes anti-spyware, desktop firewall, and application protection features.

McAfee integrates with your Mac OS and works in real-time to detect malware. It scans files, folders, local or network mounted volumes, and other items for potentially unwanted code and notifies you in case of malware detections. Scanning takes place every time you create or access an item. You can also schedule scans to run immediately, at a particular time, or at regular intervals.

Central to your McAfee Security software are the McAfee scanning engine and the malware definition files (DATs). The engine is a complex data analyzer. It identifies the type of the item being scanned and decodes the content of that object to understand what the item is. It then scans items on your Mac comparing them with all known signatures stored in the DAT files.

Additionally, you can configure application protection rules to prevent unwanted applications from executing or from accessing the incoming and/or outgoing network connections. For example, you can set rules such that the iTunes application can be launched (executed) and used for recreational purposes but cannot be used to access the Internet for downloading music. You can also specify path-based application exclusions to exclude applications from these rules.

McAfee Security also monitors network communications and allows or denies access to specific networks/hosts/IP addresses based on the firewall rules you configure. You can also specify trusted networks in groups to exclude them from these rules.

During the installation of this McAfee endpoint suite, the Endpoint Protection for Mac client and associated management files were checked into your ePO server. A deployment task was automatically created for you as well.

The McAfee Agent for Mac

Before you can utilize Endpoint Protection for Mac, you will need to deploy the McAfee Agent for Mac to provide communication with the ePO server. On most Mac systems the agent can be installed manually using an installation script (install.sh) which McAfee ePO created during installation. The agent can also be pushed from ePolicy Orchestrator to Mac clients. Once the agent is in place on client systems, you can run the deployment task to install the software, and schedule updates and scans as well.

Manual Installation of the McAfee Agent

The install script (install.sh) for the McAfee Agent for Macintosh is in the following directory on the ePO server:
C:|Program Files (x86)|McAfee|ePolicy Orchestrator|DB|Software|Current|EPOAGENT3700MACX|Install|0409
Instructions for manual installation of the Agent are located in the McAfee Agent 4.8 Product Guide.

McAfee Agent Deployment via ePO

The following operating systems support deploying the McAfee Agent from ePolicy Orchestrator:
• Apple Macintosh OS/X versions 10.5 (Leopard) and later

*****Enable SSH on the Mac systems before installing agent from McAfee ePO.**

1 Click **Menu** | **Systems** | **System Tree**, then select the group to which you wish to deploy the agent.
2 Click **Actions** | **Agent** | **Deploy Agents**.
3 Select the appropriate **Agent version** drop-down list given the target operating system, and select an agent version from that list.
You can only install one version of the agent onto one type of operating system with this task. If you need to install on multiple operating systems or versions, repeat this task for each additional target operating system or version.
4 Select **Install only on systems that do not already have an agent managed by this ePO server**.
5 Type valid credentials in the **User name**, and **Password** and **Confirm password** fields.
If you want these entries to be the default for future deployments, select **Remember my credentials for future deployments**.
6 If you do not want the defaults, enter appropriate values into the **Number of attempts**, **Retry interval**, and **Abort after** options.

Deploying Endpoint Protection for Mac

In this section you will assign the deployment task for your Macs.

1 Click the **System Tree** button**,** select the group contain your Mac systems, and then click **Assigned Client Tasks**.
2 Click **Actions**, then click **New Client Task Assignment**.
3 Under **Product**, select **McAfee Agent**.
4 Under **Task Type**, select **Product Deployment**.
5 Under **Task Name**, select the **POC - Deploy Endpoint Protection for Mac**, and then click **Next**.
6 On the **Schedule** page, set the following options:

- Schedule status **Enabled**
- Schedule type **Run Immediately**

7 Click **Next**.
8 On the **Summary** page, click **Save**.

Clients will retrieve and run this task the next time they poll the server and install protection for Mac.

McAfee Policy Auditor for Desktop (EPA)

McAfee Policy Auditor® is an extension to ePolicy Orchestrator 5.0 that automates the process for risk and compliance system audits. Audits can perform tasks such as check system settings, including password length, open or closed ports, file changes, and the presence of software updates. McAfee Benchmark Editor is a library of standardized audits, such as Sarbanes-Oxley (SOX), Center for Internet Security (CIS), Payment Card Industry Data Security Standards (PCI DSS), and patch confirmation (such as Microsoft or Adobe patches).

ePO is used to deploy the Policy Auditor agent plug-in which determines when the audits should be run. The agent plug-in conducts audits at the appropriate time, including when the managed system is off the network, and returns results to the ePolicy Orchestrator. A policy can be created for whiteout and blackout periods to run an audit. The agent plug-in determines the age of the current information and uses any pending blackout or whiteout windows to determine when content should be re-evaluated. Or, the Run Audits feature can be used to force an immediate scan in the next whiteout window.

Policy Auditor measures compliance by comparing the actual configuration of a system to the desired state of a system. To understand what the software does and how to use it, you must be familiar with these basics:

- What an audit is, when you should use it, and why you should use it.
- The supported deployment solutions based on the type(s) of systems you want to audit.
- The system classifications that determine which functional components can be used.
- The functional components you can use to audit systems. This includes leveraging the software with McAfee Policy Auditor and other McAfee and third-party software.
- The functional components you can use to audit systems. This includes leveraging the software with McAfee Vulnerability Manager and other McAfee and third-party software.

During the installation of this McAfee endpoint suite, the Policy Auditor client or agent and associated management files were checked into your ePO server. A deployment task was automatically created for you as well.

Policy Auditor Quick Start

Follow these steps to deploy Policy Auditor, and to also create and run an audit with subsequent viewing the results. Instructions are also provided for Whiteout and Blackout time periods that dictate when audits should be run or not be run, respectively.

Deploy the Policy Auditor Agent

1 Click the **System Tree** button**,** select the **Workstations** group, and then click **Assigned Client Tasks**.
2 Click **Actions**, then click **New Client Task Assignment**.
3 Under **Product**, select **McAfee Agent**.
4 Under **Task Type**, select **Product Deployment**.
5 Under **Task Name**, select the **POC - Deploy Policy Auditor**, and then click **Next**.
6 On the **Schedule** page, set the following options:

- Schedule status **Enabled**
- Schedule type **Run Immediately**

7 Click **Next**.
8 On the **Summary** page, click **Save**.
9 Send a **Wake Up Call** to the group or systems to have clients retrieve the task and execute it immediately.

View and Activate Benchmarks

1 In ePO, click **Menu | Risk & Compliance | Benchmarks**
2 Scroll to find the benchmark called **Windows "Getting Started" Benchmark** and note the status is "Received". Received indicates to benchmark was created and downloaded from McAfee. A benchmark is made up of numerous automated rules and checks. Select the **Windows "Getting Started" Benchmark** by clicking the checkbox at left, then select **Actions | View** from bottom left of page. This will show what a benchmark contains.
In the Benchmark Tree, expand Windows "Getting Started" Benchmark and its subsections. The left panel shows the rules sections of the Getting Started benchmark, the right panel reveals Rules that verify elements of the standard. These are the individual audit rules that will be processing. Click through to examine the rules. Choose CANCEL to exit back to benchmark page.
3 Select the **Windows "Getting Started" Benchmark** and click the button **Activate** and enter comments "Activate Windows "Getting Started" Benchmark. The benchmark will show "Active" and will be in the list of available benchmarks when creating an audit.
4 Similarly, select a MS Windows Bulletin Benchmark 20xx for a recent time period. View and expand to get familiar with rules. Cancel that page and then Activate it.

Create an Audit

Audits determine whether systems comply with security needs and if anything needs to be done to make the systems compliant.

1 Click **Menu | Risk & Compliance | Audits**, then click the button for **New Audit**. The New Audit Builder appears on the **Select Benchmarks Page**.

- Choose platform for the Microsoft Windows machine to be audited. The Active Benchmarks should be Windows "Getting Started" Benchmark and MS Windows Bulletin that were activated.
- In the Active Benchmarks pane select the "Getting Started" benchmark and click **Add Benchmark** button to use it in this audit. McAfee recommends using only one benchmark per audit.
- In Selected Benchmarks, note the option Selected Profile drop-down list, click **Next**.

NOTE: Some benchmarks don't have profiles. Profile is not required.
2 The **Select Systems Page** appears**.** Choose a method for adding systems to the audit:

- Select **System Tree and Tags** radial and then click **Add System** or **Add Group** button at bottom. (If adding by Group, system exclusions can be made in the right panel.)
- Enter the name of the system or Group to be audited, then click **Next**.

3 The **Properties Page** appears.

- Enter the name of the audit as Windows Getting Started Audit.
- In **Results must not be older than (frequency)***, choose 30 days then click **Next**.
- The Summary page appears. Review the information, then click **Save**.

Notes about Audit Frequency:
Audit frequency describes how often data should be gathered. Frequency is defined as "Audit results should be no older than *nnn* time unit," where "nnn" is a number and "time unit" is days, weeks, or months. For example, if the frequency for an audit is defined as 1 month and a system has not been audited in more than 1 month, the results are considered to have expired.

Repeat the steps above to also create an audit for the **MS Windows Bulletin Benchmark**.

Run an Audit Manually

You can run an audit manually to view results before the next scheduled audit.

1 Click **Menu | Risk and Compliance| Audits**.
2 Check one or more audits, then click **Actions | Run Audit**.
The audit runs during the next whiteout period. No blackouts have yet been set in your test so it should run immediately. A subsequent section below provides more details on audit whiteout periods.

View Audit Results

Return to the Audits page or use the following:

1 Click **Menu | Risk and Compliance| Audits**
2 Completed audits are shown. Click on the name of the audit (Windows Getting Started Audit) to view its results**.** The Audit Benchmarks pane appears.

- The Benchmark Title will show and how many machines passed or failed the audit.
- Click on the hyperlinked number in the "Passed" column to see the results page that shows how many Rules Passed, Rules Failed, or Rules Other. (Note: Even though the client machine may have passed the audit overall, some of the rules may have "failed". Rules Other are usually "not applicable" situations like confirming a Windows 2003 specific rule running on a Windows 7 workstation.)
- Click on the hyperlinked number under "Rules Passed" that lists the title of each passed rule. Click the rule's hyperlink to see more detailed information about that rule.

Review Findings

Findings include additional information about why a system failed a check. For example, if an audit expects a password with at least 8 characters but finds a password with only 6 characters, the Findings show the actual and expected results.
Findings can be used to:
• Report additional details about Findings.
• Perform custom actions on Findings such as remediation on violations.
• Waive or hide selected Findings.
• Ignore Findings results

To view findings:
1 Click **Menu | Risk & Compliance | Audits**, then click an audit. The Audit Benchmarks page appears.
2 Click a hyperlinked number in the "Failed" column. (You may need to use MS Windows audit results for failed.) The Benchmark Systems – Fail page appears.
3 Note the View column at left. Click **Findings** to see the status of each rule. Choose Close at bottom to return to Benchmark Systems – Fail page.

To hide or show a finding:
1 Under the "Rules Failed" column, click the hyperlinked number. Click **fail** for a rule. Rule Details page appears.
2 From the Checks pane, click **Results**. The Results page appears.
3 Select Findings that you wish to hide. Choose Actions dropdown, and then click **Hide**.

View Dashboards

McAfee Policy Auditor ships with four default dashboards. Two are for specific audit types, PCI Compliance and Microsoft patches. The *Operations* dashboard is for troubleshooting. The PA: Compliance Summary dashboard provides a quick status view of audits. To view the dashboard
1 Click the **Dashboards** button on the favorites bar.
2 From the Dashboard dropdown under Public Dashboards, click on **PA: Compliance Summary**
3 Review the report monitors and click on them to drill down to see the details.

4 Similarly, select the Dashboard dropdown for **PA: MS Patch Status Summary** and drill down as well.

Set Policy Auditor Agent Whiteout/Blackout (optional)

Audit whiteout periods are set by Policy for time intervals when an audit can run. A policy can be assigned to one machine, a group, or all machines. Audit blackout periods are time intervals when an audit cannot be run. Audits are not scheduled at a specific time; instead audits are run by frequency. Audit content updates sent to the ePolicy Orchestrator server cause McAfee Policy Auditor to run the audit at the next available whiteout period.
Setting whiteout and blackout periods for running audits on systems:
1 Click the **Policy Catalog** button on the favorites bar.
2 From the **Product** drop-down, choose **Policy Auditor Agent 6.2**.
3 Duplicate **McAfee Default – General** and name it *Policy Auditor Calendar*, and then click OK.
4 Click on the *Policy Auditor Calendar* policy you just created.
5 Check the box for **Show the Policy Auditor system tray icon (Windows only)**.
6 Click on any boxes (times) to shade them blue indicating times that audits should not be run, such as Monday through Friday, 8:00am to 5:00pm, and then click **Save**.

Follow these steps to assign this new policy which prevents audits from running during work hours.
Note: As long as client machines have retrieved this policy from ePO at some point, they do not need to be on the network or communicating with ePO to run an audit. Results are reported to ePO on their next communication interval.
1 Click the **System Tree** button on the favorites bar.
2 Highlight the **Workstations** group.
3 Click the **Assigned Policies** tab.
• From the **Product** drop-down menu, select **Policy Auditor Agent 6.2**.
• On the line that lists **General**, click **Edit Assignment**.
• For **Inherit from**, select **Break inheritance and assign the policy and settings below**.
• From the **Assigned Policy** drop-down menu, select **Policy Auditor Calendar**.
• Click **Save**. The policy is now assigned to that group.

Disable Audit (optional)

An audit will continue to run periodically on its frequency unless it is disabled or deleted.

1 Click **Menu | Risk and Compliance | Audits**.
2 Select an audit, click Actions and then click **Edit Audit** button. The New Audit Builder opens.
3 Choose the **Properties page** tab.
4 Deselect **Enable this Audit**, then click **Next**.
5 The Summary page appears. Click **Save**.
Note: The same process can be used to re-enable an audit.

Delete Audit (optional)

You can delete an audit and all associated results and findings when they are no longer needed.
1 Click **Menu |Risk and Compliance | Audits**.
2 Select an Audit. Choose **Actions** button, and the click **Delete**.

McAfee Device Control

Note: In an Active Directory domain you can leverage user based policies with Device Control. In Workgroup mode only local user or machine-based policies are possible.

During the installation of this McAfee endpoint suite, the Device Control client and associated management files were checked into your ePO server. A deployment task was automatically created for you as well. Note that after deployment of Device Control, a client reboot is required.

Post-Installation Configuration

The installer automatically checks McAfee Device Control into the ePolicy Orchestrator software repository; however, additional steps need to be taken to properly configure Device Control for use. The following steps take you through the installation of the McAfee DLP Management Tools.

Initializing the DLP Interface

1 In the ePolicy Orchestrator console, select **Menu | Data Protection | DLP Policy**.
2 The McAfee DLP Endpoint Management Tools installer runs, and, after a brief delay, the DLP Management Tools Setup wizard appears. Depending on your browser settings, you may be prompted to install the ActiveX control.
3 Click **Install**, then click **Next** on all defaults provided in the wizard, and then click **Finish**.
4 Click **OK** on the dialog box that states "DLP Global Policy is Unavailable".
5 When a first-time initialization page appears, click **Cancel**. (If you clicked **Next**, just click **Cancel** at your earliest opportunity.)

Entering the License Key for Device Control

A license key for Device Control was provided as part of the download. The key is located in a file called *McAfeeDC93LicenseKey.txt* in the \PostInstall directory where you unzipped the McAfee installer. The following steps detail the processes for entering the license key.

1 On the McAfee DLP Endpoint policy console menu bar, select **Help** | **Update License**.
The **View and Update License** window displays the current (default) activation key and expiration date.
2 Click **Update**.
3 Type or paste the Activation Key in the text box and click **Apply**.
A warning that you must log on again for the change to take effect appears.
4 Click **OK** to close the message box, and click **Close** to close the Update License window, then log off ePolicy Orchestrator.
5 Log on to ePolicy Orchestrator to complete the upgrade.
6 From the Agent Configuration menu, select **Edit Global Agent Configuration**.
7 Go to the **File Tracking** tab and select **Device Control and full content protection**.
8 Go to the **Miscellaneous** tab. Only the Agent Popup service, Device Blocking, and Reporting Service modules are selected. Select the remaining modules you require to enable them and click **OK**.

Do not enable modules you don't use. They increase the McAfee DLP Endpoint agent size and slow its operation unnecessarily.

9 On the Toolbar, click **Apply** in the upper left corner of the page.
The policy changes are applied to ePolicy Orchestrator.
10 In ePolicy Orchestrator you can issue a wake-up call to deploy the policy change to the workstations, or just let clients retrieve changes at their next polling interval.

Evidence and Whitelist Folders

Two folders must be created and shared, and their properties and security settings must be configured appropriately. The folders do not need to be on the same computer as ePolicy Orchestrator, but it is usually convenient to put them there.

Create the following directory structure on the ePolicy Orchestrator server:

- c:\dlp_resources\
- c:\dlp_resources\evidence
- c:\dlp_resources\whitelist

Configure the Share Names and Permissions

Configuration of the folders on Windows 2008 Server for Device Control requires specific security settings.

Configuring the Evidence Folder

1 Right-click the evidence folder and select **Properties**.
2 Select the **Sharing** tab, then click **Advanced Sharing**. Select the **Share this folder**.
3 Modify the Share name to evidence$.
NOTE: The $ ensures that the share is hidden.
4 Click **Permissions**. With the default user name Everyone selected, allow **Full Control**, and then click **OK**.
5 Select the Security tab, and then click **Advanced**.
6 On the Permissions tab, click **Change Permissions**, and then deselect the **Include inheritable permissions from the object's parent** option.
7 A confirmation message explains the effect this change will have on the folder. Click **Remove**. The Permissions tab on the Advanced Security Settings dialog box now shows all permissions eliminated.
8 Click **Add** to select an object type.
9 In the **Enter the object name to select** text box, type Domain Computers, then click **OK**.
The **Permission Entry** dialog box is displayed.
10 In the **Allow** column, select **Create Files/Write Data** and **Create Folders/Append Data**. Verify that the **Apply to** option says **This folder, subfolders and files**, then click **OK**.
The Advanced Security Settings dialog box now includes Domain Computers.
11 Click **Add** again to select an object type.
12 In the **Enter the object name to select** text box, type Domain Admins (or another security group if desired), then click **OK** to display the Permission Entry dialog box.
13 In the **Allow** column, select **Create Files/Write Data** and **Create Folders/Append Data**. Verify that the **Apply to** option says **This folder, subfolders and files**, then click **OK**.
The Advanced Security Settings dialog box now includes Domain Admins.
14 Click **OK**, **OK**, and then **Close** on the remaining dialog boxes.

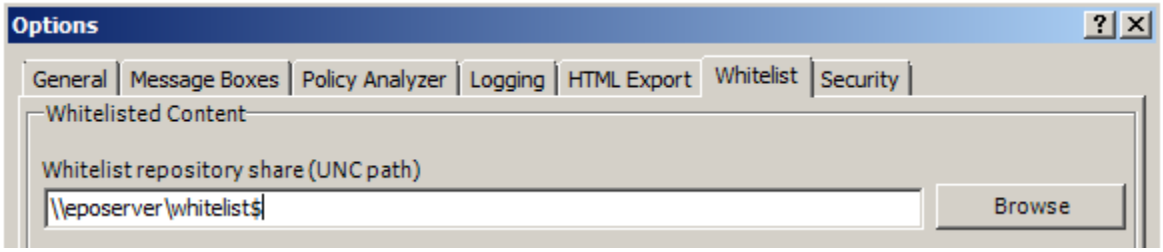
Configuring the Whitelist Folder

1 Right-click the whitelist folder and select **Properties**.
2 Select the **Sharing** tab, then click **Advanced Sharing**. Select the **Share this folder**.
3 Modify the Share name to whitelist$, and click **OK**.
NOTE: The $ ensures that the share is hidden.
4 Click **Permissions**. With the default user name Everyone selected, allow **Full Control**, and then click **OK**.
5 Select the Security tab, and then click **Advanced**.
6 On the Permissions tab, click **Change Permissions**, and then deselect the **Include inheritable permissions from the object's parent** option.

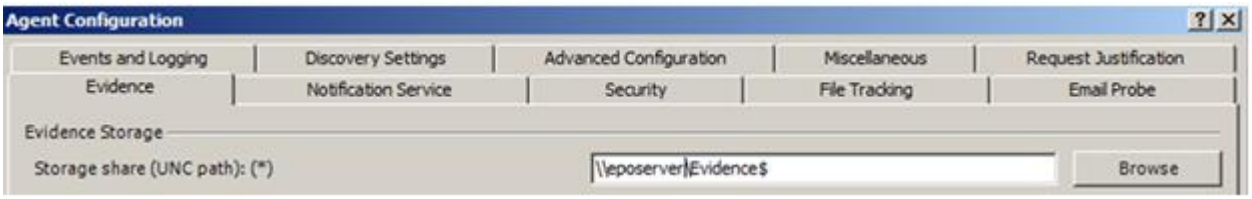
7 A confirmation message explains the effect this change will have on the folder. Click **Remove**. The Permissions tab on the Advanced Security Settings dialog box now shows all permissions eliminated.
8 Click **Add** to select an object type.
9 In the **Enter the object name to select** text box, type Domain Computers, then click **OK**.
The **Permission Entry** dialog box is displayed.
10 In the **Allow** column, select **List Folder/Read Data**. Verify that the **Apply to** option says **This folder, subfolders and files**, then click **OK**.
The Advanced Security Settings dialog box now includes Domain Computers.
11 Click **Add** again to select an object type.
12 In the **Enter the object name to select** text box, type Domain Admins (or another security group if desired), then click **OK** to display the Permission Entry dialog box.
13 In the **Allow** column, select **Create Files/Write Data** and **Create Folders/Append Data**. Verify that the **Apply to** option says **This folder, subfolders and files**, then click **OK**.
The Advanced Security Settings dialog box now includes Domain Admins.
14 Click **OK**, **OK**, and then **Close** on the remaining dialog boxes.

Finalizing Configuration

1 In the ePolicy Orchestrator console, select **Menu | Data Protection | DLP Policy.**
2 Select **Tools | Options** and select the **Whitelist** tab. Update the field with the applicable whitelist share that was created. Click **OK**.



3 Select **Agent Configuration | Edit Global Agent Configuration** and select the **Evidence** tab. Update the field with the applicable evidence share that was created. Click **OK**.



4 Click the **Apply** at the top left of the DLP Policy interface to save all settings.

NOTE: Immediate deployment of Device Control install the software, but without a policy. You will need to create a policy in order to control permitted actions regarding removable devices such as USB drives, iPods, cameras, and other devices. Please consult Implementing McAfee Device Control and the additional DLP\Device Control documentation linked in the appendix of this document.

Appendix A: List of included Best Practice Policies

The installer has been bundled with many best practice policies for the McAfee Endpoint Protection suites. These starter policies include common best practice settings for VirusScan Enterprise, Desktop IPS and Firewall, and McAfee Agent. As every environment is different, these policies should be thoroughly reviewed and modified to meet the needs of your specific environment.

Appropriate configuration is just part of solving issues regarding both security and performance. This installation endeavors to assist you with those issues by providing some custom policies commonly used by McAfee customers. You are free to use them or not. The policies provided here are not replacements for requirements you have specifically identified through rigorous risk assessments, or for environments with special needs.

McAfee provides default and recommended policies and tasks based on numerous data points to bring you, our valued customer and partner, closer to an optimal security configuration while satisfying the common needs of many organizations for security and performance. For a comprehensive solution, McAfee recommends taking advantage of the entire McAfee Endpoint suite, plus network-based protection, in conjunction with sound risk assessment practices.

McAfee Agent 4.8

General

The following policy allows administrators to view the McAfee Agent log on a remote client. It also increases the Agent to Server Connection Interval from one hour to two:

- POC - General

VirusScan Enterprise 8.8

Access Protection Policies

Policies supply exclusions specific to systems running McAfee Endpoint and McAfee Security for Microsoft Exchange (MSME). The endpoint policy can be applied to servers and workstations. The Exchange policy need only be applied to servers running both MSME and VirusScan Enterprise.

- POC - McAfee Endpoint Protection Suite Clients
- POC - Microsoft Exchange Servers

On-Access Default Processes Policies

The following policies have common file & directory exclusions and other optimizations specific to certain server types. These policies are assigned to a group or system in conjunction with the corresponding Low-Risk Processes Policies below that share the same name:

- POC - Default: AD Domain Controller
- POC - Default: DHCP and WINS Servers
- POC - Default: Lotus Notes\Domino Servers
- POC - Default: McAfee Endpoint Protection Clients
- POC - Default: ePolicy Orchestrator Server
- POC - Default: MS Exchange Servers
- POC - Default: MS SharePoint Servers
- POC - Default: MS SQL Servers

On-Access Low-Risk Processes Policies The following policies have common file & directory exclusions and other optimizations specific to certain server types. These policies are assigned to a group or system in conjunction with the corresponding Default Processes Policies above that share the same name:

- POC - Low: AD Domain Controller
- POC - Low: DHCP and WINS Servers
- POC - Low: Lotus Notes\Domino Servers
- POC - Low: McAfee Endpoint Protection Clients
- POC - Low: ePolicy Orchestrator Server
- POC - Low: MS Exchange Servers
- POC - Low: MS SharePoint Servers
- POC - Low: MS SQL Servers

KB66909 is the Master Exclusions KB article for VirusScan Enterprise.

On-Access General Policies
While the Default for GTI is Medium, the policy for High could be applied to those systems most likely to encounter malware, such as laptops:

- POC - Enable GTI for On-Access (High)

Host Intrusion Prevention 8.0: General

Client UI (Windows)
The Initial Testing policy below allows the local user to disable any FW & IPS functions. It would typically be used during a testing phase. The Production policy removes end user control to prevent tampering in the future.

- POC - Initial Testing (pre-deployment)

- POC - Production

Host Intrusion Prevention 8.0: Firewall

Firewall Options (Windows)
The following policy enables the Firewall and activates GTI protection:

- POC - Enable FW and GTI

Firewall Rules (Windows)
This policy allows for immediate implementation of McAfee GTI without the need to set any other specific firewall rules.

- POC - GTI Only

Host Intrusion Prevention 8.0:IPS

IPS Options

When Host IPS is first installed the protection is not active. You must enable protection in the IPS Options policy and apply the policy to the client.

This policy enables Host IPS, as well as Network IPS which detects and prevents known network-based attacks arriving at the host system.

- POC - Host and Network IPS enabled

In addition to the policy above, this one adds Adaptive mode functionality. To automate the creation of exception rules, clients are placed in Adaptive mode. In this mode, client rules are created without interaction from the user. After client exception rules are created, you need to carefully analyze them and decide which to convert to server-mandated policies.

- POC - Host and Network IPS enabled (adaptive mode)

A subset of the above, this policy is used to activate Host IPS protection only.

- POC - HIPS enabled

IPS Protection

After all the required components for Host IPS are installed and communicating, you are ready to apply protection, monitor events, and update policies and content as needed.

A good starter policy that includes blocking High severity events, and logs Medium events to aid in future tuning.

- POC - Block High events; Log Medium and Low

Similar to the default Enhanced Protection, this policy blocks High and Medium events and also logs Low severity events. Only block Medium events after first logging and reviewing them to see if any exceptions should be created.

- POC - Block High and Medium events

Also a good starter policy but only logs High, Medium and Low severity events without any blocking.

- POC - Initial monitoring (pre-blocking)

IPS Rules

These policies define the signatures, exceptions, and application protection rules to be used.

As virtual systems are often used for evaluations, assigning this policy facilitates testing by changing VMWare protection signatures to a severity of Low. Despite its use by hackers, VNC is still in widespread commercial use and as such the two VNC-related signatures have been changed to a severity of Low. The McAfee Default policy maintains these signatures at their normal severity levels and should be considered before staging in a live environment.

- POC - VMware and VNC exception policy

SiteAdvisor Enterprise 3.5

Authorize List (UBP)
The following policy ensures that sites specifically listed in the Authorize Policy are allowed even if listed in the Prohibit Policy:

- POC - Authorize Policy

Enable/Disable (UBP)
Applied to a group or subgroup, the Disable policy below can quickly deactivate SiteAdvisor on the client systems. Assigning a different policy such as the McAfee Default or another policy to Enable will reactivate SiteAdvisor Enterprise on those systems.

- POC - Disable SAE Policy

General (UBP)
The following policy enables file download and email annotations rating:

- POC - General

Appendix B: References

Use the links in this section to access additional information.

Support by seeing

ePO Deep Dive – provides an extensive overview of ePolicy Orchestrator's capabilities:
Deep Dive into McAfee ePolicy Orchestrator

Quick Tips videos for ePolicy Orchestrator can be found here:
ePO Quick Tips

Quick Tips videos for many other McAfee products can be found here:
McAfee Quick Tips

Video Tutorials from McAfee Technical Support
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McAfee Security Connected Reference Architecture
Security Connected Reference Architecture Homepage
Security Connected: Optimize Your Business
Security Connected for Financial Services

Global Threat Intelligence (GTI)
McAfee GTI Reputation & Categorization Services
GTI Webinar Recording & Materials
How to enable Global Threat Intelligence Technology in your McAfee product

Search the Knowledge Base
Search McAfee's award-winning Knowledge Base to find answers to questions.

Product Documentation Links
McAfee product documentation is located on the Customer Portal.

ePolicy Orchestrator 5.0
- ePolicy Orchestrator 5.0 Product Guide
- ePolicy Orchestrator 5.0 Installation Guide
- ePolicy Orchestrator 5.0 Log files Reference Guide
- ePolicy Orchestrator 5.0.1 Release Notes

McAfee Agent 4.8
- McAfee Agent 4.8 Product Guide
- McAfee Agent 4.8 Patch 1 Release Notes

VirusScan Enterprise 8.8
- VirusScan Enterprise 8.8 Installation Guide
- VirusScan Enterprise 8.8 Product Guide
- VirusScan Enterprise 8.8 Best Practices Guide

- VirusScan Enterprise 8.8 Patch 3 Release Notes

McAfee Host Intrusion Prevention 8.0
- Host Intrusion Prevention 8.0 Installation Guide
- Host Intrusion Prevention 8.0 for Product Guide
- Host Intrusion Prevention 8.0 Release Notes
- Host Intrusion Prevention 8.0 ClientControl.exe Utility Readme
- Access Protection in McAfee VirusScan Enterprise and Host Intrusion Prevention – Whitepaper

SiteAdvisor Enterprise 3.5
- SiteAdvisor Enterprise 3.5 Installation Guide
- SiteAdvisor Enterprise 3.5 Product Guide
- SiteAdvisor Enterprise 3.5 Release Notes
- Resources for Site Owners and Consumers

Real Time for McAfee ePO 1.0
- Real Time for McAfee ePO Product Guide
- Real Time for McAfee ePO Release Notes

DLP\Device Control 9.3
- Implementing Host Data Loss Prevention Device Control
- Data Loss Prevention Endpoint 9.3 Product Guide
- Data Loss Prevention Endpoint 9.3 Release Notes

McAfee Security for Microsoft Exchange 8.0
- Security for Microsoft Exchange 8.0 Product Guide
- Security for Microsoft Exchange 8.0 Release Notes

Endpoint Protection for Mac 2.1
- Endpoint Protection for Mac 2.1 Product Guide
- Endpoint Protection for Mac 2.1 Release Notes

VirusScan for Linux 1.9
- VirusScan Enterprise for Linux Installation Guide
- VirusScan Enterprise for Linux Product Guide
- VirusScan Enterprise for Linux Configuration Guide
- VirusScan Enterprise for Linux Best Practices Guide
- VirusScan Enterprise for Linux 1.9 Release Notes

Policy Auditor 6.2 (for EPA Suite)
- Policy Auditor 6.2 Installation Guide
- Policy Auditor 6.2 Product Guide
- Policy Auditor 6.2 Release Notes
- Benchmark Editor 6.2 Product Guide

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Global Solutions Lab
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