Task Scheduling

The following topics explain how to schedule tasks:

About Task Scheduling

You can schedule many different types of administrative tasks to run at designated times, either once or on a recurring basis.

Important Keep the following best practices in mind when considering the tasks to schedule for your system:

- As a part of initial configuration the FMC schedules a weekly task to download the latest software for the FMC and its managed devices. You can observe the status of this task using the web interface Message Center. If the task scheduling fails and your FMC has internet access, we recommend you schedule a recurring task for downloading software updates as described in Automating Software Downloads, on page 12. This task only downloads software updates to the FMC. It is your responsibility to install any updates this task downloads. See the *Cisco Firepower Management Center Upgrade Guide* for more information.
- As a part of initial configuration the FMC schedules a weekly task to perform a locally-stored configuration-only backup. You can observe the status of this task using the web interface Message Center. If the task scheduling fails we recommend you schedule a recurring task to perform a backup as described in Schedule FMC Backups, on page 4.
- As a part of initial configuration the FMC downloads and installs the latest vulnerability database (VDB) update from the Cisco support site. This is a one-time operation. You can observe the status of this update using the web interface Message Center. To keep your system up to date, if your FMC has internet access, we recommend you schedule tasks to perform automatic recurring VDB update downloads and installations as described in Vulnerability Database Update Automation, on page 14.

Tasks configured using this feature are scheduled in UTC, which means when they occur locally depends on the date and your specific location. Also, because tasks are scheduled in UTC, they do not adjust for Daylight Saving Time, summer time, or any such seasonal adjustments that you may observe in your location. If you are affected, scheduled tasks occur one hour "later" in the summer than in the winter, according to local time.

Important We *strongly* recommend you review scheduled tasks to be sure they occur when you intend.

Note Some tasks (such as those involving automated software updates or that require pushing updates to managed devices) may place a significant load on networks with low bandwidths. You should schedule tasks like these to run during periods of low network use.

Requirements and Prerequisites for Task Scheduling

Model Support

Any.

Supported Domains

Any

User Roles

- Admin
- Maintenance User

Configuring a Recurring Task

You set the frequency for a recurring task using the same process for all types of tasks.

Note that the time displayed on most pages on the web interface is the local time, which is determined by using the time zone you specify in your local configuration. Further, the Firepower Management Center automatically adjusts its local time display for daylight saving time (DST), where appropriate. However, recurring tasks that span the transition dates from DST to standard time and back do not adjust for the transition. That is, if you create a task scheduled for 2:00 AM during standard time, it will run at 3:00 AM during DST. Similarly, if you create a task scheduled for 2:00 AM during DST, it will run at 1:00 AM during standard time.

Procedure

Step 1 Select **System** > **Tools** > **Scheduling**.

Step 2 Click **Add Task**.

Step 3 From the **Job Type** drop-down list, select the type of task that you want to schedule.

Step 4 Click **Recurring** next to the **Schedule task to run** option.

Step 5 In the **Start On** field, specify the date when you want to start your recurring task.

Step 6 In the **Repeat Every** field, specify how often you want the task to recur.

You can either type a number or click **Up** ( ) and **Down** ( ) to specify the interval. For example, type `2` and click **Days** to run the task every two days.

Step 7 In the **Run At** field, specify the time when you want to start your recurring task.

Step 8 For a task to be run on a weekly or monthly basis, select the days when you want to run the task in the **Repeat On** field.

Step 9 Select the remaining options for the type of task you are creating:

- Backup - Schedule backup jobs as described in Schedule FMC Backups, on page 4.
- Download CRL - Schedule certificate revocation list downloads as described in Configuring Certificate Revocation List Downloads, on page 5.
- Deploy Policies - Schedule policy deployment as described in Automating Policy Deployment, on page 6.
- Nmap Scan - Schedule Nmap scans as described in Scheduling an Nmap Scan, on page 7.
- Report - Schedule report generation as described in Automating Report Generation, on page 8
- Firepower Recommended Rules - Schedule automatic update of Firepower recommended rules as described in Automating Firepower Recommendations, on page 10
- Download Latest Update - Schedule software or VDB update downloads as described in Automating Software Downloads, on page 12 or Automating VDB Update Downloads, on page 15.
- Install Latest Update - Schedule installation of software or VDB updates on a Firepower Management Center or managed device as described in Automating Software Installs, on page 14 or Automating VDB Update Installs, on page 16
- Push Latest Update - Schedule push of software updates to managed devices as described in Automating Software Pushes, on page 13.
- Update URL Filtering Database - Scheduling automatic update of URL filtering data as described in Automating URL Filtering Updates Using a Scheduled Task, on page 17

Step 10 Click **Save**

Scheduled Backups

You can use the scheduler on a Firepower Management Center to automate its own backups. You can also schedule remote device backups from the FMC. For more information on backups, see Backup and Restore.

Note that not all devices support remote backups.

Schedule FMC Backups

You can use the scheduler on the Firepower Management Center to automate both FMC and device backups. Note that not all devices support remote backups. For more information, see Backup and Restore.

Note As a part of initial configuration the FMC schedules a weekly task to perform a locally-stored configuration-only backup. You can observe the status of this task using the web interface Message Center. If the task scheduling fails we recommend you schedule a recurring task to perform a backup as described in this topic.

Before you begin

Create a backup profile that specifies your backup preferences: Create a Backup Profile.

You must be in the global domain to perform this task.

Procedure

Step 1 Choose **System** > **Tools** > **Scheduling**.

Step 2 From the **Job Type** list, select **Backup**.

Step 3 Specify whether you want to back up **Once** or **Recurring**.

- For one-time tasks, use the drop-down lists to specify the start date and time.
- For recurring tasks, see Configuring a Recurring Task, on page 2.

Step 4 Enter a **Job Name**.

Step 5 For the **Backup Type**, click **Management Center**.

Step 6 Choose a **Backup Profile**.

Step 7 (Optional) Enter a **Comment**.

Keep comments brief. They will appear in the Task Details section of the schedule calendar page.

Step 8 (Optional) Enter an email address, or a comma-separated list of email addresses, in the **Email Status To:** field.

For information on setting up an email relay server to send task status messages, see Configuring a Mail Relay Host and Notification Address.

Step 9 Click **Save**.

Schedule Remote Device Backups

You can use the scheduler on the Firepower Management Center to automate both FMC and device backups. Note that not all devices support remote backups. For more information, see Backup and Restore.

You must be in the global domain to perform this task.

Procedure

Step 1 Choose **System** > **Tools** > **Scheduling**.

Step 2 From the **Job Type** list, select **Backup**.

Step 3 Specify whether you want to back up **Once** or **Recurring**.

- For one-time tasks, use the drop-down lists to specify the start date and time.
- For recurring tasks, see Configuring a Recurring Task, on page 2.

Step 4 Enter a **Job Name**.

Step 5 For the **Backup Type**, click **Device**.

Step 6 Select one or more devices.

If your device is not listed, it does not support remote backup.

Step 7 If you did not configure remote storage for backups, choose whether you want to **Retrieve to Management Center**.

- Enabled (default): Saves the backup to the FMC in `/var/sf/remote-backup/`.
- Disabled: Saves the backup to the device in `/var/sf/backup/`.

If you configured remote backup storage, backup files are saved remotely and this option has no effect. For more information, see Manage Backups and Remote Storage.

Step 8 (Optional) Enter a **Comment**.

Keep comments brief. They will appear in the Task Details section of the schedule calendar page.

Step 9 (Optional) Enter an email address, or a comma-separated list of email addresses, in the **Email Status To:** field.

For information on setting up an email relay server to send task status messages, see Configuring a Mail Relay Host and Notification Address.

Step 10 Click **Save**.

Configuring Certificate Revocation List Downloads

You must perform this procedure using the local web interface for the Firepower Management Center. In a multidomain deployment, this task is only supported in the Global domain for the Firepower Management Center.

The system automatically creates the Download CRL task when you enable downloading a certificate revocation list (CRL) in the local configuration on an appliance where you enable user certificates or audit log certificates for the appliance. You can use the scheduler to edit the task to set the frequency of the update.

Before you begin

- Enable and configure user certificates or audit log certificates and set one or more CRL download URLs. See Requiring Valid HTTPS Client Certificates and Require Valid Audit Log Server Certificates for more information.

Procedure

Step 1 Select **System** > **Tools** > **Scheduling**.

Step 2 Click **Add Task**.

Step 3 From **Job Type**, select **Download CRL**.

Step 4 Specify how you want to schedule the CRL download, **Once** or **Recurring**:

- For one-time tasks, use the drop-down lists to specify the start date and time.
- For recurring tasks, see Configuring a Recurring Task, on page 2 for details.

Step 5 Type a name in the **Job Name** field.

Step 6 If you want to comment on the task, type a comment in the **Comment** field.

The comment field appears in the Task Details section of the schedule calendar page; keep comments brief.

Step 7 If you want to email task status messages, type an email address (or multiple email addresses separated by commas) in the **Email Status To:** field. You must have a valid email relay server configured on the Firepower Management Center to send status messages.

Step 8 Click **Save**.

Related Topics

Configuring a Mail Relay Host and Notification Address

Automating Policy Deployment

After modifying configuration settings in the FMC, you must deploy those changes to the affected devices.

In a multidomain deployment, you can schedule policy deployments only for your current domain.

Caution When you deploy, resource demands may result in a small number of packets dropping without inspection. Additionally, deploying some configurations restarts the Snort process, which interrupts traffic inspection. Whether traffic drops during this interruption or passes without further inspection depends on how the target device handles traffic. See Snort® Restart Traffic Behavior and Configurations that Restart the Snort Process When Deployed or Activated.

Procedure

Step 1 Select **System** > **Tools** > **Scheduling**.

Step 2 Click **Add Task**.

Step 3 From **Job Type**, select **Deploy Policies**.

Step 4 Specify how you want to schedule the task, **Once** or **Recurring**:

- For one-time tasks, use the drop-down lists to specify the start date and time.
- For recurring tasks, see Configuring a Recurring Task, on page 2 for details.

Step 5 Type a name in the **Job Name** field.

Step 6 In the **Device** field, select a device where you want to deploy policies.

Step 7 Select or deselect the **Skip deployment for up-to-date devices** check box, as required.

By default, the **Skip deployment for up-to-date devices** option is enabled to improve performance during the policy deployment process.

Note The system does not perform a scheduled policy deployment task if a policy deployment initiated from the Firepower Management Center web interface is in progress. Correspondingly, the system does not permit you to initiate a policy deployment from the web interface if a scheduled policy deployment task is in-progress.

Step 8 If you want to comment on the task, type a comment in the **Comment** field.

The comment field displays in the Tasks Details section of the schedule calendar page; keep comments brief.

Step 9 If you want to email task status messages, type an email address (or multiple email addresses separated by commas) in the **Email Status To:** field. You must have a valid email relay server configured to send status messages.

Step 10 Click **Save**.

Related Topics

Configuring a Mail Relay Host and Notification Address
Out-of-Date Policies

Nmap Scan Automation

You can schedule regular Nmap scans of targets on your network. Automated scans allow you to refresh information previously supplied by an Nmap scan. Because the Firepower System cannot update Nmap-supplied data, you need to rescan periodically to keep that data up to date. You can also schedule scans to automatically test for unidentified applications or servers on hosts in your network.

Note that a Discovery Administrator can also use an Nmap scan as a remediation. For example, when an operating system conflict occurs on a host, that conflict may trigger an Nmap scan. Running the scan obtains updated operating system information for the host, which resolves the conflict.

If you have not used the Nmap scanning capability before, you configure Nmap scanning before defining a scheduled scan.

Related Topics

Nmap Scanning

Scheduling an Nmap Scan

After Nmap replaces a host's operating system, applications, or servers detected by the system with the results from an Nmap scan, the system no longer updates the information replaced by Nmap for the host.

Nmap-supplied service and operating system data remains static until you run another Nmap scan. If you plan to scan a host using Nmap, you may want to set up regularly scheduled scans to keep Nmap-supplied operating systems, applications, or servers up to date. If the host is deleted from the network map and re-added, any Nmap scan results are discarded and the system resumes monitoring of all operating system and service data for the host.

In a multidomain deployment:

- You can schedule scans only for your current domain
- The remediation and Nmap targets you select must exist at your current domain or an ancestor domain.
- Choosing to perform an Nmap scan on a non-leaf domain scans the same targets in each descendant of that domain.

Procedure

Step 1 Select **System** > **Tools** > **Scheduling**.

Step 2 Click **Add Task**.

Step 3 From **Job Type**, select **Nmap Scan**.

Step 4 Specify how you want to schedule the task, **Once** or **Recurring**:

- For one-time tasks, use the drop-down lists to specify the start date and time.
- For recurring tasks, see Configuring a Recurring Task, on page 2 for details.

Step 5 Type a name in the **Job Name** field.

Step 6 In the **Nmap Remediation** field, select an Nmap remediation.

Step 7 In the **Nmap Target** field, select the scan target.

Step 8 In the **Domain** field, select the domain whose network map you want to augment.

Step 9 If you want to comment on the task, type a comment in the **Comment** field.

Tip The comment field appears in the Task Details section of the calendar schedule page; keep comments brief.

Step 10 If you want to email task status messages, type an email address (or multiple email addresses separated by commas) in the **Email Status To:** field. You must have a valid email relay server configured to send status messages.

Step 11 Click **Save**.

Related Topics

Configuring a Mail Relay Host and Notification Address

Automating Report Generation

You can automate reports so that they run at regular intervals.

In a multidomain deployment, you can schedule reports only for your current domain.

Before you begin

- For reports other than risk reports: Create a report template. See Report Templates for more information.
- If you want to distribute email reports using the scheduler, configure a mail relay host and specify report recipients and message information. See Configuring a Mail Relay Host and Notification Address and (for reports other than risk reports) Distributing Reports by Email at Generation Time or (for risk reports) Generating, Viewing, and Printing Risk Reports.
- (Optional) Set or change the file name, output format, time window, or email distribution settings of the scheduled report. See Specify Report Generation Settings for a Scheduled Report, on page 9.
- If you will choose PDF as the report output format, look at the report template and verify that the number of results in each section of the template does not exceed the limit for PDFs. For information, see Report Template Fields.

Procedure

Step 1 Select **System** > **Tools** > **Scheduling**.

Step 2 Click **Add Task**.

Step 3 From the **Job Type** list, select **Report**.

Step 4 Specify how you want to schedule the task, **Once** or **Recurring**:

- For one-time tasks, use the drop-down lists to specify the start date and time.
- For recurring tasks, see Configuring a Recurring Task, on page 2 for details.

Step 5 Type a name in the **Job Name** field.

Step 6 In the **Report Template** field, select a risk report or report template.

Step 7 If you want to comment on the task, type a comment in the **Comment** field.

The comment field appears in the Tasks Details section of the schedule calendar page; keep comments brief.

Step 8 If you want to email task status messages, type an email address (or multiple email addresses separated by commas) in the **Email Status To:** field. You must have a valid email relay server configured to send status messages.

Note Configuring this option does **not** distribute the reports.

Step 9 If you do not want to receive report email attachments when reports have no data (for example, when no events of a certain type occurred during the report period), select the **If report is empty, still attach to email** check box.

Step 10 Click **Save**.

Specify Report Generation Settings for a Scheduled Report

You must have Admin or Security Analyst privileges to perform this task.

To specify or change the file name, output format, time window, or email distribution settings of a scheduled report:

Procedure

Step 1 Select **Overview** > **Reporting** > **Report Templates**.

Step 2 Click **Edit** for the report template to change.

Step 3 If you will select PDF output:

a) Look to see whether any of the sections in the report shows a yellow triangle beside the number of results.
b) If you see any yellow triangles, mouse over the triangle to view the maximum number of results allowable for that section for PDF output.
c) For each section with a yellow triangle, reduce the number of results to a number below the limit.
d) When there are no more yellow triangles, click **Save**.

Step 4 Click **Generate**.

Note If you want to change report generation settings without generating the report now, you must click **Generate** from the template configuration page. Changes will not be saved if you click **Generate** from the template list view unless you generate the report.

Step 5 Modify settings.

Step 6 To save the new settings without generating the report, click **Cancel**.

To save the new settings and generate the report, click **Generate** and skip the rest of the steps in this procedure.

Step 7 Click **Save**.

Step 8 If you see a prompt to save even though you haven't made changes, click **OK**.

Automating Firepower Recommendations

You can automatically generate rule state recommendations based on network discovery data for your network using the most recently saved configuration settings in a custom intrusion policy.

Note If the system automatically generates scheduled recommendations for an intrusion policy with unsaved changes, you must discard your changes in that policy and commit the policy if you want the policy to reflect the automatically generated recommendations.

When the task runs, the system automatically generates recommended rule states, and modifies the states of intrusion rules based on the configuration of your policy. Modified rule states take effect the next time you deploy your intrusion policy.

In a multidomain deployment, you can automate recommendations for intrusion policies at the current domain level. The system builds a separate network map for each leaf domain. In a multidomain deployment, if you enable this feature in an intrusion policy in an ancestor domain, the system generates recommendations using data from all descendant leaf domains. This can enable intrusion rules tailored to assets that may not exist in all leaf domains, which can affect performance.

Before you begin

- Configure Firepower recommended rules in an intrusion policy as described in Generating and Applying Firepower Recommendations
- If you want to email task status messages, configure a valid email relay server.
- You must have the Threat Smart License or Protection Classic License to generate recommendations.

Procedure

Step 1 Choose **System** > **Tools** > **Scheduling**.

Step 2 Click **Add Task**.

Step 3 From **Job Type**, choose **Firepower Recommended Rules**.

Step 4 Specify how you want to schedule the task, **Once** or **Recurring**:

- For one-time tasks, use the drop-down lists to specify the start date and time.
- For recurring tasks, see Configuring a Recurring Task, on page 2 for details.

Step 5 Enter a name in the **Job Name** field.

Step 6 Next to **Policies**, choose one or more intrusion policies where you want to generate recommendations. Check **All Policies** check box to choose all intrusion policies.

Step 7 (Optional) Enter a comment in the **Comment** field.

Keep comments brief. Comments appear in the Task Details section of the schedule calendar page.

Step 8 (Optional) To email task status messages, type an email address (or multiple email addresses separated by commas) in the **Email Status To:** field.

Step 9 Click **Save**.

Related Topics

Conflicts and Changes: Network Analysis and Intrusion Policies
About Firepower Recommended Rules
Configuring a Mail Relay Host and Notification Address

Software Update Automation

You can automatically download and apply most patches and feature releases to the Firepower System.

Important As a part of initial configuration the FMC schedules a weekly task to download the latest software for the FMC and its managed devices. You can observe the status of this task using the web interface Message Center. If the task scheduling fails and your FMC has internet access, we recommend you schedule a recurring task for downloading software updates as described in Automating Software Downloads, on page 12. This task only downloads software updates to the FMC. It is your responsibility to install any updates this task downloads. See the *Cisco Firepower Management Center Upgrade Guide* for more information.

The tasks you must schedule to install software updates vary depending on whether you are updating the FMC or are using a FMC to update managed devices.

Note Cisco **strongly** recommends that you use your FMCs to update the devices they manage.

- To update the FMC, schedule the software installation using the Install Latest Update task.
- To use a FMC to automate software updates for its managed devices, you must schedule two tasks:
  - Push (copy) the update to managed devices using the Push Latest Update task.
  - Install the update on managed devices using the Install Latest Update task.

When scheduling updates to managed devices, schedule the push and install tasks to happen in succession; you must first push the update to the device before you can install it. To automate software updates on a device group, you must select all the devices within the group. Allow enough time between tasks for the process to complete; schedule tasks at least 30 minutes apart. If you schedule a task to install an update and the update has not finished copying from the FMC to the device, the installation task will not succeed. However, if the scheduled installation task repeats daily, it will install the pushed update when it runs the next day.

Note You must manually upload and install updates in two situations. First, you cannot schedule major updates to the Firepower System. Second, you cannot schedule updates for or pushes from FMC that cannot access the Support Site. If your FMC is not directly connected to the Internet, you should use management interfaces configuration to set up a proxy to allow it to download updates from the Support Site.

Note that a task scheduled to install an update on a device group will install the pushed update to each device within the device group simultaneously. Allow enough time for the scheduled task to complete for each device within the device group.

If you want to have more control over this process, you can use the **Once** option to download and install updates during off-peak hours after you learn that an update has been released.

Related Topics

Management Interfaces
System Updates

Automating Software Downloads

You can create a scheduled task that automatically downloads the latest software updates from Cisco. You can use this task to schedule download of updates you plan to install manually.

You must be in the global domain to perform this task.

Procedure

Step 1 Select **System** > **Tools** > **Scheduling**.

Step 2 Click **Add Task**.

Step 3 From the **Job Type** list, select **Download Latest Update**.

Step 4 Specify how you want to schedule the task, **Once** or **Recurring**:

- For one-time tasks, use the drop-down lists to specify the start date and time.
- For recurring tasks, see Configuring a Recurring Task, on page 2 for details.

Step 5 Type a name in the **Job Name** field.

Step 6 Next to **Update Items**, check **Software** check box.

Step 7 If you want to comment on the task, type a comment in the **Comment** field.

The comment field appears in the Task Details section of the schedule calendar page; keep comments brief.

Step 8 If you want to email task status messages, type an email address (or multiple email addresses separated by commas) in the **Email Status To:** field. You must have a valid email relay server configured to send status messages.

Step 9 Click **Save**.

Related Topics

Configuring a Mail Relay Host and Notification Address

Automating Software Pushes

If you want to automate the installation of software updates on managed devices, you must push the updates to the devices before installing.

When you create the task to push software updates to managed devices, make sure you allow enough time between the push task and a scheduled install task for the updates to be copied to the device.

You must be in the global domain to perform this task.

Procedure

Step 1 Select **System** > **Tools** > **Scheduling**.

Step 2 Click **Add Task**.

Step 3 From the **Job Type** list, select **Push Latest Update**.

Step 4 Specify how you want to schedule the task, **Once** or **Recurring**:

- For one-time tasks, use the drop-down lists to specify the start date and time.
- For recurring tasks, see Configuring a Recurring Task, on page 2 for details.

Step 5 Type a name in the **Job Name** field.

Step 6 From the **Device** drop-down list, select the device that you want to update.

Step 7 If you want to comment on the task, type a comment in the **Comment** field.

The comment field appears in the Task Details section of the schedule calendar page; keep comments brief.

Step 8 If you want to email task status messages, type an email address (or multiple email addresses separated by commas) in the **Email Status To:** field. You must have a valid email relay server configured to send status messages.

Step 9 Click **Save**.

Related Topics

Configuring a Mail Relay Host and Notification Address

Automating Software Installs

Make sure you allow enough time between the task that pushes the update to a managed device and the task that installs the update.

You must be in the global domain to perform this task.

Caution Depending on the update being installed, the appliance may reboot after the software is installed.

Procedure

Step 1 Select **System** > **Tools** > **Scheduling**.

Step 2 Click **Add Task**.

Step 3 From the **Job Type** list, select **Install Latest Update**.

Step 4 Specify how you want to schedule the task, **Once** or **Recurring**:

- For one-time tasks, use the drop-down lists to specify the start date and time.
- For recurring tasks, see Configuring a Recurring Task, on page 2 for details.

Step 5 Type a name in the **Job Name** field.

Step 6 From the **Device** drop-down list, select the appliance (including the Firepower Management Center) where you want to install the update.

Step 7 Next to **Update Items**, check the **Software** check box.

Step 8 If you want to comment on the task, type a comment in the **Comment** field.

The comment field appears in the Task Details section of the schedule calendar page; keep comments brief.

Step 9 If you want to email task status messages, type an email address (or multiple email addresses separated by commas) in the **Email Status To:** field. You must have a valid email relay server configured to send status messages.

Step 10 Click **Save**.

Related Topics

Configuring a Mail Relay Host and Notification Address

Vulnerability Database Update Automation

Cisco uses vulnerability database (VDB) updates to expand the list of network assets, traffic, and vulnerabilities that the Firepower System recognizes. You can use the scheduling feature to update the VDB, thereby ensuring that you are using the most up-to-date information to evaluate the hosts on your network.

When automating VDB updates, you must automate two separate steps:

- Downloading the VDB update.
- Installing the VDB update.

As a part of initial configuration the FMC downloads and installs the latest vulnerability database (VDB) update from the Cisco support site. This is a one-time operation. You can observe the status of this update using the web interface Message Center. To keep your system up to date, if your FMC has internet access, we recommend you schedule tasks to perform automatic recurring VDB update downloads and installations as described in this section.

Caution When a VDB update includes changes applicable to managed devices, the first manual or scheduled deploy after installing the VDB restarts the Snort process, interrupting traffic inspection. Deploy dialog messages warn you of restarts in pending deploys to Firepower Threat Defense devices. Whether traffic drops or passes without further inspection during this interruption depends on how the targeted device handles traffic. You cannot deploy VDB updates that apply only to the Firepower Management Center, and they do not cause restarts. See Snort® Restart Traffic Behavior for more information.

Allow enough time between tasks for the process to complete. For example, if you schedule a task to install an update and the update has not fully downloaded, the installation task will not succeed. However, if the scheduled installation task repeats daily, it will install the downloaded VDB update when the task runs the next day.

Note:

- You cannot schedule updates for appliances that cannot access the Support Site. If your FMC is not directly connected to the Internet, you should use management interfaces configuration to set up a proxy to allow it to download updates from the Support Site.
- If you want to have more control over this process, you can use the **Once** option to download and install VDB updates during off-peak hours after you learn that an update has been released.
- In multidomain deployments, you can only schedule VDB updates for the Global domain. The changes take effect when you redeploy policies.

Related Topics

Management Interfaces

Automating VDB Update Downloads

You must be in the global domain to perform this task.

Procedure

Step 1 Select **System** > **Tools** > **Scheduling**.

Step 2 Click **Add Task**.

Step 3 From the **Job Type** list, select **Download Latest Update**.

Step 4 Specify how you want to schedule the task, **Once** or **Recurring**:

- For one-time tasks, use the drop-down lists to specify the start date and time.

- For recurring tasks, see Configuring a Recurring Task, on page 2 for details.

Step 5 Type a name in the **Job Name** field.

Step 6 Next to **Update Items**, check the **Vulnerability Database** check box.

Step 7 If you want to comment on the task, type a comment in the **Comment** field.

The comment field appears in the Task Details section of the calendar schedule page; keep comments brief.

Step 8 If you want to email task status messages, type an email address (or multiple email addresses separated by commas) in the **Email Status To:** field. You must have a valid email relay server configured to send status messages.

Step 9 Click **Save**.

Related Topics

Configuring a Mail Relay Host and Notification Address

Automating VDB Update Installs

Allow enough time between the task that downloads the VDB update and the task that installs the update.

You must be in the global domain to perform this task.

Caution When a VDB update includes changes applicable to managed devices, the first manual or scheduled deploy after installing the VDB restarts the Snort process, interrupting traffic inspection. Deploy dialog messages warn you of restarts in pending deploys to Firepower Threat Defense devices. Whether traffic drops or passes without further inspection during this interruption depends on how the targeted device handles traffic. You cannot deploy VDB updates that apply only to the Firepower Management Center, and they do not cause restarts. See Snort® Restart Traffic Behavior for more information.

Procedure

Step 1 Select **System** > **Tools** > **Scheduling**.

Step 2 Click **Add Task**.

Step 3 From the **Job Type** list, select **Install Latest Update**.

Step 4 Specify how you want to schedule the task, **Once** or **Recurring**:

- For one-time tasks, use the drop-down lists to specify the start date and time.
- For recurring tasks, see Configuring a Recurring Task, on page 2 for details.

Step 5 Type a name in the **Job Name** field.

Step 6 From the **Device** drop-down list, select the FMC.

Step 7 Next to **Update Items**, check the **Vulnerability Database** check box.

Step 8 If you want to comment on the task, type a comment in the **Comment** field.

Tip The comment field appears in the View Tasks section of the page, so you should try to keep it relatively short.

Step 9 If you want to email task status messages, type an email address (or multiple email addresses separated by commas) in the **Email Status To:** field. You must have a valid email relay server configured to send status messages.

Step 10 Click **Save**.

Related Topics

Configuring a Mail Relay Host and Notification Address

Automating URL Filtering Updates Using a Scheduled Task

In order to ensure that threat data for URL filtering is current, the system must obtain data updates from the Cisco Collective Security Intelligence (CSI) cloud.

By default, when you enable URL filtering, automatic updates are enabled. However, if you need to control when these updates occur, use the procedure described in this topic instead of the default update mechanism.

Although daily updates tend to be small, if it has been more than five days since your last update, new URL filtering data may take up to 20 minutes to download, depending on your bandwidth. Then, it may take up to 30 minutes to perform the update itself.

Before you begin

- Ensure the Firepower Management Center has internet access; see Security, Internet Access, and Communication Ports.
- Ensure that URL filtering is enabled. See Enable URL Filtering Using Category and Reputation for more information.
- Verify that **Enable Automatic Updates** is not selected on the **Cloud Services** under the **System** > **Integration** menu.
- You must be in the global domain to perform this task. You must also have the URL Filtering license.

Procedure

Step 1 Select **System** > **Tools** > **Scheduling**.

Step 2 Click **Add Task**.

Step 3 From the **Job Type** list, select **Update URL Filtering Database**.

Step 4 Specify how you want to schedule the update, **Once** or **Recurring**:

- For one-time tasks, use the drop-down lists to specify the start date and time.
- For recurring tasks, see Configuring a Recurring Task, on page 2 for details.

Step 5 Type a name in the **Job Name** field.

Step 6 If you want to comment on the task, type a comment in the **Comment** field.

The comment field appears in the Task Details section of the schedule calendar page; keep comments brief.

Step 7 If you want to email task status messages, type an email address (or multiple email addresses separated by commas) in the **Email Status To:** field. You must have a valid email relay server configured to send status messages.

Step 8 Click **Save**.

Related Topics

Configuring a Mail Relay Host and Notification Address

Scheduled Task Review

After adding scheduled tasks, you can view them and evaluate their status. The View Options section of the page allows you to view scheduled tasks using a calendar and a list of scheduled tasks.

The Calendar view option allows you to view which scheduled tasks occur on which day.

The Task List shows a list of tasks along with their status. The task list appears below the calendar when you open the calendar. In addition, you can view it by selecting a date or task from the calendar.

You can edit a scheduled task that you previously created. This feature is especially useful if you want to test a scheduled task once to make sure that the parameters are correct. Later, after the task completes successfully, you can change it to a recurring task.

There are two types of deletions you can perform from the Schedule View page. You can delete a specific one-time task that has not yet run or you can delete every instance of a recurring task. If you delete an instance of a recurring task, all instances of the task are deleted. If you delete a task that is scheduled to run once, only that task is deleted.

Task List Details

Table 1: Task List Columns

Column	Description
Name	Displays the name of the scheduled task and the comment associated with it.
Type	Displays the type of scheduled task.
Start Time	Displays the scheduled start date and time.
Frequency	Displays how often the task is run.
Last Run Time	Displays the actual start date and time. For a recurring task, this applies to the most recent execution.

Column	Description
Last Run Status	Describes the current status for a scheduled task: • A **Check Mark** ( ) indicates that the task ran successfully. • A question mark icon (**Question Mark** ( )) indicates that the task is in an unknown state. • An exclamation mark icon ( ) indicates that the task failed. For a recurring task, this applies to the most recent execution.
Next Run Time	Displays the next execution time for a recurring task. Displays N/A for a one-time task.
Creator	Displays the name of the user that created the scheduled task.
Edit	Edits the scheduled task.
Delete	Deletes the scheduled task.

Viewing Scheduled Tasks on the Calendar

In a multidomain deployment, you can view scheduled tasks only for your current domain.

Procedure

Step 1 Select **System** > **Tools** > **Scheduling**.

Step 2 You can perform the following tasks using the calendar view:

- Click **Double Left Arrow** ( ) to move back one year.
- Click **Single Left Arrow** ( ) to move back one month.
- Click **Single Right Arrow** ( ) to move forward one month.
- Click **Double Right Arrow** ( ) to move forward one year.
- Click **Today** to return to the current month and year.
- Click **Add Task** to schedule a new task.
- Click a date to view all scheduled tasks for the specific date in a task list table below the calendar.
- Click a specific task on a date to view the task in a task list table below the calendar.

Editing Scheduled Tasks

In a multidomain deployment, you can edit scheduled tasks only for your current domain.

Procedure

Step 1 Select **System** > **Tools** > **Scheduling**.

Step 2 On the calendar, click either the task that you want to edit or the day on which the task appears.

Step 3 In the **Task Details** table, click **Edit** ( ) next to the task you want to edit.

Step 4 Edit the task.

Step 5 Click **Save**.

Deleting Scheduled Tasks

In a multidomain deployment, you can delete scheduled tasks only for your current domain.

Procedure

Step 1 Select **System** > **Tools** > **Scheduling**.

Step 2 In the calendar, click the task you want to delete. For a recurring task, click an instance of the task.

Step 3 In the **Task Details** table, click **Delete** ( ), then confirm your choice.

History for Scheduled Tasks

Feature	Version	Details
Automatically scheduled updates	6.6	For a new or newly-restored-to-factory-defaults FMC the Initial Configuration Wizard automatically schedules a daily intrusion rule update from the Cisco support site. The FMC deploys automatic intrusion rule updates when it next deploys affected polices. No modified screens Supported platforms: FMC

Feature	Version	Details
Automatically scheduled updates	6.5	For a new or newly-restored-to-factory-defaults FMC the Initial Configuration Wizard automatically schedules the following: • a weekly task to download software updates for the FMC and its managed devices. • a weekly task to perform a locally-stored configuration-only backup. No modified screens Supported platforms: FMC
Scheduled remote backups of managed devices	6.4	You can now use the FMC to schedule remote backups of certain managed devices. New/modified screens: **System** > **Tools** > **Scheduling** > add/edit task > choose **Job Type: Backup** > choose a **Backup Type** Supported platforms: FTD physical platforms, FTDv for VMware Exceptions: No support for FTD clustered devices or container instances