

CHAPTER 5

Scheduling Maintenance Jobs

The Cisco MDS command scheduler feature helps you schedule configuration and maintenance jobs in any switch in the Cisco MDS 9000 Family. You can use this feature to schedule jobs on a one-time basis or periodically.

This chapter includes the following sections:

- [About the Command Scheduler, page 5-1](#)
- [Configuring the Command Scheduler, page 5-2](#)
- [Default Settings, page 5-3](#)

About the Command Scheduler

The Cisco NX-OS command scheduler provides a facility to schedule a job (set of CLI commands) or multiple jobs at a specified time in the future. The job(s) can be executed once at a specified time in the future or at periodic intervals.



Note

To use the command scheduler, you do not need to obtain any license.

You can use this feature to schedule zone set changes, make QoS policy changes, back up data, save the configuration and do other similar jobs.

Scheduler Terminology

The following terms are used in this chapter.

- **Job**—A job is a set of NX-OS CLI commands (EXEC and config mode) that are executed as defined in the schedule.
- **Schedule**—A schedule determines the time when the assigned jobs must be executed. Multiple jobs can be assigned to a schedule. A schedule executes in one of two modes: one-time or periodic.
- **Periodic mode**—A job is executed at the user-specified periodic intervals, until it is deleted by the administrator. The following types of periodic intervals are supported:
 - **Daily**—The job is executed once a day.
 - **Weekly**—The job is executed once a week.
 - **Monthly**—The job is executed once a month.

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- Delta—The job is executed beginning at the specified start time and thereafter at user-specified intervals (days:hours:minutes).
- One-time mode—The job is executed once at a user-specified time.

Scheduling Guidelines

Before scheduling jobs on a Cisco MDS switch, be aware of the following guidelines:

- Prior to Cisco MDS SAN-OS Release 3.0(3), only users local to the switch could perform scheduler configuration. As of Cisco MDS SAN-OS Release 3.0(3), remote users can perform job scheduling using AAA authentication.
- Be aware that the scheduled job can fail if it encounters one of the following situations when executing the job:
 - If the license has expired for a feature at the time when a job containing commands pertaining to that feature is scheduled.
 - If a feature is disabled at the time when a job containing commands pertaining to that feature is scheduled.
 - If you have removed a module from a slot and the job has commands pertaining to the interfaces for that module or slot.
- Verify that you have configured the time. The scheduler does not have any default time configured. If you create a schedule and assign job(s) and do not configure the time, that schedule is not launched.
- While defining a job, verify that no interactive or disruptive commands (for example, **copy bootflash: file ftp: URI, write erase**, and other similar commands) are specified as part of a job because the job is executed noninteractively at the scheduled time.

Configuring the Command Scheduler

To configure the command scheduler, follow these steps:

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| Step 1 | Enable the scheduler. |
| Step 2 | Authorize remote user access (optional). |
| Step 3 | Define the job. |
| Step 4 | Specify the schedule and assign jobs to the schedule. |
| Step 5 | Specify the time for the schedule(s). |
| Step 6 | Verify the scheduled configuration. |
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This section includes the following topic:

- [Defining a Job, page 5-3](#)

Defining a Job

To define a job, you must specify the job name. This action places you in the job definition (config-job) submode. In this submode, you can define the sequence of CLI commands that the job has to perform. Be sure to exit the config-job submode to complete the job definition.



Note

- Job configuration files created using MDS NX-OS or SAN-OS releases before Cisco MDS NX-OS Release 4.1(1b) are not supported. However, you can edit the job configuration file and combine the commands within a job into a single line using a semicolon (;).
- You must exit the config-job submode for the job definition to be complete.
- You cannot modify or remove a command after exiting the config-job submode. To make changes, you must explicitly delete the defined job name and then reconfigure the job with new commands.

Default Settings

[Table 5-1](#) lists the default settings for command scheduling parameters.

Table 5-1 **Default Command Scheduler Parameters**

Parameters	Default
Command scheduler	Disabled.
Log file size	16 KB.

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