

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.

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Information 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.

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

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- One-time mode—The job is executed once at a user-specified time.

Guidelines and Limitations

Before scheduling jobs on a Cisco MDS 9000 switch, note 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.

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.

Configuring the Command Scheduler

Task Flow for Configuring the Command Scheduler

Follow these steps to configure the Command Scheduler:

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- Step 1** Enable the scheduler.
- Step 2** Authorize remote user access (optional).

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- 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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Enabling the Command Scheduler

To use the scheduling feature, you must explicitly enable this feature on the required switches in the fabric. By default, this feature is disabled in all switches in the Cisco MDS 9000 Family.

Specifying a Schedule

After defining jobs, you can create schedules and assign jobs to the schedule. Subsequently, you can configure the time of execution. The execution can be one-time or periodic depending on your requirements. If the time for the schedule is not configured, then it will never be executed.

You can specify a periodic job execution at the specified (daily, weekly, monthly, or delta) intervals.

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