



# Basic Device Management

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## About Basic Device Management

This section provides information about basic device management.

### Device Hostname

You can change the device hostname displayed in the command prompt from the default (switch) to another character string. When you give the device a unique hostname, you can easily identify the device from the command-line interface (CLI) prompt.

### Message-of-the-Day Banner

The message-of-the-day (MOTD) banner displays before the user login prompt on the device. This message can contain any information that you want to display for users of the device.

### Device Clock

If you do not synchronize your device with a valid outside timing mechanism, such as an NTP clock source, you can manually set the clock time when your device boots.

## Clock Manager

The Cisco NX-OS device might contain clocks of different types that might need to be synchronized. These clocks are a part of various components (such as the supervisor, line card processors, or line cards), and each might be using a different protocol.

The clock manager provides a way to synchronize these different clocks.

## Time Zone and Summer Time (Daylight Saving Time)

You can configure the time zone and summer time (daylight saving time) setting for your device. These values offset the clock time from Coordinated Universal Time (UTC). UTC is International Atomic Time (TAI) with leap seconds added periodically to compensate for the Earth's slowing rotation. UTC was formerly called Greenwich Mean Time (GMT).

## User Sessions

You can display the active user session on your device. You can also send messages to the user sessions. For more information about managing user sessions and accounts, see the *Cisco Nexus 9000 Series NX-OS Security Configuration Guide*.

## Default Settings for Basic Device Parameters

This table lists the default settings for basic device parameters.

**Table 1: Default Basic Device Parameters**

Parameters	Default
MOTD banner text	User Access Verification
Clock time zone	UTC

## Changing the Device Hostname

You can change the device hostname displayed in the command prompt from the default (switch) to another character string.

### SUMMARY STEPS

1. **configure terminal**
2. **{ hostname | switchname } name**
3. **exit**
4. (Optional) **copy running-config startup-config**

## DETAILED STEPS

	Command or Action	Purpose
Step 1	<b>configure terminal</b> <b>Example:</b> <pre>switch# configure terminal switch(config)#</pre>	Enters global configuration mode.
Step 2	<b>{hostname   switchname} name</b> <b>Example:</b> Using the <b>hostname</b> command: <pre>switch(config)# hostname Engineering1 Engineering1(config)#</pre> Using the <b>switchname</b> command: <pre>Engineering1(config)# switchname Engineering2 Engineering2(config)#</pre>	Changes the device hostname. The <i>name</i> argument is alphanumeric and case sensitive. The default is switch. <b>Note</b> The <b>switchname</b> command performs the same function as the <b>hostname</b> command. Beginning with Cisco NX-OS Release 7.0(3)I7(3), a maximum length of 63 characters for the switchname is supported.
Step 3	<b>exit</b> <b>Example:</b> <pre>Engineering2(config)# exit Engineering2#</pre>	Exits global configuration mode.
Step 4	(Optional) <b>copy running-config startup-config</b> <b>Example:</b> <pre>Engineering2# copy running-config startup-config</pre>	Copies the running configuration to the startup configuration.

## Configuring the MOTD Banner

You can configure the MOTD to display before the login prompt on the terminal when a user logs in. The MOTD banner has the following characteristics:

- Maximum of 255 characters per line
- Maximum of 40 lines

## SUMMARY STEPS

1. **configure terminal**
2. **banner motd** *delimiting-character message delimiting-character*
3. **exit**
4. (Optional) **show banner motd**
5. (Optional) **copy running-config startup-config**

## DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	<b>configure terminal</b> <b>Example:</b> <pre>switch# configure terminal switch(config)#</pre>	Enters global configuration mode.
<b>Step 2</b>	<b>banner motd <i>delimiting-character message delimiting-character</i></b> <b>Example:</b> <pre>switch(config)# banner motd #Welcome to the Switch# switch(config)#</pre>	<p>Configures the MOTD banner. Do not use the <i>delimiting-character</i> in the <i>message</i> text.</p> <p><b>Note</b> Do not use " or % as a delimiting character. Ensure that when you upgrade to higher releases for the limitation of this feature.</p> <p><b>Note</b> Beginning from Cisco NX-OS Release 10.1(x), the following special characters (" , % , &gt; , &lt; , ' , (space), and ASCII characters &lt; 0x15) are invalid as delimiting characters. If an existing MOTD banner with these delimiting characters is edited or a fresh banner is added with these delimiting characters, the banner is not configured to the running configuration.</p> <p>When you upgrade from an earlier release i.e, before 10.x releases to an existing 10.x releases, there is no impact on the configuration in the CLI and the configuration will be the same in the running configuration.</p>
<b>Step 3</b>	<b>exit</b> <b>Example:</b> <pre>switch(config)# exit switch#</pre>	Exits global configuration mode.
<b>Step 4</b>	(Optional) <b>show banner motd</b> <b>Example:</b> <pre>switch# show banner motd</pre>	Displays the configured MOTD banner.
<b>Step 5</b>	(Optional) <b>copy running-config startup-config</b> <b>Example:</b> <pre>switch# copy running-config startup-config</pre>	Copies the running configuration to the startup configuration.

## Configuring the Time Zone

You can configure the time zone to offset the device clock time from UTC.

**SUMMARY STEPS**

1. **configure terminal**
2. **clock timezone** *zone-name offset-hours offset-minutes*
3. **exit**
4. (Optional) **show clock**
5. (Optional) **copy running-config startup-config**

**DETAILED STEPS**

	<b>Command or Action</b>	<b>Purpose</b>
<b>Step 1</b>	<b>configure terminal</b> <b>Example:</b> <pre>switch# configure terminal switch(config)#</pre>	Enters global configuration mode.
<b>Step 2</b>	<b>clock timezone</b> <i>zone-name offset-hours offset-minutes</i> <b>Example:</b> <pre>switch(config)# clock timezone EST -5 0</pre>	Configures the time zone. The <i>zone-name</i> argument is a 3-character string for the time zone acronym (for example, PST or EST). The <i>offset-hours</i> argument is the offset from the UTC and the range is from -23 to 23 hours. The range for the <i>offset-minutes</i> argument is from 0 to 59 minutes.
<b>Step 3</b>	<b>exit</b> <b>Example:</b> <pre>switch(config)# exit switch#</pre>	Exits global configuration mode.
<b>Step 4</b>	(Optional) <b>show clock</b> <b>Example:</b> <pre>switch# show clock</pre>	Displays the time and time zone.
<b>Step 5</b>	(Optional) <b>copy running-config startup-config</b> <b>Example:</b> <pre>switch# copy running-config startup-config</pre>	Copies the running configuration to the startup configuration.

## Configuring Summer Time (Daylight Saving Time)

You can configure when summer time, or daylight saving time, is in effect for the device and the offset in minutes.

**SUMMARY STEPS**

1. **configure terminal**
2. **clock summer-time** *zone-name start-week start-day start-month start-time end-week end-day end-month end-time offset-minutes*
3. **exit**
4. (Optional) **show clock detail**

## 5. (Optional) copy running-config startup-config

## DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	<b>configure terminal</b> <b>Example:</b> <pre>switch# configure terminal switch(config)#</pre>	Enters global configuration mode.
<b>Step 2</b>	<b>clock summer-time zone-name start-week start-day start-month start-time end-week end-day end-month end-time offset-minutes</b> <b>Example:</b> <pre>switch(config)# clock summer-time PDT 1 Sunday March 02:00 1 Sunday November 02:00 60</pre>	<p>Configures summer time or daylight saving time.</p> <p>The <i>zone-name</i> argument is a three character string for the time zone acronym (for example, PST and EST).</p> <p>The values for the <i>start-day</i> and <i>end-day</i> arguments are <b>Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, and Sunday</b>.</p> <p>The values for the <i>start-month</i> and <i>end-month</i> arguments are <b>January, February, March, April, May, June, July, August, September, October, November, and December</b>.</p> <p>The value for the <i>start-time</i> and <i>end-time</i> arguments are in the format <i>hh:mm</i>.</p> <p>The range for the <i>offset-minutes</i> argument is from 0 to 1440 minutes.</p>
<b>Step 3</b>	<b>exit</b> <b>Example:</b> <pre>switch(config)# exit switch#</pre>	Exits global configuration mode.
<b>Step 4</b>	(Optional) <b>show clock detail</b> <b>Example:</b> <pre>switch(config)# show clock detail</pre>	Displays the configured MOTD banner.
<b>Step 5</b>	(Optional) <b>copy running-config startup-config</b> <b>Example:</b> <pre>switch# copy running-config startup-config</pre>	Copies the running configuration to the startup configuration.

## Manually Setting the Device Clock

You can set the clock manually if your device cannot access a remote time source.

### Before you begin

Configure the time zone.

## SUMMARY STEPS

1. `clock set` *time day month year*
2. (Optional) `show clock`

## DETAILED STEPS

	Command or Action	Purpose
Step 1	<p><code>clock set</code> <i>time day month year</i></p> <p><b>Example:</b></p> <pre>switch# clock set 15:00:00 30 May 2013 Fri May 30 15:14:00 PDT 2013</pre>	<p>Configures the device clock.</p> <p>The format for the <i>time</i> argument is <i>hh:mm:ss</i>.</p> <p>The range for the <i>day</i> argument is from 1 to 31.</p> <p>The values for the <i>month</i> argument are <b>January, February, March, April, May, June, July, August, September, October, November, and December</b>.</p> <p>The range for the <i>year</i> argument is from 2000 to 2030.</p>
Step 2	<p>(Optional) <code>show clock</code></p> <p><b>Example:</b></p> <pre>switch(config)# show clock</pre>	<p>Displays the current clock value.</p>

## Setting the Clock Manager

You can configure the clock manager to synchronize all the clocks of the components in the Cisco Nexus device.

## SUMMARY STEPS

1. `clock protocol` *protocol*
2. (Optional) `show run clock_manager`

## DETAILED STEPS

	Command or Action	Purpose
Step 1	<p><code>clock protocol</code> <i>protocol</i></p> <p><b>Example:</b></p> <pre>switch# clock protocol ntp</pre>	<p>Configures the clock manager.</p> <p>The values for the <i>protocol</i> argument are <b>ntp</b>, <b>ptp</b>, and <b>none</b>.</p> <p>The following describes the values:</p> <ul style="list-style-type: none"> <li>• <b>ntp</b>—Synchronizes clocks with Network Time Protocol (NTP).</li> <li>• <b>ptp</b>—Synchronizes clocks with Precision Time Protocol (PTP) as described by IEEE 1588.</li> <li>• <b>none</b>—Uses <code>clock set HH:MM:SS</code> to set the supervisor clock.</li> </ul>

	Command or Action	Purpose
		<p><b>Note</b> When <b>none</b> is used, the clock must be configured.</p> <p><b>Note</b> Once the protocol is configured, the clock must use that protocol.</p>
<b>Step 2</b>	(Optional) <b>show run clock_manager</b> <b>Example:</b> <pre>switch# show run clock_manager</pre>	Displays the configuration of the clock manager.

## Managing Users

You can display information about users logged into the device and send messages to those users.

### Displaying Information about the User Sessions

You can display information about the user session on the device.

#### SUMMARY STEPS

1. **show users**

#### DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	<b>show users</b> <b>Example:</b> <pre>switch# show users</pre>	Displays the user sessions.

### Sending a Message to Users

You can send a message to active users currently using the device CLI.

#### SUMMARY STEPS

1. (Optional) **show users**
2. **send [session line] message-text**



## DETAILED STEPS

	Command or Action	Purpose
Step 1	(Optional) <b>show users</b>  <b>Example:</b> switch# show users	Displays the active user sessions.
Step 2	<b>send</b> [session line] message-text  <b>Example:</b> switch# send Reloading the device is 10 minutes!	Sends a message to all active users or to a specific user. The message can be up to 80 alphanumeric characters and is case sensitive.

## Verifying the Device Configuration

To verify the configuration, use one of the following commands:

Command	Purpose
<b>show running-config</b> [ <b>exclude</b> ] <i>command</i> ] <b>[sanitized]</b>	Displays the contents of the currently running configuration or a subset of that configuration, use the <b>show running-config</b> command in the appropriate mode. : <ul style="list-style-type: none"> <li>• <b>exclude</b>: (Optional) Excludes a specific configuration from the display. Use the <b>exclude</b> keyword followed by a <i>command</i> argument to exclude a specific configuration from the display.</li> <li>• <b>command</b>: (Optional) Displays only a single command or a subset of commands available under a specified command mode.</li> <li>• <b>sanitized</b>: (Optional) Displays a sanitized configuration for safe distribution and analysis.  Beginning with Cisco NX-OS Release 10.3(2)F, <b>sanitized</b> keyword is supported on Cisco Nexus 9000 series switches.</li> </ul>
<b>show startup-config</b>	Displays the startup configuration.  <b>Note</b> If Layer 3 based feature configurations are disabled in the running-config, the <b>show startup-config</b> command does not display them. However, the configurations remain intact in the startup PSS, until the <b>copy running startup</b> command is performed.
<b>show time-stamp running-config last-changed</b>	Displays the timestamp when the running configuration was last changed.

The following example shows sample output of **show running-config** command with the **sanitized** keyword. The sanitized configuration is used to share a configuration without exposing some configuration details.

This option masks the sensitive words in running configuration output with <removed> keyword.

```
switch# show running-config sanitized

!Command: show running-config sanitized
!Running configuration last done at: Wed Oct 12 09:14:54 2022
!Time: Wed Oct 12 13:52:55 2022

version 10.3(2) Bios:version 07.69

username admin password 5 <removed> role network-admin

copp profile strict
snmp-server user admin network-admin auth md5 <removed> priv aes-128 <removed> localizedV2key
rmon event 1 log trap <removed> description FATAL(1) owner PMON@FATAL
rmon event 2 log trap <removed> description CRITICAL(2) owner PMON@CRITICAL
rmon event 3 log trap <removed> description ERROR(3) owner PMON@ERROR
rmon event 4 log trap <removed> description WARNING(4) owner PMON@WARNING
rmon event 5 log trap <removed> description INFORMATION(5) owner PMON@INFO
--More--
```