Basic Device Management

This chapter contains the following sections:

Information 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.

EXEC Banner

Starting with the Cisco NX-OS Release 7.3(0)N1(1), the EXEC banner is displayed after a user logs in to a switch. This banner can be used to post reminders to your network administrators.

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 Nexus chassis may contain clocks of different types that may need to be synchronized. These clocks are a part of various components (such as the supervisor, LC processors, or line cards) and each may 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 security configuration guide for your device.

Licensing Requirements for Basic Device Management

The following table shows the licensing requirements for this feature:

Product	License Requirement
Cisco NX-OS	Basic device management requires no license. Any feature not included in a license package is bundled with the Cisco NX-OS system images and is provided at no extra charge to you. For a complete explanation of the Cisco NX-OS licensing scheme, see the .

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	**configure terminal**
	
	Example:
	`switch# configure terminal`
	`switch(config)#`
		Enters global configuration mode.

Step 2	{**hostname**	**switchname**} *name*
		
		Example:
		Using the **hostname** command:
		`switch(config)# hostname Engineering1`
		`Engineering1(config)#`
		Using the **switchname** command:
		`Engineering1(config)# switchname Engineering2`
		`Engineering2(config)#`
			Changes the device hostname. The *name* argument is alphanumeric, case sensitive, and has a maximum length of 63 characters. The default name is switch.
			
			Note The **switchname** command performs the same function as the **hostname** command.

Step 3	**exit**
	
	Example:
	`Engineering2(config)# exit`
	`Engineering2#`
		Exits global configuration mode.

	Command or Action	Purpose
Step 4	**copy running-config startup-config** **Example:** `Engineering2# copy running-config startup-config`	(Optional) 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 80 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

Step 1	**configure terminal**
	
	Example:
	`switch# configure terminal`
	`switch(config)#`
		Enters global configuration mode.

Step 2	**banner motd** *delimiting-character message delimiting-character*
	
	Example:
	`switch(config)# banner motd #Welcome to the Switch#`
	`switch(config)#`
		Configures the MOTD banner. Do not use the *delimiting-character* in the *message* text.
		
		Note Do not use " or % as a delimiting character.

Step 3	**exit**
	
	Example:
	`switch(config)# exit`
	`switch#`
		Exits global configuration mode.

	Command or Action	**Purpose**
Step 4	**show banner motd** **Example:** `switch# show banner motd`	(Optional) Displays the configured MOTD banner.
Step 5	**copy running-config startup-config** **Example:** `switch# copy running-config startup-config`	(Optional) Copies the running configuration to the startup configuration.

Configuring the EXEC Banner

You can configure the EXEC banner to display a message when a user logs in to a device. The EXEC banner has the following characteristics:

- Maximum of 254 characters per line including the delimiting characters
- Maximum of 40 lines

SUMMARY STEPS

1. **configure terminal**
2. **banner exec** *delimiting-character message delimiting-character*
3. (Optional) **no banner exec**
4. **exit**
5. (Optional) **show banner exec**
6. (Optional) **copy running-config startup-config**

DETAILED STEPS

	Command or Action	**Purpose**

Step 1	**configure terminal**
	
	Example:
	`switch# configure terminal`
	`switch(config)#`
		Enters global configuration mode.

Step 2	**banner exec** *delimiting-character message delimiting-character*
	
	Example:
	`switch(config)# banner exec #Welcome to the Test#`
	`switch(config)#`
		Configures the EXEC banner. Do not use the *delimiting-character* in the *message* text.

	Command or Action	Purpose
Step 3	**no banner exec** **Example:** `switch(config)# no banner exec`	(Optional) Resets the value of EXEC banner to the default value. **Note** The default value of the EXEC banner is blank.

Step 4	**exit**
	
	Example:
	`switch(config)# exit`
	`switch#`
		Exits global configuration mode.

Step 5	**show banner exec** **Example:** `switch# show banner exec`	(Optional) Displays the configured EXEC banner.
Step 6	**copy running-config startup-config** **Example:** `switch# copy running-config startup-config`	(Optional) Copies the running configuration to the startup configuration.

Configuring the EXEC Banner

This example shows how to configure the EXEC banner.

```
# config t
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# banner exec #Unauthorized access to this device is prohibited!#
switch(config)# exit
switch# show banner exec
Unauthorized access to this device is prohibited!
```

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

	Command or Action	**Purpose**

Step 1	**configure terminal**
	
	Example:
	`switch# configure terminal`
	`switch(config)#`
		Enters global configuration mode.

Step 2	**clock timezone** *zone-name offset-hours* *offset-minutes* **Example:** `switch(config)# clock timezone EST -5 0`	Configures the time zone. The *zone-name* argument is a 3-character string for the time zone acronym (for example, PST or EST). The *offset-hours* argument is the offset from the UTC and the range is from −23 to 23 hours. The range for the *offset-minutes* argument is from 0 to 59 minutes.

Step 3	**exit**
	
	Example:
	`switch(config)# exit`
	`switch#`
		Exits global configuration mode.

Step 4	**show clock** **Example:** `switch# show clock`	(Optional) Displays the time and time zone.
Step 5	**copy running-config startup-config** **Example:** `switch# copy running-config startup-config`	(Optional) 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

Step 1	**configure terminal**
	
	Example:
	`switch# configure terminal`
	`switch(config)#`
		Enters global configuration mode.

Step 2	**clock summer-time** *zone-name start-week start-day start-month start-time end-week end-day end-month end-time offset-minutes*
	
	Example:
	`switch(config)# clock summer-time PDT`
	`1 Sunday March 02:00 1 Sunday`
	`November 02:00 60`
		Configures summer time or daylight saving time.
		
		The *zone-name* argument is a three character string for the time zone acronym (for example, PST and EST).
		
		The values for the *start-day* and *end-day* arguments are **Monday**, **Tuesday**, **Wednesday**, **Thursday**, **Friday**, **Saturday**, and **Sunday**.
		
		The values for the *start-month* and *end-month* arguments are **January**, **February**, **March**, **April**, **May**, **June**, **July**, **August**, **September**, **October**, **November**, and **December**.
		
		The value for the *start-time* and *end-time* arguments are in the format *hh*:*mm*.
		
		The range for the *offset-minutes* argument is from 0 to 1440 minutes.

Step 3	**exit**
	
	Example:
	`switch(config)# exit`
	`switch#`
		Exits global configuration mode.

Step 4	**show clock detail** **Example:** `switch(config)# show clock detail`	(Optional) Displays the configured MOTD banner.
Step 5	**copy running-config startup-config** **Example:** `switch# copy running-config startup-config`	(Optional) 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	**clock set** *time day month year*
	
	Example:
	`switch# clock set 15:00:00 30 May 2008`
	`Fri May 30 15:14:00 PDT 2008`
		Configures the device clock.
		
		The format for the *time* argument is *hh*:*mm*:*ss*.
		
		The range for the *day* argument is from 1 to 31.
		
		The values for the *month* argument are **January**, **February**, **March**, **April**, **May**, **June**, **July**, **August**, **September**, **October**, **November**, and **December**.
		
		The range for the *year* argument is from 2000 to 2030.

Step 2	**show clock** **Example:** `switch(config)# show clock`	(Optional) Displays the current clock value.

Related Topics

Setting the Clock Manager

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

SUMMARY STEPS

1. **clock protocol** *protocol* **vdc** *vdc-num*
2. (Optional) **show run clock_manager**

DETAILED STEPS

	Command or Action	Purpose
Step 1	**clock protocol** *protocol* **vdc** *vdc-num* **Example:** `# clock protocol ptp vdc 2`	Configures the clock manager. The values for the *protocol* argument are **ptp**, **ntp**, and **none**. The following describes the values:

	Command or Action	Purpose
		• **ptp**—Synchronizes clocks with Precision Time Protocol (PTP) as described by IEEE 1588.
		• **ntp**— Synchronizes clocks with Network Time Protocol (NTP).
		• **none**—Use **clock set** to set supervisor clocks.
		Note When **none** is used, the clock in the specified VDC must be configured.
		Note Once the protocol is configured, the clock in the specified VDC must use that protocol.
		For example, if the **clock protocol ptp vdc 2** command is entered, then PTP should be configured in VDC 2.
		The range for the *vdc* argument is 1 to 8.
Step 2	**show run clock_manager** **Example:** `#show run clock_manager`	(Optional) 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
Step 1	**show users** **Example:** `switch# show users`	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	**show users** **Example:** `switch# show users`	(Optional) Displays the active user sessions.
Step 2	**send** [**session** *line*] *message-text* **Example:** `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 after bootstrapping the device using POAP, use one of the following commands:

Command	**Purpose**
show running-config	Displays the running configuration.
show startup-config	Displays the startup configuration.

For detailed information about the fields in the output from these commands, see the Cisco Nexus command reference for your device.

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

Additional References for Basic Device Management

You can find additional information related to basic device management.

Related Documents for Basic Device Management

Related Topic	Document Title
Licensing	*Cisco NX-OS Licensing Guide*
Command reference	*Cisco Nexus 7000 Series NX-OS Fundamentals Command Reference*