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.

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.

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)#`
		Changes the device hostname. The *name* argument is alphanumeric, case sensitive, and has a maximum length of 32 characters. The default is switch.
		Note The **switchname** command performs the same function as the **hostname** command.

	Command or Action	Purpose

	Using the **switchname** command:
	`Engineering1(config)# switchname Engineering2`
	`Engineering2(config)#`	

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

Step 4	(Optional) **copy running-config startup-config** **Example:** `Engineering2# copy running-config startup-config`	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.

	Command or Action	Purpose

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

Step 4	(Optional) **show banner motd** **Example:** `switch# show banner motd`	Displays the configured MOTD banner.
Step 5	(Optional) **copy running-config startup-config** **Example:** `switch# copy running-config startup-config`	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

	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.

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

	Command or Action	Purpose

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

Step 4	(Optional) **show clock detail** **Example:** `switch(config)# show clock detail`	Displays the configured MOTD banner.
Step 5	(Optional) **copy running-config startup-config** **Example:** `switch# copy running-config startup-config`	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	(Optional) **show clock** **Example:** `switch(config)# show clock`	Displays the current clock value.

Related Topics

Configuring the Time Zone, on page 4

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: • **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	(Optional) **show run clock_manager** **Example:** `#show run clock_manager`	Displays the configuration of the clock manager.

Configuring the Mode on the Cisco Nexus 3100 Series Switches

You can configure the Cisco Nexus 3100 Series switches in the N9K mode using the following commands:

Before you begin

The Cisco Nexus 3100 Series switches, except Cisco Nexus 3100-V switches, now support two system modes: the N3K mode and the N9K mode. The N3K mode is the default mode. It uses the same CLI commands as the previous Cisco Nexus 3000 Series and Cisco Nexus 3100 Series NX-OS releases. The N9K mode enables the Cisco Nexus 3100 Series switches to use the Cisco Nexus 9000 Series switches CLI commands. Refer to the Cisco Nexus 9000 Series configuration guides for the Cisco Nexus 9000 Series CLI commands.

Note The N9K mode is available on the Cisco Nexus 3100 Series switches only and it is not available on the Cisco Nexus 3000 Series switches. Cisco Nexus 3100-V switches supports only N9K CLI.

SUMMARY STEPS

1. **configure terminal**
2. switch(config)# **system switch-mode** *mode*
3. switch(config)# **write erase**
4. switch(config)# **reload**
5. (Optional) switch(config)# **show system switch-mode**

DETAILED STEPS

	Command or Action	Purpose

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

Step 2	switch(config)# **system switch-mode** *mode*
	Example:
	`switch(config)# system switch-mode n9k`
	`!WARNING: "write erase/reload" is required before new mode is effective.`
		Configures the mode as N9K.

Step 3	switch(config)# **write erase**
	Example:
	`switch(config)# write erase`
	`Warning: This command will erase the startup-configuration.`
	`Do you wish to proceed anyway? (y/n)  [n] y`
		Erases the start-up configuration.

Step 4	switch(config)# **reload**
	Example:
	`switch(config)# reload`
	`This command will reboot the system. (y/n)?  [n] y`
	`2002 Jan  9 03:57:59 Neptune-1 %$ VDC-1 %$`
	`%PLATFORM-2-PFM_SYSTEM_RESET: Manual system restart from Command Line Interface`
		Reloads the switch.

	Command or Action	Purpose
	(c) Copyright 2013, Cisco Systems. (c) Copyright 2015, Cisco Systems. NPT3000 BIOS v.3.0.2, Tue 05/26/2015 Press TAB in 1 seconds to list all boot options Any other key to active boot... Press ctrl L to go to loader prompt in 2 secs Booting kickstart image: bootflash:/n9000-dk9.7.0.3.I2.0.527.bin Image valid INIT: version 2.88 booting Skipping ata_piix for n3k. Unsquashing rootfs ... Loading IGB driver ... Installing SSE module ... done Creating the sse device node ... done Loading I2C driver ... Installing CCTRL driver for card_type 31 ... CCTRL driver for card_index 11081 ... 7.46: Interrupt throttling disabled. No cctrl irq detected. Checking all filesystems./etc/rc.d/rcS.d/S08check-flash-noinit: line 167: sg_inq: command not found /etc/rc.d/rcS.d/S08check-flash-noinit: line 168: sg_inq: command not found Current boot disk sda3.. ...Skipping LOGFLASH check for N3k... .Skipping plog check for N3k... Skipping installing default sprom values... Configuring network ... Installing LC netdev ... Installing veobc ... Installing OBFL driver ... ..done Wed Jan 9 03:59:36 UTC 2002 tune2fs 1.42.1 (17-Feb-2012) Setting reserved blocks percentage to 0% (0 blocks) Starting portmap daemon... creating NFS state directory: done starting 8 nfsd kernel threads: done starting mountd: done starting statd: done Saving image for img-sync ... Loading system software Installing local RPMS Patch Repository Setup completed successfully Uncompressing system image: Wed Jan 9 03:59:46 UTC 2002 blogger: nothing to do. ..done Wed Jan 9 03:59:46 UTC 2002 Creating /dev/mcelog Starting mcelog daemon Removing dme lib Moving N3K specific syslog config file INIT: Entering runlevel: 3 Running S93thirdparty-script...	

	Command or Action	Purpose
	Populating conf files for hybrid sysmgr ... Starting hybrid sysmgr ... 2002 Jan 9 03:59:54 %$ VDC-1 %$ Jan 9 03:59:52 %KERN-2-SYSTEM_MSG: [9.062765] Initializing NVRAM Block 6 - kernel 2002 Jan 9 03:59:54 %$ VDC-1 %$ Jan 9 03:59:52 %KERN-2-SYSTEM_MSG: [10.469175] hwport mode=6type 2. mod_no 0, inst_no 0 - kernel 2002 Jan 9 03:59:58 %$ VDC-1 %$ %USER-0-SYSTEM_MSG: after syslog open - clis 2002 Jan 9 03:59:58 %$ VDC-1 %$ %USER-0-SYSTEM_MSG: after ksink_get_rsw_sched_policy - clis 2002 Jan 9 03:59:58 %$ VDC-1 %$ %USER-0-SYSTEM_MSG: after clis_process_options - clis 2002 Jan 9 03:59:58 %$ VDC-1 %$ %USER-0-SYSTEM_MSG: before access to bkout_cfg - clis 2002 Jan 9 03:59:58 %$ VDC-1 %$ %USER-2-SYSTEM_MSG: main 2348- Done with Shm..Now read commandfiles - clis 2002 Jan 9 03:59:59 %$ VDC-1 %$ %PLATFORM-2-PS_FAIL: Power supply 1 failed or shut down (Serial number N/A) 2002 Jan 9 03:59:59 %$ VDC-1 %$ %PLATFORM-2-PS_OK: Power supply 2 ok (Serial number) 2002 Jan 9 03:59:59 %$ VDC-1 %$ %PLATFORM-2-PS_FANOK: Fan in Power supply 2 ok 2002 Jan 9 03:59:59 %$ VDC-1 %$ %PLATFORM-2-PS_ABSENT: Power supply 1 is absent/shutdown, ps-redundancy might be affected 2002 Jan 9 03:59:59 %$ VDC-1 %$ %PLATFORM-2-PS_RED_MODE_CHG: Power supply operational redundancy mode changed to non-redundant 2002 Jan 9 03:59:59 %$ VDC-1 %$ %PLATFORM-2-FANMOD_FAN_OK: Fan module 1 (Fan1(sys_fan1) fan) ok 2002 Jan 9 03:59:59 %$ VDC-1 %$ %PLATFORM-2-FANMOD_FAN_OK: Fan module 2 (Fan2(sys_fan2) fan) ok 2002 Jan 9 03:59:59 %$ VDC-1 %$ %PLATFORM-2-FANMOD_FAN_OK: Fan module 3 (Fan3(sys_fan3) fan) ok 2002 Jan 9 03:59:59 %$ VDC-1 %$ %PLATFORM-2-FANMOD_FAN_OK: Fan module 4 (Fan4(sys_fan4) fan) ok 2002 Jan 9 04:00:01 %$ VDC-1 %$ %USER-2-SYSTEM_MSG: IP Netlink thread init successful - netstack 2002 Jan 9 04:00:08 %$ VDC-1 %$ %USER-2-SYSTEM_MSG: main :2355- Done with reading commandfiles - clis 2002 Jan 9 04:00:18 %$ VDC-1 %$ %USER-0-SYSTEM_MSG: end of default policer - copp 2002 Jan 9 04:00:18 %$ VDC-1 %$ %COPP-2-COPP_NO_POLICY: Control-plane is unprotected. 2002 Jan 9 04:00:27 %$ VDC-1 %$ icmpv6: IPV6 Netlink thread init successful	

	Command or Action	Purpose

	2002 Jan 9 04:00:28 %$ VDC-1 %$
	%VDC_MGR-2-VDC_ONLINE: vdc 1 has come online
	Waiting for system online status before starting
	POAP ...
	2002 Jan 9 04:01:01 switch %$ VDC-1 %$
	%ASCII-CFG-2-CONF_CONTROL: System ready
	Starting Auto Provisioning ...
	2002 Jan 9 04:01:02 switch %$ VDC-1 %$
	%USER-0-SYSTEM_MSG: ETH_PORT_UP - port_client
	Done
	
	Abort Auto Provisioning and continue with normal
	setup ?(yes/no)[n]: 2002 Jan 9 04:01:03 switch %$
	 VDC-1 %$ %POAP-2-POAP_INITED: POAP process
	initialized
	yes
	  ---- System Admin Account Setup ----
	Do you want to enforce secure password standard
	(yes/no) [y]: no
	
	  Enter the password for "admin":
	  Confirm the password for "admin":
	
	  ---- Basic System Configuration Dialog
	VDC: 1 ----
	 This setup utility will guide you through the
	basic configuration of
	the system. Setup configures only enough
	connectivity for management
	of the system.
	
	Please register Cisco Nexus3000 Family devices
	promptly with your
	supplier. Failure to register may affect response
	 times for initial
	service calls. Nexus3000 devices must be registered
	 to receive
	entitled support services.
	
	Press Enter at anytime to skip a dialog. Use ctrl-c
	 at anytime
	to skip the remaining dialogs.
	Would you like to enter the basic configuration
	dialog (yes/no): no
	2015 Jan 9 04:01:26 switch %$ VDC-1 %$
	%COPP-2-COPP_POLICY: Control-Plane is protected
	with policy copp-system-p-policy-strict.
	
	User Access Verification
	switch login: admin
	Password:
	Cisco Nexus Operating System (NX-OS) Software
	TAC support: http://www.cisco.com/tac
	Copyright (C) 2002-2015, Cisco and/or its
	affiliates.
	All rights reserved.
	The copyrights to certain works contained in this
	 software are
	owned by other third parties and used and
	distributed under their own
	licenses, such as open source. This software is
	provided "as is," and unless	

	Command or Action	Purpose
	otherwise stated, there is no warranty, express or implied, including but not limited to warranties of merchantability and fitness for a particular purpose. Certain components of this software are licensed under the GNU General Public License (GPL) version 2.0 or GNU General Public License (GPL) version 3.0 or the GNU Lesser General Public License (LGPL) Version 2.1 or Lesser General Public License (LGPL) Version 2.0. A copy of each such license is available at http://www.opensource.org/licenses/gpl-2.0.php and http://opensource.org/licenses/gpl-3.0.html and http://www.opensource.org/licenses/lgpl-2.1.php and http://www.gnu.org/licenses/old-licenses/library.txt.	
Step 5	(Optional) switch(config)# **show system switch-mode** **Example:** switch(config)# **show system switch-mode** system switch-mode n9k switch(config)#	Verifies the configuration mode as N9K on the switch.

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	(Optional) **show users** **Example:** `switch# show users`	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, 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*