Basic Device Management

This chapter describes how to configure, manage, and verify the basic setting on your Cisco NX-OS device.

- Information About Basic Device Management, on page 1
- Changing the Device Hostname, on page 3
- Configuring the Management Interface, on page 4
- Configuring the Default Gateway, on page 5
- Configuring the MOTD Banner, on page 6
- Configuring the Time Zone, on page 7
- Configuring Summer Time (Daylight Saving Time), on page 8
- Manually Setting the Device Clock, on page 9
- Managing Users, on page 10
- Enabling or Disabling a Telnet Server Connection, on page 11
- Verifying the Device Configuration, on page 11
- Default Settings for Basic Device Parameters, on page 12

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.

Interface

If the management 10/100 Ethernet port (mgmt0) interface of the Cisco MDS 9700 Series switches has a preconfigured IPv6 address that cannot be removed, use the `write erase boot` command to clear the complete configuration of the device and reload it. Perform this process before commissioning the device into production as this process is disruptive to user traffic if it is applied to the active supervisor of a system. Ensure an active console connection to the supervisor as this process will remove the IPv4 address of the mgmt0 interface.

Note

- Information About Basic Device Management, on page 1
- Changing the Device Hostname, on page 3
- Configuring the Management Interface, on page 4
- Configuring the Default Gateway, on page 5
- Configuring the MOTD Banner, on page 6
- Configuring the Time Zone, on page 7
- Configuring Summer Time (Daylight Saving Time), on page 8
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- Managing Users, on page 10
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Note
The management interface allows multiple simultaneous Telnet or SNMP sessions. You can remotely configure the device through the management interface (mgmt0), but first you must configure some IP parameters so that the switch is reachable. You can manually configure the management interface from the CLI. You can configure the mgmt0 interface with either IPv4 address parameters or an IPv6 address.

On devices with dual supervisor modules, a single IP address is used to manage the switch. The active supervisor module's mgmt0 interface uses this IP address. The mgmt0 interface on the standby supervisor module remains in an inactive state and cannot be accessed until a switchover happens. After a switchover, the mgmt0 interface on the standby supervisor module becomes active and assumes the same IP address as the previously active supervisor module.

The management port (mgmt0) is autosensing and operates in full duplex mode at a speed of 10/100/1000 Mbps. Autosensing supports both the speed and the duplex mode.

**Default Gateway**

*Figure 1: Default Gateway*

The supervisor module sends IP packets with unresolved destination IPv4 addresses to the default gateway.

**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.
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.

Telnet Server Connection

The Telnet server is disabled by default on all switches in the Cisco MDS 9000 Family. You can enable the Telnet server if you do not require a secure SSH connection. However, if you require a secure SSH connection, you need to disable the default Telnet connection and then enable the SSH connection.

Note

For information on connecting a terminal to the supervisor module console port, refer to the Cisco MDS 9200 Series Hardware Installation Guide or the Cisco MDS 9500 Series Hardware Installation Guide.

Note

The Cisco NX-OS software allows a maximum of 16 sessions on any switch in the Cisco MDS 9500 Series or the Cisco MDS 9200 Series.

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

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>Enters global configuration mode.</td>
</tr>
<tr>
<td>configure terminal</td>
<td></td>
</tr>
<tr>
<td>Example:</td>
<td></td>
</tr>
</tbody>
</table>
Purpose
Command or Action

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
</table>
| switch# configure terminal  
switch(config)# | |

**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.**

**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 Management Interface

You can manually configure the management interface from the CLI. You can configure the mgmt 0 interface with either IPv4 address parameters or an IPv6 address.

**Note**

You only need to configure the mgmt0 interface on the active supervisor module. When a supervisor module switchover occurs, the new active supervisor module uses the same configuration for the mgmt0 interface.

**Before you begin**

Establish a connection on the console port.

**SUMMARY STEPS**

1. configure terminal
2. interface mgmt 0
3. ip address \{ipv4-address subnet-mask | ipv6-address\}
4. exit
5. (Optional) show interface mgmt 0
6. (Optional) copy running-config startup-config

---

### Configuring the Management Interface

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**Note**

You only need to configure the mgmt0 interface on the active supervisor module. When a supervisor module switchover occurs, the new active supervisor module uses the same configuration for the mgmt0 interface.

**Before you begin**

Establish a connection on the console port.

**SUMMARY STEPS**

1. configure terminal
2. interface mgmt 0
3. ip address \{ipv4-address subnet-mask | ipv6-address\}
4. exit
5. (Optional) show interface mgmt 0
6. (Optional) copy running-config startup-config
**DETAILED STEPS**

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong> configure terminal</td>
<td>Enters global configuration mode.</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td></td>
</tr>
<tr>
<td>switch# configure terminal</td>
<td></td>
</tr>
<tr>
<td>switch(config)#</td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong> interface mgmt 0</td>
<td>Specifies the mgmt0 interface and enters the interface configuration mode.</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td></td>
</tr>
<tr>
<td>switch(config)# interface mgmt 0</td>
<td></td>
</tr>
<tr>
<td>switch(config-if)#</td>
<td></td>
</tr>
<tr>
<td><strong>Step 3</strong> ip address {ipv4-address subnet-mask</td>
<td>ipv6-address}</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td></td>
</tr>
<tr>
<td>switch(config-if)# ip address 1.1.1.0 255.255.255.0</td>
<td></td>
</tr>
<tr>
<td><strong>Step 4</strong> exit</td>
<td>Returns to global configuration mode.</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td></td>
</tr>
<tr>
<td>switch(config-if)# exit</td>
<td></td>
</tr>
<tr>
<td>switch(config)#</td>
<td></td>
</tr>
<tr>
<td><strong>Step 5</strong> (Optional) show interface mgmt 0</td>
<td>Displays the mgmt 0 interface information.</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td></td>
</tr>
<tr>
<td>switch(config)# show interface mgmt 0</td>
<td></td>
</tr>
<tr>
<td><strong>Step 6</strong> (Optional) copy running-config startup-config</td>
<td>Copies the running configuration to the startup configuration.</td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td></td>
</tr>
<tr>
<td>switch(config)# copy running-config startup-config</td>
<td></td>
</tr>
</tbody>
</table>

**Configuring the Default Gateway**

You can manually configure the management interface from the CLI. You can configure the mgmt 0 interface with either IPv4 address parameters or an IPv6 address.

**Before you begin**
Establish a connection on the console port.

**SUMMARY STEPS**

1. configure terminal
2. ip default gateway ipv4-address
3. (Optional) show ip route
4. (Optional) copy running-config startup-config
### 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 254 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

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong> configure terminal</td>
<td>Enters global configuration mode.</td>
</tr>
<tr>
<td>Example: <code>switch# configure terminal switch(config)#</code></td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong> ip default gateway <em>ipv4-address</em></td>
<td>Configures the IPv4 address for the default gateway.</td>
</tr>
<tr>
<td>Example: <code>switch(config)# ip default-gateway 172.16.1.1</code></td>
<td></td>
</tr>
<tr>
<td><strong>Step 3</strong> (Optional) show ip route</td>
<td>Displays the default gateway configuration.</td>
</tr>
<tr>
<td>Example: <code>switch(config)# show ip route</code></td>
<td></td>
</tr>
<tr>
<td><strong>Step 4</strong> (Optional) copy running-config startup-config</td>
<td>Configures the IPv4 or IPv6 address on the mgmt 0 interface.</td>
</tr>
<tr>
<td>Example: <code>switch(config)# copy running-config startup-config</code></td>
<td></td>
</tr>
</tbody>
</table>
### Purpose

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

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

| **Step 4** | Displays the configured MOTD banner. |
| **(Optional) show banner motd** |
| **Example:** | switch# show banner motd |

| **Step 5** | Copies the running configuration to the startup configuration. |
| **(Optional) copy running-config startup-config** |
| **Example:** | switch# copy running-config startup-config |

### 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**

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td>Enters global configuration mode.</td>
</tr>
<tr>
<td><strong>configure terminal</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Example:</strong></td>
<td>switch# configure terminal switch(config)#</td>
</tr>
</tbody>
</table>

| **Step 2** | 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. |
| **clock timezone zone-name offset-hours offset-minutes** |
| **Example:** | switch(config)# clock timezone EST -5 0 |
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

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong> configure terminal</td>
<td>Enters global configuration mode.</td>
</tr>
</tbody>
</table>
| **Example:**  
  switch# configure terminal  
  switch(config)# | |
| **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 | Configures summer time or daylight saving time. |
| **Example:**  
  switch(config)# clock summer-time PDT  
  1 Sunday March 02:00 1 Sunday  
  November 02:00 60 | 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. |
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

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>clock set time day month year</td>
<td>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.</td>
</tr>
<tr>
<td>switch# clock set 15:00:00 30 May 2008 Fri May 30 15:14:00 PDT 2008</td>
<td></td>
</tr>
</tbody>
</table>

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.
### 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**

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show users</code></td>
<td>Displays the user sessions.</td>
</tr>
</tbody>
</table>

#### 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**

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Optional) <code>show users</code></td>
<td>Displays the active user sessions.</td>
</tr>
<tr>
<td><code>switch# show users</code></td>
<td></td>
</tr>
</tbody>
</table>

---

The range for the `year` argument is from 2000 to 2030.

Related Topics

- [Configuring the Time Zone](#), on page 7

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**Purpose**

Command or Action

<table>
<thead>
<tr>
<th>Purpose</th>
<th></th>
</tr>
</thead>
</table>
| Sends a message to all active users or to a specific user. The message can be up to 80 alphanumerical characters and is case sensitive. | send [session line] message-text
Example:
switch# send Reloading the device is 10 minutes! |

---

### Enabling or Disabling a Telnet Server Connection

You can enable or disable the Telnet server connection.

**SUMMARY STEPS**

1. `configure terminal`
2. `[no] feature telnet`
3. (Optional) `show telnet server`
4. (Optional) `copy running-config startup-config`

**DETAILED STEPS**

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>configure terminal</td>
<td>Enters global configuration mode.</td>
<td></td>
</tr>
</tbody>
</table>
| Example: | switch# configure terminal
switch(config)# |
| Step 2 | `[no] feature telnet` | Enables the Telnet server connection. Use the `no` form of the command to disable the Telnet server connection. The default is disabled. |
| Example: | switch(config)# feature telnet |
| Step 3 | (Optional) `show telnet server` | Displays the Telnet server configuration. |
| Example: | switch(config)# show telnet server |
| Step 4 | (Optional) `copy running-config startup-config` | Copies the running configuration to the startup configuration. |
| Example: | switch(config)# copy running-config startup-config |

---

### Verifying the Device Configuration

To verify the configuration after bootstrapping the device using POAP, use one of the following commands:

<table>
<thead>
<tr>
<th>Command</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show running-config</code></td>
<td>Displays the running configuration.</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Default</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOTD banner text</td>
<td>User Access Verification</td>
</tr>
<tr>
<td>Clock time zone</td>
<td>UTC</td>
</tr>
</tbody>
</table>