



## CHAPTER 11

# Configuring ECMP for Host Routes

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This chapter describes how to configure the equal-cost multipathing (ECMP) protocol for host routes on the Cisco NX-OS switch.

This chapter includes the following sections:

- [Information About ECMP for Host Routes, page 11-1](#)
- [Licensing Requirements for ECMP for Host Routes, page 11-1](#)
- [Prerequisites for ECMP for Host Routes, page 11-2](#)
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## Information About ECMP for Host Routes

When you enable ECMP support for host routes, all unicast host routes are programmed into the longest-prefix match algorithm (LPM) table. ECMP for host routes is provided in the switch hardware. You configure this feature in the CLI using the **hardware profile unicast enable-host-ecmp** command.



### Note

Host entries are stored in the LPM routing table instead of the host table when ECMP is configured for IPv4 (/32) routes and IPv6 (/128) routes.

## Licensing Requirements for ECMP for Host Routes

The following table shows the licensing requirements for this feature:

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| Product     | License Requirement   |
|-------------|---|
| Cisco NX-OS | ECMP for host routes 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 <i>Cisco NX-OS Licensing Guide</i> . |

## Prerequisites for ECMP for Host Routes

ECMP for host routes has the following prerequisites:

- Before you use this command, we recommend that you disable Unicast Reverse Path Forwarding (URPF) globally on the switch using the **system urpf disable** command, and then save the configuration and reload the switch. Disabling URPF globally extends the LPM table size.

## Default Settings

ECMP for host routes is disabled by default.

## Configuring ECMP for Host Routes

This section includes the following topics:

- [Enabling the EMCP for Host Routes Feature, page 11-2](#)

## Enabling the EMCP for Host Routes Feature

You can enable the ECMP for host routes feature.

### SUMMARY STEPS

1. **configure terminal**
2. (Optional) **system urpf disable**
3. **hardware profile unicast enable-host-ecmp**
4. **copy running-config startup-config**

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## DETAILED STEPS

|        | Command  | Purpose  |
|--------|--|--|
| Step 1 | <b>configure terminal</b><br><br><b>Example:</b><br>switch# configure terminal<br>switch(config)#                                    | Enters configuration mode.                           |
| Step 2 | <b>system urpf disable</b><br><br><b>Example:</b><br>switch(config)# system urpf disable   | (Optional) Disables URPF globally on the switch.     |
| Step 3 | <b>hardware profile unicast enable-host-ecmp</b><br><br><b>Example:</b><br>switch(config)# hardware profile unicast enable-host-ecmp | Enables ECMP for host routes globally on the switch. |
| Step 4 | <b>copy running-config startup-config</b><br><br><b>Example:</b><br>switch(config)# copy running-config startup-config               | Saves this configuration change.                     |

## Disabling the EMCP for Host Routes Feature

You can disable the ECMP for host routes feature.

## SUMMARY STEPS

1. **configure terminal**
2. **no hardware profile unicast enable-host-ecmp**
3. **copy running-config startup-config**

## DETAILED STEPS

|        | Command   | Purpose                    |
|--------|---|----------------------------|
| Step 1 | <b>configure terminal</b><br><br><b>Example:</b><br>switch# configure terminal<br>switch(config)# | Enters configuration mode. |

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|        | Command  | Purpose  |
|--------|--|--|
| Step 2 | <b>no hardware profile unicast enable-host-ecmp</b><br><br><b>Example:</b><br>switch(config)# no hardware profile unicast enable-host-ecmp | Disables ECMP for host routes globally on the switch and removes all associated configuration. |
| Step 3 | <b>copy running-config startup-config</b><br><br><b>Example:</b><br>switch(config)# copy running-config startup-config                     | Saves this configuration change.   |

## Verifying the ECMP for Host Routes Configuration

To display the ECMP for host routes configuration information, perform one of the following tasks:

| Command                             | Purpose  |
|-------------------------------------|--|
| <b>show hardware profile status</b> | Displays the unicast and multicast routing entries in hardware tables. |
| <b>show running-config</b>          | Displays the running system configuration.                             |

## Configuration Examples for ECMP for Host Routes

This example shows how to disable URPF and configure ECMP for host routes:

```
switch# configure terminal
switch(config)# system urpf disable
switch(config)# hardware profile unicast enable-host-ecmp
switch(config)# copy running-config startup-config
```

This example show how to disable ECMP for host routes:

```
switch# configure terminal
switch(config)# no hardware profile unicast enable-host-ecmp
switch(config)# copy running-config startup-config
```

## Additional References

For additional information related to implementing ECMP for host routes, see the following sections:

- [Related Documents, page 11-5](#)
- [Feature History for ECMP for Host Routes, page 11-5](#)

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## Related Documents

| Related Topic                     | Document Title                                   |
|-----------------------------------|--|
| ECMP for host routes CLI commands | <i>Cisco Nexus 3000 Series Command Reference</i> |

## Feature History for ECMP for Host Routes

[Table 11-1](#) lists the release history for this feature.

**Table 11-1**      *Feature History for ECMP for Host Routes*

| Feature Name         | Releases    | Feature Information          |
|----------------------|-------------|------------------------------|
| ECMP for Host Routes | 5.0(3)U1(2) | This feature was introduced. |

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