

Switching to Layer 3 Mode on the SF/SG 300 Series Switches

Objective

By default, the SF/SG 300 Series Managed Switch operates in Layer 2 mode. In this mode, the switch uses hardware to make forwarding decisions based on the MAC address information in a frame. In Layer 3 mode, the switch analyzes only the IP header segment of a frame using hardware, as opposed to a router analyzing the entire packet with software. A switch operating in Layer 3 mode has low latency, and can be a replacement for other routers with similar throughput. If you would like to know more about the Layer 3 switch evolution, click [here](#).

The objective of this document is to show you how to enable Layer 3 Mode on the SF/SG 300 Series Managed Switch using the graphical user interface (GUI) and command line interface (CLI).

Applicable Devices

- SF/SG 300 Series Managed Switches

Software Version

- 1.4.0.88

Switching to Layer 3 Mode using the GUI

Step 1. Log into the web configuration utility and choose **Administration > System Settings**. The *System Settings* page appears.

System Settings

System Settings

System Description: SG300-20 20-Port Gigabit Managed Switch

System Location: (0/160 characters used)

System Contact: (0/160 characters used)

Host Name: Use Default
 User Defined (0/58 characters used; Default: switch3ba618)

System Mode: L2
 L3

Custom Banner Settings

Login Banner: (0/1000 characters used)

Preview...

Welcome Banner: (0/1000 characters used)

Preview...

Step 2. In the *System Mode* field, select either the **L2** or **L3** radio button to select which mode the switch will run in. **L2** stands for Layer 2 (Data-Link). **L3** stands for Layer 3 (Network). The default is **L2**.

System Settings

System Settings

System Description: SG300-20 20-Port Gigabit Managed Switch

System Location: (0/160 characters used)

System Contact: (0/160 characters used)

Host Name: Use Default
 User Defined (0/58 characters used; Default: switch3ba618)

System Mode: L2
 L3

Custom Banner Settings

Login Banner: (0/1000 characters used)

Preview...

Welcome Banner: (0/1000 characters used)

Preview...

Note: Layer 2 (Data-Link) forwards data based on MAC addresses. Layer 3 (Network) adds a level of intelligence usually found in routers and the ability to route data using IP addresses.

Step 3. Click **Apply**.

System Settings

System Description: SG300-20 20-Port Gigabit Managed Switch

System Location: (0/160 characters used)

System Contact: (0/160 characters used)

Host Name: Use Default
 User Defined (0/58 characters used; Default: switch3ba618)

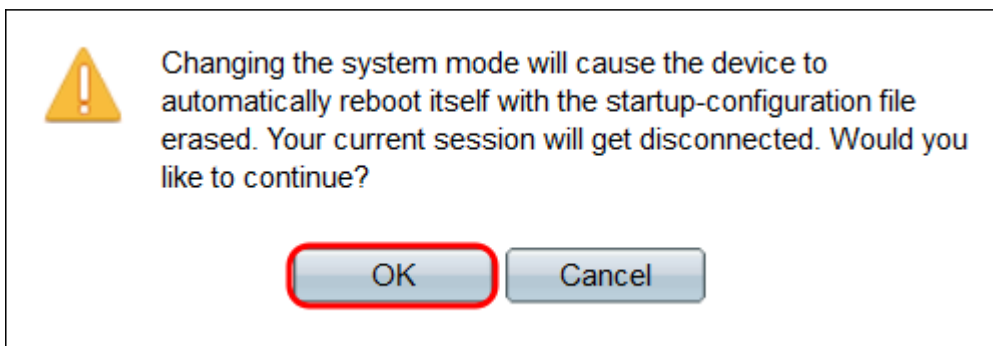
System Mode: L2
 L3

Custom Banner Settings

Login Banner: (0/1000 characters used)

Welcome Banner: (0/1000 characters used)

Step 4. A pop-up window will appear warning that changing the system mode will cause the switch to automatically reboot itself, and erase the startup configuration file in process. Click **OK** to proceed; the switch will reboot.



Switching to Layer 3 mode using CLI

To set the switch to layer 3 mode, use the following command,

```
SG300#set system mode router
```

View a video related to this article...

[Click here to view other Tech Talks from Cisco](#)