



## Configuring SDM Templates

---

- [Information About SDM Templates, on page 1](#)
- [SDM Templates and Switch Stacks, on page 1](#)
- [How to Configure SDM Templates, on page 2](#)
- [Monitoring and Maintaining SDM Templates, on page 3](#)
- [Configuration Examples for SDM Templates, on page 3](#)
- [Additional References for SDM Templates, on page 5](#)
- [Feature History for SDM Templates, on page 5](#)

## Information About SDM Templates

You can use SDM templates to configure system resources to optimize support for specific features, depending on how your device is used in the network. You can select a template to provide maximum system usage for some functions.

Cisco Catalyst 9200 Series Switches support the following templates:

- Advanced
- VLAN

It is recommended that you reload the system as soon as you make a change to the SDM template. After you change the template and the system reboots, you can use the **show sdm prefer** privileged EXEC command to verify the new template configuration. If you enter the **show sdm prefer** command before you enter the **reload** privileged EXEC command, the **show sdm prefer** command shows the template currently in use and the template that will become active after a reload.

## SDM Templates and Switch Stacks

In a switch stack, all stack members must use the same SDM template that is stored on the active switch. When a new switch is added to a stack, the SDM configuration that is stored on the active switch overrides the template configured on an individual switch.

You can use the **show switch** privileged EXEC command to see if any stack members are in SDM mismatch mode.

# How to Configure SDM Templates

## Setting the SDM Template

Follow these steps to use the SDM template to maximize feature usage:

### SUMMARY STEPS

1. `enable`
2. `configure terminal`
3. `sdm prefer {advanced | vlan}`
4. `end`
5. `reload`

### DETAILED STEPS

	Command or Action	Purpose
<b>Step 1</b>	<b>enable</b> <b>Example:</b> Device> <code>enable</code>	Enables privileged EXEC mode. Enter your password if prompted.
<b>Step 2</b>	<b>configure terminal</b> <b>Example:</b> Device# <code>configure terminal</code>	Enters global configuration mode.
<b>Step 3</b>	<b>sdm prefer {advanced   vlan}</b> <b>Example:</b> Device(config)# <code>sdm prefer vlan</code>	Selects an SDM template. <ul style="list-style-type: none"> <li>• <b>advanced</b> —Sets the switch to the advanced template.</li> <li>• <b>vlan</b> —Maximizes VLAN configuration on the switch with no routing supported in hardware.</li> </ul>
<b>Step 4</b>	<b>end</b> <b>Example:</b> Device(config)# <code>end</code>	Returns to privileged EXEC mode.
<b>Step 5</b>	<b>reload</b> <b>Example:</b> Device# <code>reload</code>	Reloads the operating system. After the system reboots, you can use the <b>show sdm prefer</b> privileged EXEC command to verify the new template configuration. If you enter the <b>show sdm prefer</b> command before you enter the reload privileged EXEC command, the

	Command or Action	Purpose
		<b>show sdm prefer</b> command shows the template currently in use and the template that will become active after a reload.

## Monitoring and Maintaining SDM Templates

Command	Purpose
show sdm prefer	Displays the SDM template in use.
reload	Reloads the switch to activate the newly configured SDM template.



**Note** The SDM templates contain only those commands that are defined as part of the templates. If a template enables another related command that is not defined in the template, then this other command will be visible when the **show running config** command is entered. For example, if the SDM template enables the **switchport voice vlan** command, then the **spanning-tree portfast edge** command may also be enabled (although it is not defined on the SDM template).

If the SDM template is removed, then other such related commands are also removed and have to be reconfigured explicitly.

## Configuration Examples for SDM Templates

### Examples: Displaying SDM Templates

This is an example output showing the advanced template information.

```
Device# show sdm prefer advanced
```

```
Showing SDM Template Info
```

```
This is the Advanced template.
```

```
Number of VLANs:                4094
Unicast MAC addresses:          16384
Overflow Unicast MAC addresses: 256
L2 Multicast entries:           1024
L3 Multicast entries:           1024
Overflow L3 Multicast entries:  256
Directly connected routes:     10240
Indirect routes:                4096
Security Access Control Entries: 1664
QoS Access Control Entries:     1024
Policy Based Routing ACEs:      512
Netflow Input ACEs:             128
Netflow Output ACEs:           128
Flow SPAN ACEs:                 256
Tunnels:                        128
```

```

LISP Instance Mapping Entries:          256
Control Plane Entries:                  512
Input Netflow flows:                    8192
Output Netflow flows:                   8192
SGT/DGT (or) MPLS VPN entries:         2048
SGT/DGT (or) MPLS VPN Overflow entries: 256
Wired clients:                          2048
MACSec SPD Entries:                     128

```

These numbers are typical for L2 and IPv4 features.  
Some features such as IPv6, use up double the entry size;  
so only half as many entries can be created.

This is an example output showing the VLAN template information.

```
Device# show sdm prefer vlan
```

```
Showing SDM Template Info
```

```
This is the VLAN template for a typical Layer 2 network.
```

```

Number of VLANs:                        4094
Unicast MAC addresses:                  32768
Overflow Unicast MAC addresses:         256
L2 Multicast entries:                   1024
L3 Multicast entries:                   1024
Overflow L3 Multicast entries:          256
Direct/Indirect shared unicast routes: 6144
Security Access Control Entries:        1664
QoS Access Control Entries:              1024
Policy Based Routing ACEs:               512
Netflow Input ACEs:                     128
Netflow Output ACEs:                    128
Flow SPAN ACEs:                         256
Tunnels:                                128
LISP Instance Mapping Entries:          256
Control Plane Entries:                  512
Input Netflow flows:                    8192
Output Netflow flows:                   8192
SGT/DGT (or) MPLS VPN entries:         2048
SGT/DGT (or) MPLS VPN Overflow entries: 256
Wired clients:                          2048
MACSec SPD Entries:                     128

```

These numbers are typical for L2 and IPv4 features.  
Some features such as IPv6, use up double the entry size;  
so only half as many entries can be created.

## Examples: Configuring SDM Templates

```

Device(config)# sdm prefer advanced
Device(config)# exit
Device# reload
Proceed with reload? [confirm]

```

## Additional References for SDM Templates

### Related Documents

Related Topic	Document Title
For complete syntax and usage information for the commands used in this chapter.	<i>Command Reference (Catalyst 9200 Series Switches)</i>

## Feature History for SDM Templates

This table provides release and related information for features explained in this module.

These features are available on all releases subsequent to the one they were introduced in, unless noted otherwise.

Release	Feature	Feature Information
Cisco IOS XE Fuji 16.9.2	SDM Template	Standard SDM templates can be used to configure system resources to optimize support for specific features.

Use Cisco Feature Navigator to find information about platform and software image support. To access Cisco Feature Navigator, go to <http://www.cisco.com/go/cfn>.

