



# Configuring SDM Templates

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- [Finding Feature Information, on page 1](#)
- [Information About Configuring SDM Templates, on page 1](#)
- [How to Configure SDM Templates, on page 3](#)
- [Configuration Examples for SDM Templates, on page 4](#)

## Finding Feature Information

Your software release may not support all the features documented in this module. For the latest caveats and feature information, see Bug Search Tool and the release notes for your platform and software release. To find information about the features documented in this module, and to see a list of the releases in which each feature is supported, see the feature information table at the end of this module.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to <http://www.cisco.com/go/cfn>. An account on Cisco.com is not required.

## Information About Configuring SDM Templates

### Restrictions for SDM Templates

The following are restrictions when using SDM templates:

### SDM Templates

You can use Switch Database Management (SDM) templates to configure system resources to optimize support for specific features, depending on how your device is used in the network.

To allocate ternary content addressable memory (TCAM) resources for different usages, the switch SDM templates prioritize system resources to optimize support for certain features. The templates supported on your device:

- Default—The default template gives balance to all functions.

**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.

- SDM templates do not create VLANs. You must create the VLANs before adding commands to the SDM templates.

## Default Templates for Catalyst 2960-CX

The templates for Catalyst 2960-CX switches are applicable for the LAN Base license.

**Table 1: Approximate Number of Feature Resources Allowed by Templates**

Resource	Default
Unicast MAC addresses	16K
Active VLANs/VLAN IDs	255/4096
NetFlow entries	16K
Etherchannel groups per stack	6
IPv4 IGMP or IPv6 groups	1K IPv4 1K IPv6
Direct routes	2K IPv4 2K IPv6
Indirect routes	1K IPv4 1K IPv6 (16 static routes only)
IPv4 or IPv6 policy-based routing ACEs	0 (IPv4 PBR) 0 (IPv6 PBR)
IPv4 or IPv6 MAC QoS ACEs	0.375K (IPv4 QoS) 0.25K (IPv6 QoS)
IPv4 or IPv6 port or MAC security ACEs	0.375K (IPv4 ACL) 0.375K (IPv6 ACL)

## Default Templates for Catalyst 3560-CX

The templates for Catalyst 3560-CX switches are applicable for IP Base and IP Services licenses.

**Table 2: Approximate Number of Feature Resources Allowed by Templates**

Resource	Default
Unicast MAC addresses	16K
Active VLANs/VLAN IDs	1K/4096
Etherchannel groups per stack	6
IPv4 IGMP or IPv6 groups	1K IPv4 1K IPv6
Direct routes	4K IPv4 4K IPv6
Indirect routes	1K IPv4 1K IPv6
IPv4 or IPv6 policy-based routing ACEs	0.25K (IPv4 PBR) 0.25K (IPv6 PBR)
IPv4 or IPv6 QoS ACEs	0.375K (IPv4 QoS) 0.25K (IPv6 QoS)
IPv4 or IPv6 port or MAC security ACEs	0.375K (IPv4 ACL) 0.375K (IPv6 ACL)

## How to Configure SDM Templates

### Setting the SDM Template

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

#### Procedure

	Command or Action	Purpose
<b>Step 1</b>	<b>enable</b>  <b>Example:</b>  Switch> <b>enable</b>	Enables privileged EXEC mode. <ul style="list-style-type: none"> <li>• Enter your password if prompted.</li> </ul>

	Command or Action	Purpose
Step 2	<b>configure terminal</b> <b>Example:</b> <pre>Switch# configure terminal</pre>	Enters global configuration mode.
Step 3	<b>sdm prefer { advanced   vlan }</b> <b>Example:</b> <pre>Switch(config)# sdm prefer advanced</pre>	Specifies the SDM template to be used on the switch. The keywords have these meanings: <ul style="list-style-type: none"> <li>• <b>advanced</b> —Supports advanced features such as Netflow.</li> <li>• <b>vlan</b> —Maximizes VLAN configuration on the switch with no routing supported in hardware.</li> </ul> <p><b>Note</b> The <b>no sdm prefer</b> command and a default template is not supported.</p>
Step 4	<b>sdm prefer { default }</b> <b>Example:</b> <pre>Switch(config)# sdm prefer lanbase-routing</pre>	Specifies the SDM template to be used on the switch. The keywords have these meanings: <ul style="list-style-type: none"> <li>• <b>default</b>—The default template provides balance for all Layer 2, IPv4 and IPv6 functionality.</li> </ul> <p>Use the <b>no sdm prefer</b> command to set the switch to the default template, The default template balances the use of system resources.</p>
Step 5	<b>end</b> <b>Example:</b> <pre>Switch(config)# end</pre>	Returns to privileged EXEC mode.
Step 6	<b>reload</b> <b>Example:</b> <pre>Switch# reload</pre>	Reloads the operating system.

## Configuration Examples for SDM Templates

### Examples: Displaying SDM Templates

This is an example output showing the default template information.

Example output showing the default template information on a Catalyst 3560-CX switch.

```
Device# show sdm prefer
```

```
The current template is "default" template.
The selected template optimizes the resources in
the switch to support this level of features for
8 routed interfaces and 1024 VLANs.
```

```

number of unicast mac addresses:          16K
number of IPv4 IGMP groups + multicast routes: 1K
number of IPv4 unicast routes:           5K
number of directly-connected IPv4 hosts:  4K
number of indirect IPv4 routes:          1K
number of IPv6 multicast groups:         1K
number of IPv6 unicast routes:           5K
number of directly-connected IPv6 addresses: 4K
number of indirect IPv6 unicast routes:   1K
number of IPv4 policy based routing aces: 0.25K
number of IPv4/MAC qos aces:             0.375k
number of IPv4/MAC security aces:        0.375k
number of IPv6 policy based routing aces: 0.25K
number of IPv6 qos aces:                 0.25K
number of IPv6 security aces:            0.375k

```

Example output showing the default template information on a Catalyst 2960-CX switch.

```
Device# show sdm prefer
```

```
The current template is "default" template.
The selected template optimizes the resources in
the switch to support this level of features for
0 routed interfaces and 255 VLANs.
```

```

number of unicast mac addresses:          16K
number of IPv4 IGMP groups + multicast routes: 1K
number of IPv4 unicast routes:           3K
number of directly-connected IPv4 hosts:  2K
number of indirect IPv4 routes:          1K
number of IPv6 multicast groups:         1K
number of IPv6 unicast routes:           3K
number of directly-connected IPv6 addresses: 2K
number of indirect IPv6 unicast routes:   1K
number of IPv4 policy based routing aces: 0
number of IPv4/MAC qos aces:             0.375k
number of IPv4/MAC security aces:        0.375k
number of IPv6 policy based routing aces: 0
number of IPv6 qos aces:                 0.25K
number of IPv6 security aces:            0.375k

```

## Examples: Configuring SDM Templates

This example shows how to configure the VLAN template:

```
Switch(config)# sdm prefer lanbase-routing
Switch(config)# exit
Switch# reload
Proceed with reload? [confirm]
```

