Configuring SDM Templates

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

Understanding the SDM Templates

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

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

Configuring the Switch SDM Template

Default SDM Template

The default template is the default Switch Database Management (SDM) desktop template.

SDM Template Configuration Guidelines

- When you select and configure SDM templates, you must reload the switch for the configuration to take effect.

- If you try to configure IPv6 features without first selecting a dual IPv4 and IPv6 template, a warning message appears.

- Using the dual stack templates results in less TCAM capacity allowed for each resource, so do not use it if you plan to forward only IPv4 traffic.

Setting the SDM Template

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

SUMMARY STEPS

1. **enable**
2. **configure terminal**
3. **end**
4. **reload**

DETAILED STEPS

	Command or Action	**Purpose**
Step 1	**enable** **Example:** Switch> **enable**	Enables privileged EXEC mode. - Enter your password if prompted.
Step 2	**configure terminal** **Example:** Switch# **configure terminal**	Enters global configuration mode.
Step 3	**end** **Example:** Switch(config)# **end**	Returns to privileged EXEC mode.
Step 4	**reload** **Example:** Switch# **reload**	Reloads the operating system.

Displaying the SDM Templates

Use the **show sdm prefer** privileged EXEC command with no parameters to display the active template.

To display the resource numbers supported by the specified template, use the **show sdm prefer [access |** **default | dual-ipv4-and-ipv6 {default | vlan} | indirect-ipv4-and-ipv6-routing | routing | vlan]** privileged EXEC command.

Note   On Switch running the LAN Base feature set, routing values shown in all templates are not valid.

Configuration Examples for SDM Templates

Examples: Configuring SDM Templates

Examples: Displaying SDM Templates

This is an example output showing the advanced template information:

```
Switch# 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:              8K
  number of IPv4 IGMP groups + multicast routes:   0.375k
  number of IPv4 unicast routes:                0.375k
    number of directly-connected IPv4 hosts:    0.375k
    number of indirect IPv4 routes:             64
  number of IPv6 multicast groups:              0.25K
  number of IPv6 unicast routes:                0.25K
    number of directly-connected IPv6 addresses:  0.25K
    number of indirect IPv6 unicast routes:     32
  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:                      60
  number of IPv6 security aces:                 0.125k


Switch# show sdm prefer  lanbase-routing

"lanbase-routing" 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:              4K
  number of IPv4 IGMP groups + multicast routes:   0.375k
  number of IPv4 unicast routes:                0.875k
    number of directly-connected IPv4 hosts:    0.875k
```

```
      number of indirect IPv4 routes:                 80
    number of IPv6 multicast groups:                  0.25K
    number of IPv6 unicast routes:                    0.875k
      number of directly-connected IPv6 addresses:    0.75K
      number of indirect IPv6 unicast routes:         32
    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:                          0.125k
    number of IPv6 security aces:                     0.25K
```

This is an example output showing the VLAN template information:

```
Switch# 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:      512
  IGMP and Multicast groups:           8192
  Overflow IGMP and Multicast groups:  512
  Directly connected routes:           32768
  Indirect routes:                     8192
  Security Access Control Entries:     3072
  QoS Access Control Entries:          3072
  Policy Based Routing ACEs:           0
  Netflow ACEs:                        1024
  Input Microflow policer ACEs:        0
  Output Microflow policer ACEs:       0
  Flow SPAN ACEs:                      256
  Tunnels:                             0
  Control Plane Entries:               512
  Input Netflow flows:                 16384
  Output Netflow flows:                8192
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.

Switch#
```

Additional References for SDM Templates

Related Documents

Related Topic	Document Title
SDM command reference	
VLAN configuration guide	

Standards and RFCs

Standard/RFC	Title
None	—

MIBs

MIB	MIBs Link
All the supported MIBs for this release.	To locate and download MIBs for selected platforms, Cisco IOS releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

Technical Assistance

Description	Link
The Cisco Support website provides extensive online resources, including documentation and tools for troubleshooting and resolving technical issues with Cisco products and technologies. To receive security and technical information about your products, you can subscribe to various services, such as the Product Alert Tool (accessed from Field Notices), the Cisco Technical Services Newsletter, and Really Simple Syndication (RSS) Feeds. Access to most tools on the Cisco Support website requires a Cisco.com user ID and password.	http://www.cisco.com/support