



## XSM Commands for VDM

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This chapter documents the Cisco IOS commands used to configure your router or switch as an XML Subscription Manager (XSM) server. The XSM server subsystem is used on a device to communicate with the VPN Device Manager (VDM) application. VDM is a Java-based application that can be accessed from a remote workstation to manage and configure a VDM-enabled device.

After XSM is enabled, XML-formatted messages containing information about the device (such as its configuration, memory usage, interface statistics, and so on) can be retrieved from the VDM-enabled device (the XSM client).

VDM can operate in a monitor-and-configure mode and a monitor-only mode. The mode depends on what privileges the user started VDM with and what privileges are configured for XSM XRDs. CLI commands are used to set XSM access privilege levels on the XSM Server (VDM-enabled device).

For additional information on this feature, see

[http://www.cisco.com/univercd/cc/td/doc/product/software/ios121/121newft/121limit/121e/121e6/vdm\\_e.htm](http://www.cisco.com/univercd/cc/td/doc/product/software/ios121/121newft/121limit/121e/121e6/vdm_e.htm)

# clear xsm

To clear XML Subscription Manager (XSM) client sessions, use the **clear xsm** command in privileged EXEC mode.

```
clear xsm [session number]
```

## Syntax Description

|                       |  |
|-----------------------|--|
| <b>session number</b> | (Optional) XSM session ID number of the specific XSM client session you wish to clear. |
|-----------------------|--|

## Defaults

If the optional **session number** syntax is not used, the **clear xsm** command clears all XSM client sessions.

## Command Modes

Privileged EXEC

## Command History

| Release    | Modification   |
|------------|--|
| 12.1(6)E   | This command was introduced.                                   |
| 12.2(9)YE  | This command was integrated into Cisco IOS Release 12.2(9)YE.  |
| 12.2(9)YO1 | This command was integrated into Cisco IOS Release 12.2(9)YO1. |
| 12.2(13)T  | This command was integrated into Cisco IOS Release 12.2(13)T.  |

## Usage Guidelines

This command disconnects all active client sessions (such as with a VPN Device Manager [VDM]) on the XSM server, unless you state a specific session number. This command allows troubleshooting of the XSM server and its active clients by allowing individual clients to be disconnected. Use the [show xsm status](#) command to obtain specific session numbers.

## Examples

In the following example, all XSM client sessions are cleared:

```
Router# clear xsm
```

In the following example, XSM client session 10 is cleared:

```
Router# clear xsm session 10
```

## Related Commands

| Command                         | Description   |
|---------------------------------|---|
| <a href="#">show xsm status</a> | Displays information and status about clients subscribed to the XSM server. |
| <a href="#">xsm</a>             | Enables XSM client access to the router.                                    |

# crypto mib topn

To configure TopN sampling parameters, use the **crypto mib topn** command in global configuration mode. To disable TopN sampling, use the **no** form of this command.

```
crypto mib topn [interval seconds] [stop seconds]
```

```
no crypto mib topn [interval seconds] [stop seconds]
```

## Syntax Description

|                                |   |
|--------------------------------|---|
| <b>interval</b> <i>seconds</i> | (Optional) Frequency of sampling interval, in seconds. In other words, how many minutes should pass between samples.<br><br>The allowable range is from 60 to 86400 seconds (60 seconds to 24 hours). The default is 300 seconds (5 minutes). TopnMinSampleInterval: how long (in seconds) between samples?<br><br>Defined in the MIB as TopnMinSampleInterval.   |
| <b>stop</b> <i>seconds</i>     | (Optional) Time before sampling stops, in seconds. In other words, how many minutes should pass from the time this command is executed before sampling will cease.<br><br>The allowable range is from 0 to 604800 seconds. A zero (0) indicates continuous sampling. For any value other than 0, the stop time value must be greater than or equal to the sampling interval value.<br><br>Defined in the MIB as TopnStopTime. |

## Defaults

**interval:** 300 seconds, **stop:** continuous sampling (0 seconds)

## Command Modes

Global configuration

## Command History

| Release    | Modification   |
|------------|--|
| 12.1(6)E   | This command was introduced.                                   |
| 12.2(9)YE  | This command was integrated into Cisco IOS Release 12.2(9)YE.  |
| 12.2(9)YO1 | This command was integrated into Cisco IOS Release 12.2(9)YO1. |
| 12.2(13)T  | This command was integrated into Cisco IOS Release 12.2(13)T.  |

## Usage Guidelines

Use this command to rank objects according to your chosen criteria. You will not see the stop parameter setting after enabling the **show running configuration** command if the stop parameter is set at a value greater than zero. Otherwise, the current sampling parameters are recorded in the active configuration (if sampling is enabled), and sampling occurs continuously (at the specified intervals) until, and after, the device is rebooted. This command should be disabled if your criteria queries performed by XSM clients (such as VPN Device Manager [VDM]) are not to be processed.

“Crypto MIB” commands apply to characteristics of the IP Security (IPSec) MIBs. TopN (**topn**) is a special subset of the IPSec MIB Export (IPSMX) interface that provides a set of queries that allows ranked reports of active Ike or IPSec tunnels to be obtained depending on certain criteria. While the VPN Device Manager (VDM) application retrieves and presents the data elements defined in the Ike and IPSec MIBs, the application does not use the SNMP interface.

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**Examples**

The following example shows the **crypto mib topn** command being enabled with an interval frequency of 240 seconds and a designated stop time of 1200 seconds (20 minutes). At that time, the assigned sampling ceases.

```
crypto mib topn interval 240 stop 1200
```

---

**Related Commands**

| Command             | Description                              |
|---------------------|--|
| <a href="#">xsm</a> | Enables XSM client access to the router. |

# show xsm status

To display information and subscription status of the XML Subscription Manager (XSM) server and clients (such as VPN Device Manager [VDM]), and to display a list of XML data from the XSM server, use the **show xsm status** command in privileged EXEC mode.

**show xsm status**

**Syntax Description** This command has no arguments or keywords.

**Command Modes** Privileged EXEC

| Command History | Release    | Modification   |
|-----------------|------------|--|
|                 | 12.1(6)E   | This command was introduced.                                   |
|                 | 12.2(9)YE  | This command was integrated into Cisco IOS Release 12.2(9)YE.  |
|                 | 12.2(9)YO1 | This command was integrated into Cisco IOS Release 12.2(9)YO1. |
|                 | 12.2(13)T  | This command was integrated into Cisco IOS Release 12.2(13)T.  |

**Usage Guidelines** Use this command to display the following information: which subsystems and histories are enabled or disabled (XSM, Embedded Device Manager [EDM], VDM), XSM client version, number of XSM sessions, duration of XSM session, session IDs, client version and IP address, configuration and monitor privilege levels, and list of subscribed XML Request Descriptors (XRDs).

**Examples** The following example shows one XSM session (Session ID = 2) active on the Cisco device for the XSM client at IP address 172.17.129.134, and how long this session has been connected to the XSM server (Session 2: Connected since 22:47:07 UTC Mon Jan 8 2001). The output shows that the XSM, VDM, and EDM subsystems, and EDM and VDM history collecting are enabled. XSM configuration privilege level is set at 15, with XSM monitor privilege level set at 1.

This output also shows the active XRDs (and their version) for Session 2:

```
Router# show xsm status

XSM subsystem is Enabled.
VDM subsystem is Enabled.
EDM subsystem is Enabled.
EDM History is Enabled.
VDM History is Enabled.
XSM privilege configuration level 15.
XSM privilege monitor level 1.

Number of XSM Sessions : 1.

Session ID = 2.
  XSM Client v0.0(0.0)- @ 172.17.129.134
  Connected since 22:47:07 UTC Mon Jan 8 2001
```

## ■ show xsm status

```

List of subscribed xrds:
0 ) device-about                v1.0
1 ) ios-image                   v1.0
2 ) if-list                      v1.0
3 ) device-health               v1.0
4 ) ike-stats                   v1.0
5 ) ike                         v1.0
6 ) ipsec-topn-tunnels-by-traffic v1.0
7 ) ipsec-topn-tunnels-by-duration v1.0
8 ) ipsec-stats                 v1.0
9 ) crypto-maps                 v1.0
10) ipsec                       v1.0

```

Table 136 describes the significant fields shown in the **show xsm status** output. (see See the Table 137, “show xsm xrd-list Field Descriptions,” for a full description of subscribed XRDs).

**Table 136** show xsm status Field Descriptions

| Field                             | Description   |
|-----------------------------------|---|
| XSM privilege configuration level | XSM configuration privilege level.  |
| XSM privilege monitor level       | XSM monitor privilege level.  |
| Number of XSM Sessions            | Total number of concurrent XSM sessions.  |
| Session ID                        | Specific XSM session number.  |
| XSM Client                        | Version and IP address of the XSM client.   |
| Connected since                   | Start time for each session connection to the XSM server.   |
| List of subscribed xrds           | Details XRDs available from the XSM server (see <a href="#">show xsm xrd-list</a> command for complete list of XRDs). |

#### Related Commands

| Command   | Description   |
|---|---|
| <a href="#">clear xsm</a>                         | Clears XSM client sessions.                                 |
| <a href="#">show xsm xrd-list</a>                 | Displays all XRDs for clients subscribed to the XSM server. |
| <a href="#">xsm</a>                               | Enables XSM client access to the router.                    |
| <a href="#">xsm privilege configuration level</a> | Enables configuration privilege level to subscribe to XRDs. |
| <a href="#">xsm privilege monitor level</a>       | Enables monitor privilege level to subscribe to XRDs.       |

# show xsm xrd-list

To display all XML Request Descriptors (XRDs) for XML Subscription Manager (XSM) clients (such as the VPN Device Manager [VDM]) made available by subscription to the XSM server and to identify the required privilege levels, use the **show xsm xrd-list** command in privileged EXEC mode.

**show xsm xrd-list**

## Syntax Description

This command has no arguments or keywords.

## Command Modes

Privileged EXEC

## Command History

| Release    | Modification   |
|------------|--|
| 12.1(6)E   | This command was introduced.                                   |
| 12.2(9)YE  | This command was integrated into Cisco IOS Release 12.2(9)YE.  |
| 12.2(9)YO1 | This command was integrated into Cisco IOS Release 12.2(9)YO1. |
| 12.2(13)T  | This command was integrated into Cisco IOS Release 12.2(13)T.  |

## Usage Guidelines

Use this command to display the XRD version and minimum privilege level and type (configuration or monitor) required to view each XRD.

## Examples

The following example shows some active XRDs on the XSM server. The end of each line displays the following:

- XRD version number.
- XRD privilege type (configuration or monitor), indicating the privilege level required.

This example displays all available XRDs because both relevant commands (**xsm edm** and **xsm vdm**) have been configured. However, if one command is not configured, only an abbreviated XRD list will appear.

```
Router# show xsm xrd-list
List of all available xrds:
0 ) vlan-db                v1.0  privilege=configuration
1 ) entity                 v1.0  privilege=configuration
2 ) ip                     v1.0  privilege=configuration
3 ) ios-users              v1.0  privilege=configuration
4 ) device-about          v1.0  privilege=monitor
5 ) ios-image              v1.0  privilege=configuration
6 ) if-stats               v1.0  privilege=monitor
7 ) if-list                v1.0  privilege=configuration
8 ) device-health         v1.0  privilege=monitor
9 ) time                   v1.0  privilege=monitor
10) access-lists           v1.0  privilege=configuration
11) ike-topn-tunnels-by-traffic v1.0  privilege=monitor
12) ike-topn-tunnels-by-errors v1.0  privilege=monitor
```

```

13) ike-topn-tunnels-by-duration      v1.0  privilege=monitor
14) ike-stats                        v1.0  privilege=monitor
15) ike                              v1.0  privilege=configuration
16) certificate-authorities          v1.0  privilege=configuration
17) ipsec-topn-tunnels-by-traffic    v1.0  privilege=monitor
18) ipsec-topn-tunnels-by-errors     v1.0  privilege=monitor
19) ipsec-topn-tunnels-by-duration   v1.0  privilege=monitor
20) ipsec-stats                      v1.0  privilege=monitor
21) crypto-maps                      v1.0  privilege=configuration
22) ipsec                            v1.0  privilege=configuration
23) vdm-history                      v1.0  privilege=configuration
24) gre-tunnels                      v1.0  privilege=monitor
end list.

```

Table 137 describes (in alphabetical order) typical XRDs shown in the **show xsm xrd-list** output.

**Table 137** *show xsm xrd-list* Field Descriptions

| Field                          | Descriptions   |
|--------------------------------|--|
| access-lists                   | IOS access control list (ACL) configuration.   |
| certificate-authorities        | IOS certificate authority (CA) configuration.  |
| crypto-maps                    | IOS Crypto Map configuration.  |
| device-about                   | General network device information.  |
| device-health                  | General network device health statistics.  |
| edm-history                    | Selected, historical statistics related to general embedded device management. (This field is not shown in the example above.) |
| entity                         | Summary of all physical and logical entities within a device.  |
| gre-tunnels                    | All current GRE tunnels and respective statistics.   |
| if-list                        | List of all interfaces and their respective IOS configurations.  |
| if-stats                       | Statistics for all interfaces and their respective IOS configurations.   |
| ike                            | IOS IKE configuration.   |
| ike-stats                      | Statistics related to IKE.   |
| ike-topn-tunnels-by-duration   | Top 10 IKE tunnels by duration (time).   |
| ike-topn-tunnels-by-errors     | Top 10 IKE tunnels by errors.  |
| ike-topn-tunnels-by-traffic    | Top 10 IKE tunnels by traffic volume.  |
| ios-image                      | Information about the current running IOS image.   |
| ios-users                      | Local IOS user configuration.  |
| ip                             | IOS IP configuration statistics.   |
| ipsec                          | IOS IPsec configuration.   |
| ipsec-stats                    | Interface name and IPsec input and output statistics including: number of packets, dropped packets, octets and errors.         |
| ipsec-topn-tunnels-by-duration | Top 10 IPsec tunnels by duration.  |
| ipsec-topn-tunnels-by-errors   | Top 10 IPsec tunnels by errors.  |
| ipsec-topn-tunnels-by-traffic  | Top 10 IPsec tunnels by traffic.   |
| time                           | Device's clock reading in UTC.   |

**Table 137** *show xsm xrd-list Field Descriptions (continued)*

| Field       | Descriptions  |
|-------------|---|
| vdm-history | Selected, historical VPN-related statistics.  |
| vlan-db     | VLAN database configuration (switches only).  |
| xsm-session | Status of the current XSM session and related subscriptions.<br>(This field is not shown in the example above.) |

**Related Commands**

| Command   | Description   |
|---|---|
| <a href="#">clear xsm</a>                         | Clears XSM client sessions.   |
| <a href="#">show xsm status</a>                   | Displays information and status about clients subscribed to the XSM server. |
| <a href="#">xsm</a>                               | Enables XSM client access to the router.                                    |
| <a href="#">xsm privilege configuration level</a> | Enables configuration privilege level to subscribe to XRDs.                 |
| <a href="#">xsm privilege monitor level</a>       | Enables monitor privilege level to subscribe to XRDs.                       |

## XSM

To enable XML Subscription Manager (XSM) client access to the device, use the **xsm** command in global configuration mode. To disable XSM client access to the device, use the **no** form of this command.

**xsm**

**no xsm**

**Syntax Description** This command has no arguments or keywords.

**Defaults** XSM client access to the device is enabled.

**Command Modes** Global configuration

### Command History

| Release    | Modification   |
|------------|--|
| 12.1(6)E   | This command was introduced.                                   |
| 12.2(9)YE  | This command was integrated into Cisco IOS Release 12.2(9)YE.  |
| 12.2(9)YO1 | This command was integrated into Cisco IOS Release 12.2(9)YO1. |
| 12.2(13)T  | This command was integrated into Cisco IOS Release 12.2(13)T.  |

### Usage Guidelines

This command requires that the **ip http server** command is enabled. Enabling the **xsm** command also enables the **xsm vdm** and **xsm edm** commands. This command must be enabled for the XSM client (such as VPN Device Manager [VDM]) to operate.

### Examples

In the following example, access by remote XSM clients to XSM data on the device is disabled:

```
Router# no xsm
```

### Related Commands

| Command                  | Description   |
|--------------------------|---|
| <b>ip http server</b>    | Enables a device to be reconfigured through the Cisco browser interface.    |
| <b>show xsm status</b>   | Displays information and status about clients subscribed to the XSM server. |
| <b>show xsm xrd-list</b> | Displays all XRDs for clients subscribed to the XSM server.                 |
| <b>xsm dwdm</b>          | Grants access to switch operations.   |
| <b>xsm edm</b>           | Grants access to EDM monitoring and configuration data.                     |
| <b>xsm vdm</b>           | Grants access to VPN-specific monitoring and configuration data.            |

# xsm dwdm

To enable switch-specific configuration data (for example, configuring switch ports and VLANs) when running VPN Device Manager (VDM) on a switch, use the **xsm dwdm** command in global configuration mode. To disable switch-specific configuration data for VDM, use the **no** form of this command.

**xsm dwdm**

**no xsm dwdm**

## Syntax Description

This command has no arguments or keywords.

## Defaults

Access to switch-specific configuration data is enabled when XSM is enabled.

## Command Modes

Global configuration

## Command History

| Release    | Modification  |
|------------|---|
| 12.2(9)YO1 | This command was introduced.                                  |
| 12.2(13)T  | This command was integrated into Cisco IOS Release 12.2(13)T. |

## Usage Guidelines

Access to switch-specific configuration data (dVDM) is enabled by default when XSM is enabled.

The **no xsm dwdm** command allows you to disable only switch-specific XSM data. Note however that disabling dVDM will prevent the VDM application from communicating properly with the device (switch). There is minimal performance impact associated with leaving dVDM enabled.

## Examples

In the following example, access to switch-specific configuration data is disabled in XSM:

```
Router(config)# no xsm dwdm
```

## Related Commands

| Command                         | Description  |
|---------------------------------|--|
| <a href="#">xsm</a>             | Enables XSM client access to the router.                         |
| <a href="#">xsm edm</a>         | Grants access to EDM monitoring and configuration data.          |
| <a href="#">xsm history vdm</a> | Enables specific VPN statistics collection on the XSM server.    |
| <a href="#">xsm vdm</a>         | Grants access to VPN-specific monitoring and configuration data. |

# xsm edm

To grant access to Embedded Device Manager (EDM) monitoring and configuration data, use the **xsm edm** command in global configuration mode. To cancel access to EDM monitoring and configuration data, use the **no** form of this command.

**xsm edm**

**no xsm edm**

## Syntax Description

This command has no arguments or keywords.

## Defaults

Access to EDM monitoring and configuration data is granted by default if XSM is enabled.

## Command Modes

Global configuration

## Command History

| Release    | Modification   |
|------------|--|
| 12.1(6)E   | This command was introduced.                                   |
| 12.2(9)YE  | This command was integrated into Cisco IOS Release 12.2(9)YE.  |
| 12.2(9)YO1 | This command was integrated into Cisco IOS Release 12.2(9)YO1. |
| 12.2(13)T  | This command was integrated into Cisco IOS Release 12.2(13)T.  |

## Usage Guidelines

This command exists to allow you to disable EDM using the **no xsm edm** form of the command. EDM is enabled by default when XSM is enabled.

EDM provides the following generic information to the VPN Device Manager (VPM):

- Relevant interfaces
- IP routing
- Access-list details
- Basic device health

Note that disabling EDM prevents XSM clients (such as VDM) from working properly and also disables the **xsm history edm** command. There is minimal performance impact associated with leaving EDM enabled.

## Examples

In the following example, access to EDM data is disabled:

```
Router(config)# xsm
Router(config)# no xsm edm
```

| Related Commands | Command                         | Description  |
|------------------|---------------------------------|--|
|                  | <a href="#">xsm</a>             | Enables XSM client access to the router.                         |
|                  | <a href="#">xsm dvdm</a>        | Grants access to switch operations.                              |
|                  | <a href="#">xsm history edm</a> | Enables statistics collection for the EDM on the XSM server.     |
|                  | <a href="#">xsm vdm</a>         | Grants access to VPN-specific monitoring and configuration data. |

# xsm history edm

To enable statistics collection for the Embedded Device Manager (EDM) on the XML Subscription Manager (XSM) server, use the **xsm history edm** command in global configuration mode. To disable statistics collection for the EDM on the XSM server, use the **no** form of this command.

**xsm history edm**

**no xsm history edm**

**Syntax Description** This command has no arguments or keywords.

**Defaults** EDM statistics collection is disabled.

**Command Modes** Global configuration

| Command History | Release    | Modification   |
|-----------------|------------|--|
|                 | 12.1(6)E   | This command was introduced.                                   |
|                 | 12.2(9)YE  | This command was integrated into Cisco IOS Release 12.2(9)YE.  |
|                 | 12.2(9)YO1 | This command was integrated into Cisco IOS Release 12.2(9)YO1. |
|                 | 12.2(13)T  | This command was integrated into Cisco IOS Release 12.2(13)T.  |

**Usage Guidelines** Use this command to save up to five days of data. Historical information on items such as RAM and CPU utilization is gathered and made available, thus enabling XSM clients (such as VPN Device Manager [VDM]) to display charts and data. Use of this command consumes resources on the device. Disabling this command clears all your historical data, as the XSM server does not save this data between reloads.

**Examples** In the following example, statistics collection for the EDM is enabled on the XSM server:

```
Router(config)# xsm
Router(config)# xsm history edm
```

| Related Commands | Command                         | Description   |
|------------------|---------------------------------|---|
|                  | <a href="#">xsm</a>             | Enables XSM client access to the router.                      |
|                  | <a href="#">xsm edm</a>         | Grants access to EDM monitoring and configuration data.       |
|                  | <a href="#">xsm history vdm</a> | Enables specific VPN statistics collection on the XSM server. |

# xsm history vdm

To enable specific VPN statistics collection on the XML Subscription Manager (XSM) server, use the **xsm history vdm** command in global configuration mode. To disable collection of specific selected VPN statistics on the XSM server, use the **no** form of this command.

**xsm history vdm**

**no xsm history vdm**

## Syntax Description

This command has no arguments or keywords.

## Defaults

VPN statistics collecting is disabled.

## Command Modes

Global configuration

## Command History

| Release    | Modification   |
|------------|--|
| 12.1(6)E   | This command was introduced.                                   |
| 12.2(9)YE  | This command was integrated into Cisco IOS Release 12.2(9)YE.  |
| 12.2(9)YO1 | This command was integrated into Cisco IOS Release 12.2(9)YO1. |
| 12.2(13)T  | This command was integrated into Cisco IOS Release 12.2(13)T.  |

## Usage Guidelines

With this command enabled, you can save up to five days of data. Historical information on items such as the number of active IKE tunnels, IPSec tunnels, total crypto throughput, and total throughput is gathered and made available, thus enabling XSM clients (such as VPN Device Manager [VDM]) to display charts and data. Use of this command consumes resources on the device. Disabling this command clears all your historical data. The XSM server does not save history data across reloads..

## Examples

The following example shows how to enable specific VPN statistics collection on the XSM server:

```
Router(config)# xsm
Router(config)# xsm history vdm
```

## Related Commands

| Command                         | Description  |
|---------------------------------|--|
| <a href="#">xsm</a>             | Enables XSM client access to the router.                         |
| <a href="#">xsm history edm</a> | Enables statistics collection for the EDM on the XSM server.     |
| <a href="#">xsm vdm</a>         | Grants access to VPN-specific monitoring and configuration data. |

# xsm privilege configuration level

To enable the XML Subscription Manager (XSM) configuration privilege level required to subscribe to XML Request Descriptors (XRDs), use the **xsm privilege configuration level** command in global configuration mode. To remove a previously configured XSM configuration privilege level, use the **no** form of this command.

**xsm privilege configuration level** *number*

**no xsm privilege configuration level** *number*

|                           |                      |  |
|---------------------------|----------------------|--|
| <b>Syntax Description</b> | <i>number</i>        | Privilege level. Valid values are from 1 to 15. The default is 15. |
| <b>Defaults</b>           | Level 15             |  |
| <b>Command Modes</b>      | Global configuration |  |
| <b>Command History</b>    | <b>Release</b>       | <b>Modification</b>  |
|                           | 12.1(6)E             | This command was introduced.                                       |
|                           | 12.2(9)YE            | This command was integrated into Cisco IOS Release 12.2(9)YE.      |
|                           | 12.2(9)YO1           | This command was integrated into Cisco IOS Release 12.2(9)YO1.     |
|                           | 12.2(13)T            | This command was integrated into Cisco IOS Release 12.2(13)T.      |

## Usage Guidelines

The privilege level for the **xsm privilege configuration level** command must be greater than or equal to the privilege level for the **xsm privilege monitor level** command. For example, if the **xsm privilege configuration 7** command is enabled, you need a minimum privilege level of 7 to subscribe to configuration XRDs. The higher the number the higher the privilege level. Trying to set a conflicting range of privilege settings will force the Cisco device to display the following message:

```
Attempt to set monitor privilege greater than configuration. Privilege denied.
```

You can check the XSM privilege level settings by using the **show xsm status** command. Use the **show xsm xrd-list** command to check which privilege level is required for each XRD.



### Note

The initial login set by your system administrator determines whether you have the necessary IOS privilege level for actually configuring the Cisco router. Ask your system administrator for more information about privilege levels.

**Examples**

The following example shows how to set a configuration privilege level of 15, and a monitor privilege level of 11 for subscription to XRDs. Users with a privilege level below 11 are denied access.

```
xsm privilege configuration level 15
xsm privilege monitor level 11
```

**Related Commands**

| Command                                     | Description   |
|---|---|
| <b>privilege</b>                            | Configures IOS privilege parameters.                  |
| <a href="#">xsm privilege monitor level</a> | Enables monitor privilege level to subscribe to XRDs. |

# xsm privilege monitor level

To enable the XML Subscription Manager (XSM) monitoring privilege level required to subscribe to XML Request Descriptors (XRDs), use the **xsm privilege monitor level** command in global configuration mode. To remove a previously configured XSM monitoring privilege level, use the **no** form of this command.

**xsm privilege monitor level** *number*

**no xsm privilege monitor level** *number*

|                           |                      |  |
|---------------------------|----------------------|--|
| <b>Syntax Description</b> | <i>number</i>        | Privilege level. Valid values are from 1 to 15. The default is 15. |
| <b>Defaults</b>           | Level 1              |  |
| <b>Command Modes</b>      | Global configuration |  |
| <b>Command History</b>    | <b>Release</b>       | <b>Modification</b>  |
|                           | 12.1(6)E             | This command was introduced.                                       |
|                           | 12.2(9)YE            | This command was integrated into Cisco IOS Release 12.2(9)YE.      |
|                           | 12.2(9)YO1           | This command was integrated into Cisco IOS Release 12.2(9)YO1.     |
|                           | 12.2(13)T            | This command was integrated into Cisco IOS Release 12.2(13)T.      |

## Usage Guidelines

The privilege level for the **xsm privilege monitor level** command must be less than or equal to the privilege level for the **xsm privilege configuration level** command. For example, if the **xsm privilege monitor 7** command is enabled, you need a minimum privilege level of 7 to subscribe to monitor XRDs. The higher the number the higher the privilege level. Trying to set a conflicting range of privilege settings will force the Cisco device to display the following message:

```
Attempt to set monitor privilege greater than configuration. Privilege denied.
```

You can check the XSM privilege level settings by using the **show xsm status** command. Use the **show xsm xrd-list** command to check which privilege level is required for each XRD.



### Note

The initial login set by your system administrator determines whether you have the necessary IOS privilege level for actually configuring the Cisco router. Ask your system administrator for more information about privilege levels.

**Examples**

The following example shows how to set a configuration privilege level of 15 and a monitor privilege level of 11 for subscription to XRDs. Users with a privilege level below 11 are denied access.

```
xsm privilege configuration level 15
xsm privilege monitor level 11
```

**Related Commands**

| Command   | Description   |
|---|---|
| <b>privilege</b>                                  | Configures IOS privilege parameters.                        |
| <a href="#">xsm privilege configuration level</a> | Enables configuration privilege level to subscribe to XRDs. |

# xsm vdm

To grant access to VPN-specific monitoring and configuration data for the VPN Device Manager (VDM), use the **xsm vdm** command in global configuration mode. To cancel access to VPN-specific monitoring and configuration data for VDM, use the **no** form of this command.

**xsm vdm**

**no xsm vdm**

**Syntax Description** This command has no arguments or keywords.

**Defaults** Access to VPN-specific monitoring and configuration data for the VDM is granted when XSM is enabled.

**Command Modes** Global configuration

| Command History | Release    | Modification   |
|-----------------|------------|--|
|                 | 12.1(6)E   | This command was introduced.                                   |
|                 | 12.2(9)YE  | This command was integrated into Cisco IOS Release 12.2(9)YE.  |
|                 | 12.2(9)YO1 | This command was integrated into Cisco IOS Release 12.2(9)YO1. |
|                 | 12.2(13)T  | This command was integrated into Cisco IOS Release 12.2(13)T.  |

**Usage Guidelines** This command enables access to the following VPN-specific information:

- IPSec
- IKE
- Tunneling
- Encryption
- Keys and certificates

If XSM is enabled, this command is enabled by default. Access to VPN-specific monitoring and configuration data within XSM can be disabled by using the **no** form of the command. However, disabling this command will prevent VDM from working properly and will also disable the **xsm history vdm** command. Leaving this command enabled has minimal performance impact.

**Examples** In the following example, access to VPN-specific monitoring and configuration data is disabled:

```
Router(config)# xsm
Router(config)# no xsm vdm
```

| Related Commands | Command                         | Description   |
|------------------|---------------------------------|---|
|                  | <a href="#">xsm</a>             | Enables XSM client access to the router.                      |
|                  | <a href="#">xsm dvdm</a>        | Grants access to switch operations.                           |
|                  | <a href="#">xsm edm</a>         | Grants access to EDM monitoring and configuration data.       |
|                  | <a href="#">xsm history vdm</a> | Enables specific VPN statistics collection on the XSM server. |

