Tech-Support Commands

This module describes commands used for displaying the output of **show** commands using Cisco IOS XR software software. The command output varies depending on the router platform and configuration.

The **show tech-support** commands all display common data from commands such as **show version** . Each **show tech-support** command also generates and gathers relevant data for a specific area. This data includes trace output to collect debugging information available in the specific area of interest.

show system verify

To verify the system parameters, use the **show system verify** command in XR EXEC mode.

show system verify [**start**| **restart [detail]**]

Syntax Description

start	(Optional) Performs an initial analysis of the system and stores the information for subsequent verification.
report	(Optional) Generates a report for the system verification process.
detail	(Optional) Generates a detailed report for the system verification process.

Command Default

No default behavior or values

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

You must run the **show system verify** command with the **start** keyword before generating any reports.

Task ID

Task ID	Operations
system	read

Examples

The following example shows how to prepare for system verification:

```
RP/0/RP0/CPU0:router# show system verify start
```

```
Storing initial router status ...
done.
```

The following example shows output from running the **show system verify** command:

```
RP/0/RP0/CPU0:router#  show system verify

Getting current router status ...
System Verification Report
==========================
- Verifying Memory Usage
- Verified Memory Usage                                 : [OK]
- Verifying CPU Usage
- Verified CPU Usage                                    : [OK]

- Verifying Blocked Processes
- Verified Blocked Processes                            : [OK]
- Verifying Aborted Processes
- Verified Aborted Processes                            : [OK]
- Verifying Crashed Processes
- Verified Crashed Processes                            : [OK]

- Verifying LC Status
- Verified LC Status                                    : [OK]
- Verifying QNET Status
Unable to get current LC status info
- Verified QNET Status                                  : [FAIL]

- Verifying GSP Fabric Status
- Verified GSP Fabric Status                            : [OK]
- Verifying GSP Ethernet Status
  gsp WARNING messages for router
  Current set of gsp ping nodes does not match initial set of nodes
- Verified GSP Ethernet Status                          : [WARNING]

- Verifying POS interface Status
- Verified POS interface Status                         : [OK]
- Verifying TenGigE interface Status
- Verified TenGigE interface Status                     : [OK]

- Verifying TCP statistics
- Verified TCP statistics                               : [OK]
- Verifying UDP statistics
  tcp_udp_raw WARNING messages for router
  UDP Packets sent has not increased during this period.
- Verified UDP statistics                               : [WARNING]
- Verifying RAW statistics
- Verified RAW statistics                               : [OK]

- Verifying RIB Status
- Verified RIB Status                                   : [OK]
- Verifying CEF Status
- Verified CEF Status                                   : [OK]
- Verifying CEF Consistency Status
- Verified CEF Consistency Status                       : [OK]
- Verifying BGP Status
- Verified BGP Status                                   : [OK]
- Verifying ISIS Status
- Verified ISIS Status                                  : [OK]
- Verifying OSPF Status
- Verified OSPF Status                                  : [OK]

- Verifying Syslog Messages
- Verified Syslog Messages                              : [OK]

System may not be stable. Please look into WARNING messages.
```

This table describes the significant fields shown in the display.

Table 1: show system verify Field Descriptions

Field	Description
Type	Type of memory
Initial	Initial usage determined when the command is run with the **start** keyword
Current	Current usage
Application	Memory used for applications
Available	Memory available for applications
Physical	Total physical memory
nodes	Devices in the system such as linecards, route processors, fabric cards, and so forth
blocked processes	Number of blocked processes on the router
aborted processes	Number of aborted processes on the router
crashed processes	Number of crashed processes on the router
LC Status on Router	Linecard status
QNET Status on router	Internal communications protocol status
GSP Fabric Status on router	Internal communications protocol status
GSP Ethernet Status on router	Internal communications protocol status
Interface Status on router	Packet-over-SONET status
Protocol	Protocol on the interface
IP address	IP Address of the interface
Encapsulation	Encapsulation method used on the interface
MTU	Maximum Transmission Units for the interface
Keep alive	Keep alives messages on the interface
Packets Input	Total number packets input to the interface
Bytes Input	Total number of bytes input to the interface
Packets Output	Total number of packets output by the interface

Field	Description
Byte Output	Total number of bytes output by the interface
TenGigE interface Status on router	10 Gigabit Ethernet interface status
TCP statistics on router	Transmission Control Protocol statistics
UDP statistics on router	User Datagram Protocol statistics
RAW statistics on router	RAW statistics
PCBs	Protocol Control Blocks
RIB Status on router	Routing Information Base status
CEF Status on node.....	Cisco Express Forwarding status
CEF Consistency Status on router	Cisco Express Forwarding consistency status
BGP Status on router	Border Gateway Protocol status
neighbors	Number of BGP neighbors
established	Number of BGP neighbors in ‘established’ state
ISIS Status on router	Intermediate System-to-Intermediate System status
up	Number of ISIS links up
failed	Number of failed ISIS links
init	Initial number of ISIS links
OSPF Status on router	Open Shortest Path First status
interfaces	Number of interfaces configured in OSPF
interfaces_up	Number of interfaces configured in OSPF that are in the ‘up’ state
virtual_int	Number of virtual interfaces
neighbors	Number of OSPF neighbors configured
neighbors_adj	Number of OSPF configured neighbors that are ‘adjacent’
Syslog Messages on router	Number of syslog messages

show tech-support

To automatically run **show** commands that display system information, use the **show tech-support** command in the XR EXEC mode.

show tech-support [password] [**file** *send-to* **[background]** [**compressed**| **uncompressed**]] **[rack]**[**location** *node-id*]

Syntax Description

password	(Optional) Leaves passwords and other security information in the output. If not used, passwords and other security-sensitive information in the output are replaced with the label "<removed>".
file	(Optional) Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.
location *node-id*	(Optional) Specifies a node. The *node-id* argument is entered in the *rack/slot/module* notation.
rack	(Optional) Specifies a list of racks.

Command Default

The command output is not compressed.

Passwords and other security information are not displayed.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech**/*name.tgz* **tftp:**//*server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

Note This command is not required during normal use of the router.

The following **show** commands run automatically when you run the **show tech-support** command:

- **show running-config**
- **show version**
- **show interfaces**
- **show arm summary**
- **show arm conflicts**
- **show install**
- **show filesystem**
- **dir location all: pwd = disk0:**
- **dir location all: pwd = bootflash:**
- **run top_procs**
- **show processes aborts location all**
- **show processes blocked location all**
- **show placement nodes all**
- **show placement policy program all**
- **show memory summary location all**
- **show lpts ifib brief**
- **show im database all**

- **run gsp_show**
- **show context all location all**
- **show redundancy**
- **show dsc all**
- **show lr all**
- **show ipv4 traffic**
- **show ipv6 traffic**
- **show logging**
- **show inventory**
- **show packet-memory**
- **show packet-memory corrupt**
- **show packet-memory failures**
- **show platform**
- **show led**
- **show buffer reserved-memory**
- **show controllers fabricq eio links all**
- **show controllers pse eio links all**
- **show controllers plim asic pla eio links all**
- **show controllers fia eio links all**
- **show controllers cpuctrl summary**
- **admin show controllers fabric plane all**
- **admin show controllers fabric plane all stat**
- **admin show controllers fabric sfe fabricq all detail**
- **admin show controllers fabric sfe ingressq all detail**
- **admin show controllers fabric sfe s1 all detail**
- **admin show controllers fabric sfe s2 all detail**
- **admin show controllers fabric sfe s3 all detail**
- **show environment all**

See the Cisco IOS XR software command references for information about these commands and descriptions of their command output. The Cisco IOS XR software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
basic-services or cisco-support	read

show tech-support bcdl

To automatically run **show** commands that display information specific to bulk content downloader (BCDL) debugging, use the **show tech-support bcdl** command in XR EXEC mode.

show tech-support bcdl [*bcdl-group*] [**file** *send-to* **[background]** [**compressed**| **uncompressed**]] **[rack]location** *node-id*

Syntax Description

bcdl-group	(Optional) Name of the BCDL group.
file	(Optional) Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.
location *node-id*	(Optional) Specifies a node. The *node-id* argument is entered in the *rack/slot/module* notation.
rack	(Optional) Specifies a list of racks.

Command Default

The command output is not compressed.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech**/*name.tgz* **tftp:**//*server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

Use the **show tech-support bcdl** command to run **show** commands that display information specific to BCDL debugging. The BCDL is used to pass routing information from the Routing Information Base (RIB) to the linecards for Forwarding Information Base (FIB) processing. BCDL also allows Multiprotocol Label Switching (MPLS) to send label information to the FIB and allows Local Packet Transport Services (LPTS) to send information to the linecard processes.

Note This command is not required during normal use of the router.

The following **show** commands run automatically when you run the **show tech-support bcdl** command:

- **show bcdl**
- **show bcdl consumers**
- **show bcdl tables**
- **show process bcdl_agent**
- **show bcdl trace location all**

See the Cisco IOS XR Software command references for information about these commands and descriptions of their command output. The Cisco IOS XR Software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
basic-services or cisco-support	read
sysmgr	read

show tech-support bundles

To automatically run **show** commands that display information specific to bundle debugging, use the **show tech-support bundles** command in XR EXEC mode.

show tech-support bundles [**interface** *type interface-path-id*] [**file** *sent-to*] **[background]** [**compressed**| **uncompressed**]

Syntax Description

file	(Optional) Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.
interface	(Optional) Collects information about a specific interface.
type	Interface type. For more information, use the question mark (?) online help function.
interface-path-id	Physical interface or virtual interface. **Note** Use the **show interfaces** command to see a list of all interfaces currently configured on the router. For more information about the syntax for the router, use the question mark (**?**) online help function.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech/***name.tgz* **tftp://***server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

Use the **show tech-support bundles** command for 802.3ad link bundles. This command is used to locate any issues related to bundling.

See the Cisco IOS XR Software command references for information about these commands and descriptions of their command output. The Cisco IOS XR Software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
cisco-support	read
basic-services	read

show tech-support cef

To automatically run **show** commands that display information specific to Cisco Express Forwarding (CEF) debugging, use the **show tech-support cef** command in XR EXEC mode.

show tech-support cef [**vrf** *vrf-name* [**ipv4**| **ipv6**| **mpls**] [**A**.**B**.**C**.**D**| **A**.**B**.**C**.**D/length**| **detail**| **brief**| **interface** | **rack**]] [**file** *send-to* **[background]** [**compressed**| **uncompressed**]] **[compress]** [**location** *node-id*]

Syntax Description

vrf	(Optional) Specifies a VPN routing and forwarding (VRF) instance.
vrf-name	(Optional) Name of a VRF.
ipv4	(Optional) Specifies IPv4 CEF information.
ipv6	(Optional) Specifies IPv6 CEF information.
mpls	(Optional) Specifies Multiprotocol Label Switching CEF information.
A.B.C.D	(Optional) Specifies IPv4 Prefix entries.
A.B.C.D/length	(Optional) Specifies IPv4 Prefix mask.
detail	(Optional) Specifies detailed CEF debugging information.
brief	(Optional) Specifies a brief CEF debugging information.
file	(Optional) Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.
interface	(Optional) Specifies CEF interface status and configuration.
location*node-id*	(Optional) Specifies a node. The *node-id* argument is entered in the *rack/slot/module* notation.

rack	(Optional) Specifies a list of racks.

Command Default

IPv4 is the default.

The command output is not compressed.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech/***name.tgz* **tftp://***server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

Use the **show tech-support cef** command to run **show** commands that display information specific to CEF debugging. This command is used to locate any issues related to the Forwarding Information Base (FIB) which is more commonly referred to as Cisco Express Forwarding (CEF). This command generates CEF debugging information that can be useful for Cisco Technical Support representatives when troubleshooting a router.

Note This command is not required during normal use of the router.

The following **show** commands run automatically when you run the **show tech-support cef** command:

- show version
- show running
- **show route** {**ipv4** | **ipv6**} **unicast**

- **show proc blocked**
- **show cef** {**ipv4** | **ipv6** | **mpls**} **exceptions**
- **show cef** {**ipv4** | **ipv6** | **mpls**} **drop**
- **show ipv4 interface brief**
- **show cef** {**ipv4** | **ipv6**} **summary**
- **show cef** {**ipv4** | **ipv6** | **mpls**} **interface**
- show cef ipv4 non-recursive
- **show cef** {**ipv4** | **ipv6**}
- **show cef** {**ipv4** | **ipv6** | **mpls**} **adjacency**
- **show mpls forwarding** (if the **mpls** keyword is specified)

See the Cisco IOS XR software command references for information about these commands and descriptions of their command output. The Cisco IOS XR software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
basic-services or cisco-support	read
cef	read

show tech-support cfgmgr

To automatically run **show** commands that display information to gather information about the configuration manager, use the **show tech-support cfgmgr** command in XR EXEC mode.

show tech-support cfgmgr [rack] [**location** *node-id*] [**file** *send-to* **[background]** [**compressed**| **uncompressed**]]

Syntax Description

rack	Specifies that the command output for a rack.
location *node-id*	Specifies a node. The *node-id* argument is entered in the rack/slot/module notation.
file	Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech/***name.tgz* **tftp://***server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

Use the **show tech-support cfgmgr** command to gather information about the configuration manager. This command is used to locate any issues in regards to executing configuration commands or problems.

See the Cisco IOS XR Software command references for information about these commands and descriptions of their command output. The Cisco IOS XR Software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
basic-services	read
sysmgr	read
cisco-support	read

show tech-support ethernet

To automatically run **show** commands that display information specific to ethernet debugging, use the **show tech-support ethernet** command in XR EXEC mode.

show tech-support [**file** *send-to* **[background]** [**compressed**| **uncompressed**]] [**interface** *interface-type interface-instance*] [**location** *node-id*] **[rack]**

Syntax Description

file	(Optional) Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
interface	(Optional) Collects the status and configuration information about a specific interface.
interface-type	Identifies a physical interface or a virtual interface. **Note** Use the **show interfaces** command to see a list of all possible interfaces currently configured on the router.
interface-instance	Specifies the interface instance. The argument *interface-instance* is expressed in the rack/slot/module notation.
location*node-id*	(Optional) Specifies a node. The *node-id* argument is entered in the *rack/slot/module* notation.
rack	(Optional) Specifies a list of racks.

Command Default

IPv4 is the default.

The command output is compressed.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech/***name.tgz* **tftp://***server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

Use the **show tech-support ethernet** command to run **show** commands that display information specific to VLAN and ethernet infrastructure debugging. This command generates ethernet debugging information that can be useful for Cisco Technical Support representatives when troubleshooting a router.

Note This command is not required during normal use of the router.

The following **show** commands run automatically when you run the **show tech-support ethernet** command:

- **show version**
- **show running**
- **show route** {**ipv4** | **ipv6**} **unicast**
- **show proc blocked**
- **show ethernet** {**ipv4** | **ipv6** | **mpls**} **exceptions**
- **show ethernet** {**ipv4** | **ipv6** | **mpls**} **drop**
- **show ipv4 interface brief**
- **show mpls forwarding** (if the **mpls** keyword is specified)

See the Cisco IOS XR software command references for information about these commands and descriptions of their command output. The Cisco IOS XR software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
cisco-support	read

show tech-support fabric

To automatically run **show** commands that display information specific to fabric debugging, use the **show tech-support fabric** command in XR EXEC mode.

show tech-support fabric [**file** *sent-to* **[background]** [**compressed**| **uncompressed**]] [**location** *node-id*] **[rack]**

Syntax Description

file	(Optional) Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.
location*node-id*	(Optional) Specifies a node. The *node-id* argument is entered in the *rack/slot/module* notation.
rack	(Optional) Specifies a list of rack.

Command Default

The command output is not compressed.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech/***name.tgz* **tftp://***server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

Use the **show tech-support fabric** command to run **show** commands that display information specific to fabric debugging. This command generates fabric information that can be useful for Cisco Technical Support representatives when troubleshooting a router.

Note This command is not required during normal use of the router.

The following **show** commands run automatically when you run the **show tech-support fabric multicast** command:

- **show controllers fabric fgid stat all detail**
- **show controllers fabric fgid info**
- **show process fgid_allocator**
- **show process fgid_aggregator**
- **show process fgid_server**
- **show process fgid_allocator**

The following **show** commands run automatically when you run the **show tech-support fabric traffic** command:

- **show controllers fabric plane all detail**
- **show controllers fabric plane all stat brief**
- **show controllers fabric plane all stat detail**
- **show controllers fabric link port**
- **show controller fabricq stat**
- **show controllers fabricq queues**
- **show controllers fabricq eio links all**

- **show controller ingressq stat**
- **show controller ingressq queue all**
- **show controller ingressq fabric pla**
- **show control ingressq block ssm bpmem 0**
- **show controllers ingressq block fqm queue**
- **show controllers ingressq vports all**
- **show controllers ingressq interfaces all**
- **show controllers ingressq eio links all**
- **show controller fia rxslice all uq all channel all**
- **show controllers cpuctrl devices ingressq pdma queue all act**
- **show controllers cpuctrl devices egressq pdma queue all act**
- **show controllers cpuctrl devices fabricq pdma queue all act**

See the Cisco IOS XR software command references for information about these commands and descriptions of their command output. The Cisco IOS XR software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
cisco-support	read

show tech-support gsp

To automatically run **show** commands that display information specific to Gigabit Switch Platform (GSP) debugging, use the **show tech-support gsp** command in XR EXEC mode.

show tech-support gsp [**client**| **group**] [**location** *node-id*] [**rack**][**file** *send-to* **[background]** [**compressed**| **uncompressed**]]

Syntax Description

client	(Optional) Displays the client tech-support information.
group	(Optional) Displays the group tech-support information.
rack	(Optional) Displays the number of racks
location	(Optional) Specifies a node.
node-id	(Optional) Node ID. The *node-id* argument is entered in the *rack/slot/module* notation.
file	(Optional) Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.

Command Default

The command output is not compressed.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech/***name.tgz* **tftp://***server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

Use the **show tech-support gsp** command to run **show** commands that display information specific to GSP debugging. GSP is a common IPC utilized in Cisco IOS XR software to communicate between nodes. This command would be used to determine if there are any issues with GSP communication between nodes. This command generates GSP debugging information that can be useful for Cisco Technical Support representatives when troubleshooting a router.

Note This command is not required during normal use of the router.

The following **show** commands run automatically when you run the **show tech-support gsp** command:

- **show gsp group addresses**
- **show gsp group admin addresses**
- **show gsp group lr-control addresses**
- **show gsp group gid 0**
- **show gsp group gid 1000**
- **show gsp group gid 2000**
- **show gsp memory**
- **show gsp stats client**
- **show gsp stats server jid 0**
- **show gsp trace server bootstrap location all**
- **show gsp trace server timeout slow location all**
- **show gsp trace server timeout fast location all**
- **show gsp trace server limp fast location all**

- **show gsp trace server limp slow location all**
- **show gsp trace server error api location all**
- **show gsp trace server error minor location all**
- **show gsp trace server ens location all**

See the Cisco IOS XR software command references for information about these commands and descriptions of their command output. The Cisco IOS XR software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
basic-services or cisco-support	read
sysmgr	read

show tech-support install

To automatically run **show** commands that display information specific to installation information, use the **show tech-support install** command in the XR EXEC mode.

show tech-support install [**file** *send-to***[background]** [**compressed**| **uncompressed**]] [**location** *node-id*] **[rack]**

Syntax Description

file	(Optional) Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.
location *node-id*	(Optional) Specifies a node. The *node-id* argument is entered in the *rack/slot/module* notation.
rack	(Optional) Displays the list of racks.

Command Default

Output is logged to the terminal screen.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech/***name.tgz* **tftp://***server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

Use the **show tech-support install** command to run **show** commands that display information specific to installation information. This command is useful for any problems encountered while executing install operations on the system during an install activate, install add, remove, or commit operation.This command generates installation information that can be useful for Cisco Technical Support representatives when troubleshooting a router.

Note This command is not required during normal use of the router.

The following **show** commands run automatically when you run the **show tech-support install** command:

- **show install request**
- **show version**
- **show install active summary**
- **show install committed summary**
- **show install package all detail**
- **show install log verbose**
- **show running-config sanitize**
- **show redundancy**
- **show logging**
- **show platform**
- **show install active detail**
- **show install committed detail**
- **show install inactive detail**

- **show pkgfs trace location all**
- **show install trace loadpath location** *node-id*
- **show install trace io location** *node-id*
- **show install trace instdir-lr location** *node-id*
- **show install trace insthelper location** *node-id*
- **show install trace notify location** *node-id*
- **show install trace replicator location** *node-id*
- **show install trace pkg location** *node-id*
- **show install trace inv location** *node-id*
- **show install trace platform location** *node-id*
- **show install trace ior location** *node-id*
- **show install trace state-file-replication location** *node-id*
- **show install trace sds location** *node-id*
- **show memory summary location** *node-id*
- **show context location** *node-id*
- **show processes memory location** *node-id*
- **show processes aborts location** *node-id*
- **show processes blocked location** *node-id*
- **show pkgfs trace location** *node-id*
- **show filesystem location** *node-id*
- **run diskinfo** (various)

See the Cisco IOS XR software command references for information about these commands and descriptions of their command output. The Cisco IOS XR software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
basic-services	read

show tech-support mpls ldp

To automatically run **show** commands that display information specific to Multiprotocol Label Switching (MPLS) Label Distribution Protocol (LDP) debugging, use the **show tech-support mpls ldp** command in XR EXEC mode.

show tech-support mpls ldp location *node-id* {*verbosity*| **file** *send-to* **[background]** [**compressed**| **uncompressed**]| **terminal [page]**}

Syntax Description

verbosity	Specifies the verbosity. The *verbosity* argument is expressed in number and has valid range from 1 through 4. • 1: brief • 2: detail • 3: detail+trace (dflt) • 4: extended
file	Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.
terminal	Specifies that the command output is displayed on the terminal.

page	(Optional) Specifies that the command output is displayed one page at a time. Use the return key to display the next line of output or use the space bar to display the next page of information. If not used, the output scrolls (that is, it does not stop for page breaks). Press the **Ctrl+C** keys to stop the command output.
location *node-id*	(Optional) Specifies a node. The *node-id* argument is entered in the *rack/slot/module* notation.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech/***name.tgz* **tftp://***server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

This command generates LDP debugging information that can be useful for Cisco Technical Support representatives when troubleshooting a router.

Note This command is not required during normal use of the router.

See the Cisco IOS XR software command references for information about these commands and descriptions of their command output. The Cisco IOS XR software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
cisco-support	read
mpls-ldp	read

show tech-support mpls optical-uni

To automatically run **show** commands that display information specific to Multiprotocol Label Switching (MPLS) Optical User Network Interface (O-UNI) debugging, use the **show tech-support mpls optical-uni** command in XR EXEC mode.

show tech-support mpls optical-uni {**file** *send-to* **[background]** [**compressed**| **uncompressed**]| **terminal [page]**}

Syntax Description

file	Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.
terminal	Specifies that the command output is displayed on the terminal.
page	(Optional) Specifies that the command output is displayed one page at a time. Use the return key to display the next line of output or use the space bar to display the next page of information. If not used, the output scrolls (that is, it does not stop for page breaks). Press the **Ctrl+C** keys to stop the command output.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech/***name.tgz* **tftp://***server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

This command generates O-UNI debugging information that can be useful for Cisco Technical Support representatives when troubleshooting a router.

Note This command is not required during normal use of the router.

See the Cisco IOS XR software command references for information about these commands and descriptions of their command output. The Cisco IOS XR software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
cisco-support	read
ouni	read

show tech-support mpls rsvp

To automatically run **show** commands that display information specific to Multiprotocol Label Switching (MPLS) Resource Reservation Protocol (RSVP) debugging, use the **show tech-support mpls rsvp** command in XR EXEC mode.

show tech-support mpls rsvp {**terminal [page]**| **file** *send-to* **[background]** [**compressed**| **uncompressed**]}

Syntax Description

terminal	Displays the command output on the terminal.
page	(Optional) Displays the command output on a single page at a time. Use the Return key to display the next line of output or use the space bar to display the next page of information. If not used, the output scrolls (that is, it does not stop for page breaks). Press the **Ctrl-C** keys to stop the command output.
file	Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.

Command Default

The command output is not compressed.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

Use the **show tech-support mpls** command to run **show** commands that display information specific to MPLS RSVP debugging. This command generates RSVP debugging information that can be useful for Cisco Technical Support representatives when troubleshooting a router. See 'Obtaining Documentation and Submitting a Service Request' section on page iii in the Preface for Cisco Technical Support contact information.

Note This command is not required during normal use of the router.

The following **show** commands run automatically when you run the **show tech-support mpls rsvp** command:

- **show rsvp interface detail**
- **show rsvp counters pak**
- **show rsvp counters handles**
- **show rsvp counters database private**
- **show rsvp counters messages private**
- **show rsvp counters memory**
- **show rsvp counters events**
- **show rsvp counters notifications-client**
- **show rsvp counters request**
- **show rsvp counters destroy-reasons**
- **show rsvp counters policy**
- **show rsvp graceful-restart**
- **show rsvp fast-reroute summary**
- **show rsvp graceful-restart neighbors detail**
- **show rsvp hello instance detail**
- show rsvp sender detail
- **show rsvp reservation detail**
- **show rsvp request detail**
- **show rsvp session detail**
- **show rsvp authentication**

- **show rsvp sender private**
- **show rsvp reservation private**
- **show rsvp request private**
- **show rsvp interface private**
- **show rsvp installed private**
- **show rsvp trace events**
- **show rsvp trace default**
- **show rsvp trace buffer**
- **show rsvp trace interface**
- **show rsvp trace errors**
- **show rsvp trace client**
- **show rsvp debug-error**

See the Cisco IOS XR software command references for information about these commands and descriptions of their command output. The Cisco IOS XR software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
cisco-support	read
mpls-te or ouni	read

Examples

The following example shows some of the **show tech-support mpls rsvp** command output:

```
RP/0/RP0/CPU0:router# show tech-support mpls rsvp terminal page

------------------------------------------------------------------------------

            show tech-support mpls rsvp (Detail with Event traces)

------------------------------------------------------------------------------


------------------------- show rsvp interface detail -------------------------
INTERFACE: GigE0/1/0/0 (ifh=0x1180060).
 VRF ID: 0x0 (Default).
 BW (bits/sec): Max=1230M. MaxFlow=1230M.
                Allocated=0 (0%). MaxSub=0.
 Signalling: No DSCP marking. No rate limiting.
 States in: 0. Max missed msgs: 4.
 Expiry timer: Not running. Refresh interval: 45s.
 Normal Refresh timer: Not running. Summary refresh timer: Not running.
 Refresh reduction local: Enabled. Summary Refresh: Enabled (4096 bytes max).

 Reliable summary refresh: Disabled. Bundling: Enabled. (4096 bytes max).
 Ack hold: 400 ms, Ack max size: 4096 bytes. Retransmit: 900ms.
```

```
--------------------------- show rsvp counters pak ----------------------------
Number of pak TX=0
Number of pak events received from raw=1
Number of spurious events received from raw=1
Number of packets received from raw=0
Number of errored drops=0
Authentication queue:
    Number of enqueues=0
    Number of drops due to max q size=0
    High water mark=0
    Current queue size=0
High priority queue:
    Number of enqueues=0
    Number of drops due to max q size=0
    High water mark=0
    Current queue size=0
Low priority queue:
    Number of enqueues=0
    Number of drops due to max q size=0
    High water mark=0
    Current queue size=0


------------------------- show rsvp counters handles --------------------------

         All allocated handles:     5
    Unallocated cached handles:  1019
                                -------
                  LXSB handles:     1
                   ISB handles:     2
                    KI handles:     1
                                -------
  Total handles ever allocated:     5
      Total handles ever freed:     0


--------------------- show rsvp counters database private ----------------------

                               Sessions: 0
       Locally created and incoming Paths: 0
                           Outgoing Paths: 0
Locally created and incoming Reservations: 0
                     Outgoing Reservations: 0
                                Interfaces: 2
                                 Installed: 0
                           New LSP count: 0
                      Refreshed LSP count: 0
      LSP count recovered from checkpoint: 0
                            Proxy Senders: 0
                       Proxy Reservations: 0
                          Proxy Listeners: 1
                           TMB allocation: 0
                             Local Routes: 22


--------------------- show rsvp counters messages private ----------------------
 Routed                  Recv     Xmit                        Recv     Xmit
    Path                                0    Resv                           0
    PathError                           0    ResvError                      0
    PathTear                            0    ResvTear                       0
    ResvConfirm                         0    Hello                          0
    Ack                                 0    SRefresh                       0
    Challenge                           0    ChallengeRsp                   0
    Retransmit                          0    Rate Limited                   0
    OutOfOrder
    Bundle                              0    AckSubmsg                      0
    PathSubmsg                          0    ResvSubmsg                     0
    PathTearSubmsg                      0    ResvTearSubmsg                 0
    PathErrorSubmsg                     0    ResvErrorSubmsg                0
    PathQuery                           0

 POS0/1/0/0              Recv     Xmit                        Recv     Xmit
```

```
    Path                    0         0    Resv                    0         0
    PathError               0         0    ResvError               0         0
    PathTear                0         0    ResvTear                0         0
    ResvConfirm             0         0    Hello                   0         0
    Ack                     0         0    SRefresh                0         0
    Challenge               0         0    ChallengeRsp            0         0
    Retransmit                        0    Rate Limited                      0
    OutOfOrder              0
    Bundle                  0         0    AckSubmsg               0         0
    PathSubmsg              0         0    ResvSubmsg              0         0
    PathTearSubmsg          0         0    ResvTearSubmsg          0         0
    PathErrorSubmsg         0         0    ResvErrorSubmsg         0         0
    PathQuery               0         0

 All RSVP Interfaces    Recv     Xmit                          Recv     Xmit
    Path                    0         0    Resv                    0         0
    PathError               0         0    ResvError               0         0
    PathTear                0         0    ResvTear                0         0
    ResvConfirm             0         0    Hello                   0         0
    Ack                     0         0    SRefresh                0         0
    Challenge               0         0    ChallengeRsp            0         0
    Retransmit                        0    Rate Limited                      0
    OutOfOrder              0
    Bundle                  0         0    AckSubmsg               0         0
    PathSubmsg              0         0    ResvSubmsg              0         0
    PathTearSubmsg          0         0    ResvTearSubmsg          0         0
    PathErrorSubmsg         0         0    ResvErrorSubmsg         0         0
    PathQuery               0         0


-------------------------- show rsvp counters memory --------------------------
Pool size  Count
---------- ----------
32                  0
48                  0
96                  0
128                 0
192                 0
256                 0
Dynamic             0

-------------------------- show rsvp counters events --------------------------
POS0/1/0/0                              All RSVP Interfaces
 Expired Path states           0         Expired Path states           0
 Expired Resv states           0         Expired Resv states           0
 NACKs received                0         NACKs received                0

------------------- show rsvp counters notifications-client --------------------
Total notifications                     Total filtered notifications
 Path delete                          0  Path delete                          0
 Path error                           0  Path error                           0
 Path change                          0  Path change                          0
 Matching Resv create                 0  Matching Resv create                 0
 Matching Resv change                 0  Matching Resv change                 0
 Matching Resv delete                 0  Matching Resv delete                 0
 Async Path create                    0  Async Path create                    0
 Resv delete                          0  Resv delete                          0
 Resv error                           0  Resv error                           0
 Resv confirm                         0  Resv confirm                         0
 Async Resv create                    0  Async Resv create                    0
 Listener Path create                 0  Listener Path create                 0
 Listener Path change                 0  Listener Path change                 0
 Listener Path delete                 0  Listener Path delete                 0
 Listener Path FRR                    0  Listener Path FRR                    0
 Listener Assign Backup err           0  Listener Assign Backup err           0
 Listener Resv create                 0  Listener Resv create                 0
 Listener Resv change                 0  Listener Resv change                 0
 Listener Resv delete                 0  Listener Resv delete                 0
 Restart Time                         0  Restart Time                         0
 Recovery Done                        0  Recovery Done                        0
```

show tech-support mpls traffic-eng

To automatically run **show** commands that display information specific to Multiprotocol Label Switching (MPLS) Traffic Engineering (TE) debugging, use the **show tech-support mpls traffic-eng** command in XR EXEC mode.

show tech-support mpls traffic-eng {**forwarding tunnel-name** *tunnel-name* **p2mp| tp**| **file** *send-to* **[background]** [**compressed| uncompressed**]| **terminal [page]**}

Syntax Description

file	Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
tp	Displays Transport Profile Information.
forwarding	Displays forwarding information for a tunnel.
	Displays forwarding information for a tunnel.
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.
tunnel-name	Specifies the tunnel name that is used by the RSVP process.
tunnel name	Name for the tunnel.
p2mp	Specifies P2MP tunnel.
terminal	Specifies that the command output is displayed on the terminal.
page	(Optional) Specifies that the command output is displayed one page at a time. Use the return key to display the next line of output or use the space bar to display the next page of information. If not used, the output scrolls (that is, it does not stop for page breaks). Press the **Ctrl+C** keys to stop the command output.

Command Modes XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

This command generates MPLS-TE information that can be useful for Cisco Technical Support representatives when troubleshooting a router. See 'Obtaining Documentation and Submitting a Service Request' section on page iii in the Preface for Cisco Technical Support contact information.

Note This command is not required during normal use of the router.

See the Cisco IOS XR Software command references for information about these commands and descriptions of their command output. The Cisco IOS XR Software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
cisco-support	read
mpls-te	read

Examples The following example shows some of the **show tech-support mpls traffic-eng** command output that is displayed on the terminal:

```
RP/0/RP0/CPU0:router# show tech-support mpls traffic-eng terminal page
------------------------------------------------------------------------------
                    show tech-support mpls traffic-eng
------------------------------------------------------------------------------
```

```
-------------------- show mpls traffic-eng tunnels summary --------------------
Signalling Summary:
              LSP Tunnels Process:  running
                     RSVP Process:  running
                       Forwarding:  enabled
    Head: 0 interfaces, 0 active signalling attempts, 0 established
          0 explicit, 0 dynamic
          0 activations, 0 deactivations
          0 recovering, 0 recovered
    Mids: 2
    Tails: 0
          Periodic reoptimization:  every 3600 seconds, next in 2703 seconds
           Periodic FRR Promotion:  every 300 seconds, next in 106 seconds
      Periodic auto-bw collection:  disabled

Fast ReRoute Summary:
    Head:     0 FRR tunnels, 0 protected, 0 rerouted
    Mid:      0 FRR tunnels, 0 protected, 0 rerouted
    Summary:  0 protected, 0 link protected, 0 node protected, 0 bw protected
    Backup:   0 tunnels, 0 assigned
    Interface: 0 protected, 0 rerouted

--------------- show mpls traffic-eng counters tunnels summary ----------------
 Head:                      Mid:                       Tail:
  Total:                  0 Total:                     8 Total:                    0
  Sender Create:          0 Path Create:               2 Path Create:              0
  Sender Modify:          0 Path Change:               0 Path Change:              0
  Sender Delete:          0 Path Delete:               0 Path Delete:              0
  RESV Create:            0 Receiver Create:           2 Receiver Create:          0
  RESV Change:            0 Receiver Modify:           0 Receiver Modify:          0
  RESV Delete:            0 Receiver Delete:           0 Receiver Delete:          0
  Path Delete:            0 RESV Create:               2 RESV Create:              0
  Path Error:             0 RESV Delete:               0 RESV Delete:              0
  Path Change:            0 RESV Change:               0 RESV Change:              0
  Path Create:            0 Sender Create:             2 RESV Error:               0
  RESV Confirm:           0 Sender Modify:             0
                            Sender Delete              0
  Other:                  0 Other:                     0 Other:                    0

-------------------- show mpls traffic-eng counters batch ---------------------
Messages   Batches   MinSize   MaxSize   AverageSize   Description
--------   -------   -------   -------   -----------   -----------
0          0         0         0         0             IF CREATE
0          0         0         0         0             CAPS ADD
0          0         0         0         0             MTU UPDATE
0          0         0         0         0             STATE UPDATE
0          0         0         0         0             IF REPLICATE
0          0         0         0         0             IF DEL CONFIRM
0          0         0         0         0             IF DELETE
25         23        1         2         1             NOTFN from IM
4          2         2         2         2             MESSAGE to RSVP
9          6         1         2         1             MESSAGES from RSVP
0          0         0         0         0             MESSAGES to IGP
0          0         0         0         0             SYSDB VRFNs
0          0         0         0         0             SYSDB APPLYs
2          1         2         2         2             MESSAGE to LSD
2          2         2         2         1             MESSAGES from LSD
12         6         1         6         2             MESSAGES to IPARM

---------- show mpls traffic-eng link-management statistics summary -----------

  LSP Admission Statistics::

         Setup    Setup    Setup    Setup    Tear     Tear     Tear
         Requests Admits   Rejects  Errors   Requests Preempts Errors
         -------- -------- -------- -------- -------- -------- --------
    Path        2        2        0        0        0        0        0
    Resv        2        2        0        0        0        0        0


---------------- show mpls traffic-eng link-management summary ----------------

  System Information::
```

```
      Links Count         : 6 (Maximum Links Supported 100)
      Flooding System     : enabled
      IGP Areas Count     : 1

  IGP Areas
  ----------

  IGP Area[1]:: OSPF 100 area 0
      Flooding Protocol   : OSPF
      Flooding Status     : flooded
 --More--  Zero Nodes Found.
      Periodic Flooding   : enabled (every 180 seconds)
      Flooded Links       : 6
      IGP System ID       : 10.1.1.1
      MPLS TE Router ID   : 10.1.1.1
      IGP Neighbors       : 6


------------- show mpls traffic-eng fast-reroute database summary -------------
Status     Count
---------- ----------
Active     0
Ready      0
Partial    0

------------------------ show mpls forwarding summary -------------------------
Forwarding entries:
   Label switching: 60
   MPLS TE tunnel head: 0
   MPLS TE fast-reroute: 0 via 0 protected next-hops
   MPLS TE internal: 0
Forwarding updates:
   392 updates, 37 messages
Labels in use:
   Reserved: 3
   Lowest: 0
   Highest: 16059
   Deleted stale label entries: 0

Pkt drops=0, fragm=0, fail_look=0

Pkts dropped:    0
Pkts fragmented: 0
Failed lookups:  0

----------------------- show cef drop location 0/0/cpu0 ------------------------
CEF Drop Statistics

----------------------- show cef drop location 0/1/cpu0 ------------------------
CEF Drop Statistics
Node: 0/1/CPU0
  Unresolved drops     packets :               0
  Unsupported drops    packets :               0
  Null0 drops          packets :               0
  No route drops       packets :               0
  No Adjacency drops   packets :               0
  Checksum error drops packets :               0
```

show tech-support multicast

To automatically run **show** commands that display information specific to multicast-related information, use the **show tech-support multicast** command in XR EXEC mode.

show tech-support multicast [address-family] [classic] [**group** *group-address*] [**terminal [page]**] [**file** *send-to* **[background]** [**compressed**| **uncompressed**]] [**source** *source-address*] **[hardware]** [**location** *node-id*] **[rack]** [**vrf** *vrf-name*]

Syntax Description

address-family	(Optional) Collects address family specific information. It can be either ipv4 or ipv6.
classic	(Optional) Retrieves multicast related information using the non-fast method.
group	(Optional) Specifies the multicast group address.
group-address	(Optional) Address or name of the multicast group. An address is a multicast IP address in four-part dotted-decimal notation. A name is as defined in the Domain Name System (DNS) hosts table.
terminal	(Optional) Displays the command output on the terminal.
page	(Optional) Displays the command output on a single page at a time. Use the Return key to display the next line of output or use the space bar to display the next page of information. If not used, the output scrolls (that is, it does not stop for page breaks).
file	(Optional) Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.
source	(Optional) Displays the multicast source address.
source address	(Optional) Source address for multicast.

location *node-id*	(Optional) Specifies a node. The *node-id* argument is entered in the *rack/slot/module* notation.
hardware	(Optional) Displays the hardware platform information.
rack	(Optional) Displays the list of racks.
vrf	(Optional) Specifies a VPN routing and forwarding (VRF) instance.
vrf-name	Name of VRF.

Command Default

Output is logged to the terminal screen.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech**/*name.tgz* **tftp:**//*server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

Use the **show tech-support multicast** command to run **show** commands that display information specific to multicast-related information for PIM, IGMP, and mcast. This command generates multicast information that can be useful for Cisco Technical Support representatives when troubleshooting a router.

Note This command is not required during normal use of the router.

The following **show** commands run automatically when you run the **show tech-support multicast** command:

- **show version**
- **show running-config**
- **show ip interface brief**
- **show install**
- **show processes aborts location all**
- **show processes blocked location all**
- **show context location all**
- **show memory summary location all**
- **show ip access-lists show ip mhost default-interface**
- **show msdp summary**
- **show msdp globals**
- **show msdp sa-cache summary**
- **show msdp statistics peer**
- **show pim group-map**
- **show pim topology route-count**
- **show pim topology** *ip-address*
- **show pim rpf count**
- **show pim rpf**
- **show pim traffic**
- **show pim join-prune statistic**
- **show pim interface state-on**
- **show pim tunnel info all**
- **show pim neighbor**
- **show pim nsf**
- **show pim summary**
- **show igmp groups summary**
- **show igmp groups** *group-address*
- **show igmp interface**
- **show igmp traffic**
- **show igmp nsf**
- **show igmp summary**
- **show mrib client filter**
- **show mrib route summary**

- **show mrib route** *source-address*
- **show mrib nsf**
- **show cef ipv4** *prefix* **location** *node-id*
- **show mfib route summary location** *node-id*
- **show mfib route** *source-address* **location** *node-id*
- **show mfib counter location** *node-id*
- **show mfib nsf location** *node-id*
- **show mfib hardware route mofrr location** *node-id*
- **show mfib hardware route olist detail** *source-address* **location** *node-id*
- **show mfib hardware interface detail location** *node-id*
- **show mfib hardware route statistics** *source-address* **location** *node-id*
- **show mfib hardware resource-counter location** *node-id*
- **show mfib hardware adjacency detail location** *node-id*
- **show mfib hardware route accept-bitmap detail** *source-address* **location** *node-id*

See the Cisco IOS XR software command references for information about these commands and descriptions of their command output. The Cisco IOS XR software command references are located at the following URL:http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
basic-services or cisco-support	read
multicast	read

show tech-support netflow

To automatically run **show** commands that display information specific to netflow debugging, use the **show tech-support netflow** command in XR EXEC mode.

show tech-support netflow [**file** *send-to* **[background]** [**compressed**| **uncompressed**]] [**location** *node-id*] **[rack]**

Syntax Description

file	Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.
location *node-id*	(Optional) Specifies a node. The *node-id* argument is entered in the *rack/slot/module* notation.
rack	(Optional) Displays the list of racks.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a

file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech/***name.tgz* **tftp://***server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

This command generates netflow debugging information that can be useful for Cisco Technical Support representatives when troubleshooting a router.

Note This command is not required during normal use of the router.

See the Cisco IOS XR software command references for information about these commands and descriptions of their command output. The Cisco IOS XR software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
cisco-support	read

show tech-support nrs

To automatically run **show** commands that display information specific to the name registration service (NRS) information, use the **show tech-support nrs** command in XR EXEC mode.

show tech-support nrs [**file** *send-to* **[background]** [**compressed**| **uncompressed**]] [**location** *node-id*] **[rack]**

Syntax Description

file	Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.
rack	(Optional) Displays the list of racks.
location *node-id*	(Optional) Specifies a node. The *node-id* argument is entered in the *rack/slot/module* notation.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command

to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech/***name.tgz* **tftp://***server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

Use the **show tech-support nrs** command to collect data for the NRS. The NRS is a central registration authority and is used by the Replication Data Services (RDS) and the Event Notification Services (ENS). This command generates NRS debugging information that can be useful for Cisco Technical Support representatives when troubleshooting a router.

Note This command is not required during normal use of the router.

See the Cisco IOS XR Software command references for information about these commands and descriptions of their command output. The Cisco IOS XR Software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
basic-services	read

show tech-support password

To automatically run **show** commands that display information to include the password in the output for debugging, use the **show tech-support password** command in XR EXEC mode.

show tech-support password [**file** *send-to* **[background]** [**compressed**| **uncompressed**]] [**location** *node-id*] **[rack]**

Syntax Description

file	Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.
location*node-id*	(Optional) Specifies a node. The *node-id* argument is entered in the *rack/slot/module* notation.
rack	(Optional) Displays the list of racks.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a

file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech/***name.tgz* **tftp://***server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

This command generates output to include the password for debugging information that can be useful for Cisco Technical Support representatives when troubleshooting a router.

Note This command is not required during normal use of the router.

See the Cisco IOS XR software command references for information about these commands and descriptions of their command output. The Cisco IOS XR software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
basic-services	read

show tech-support pfi

To automatically run **show** commands that display information specific to Packet Forwarding Infrastructure (PFI) debugging for all components, use the **show tech-support pfi** command in XR EXEC mode.

show tech-support pfi [**file** *send-to* **[background]** [**compressed**| **uncompressed**]]

Syntax Description

file	Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech/***name.tgz* **tftp:**//*server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

Use the **show tech-support pfi** command to collect information for the PFI, which consists of interface-related date with regards to netio and interface manager. This command generates output PFI debugging information that can be useful for Cisco Technical Support representatives when troubleshooting a router.

Note This command is not required during normal use of the router.

See the Cisco IOS XR Software command references for information about these commands and descriptions of their command output. The Cisco IOS XR Software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
basic-services	read
cisco-support	read

show tech-support qos

To automatically run **show** commands that display platform dependent and platform independent Quality of Service (QoS) debugging information, use the **show tech-support qos** command in XR EXEC mode.

show tech-support qos {**platform**| **pi**} [**file** *send-to* **[background]** [**compressed**| **uncompressed**]] [**location** *node-id*] **[rack]**

Syntax Description

platform	Collects platform dependent QOS related information and saves to disk.
pi	Collects platform independent QOS related information and saves to disk.
file	Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.
location	(Optional) Specifies a node.
node-id	Node ID. The *node-id* argument is entered in the *rack/slot/module* notation.
rack	(Optional) Displays the list of racks.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech**/*name.tgz* **tftp:**//*server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

This command generates QoS debugging information that can be useful for Cisco Technical Support representatives when troubleshooting a router.

Note This command is not required during normal use of the router.

Task ID

Task ID	Operations
basic-services	read
cisco-support	read

show tech-support rdsfs

To automatically run **show** commands that display information specific to Replication Data Services File System (RDSFS) debugging, use the **show tech-support rdsfs** command in XR EXEC mode.

show tech-support rdsfs [**file** *send-to* **[background]** [**compressed**| **uncompressed**]] [**location** *node-id*] **[rack]**

Syntax Description

file	Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.
location*node-id*	(Optional) Specifies a node. The *node-id* argument is entered in the *rack/slot/module* notation.
rack	(Optional) Displays the list of racks.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a

file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech/***name.tgz* **tftp://***server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

Use the **show tech-support rdsfs** command to run **show** commands that display information specific to RDSFS debugging and is relevant to bring to a ready state. This command generates RDSFS debugging information that can be useful for Cisco Technical Support representatives when troubleshooting a router.

Note This command is not required during normal use of the router.

See the Cisco IOS XR software command references for information about these commands and descriptions of their command output. The Cisco IOS XR software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
cisco-support	read

show tech-support rib

To automatically run **show** commands that display information specific to Routing Information Base (RIB) debugging, use the **show tech-support rib** command in XR EXEC mode.

show tech-support rib {**ipv4 location** {**active**| **standby**}| **ipv6 location** {**active**| **standby**}} {**file** *send-to* **[background]** [**compressed**| **uncompressed**]| **terminal [page]**}

Syntax Description

terminal	Displays the command output on the terminal.
page	(Optional) Displays the command output on a single page at a time. Use the Return key to display the next line of output or use the space bar to display the next page of information. If not used, the output scrolls (that is, it does not stop for page breaks). Press the **Ctrl-C** keys to stop the command output.
file	Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.
ipv4	Displays the IPv4 command output.
ipv6	Displays the IPv6 command output.
active	Collects information from the Active RIB.
standby	Collects information from the Standby RIB.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech/***name.tgz* **tftp://***server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

The RIB data stores the best path information for the routing protocol that is sent to FIB to help build the data structures. This command generates RIB debugging information that can be useful for Cisco Technical Support representatives when troubleshooting a router.

Note This command is not required during normal use of the router.

See the Cisco IOS XR software command references for information about these commands and descriptions of their command output. The Cisco IOS XR software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
cisco-support	read

show tech-support routing bfd

To automatically run **show** commands that display information specific to Bidirectional Forwarding Detection (BFD) debugging, use the **show tech-support routing bfd** command in XR EXEC mode.

show tech-support routing bfd[**file** *send-to* **[background]** [**compressed**| **uncompressed**]] [**location** *node-id*][**rack]**

Syntax Description

file	(Optional) Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.
location*node-id*	(Optional) Specifies a node. The *node-id* argument is entered in the *rack/slot/module* notation.
rack	(Optional) Displays the list of racks.

Command Default

The command output is not compressed.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech**/*name.tgz* **tftp:**//*server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

Use the **show tech-support routing bfd** command to run **show** commands that display information specific to BFD debugging. This command generates BFD debugging information that can be useful for Cisco Technical Support representatives when troubleshooting a router.

Note This command is not required during normal use of the router.

The following **show** commands run automatically when you run the **show tech-support routing bfd** command:

- **show bfd session**
- **show bfd**
- **show memory heap fail all**
- **show memory summary location all**
- **show process blocked location** *node-id*
- **show adjacency**
- **show bfd location**
- **show bfd session detail location** *node-id*
- **show bfd session agent detail location** *node-id*
- **show bfd timer-groups location***node-id*
- **show bfd index-mgrs location** *node-id*
- **show bfd session-array location** *node-id*
- **show bfd interfaces location** *node-id*
- **show bfd bundles detail location** *node-id*
- **show bfd counters packet invalid** location *node-id*

- **show bfd counters packet private location** *node-id*
- **show bfd client private**
- **show controllers cpuctrl summary**
- **show controllers cpuctrl client pdma bfd active location all**

See the Cisco IOS XR software command references for information about these commands and descriptions of their command output. The Cisco IOS XR software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
basic-services	read
cisco-support	read
ospf	read

show tech-support routing isis

To automatically run **show** commands that display information specific to Intermediate System-to-Intermediate System (IS-IS) debugging, use the **show tech-support routing isis** command in XR EXEC mode.

show tech-support routing isis {**terminal [page]**| **file** *send-to* **[background]** [**compressed**| **uncompressed**]}

Syntax Description

terminal	Displays the command output on the terminal.
page	(Optional) Displays the command output on a single page at a time. Use the Return key to display the next line of output or use the space bar to display the next page of information. If not used, the output scrolls (that is, it does not stop for page breaks). Press the **Ctrl-C** keys to stop the command output.
file	Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.

Command Default

The command output is not compressed.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

Use the **show tech-support isis** command to run **show** commands that display information specific to IS-IS debugging. This command generates IS-IS debugging information that can be useful for Cisco Technical Support representatives when troubleshooting a router. See 'Obtaining Documentation and Submitting a Service Request' section on page iii in the Preface for Cisco Technical Support contact information.

Note This command is not required during normal use of the router.

The following **show** commands run automatically when you run the **show tech-support routing isis** command:

- show isis trace all location all
- **show isis all**
- **show clns statistics**
- **show imds interface all**
- **show ipv4 int brief**
- **show ipv6 int brief**
- **show route ipv4**
- **show route ipv6**
- **show inst which comp clns-isis**

See the Cisco IOS XR software command references for information about these commands and descriptions of their command output. The Cisco IOS XR software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
basic-services	read

Examples

The following example shows some of the **show tech-support routing isis** command output:

```
RP/0/RP0/CPU0:router# show tech-support isis terminal page
```

```
------------------------------------------------------------------------------

                            show tech-support isis

------------------------------------------------------------------------------


---------------------- show isis instance isp trace all -----------------------
184 wrapping entries (6144 possible, 0 filtered, 184 total)
Mar 29 08:38:18.437 isis/isp/sev 0/RP0/CPU0 t1  STARTUP_START
Mar 29 08:38:18.437 isis/isp/sev 0/RP0/CPU0 t1  STARTUP_MODULE
Mar 29 08:38:18.438 isis/isp/sev 0/RP0/CPU0 t1  STARTUP_MODULE
Mar 29 08:38:18.438 isis/isp/sev 0/RP0/CPU0 t1  THREAD_CREATING
Mar 29 08:38:18.451 isis/isp/det 0/RP0/CPU0 t1  THREAD_THREAD_ID
Mar 29 08:38:18.451 isis/isp/sev 0/RP0/CPU0 t1  THREAD_CREATING
Mar 29 08:38:18.451 isis/isp/sev 0/RP0/CPU0 t1  THREAD_CREATING
Mar 29 08:38:18.452 isis/isp/sev 0/RP0/CPU0 t1  THREAD_CREATING
Mar 29 08:38:18.452 isis/isp/sev 0/RP0/CPU0 t1  THREAD_CREATING
Mar 29 08:38:18.536 isis/isp/sev 0/RP0/CPU0 t1  STARTUP_MODULE
Mar 29 08:38:19.274 isis/isp/sev 0/RP0/CPU0 t1  STARTUP_MODULE
Mar 29 08:38:19.470 isis/isp/sev 0/RP0/CPU0 t1  IO_PAK_SERVER_CONNECTED
Mar 29 08:38:19.551 isis/isp/det 0/RP0/CPU0 t1  IO_SOCKET_CREATE_SUCCESS
Mar 29 08:38:19.555 isis/isp/sev 0/RP0/CPU0 t1  IO_SOCKET_CONN_OPEN
Mar 29 08:38:20.561 isis/isp/std 0/RP0/CPU0 t1  ROUTE_RIB_PURGE_TIME_SET
.
.
.
Mar 29 08:38:27.622 isis/isp/det 0/RP0/CPU0 t4  THREAD_FOP_PROCESS
Mar 29 08:38:27.622 isis/isp/det 0/RP0/CPU0 t4  SSM_TICK_TIMER_FIRES CR-SYNC-LSPDB
Mar 29 08:38:27.622 isis/isp/det 0/RP0/CPU0 t4  SSM_STATE_RESULT CR-SYNC-LSPDB
Mar 29 08:38:27.622 isis/isp/det 0/RP0/CPU0 t4  SSM_STATE_TIME_BUDGET CR-SYNC-LSPDB
Mar 29 08:38:27.622 isis/isp/sev 0/RP0/CPU0 t4  SSM_STATE_RUN CR-SYNC-LSPDB

------------------------------- show isis all --------------------------------

No IS-IS isp levels found
No IS-IS isp levels found
No IS-IS isp levels found
No IS-IS isp levels found
No IS-IS isp levels found
No IS-IS isp levels found
No IS-IS isp levels found
No IS-IS isp levels found
No IS-IS isp levels found
No IS-IS isp IPv4 Unicast levels found
No IS-IS isp IPv4 Unicast levels found
No IS-IS isp IPv4 Unicast levels found
No IS-IS isp IPv4 Unicast levels found
No IS-IS isp IPv4 Unicast levels found
IS-IS Router: isp
  System Id: 0000.0000.0000 (Not configured, protocol disabled)
  IS Levels: level-1-2
  Manual area address(es):
  Routing for area address(es):
  Non-stop forwarding: Disabled
  Most recent startup mode: Cold Restart
  Topologies supported by IS-IS:
    IPv4 Unicast
      No protocols redistributed
      Distance: 115
  Interfaces supported by IS-IS:
    POS0/1/0/0 is disabled (active in configuration)

No IS-IS isp host data available

IS-IS isp Interfaces
POS0/1/0/0                  Disabled (No NET configured)

IS-IS isp Interfaces
    Interface      All     Adjs    Adj Topos  Adv Topos  CLNS   MTU    Prio
                   OK    L1   L2    Run/Cfg    Run/Cfg                L1   L2
-----------------  ---  ---------  ---------  ---------  ----  ----  --------
PO0/1/0/0          No
```

```
No IS-IS isp mesh-groups found

IS-IS isp statistics:
  IS-IS statistics:
    Fast PSNP cache (hits/tries): 0/0
    LSP checksum errors received: 0
    LSP Dropped: 0
    SNP Dropped: 0
    UPD Max Queue size: 0

IS-IS isp neighbor summary:
State         L1       L2     L1L2
Up             0        0        0
Init           0        0        0
Failed         0        0        0

IS-IS isp neighbors:
System Id      Interface        SNPA           State Holdtime Type IETF-NSF

IS-IS isp Database Summary for all LSPs
                             Active              Purged               All
                         L1    L2   Total   L1    L2   Total   L1    L2   Total
                        ----- ----- -----  ----- ----- -----  ----- ----- -----
Fragment 0 Counts
           Router LSPs:     0     0     0      0     0     0      0     0     0
      Pseudo-node LSPs:     0     0     0      0     0     0      0     0     0
              All LSPs:     0     0     0      0     0     0      0     0     0

All Fragment Counts
           Router LSPs:     0     0     0      0     0     0      0     0     0
      Pseudo-node LSPs:     0     0     0      0     0     0      0     0     0
              All LSPs:     0     0     0      0     0     0      0     0     0

IS-IS isp IS Topology Summary IPv4 Unicast
                          L1                          L2
                Reach  UnReach  Total      Reach  UnReach  Total
               ------- ------- -------    ------- ------- -------
Router nodes:        0       0       0          0       0       0
Pseudo nodes:        0       0       0          0       0       0

 Total nodes:        0       0       0          0       0       0

IS-IS isp IPv4 Unicast routes

Codes: L1 - level 1, L2 - level 2, ia - interarea (leaked into level 1)
       df - level 1 default (closest attached router), su - summary null
       C - connected, S - static, R - RIP, B - BGP, O - OSPF
       i - IS-IS (redistributed from another instance)

Maximum parallel path count: 8

IS-IS isp checkpoint interface
Interface         Handle    CircNum  DIS Areas    Adj  Chkpt ID
No 'checkpoint interfaces' found in IS-IS isp

IS-IS isp checkpoint adjacencies
System ID      Interface        SNPA           Lvl  Hold Pri  CID  Chkpt ID Nexthops
No 'checkpoint adjacencies' found in IS-IS isp

IS-IS isp checkpoint LSPs
Level  LSPID                  Chkpt ID
  No 'checkpoint LSPs' found in IS-IS isp

 Total LSP count: 0 (L1: 0, L2 0, local L1: 0, local L2 0)

---------------------------- show clns statistics -----------------------------
CLNS Statistics:
Last counter clear:                   1067929 seconds ago
Total number of packets sent:         0
Total number of packets received:     0
Send packets dropped, total:          0
Send packets dropped, buffer overflow: 0
```

```
Send packets dropped, out of memory:   0
Send packets dropped, netio:           0
Send packets dropped, other:           0
Receive socket max queue size:         0
Receive packets dropped, total:        0
Receive packets dropped, other:        0
Receive packets dropped per pdu class:

Class    Overflow/Max   Rate Limit/Max
IIH             0/0             0/0
LSP             0/0             0/0
SNP             0/0             0/0
OTHER           0/0             0/0
Total          0               0

--------------------------- show imds interface all ---------------------------
IMDS INTERFACE DATA (Node 0x201)

MgmtEth0_RP0_CPU0_0 (0x00080000)
------------------------
flags: 0x0001002f    type: 8 (IFT_ETHERNET)    encap: 30 (ether)
state: 3 (up)     mtu: 1514    protocol count: 4
control parent: 0x00000000     data parent: 0x00000000
       protocol         capsulation           state        mtu
    --------------- -------------------- --------------- --------
    7 (arp)
.
```

show tech-support routing ospf

To automatically run **show** commands that display information specific to Open Shortest Path First (OSPF) debugging, use the **show tech-support routing ospf** command in XR EXEC mode.

show tech-support routing ospf {**active**| **no-trace**| **standby**} {**terminal [page]**| **file** *send-to* **[background]** [**compressed**| **uncompressed**]}

Syntax Description

no-trace	Excludes trace information from the command output.
active	Displays information from active route processor only.
standby	Displays information from standby route processor only.
terminal	Displays the command output on the terminal.
page	(Optional) Displays the command output on a single page at a time. Use the Return key to display the next line of output or use the space bar to display the next page of information. If not used, the output scrolls (that is, it does not stop for page breaks). Press the **Ctrl-C** keys to stop the command output.
file	Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.

Command Default

The command output is not compressed.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech/***name.tgz* **tftp://***server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

Use the **show tech-support routing ospf** command to run **show** commands that display information specific to OSPF debugging. This command generates OSPF debugging information that can be useful for Cisco Technical Support representatives when troubleshooting a router.

Note This command is not required during normal use of the router.

The following **show** commands run automatically when you run the **show tech-support routing ospf** command:

- show ospf
- **show ospf vrf all**
- **show ospf summary**
- **show ospf vrf all summary**
- **show ospf interface**
- **show ospf vrf all interface**
- **show ospf virtual-links**
- **show ospf vrf all virtual-links**
- **show ospf neighbor detail**
- **show ospf vrf all neighbor detail**

- **show ospf database database-summary**
- **show ospf vrf all database database-summary**
- **show ospf database router self-originate**
- **show ospf vrf all database router self-originate**
- **show ospf statistics prot**
- **show ospf statistics raw-io**
- **show ospf statistics te**
- **show ospf statistics spf**
- **show ospf statistics rib-thread**
- **show ospf statistics rib-batch**
- **show ospf message-queue**
- **show ospf border-routers**
- **show ospf vrf all border-routers**
- **show ospf retransmission-list**
- **show ospf vrf all retransmission-list**
- **show ospf request-list**
- **show ospf vrf all request-list**
- **show ospf flood-list**
- **show ospf vrf all flood-list**
- **show ospf maxage-list**
- **show ospf vrf all maxage-list**
- **show ospf bad-checksum**
- **show ospf vrf all bad-checksum**
- **show ospf standby**
- **show ospf vrf all standby**
- **show ip interface brief**
- **show route ipv4 summary**
- **show route vrf all ipv4 summary**
- **show ospf trace all**
- **show logging process ospf**

Note

- If you do not specify any options, all information is collected by default.
- Active and standby options are exclusive and only one of them can be used. When neither active or standby is used, the information is collected from both RPs.
- The **no-trace** option can be used with or without specifying the **active** or **standby** options.
- When **standby** option is specified, only ospf- related information from the standby RP is included in the output. The common non-ospf information such as version, placement info, logging and so on are not included.

See the Cisco IOS XR software command references for information about these commands and descriptions of their command output. The Cisco IOS XR software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
basic-services	read

show tech-support routing ospfv3

To automatically run **show** commands that display information specific to Open Shortest Path First Version 3 (OSPFv3) debugging, use the **show tech-support routing ospfv3** command in XR EXEC mode.

show tech-support routing ospfv3 {*instance*| **detail**| **terminal [page]**| **file** *send-to* **[background]** [**compressed**| **uncompressed**]}

Syntax Description

instance	Name of the OSPFv3 instance.
detail	Displays all available OSPFv3 information.
terminal	Displays the command output on the terminal.
page	(Optional) Displays the command output on a single page at a time. Use the Return key to display the next line of output or use the space bar to display the next page of information. If not used, the output scrolls (that is, it does not stop for page breaks). Press the **Ctrl-C** keys to stop the command output.
file	Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.

Command Default

The command output is not compressed.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech/***name.tgz* **tftp://***server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

Use the **show tech-support routing ospfv3** command to run **show** commands that display information specific to OSPFv3 debugging. This command generates OSPFv3 debugging information that can be useful for Cisco Technical Support representatives when troubleshooting a router.

Note This command is not required during normal use of the router.

The following **show** commands run automatically when you run the **show tech-support routing ospfv3** command:

- **show version**
- **show run router ospfv3**
- **show route ipv6 ospf**
- **show ospfv3**
- **show ospfv3 interface**
- **show ospfv3 virtual-links**
- **show ospfv3 neighbor**
- **show ospfv3 message-queue**
- **show ospfv3 request-list**
- **show ospfv3 retransmission-list**

- **show ospfv3 flood-list**
- **show ospfv3 border-routers**
- **show ospfv3 database database-summary**
- **show ospfv3 database**
- **show ospfv3 route**

See the Cisco IOS XR software command references for information about these commands and descriptions of their command output. The Cisco IOS XR software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
basic-services	read
cisco-support	read
ospf	read

show tech-support routing rpl

To automatically run **show** commands that display information specific to Routing Policy Language (RPL) debugging, use the **show tech-support routing rpl** command in XR EXEC mode.

show tech-support routing rpl [**file** *send-to* **[background]** [**compressed**| **uncompressed**]] [**location** *node-id*] **[rack]**

Syntax Description

file	(Optional) Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
location*node-id*	(Optional) Specifies a node. The *node-id* argument is entered in the *rack/slot/module* notation.
rack	(Optional) Displays the list of racks.
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.

Command Default

The command output is not compressed.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech/***name.tgz* **tftp://***server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

Use the **show tech-support routing rpl** command to run **show** commands that display information specific to RPL debugging. This command generates RPL debugging information that can be useful for Cisco Technical Support representatives when troubleshooting a router.

Note This command is not required during normal use of the router.

The following **show** commands run automatically when you run the **show tech-support routing rpl** command:

- **show running-config rpl**
- **show process policy_repository**
- **show rpl route-policy** *policy-name* **pxl**
- **show sysdb reg notif path /ipc/gl/policy_lang/policies/routing/** *policy-name* **/pxl s**

See the Cisco IOS XR software command references for information about these commands and descriptions of their command output. The Cisco IOS XR software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
basic-services	read

show tech-support serial

To automatically run **show** commands that display information specific to serial debugging, use the **show tech-support serial** command in XR EXEC mode.

show tech-support serial [**interface** *type instance*] **[show-only] [rack]**[**file** *send-to* **[background]** [**compressed**| **uncompressed**]]**[trace-only]** [**location** *node-id*]

Syntax Description

file	(Optional) Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.
interface	(Optional) Collects information about a specific interface.
type	Interface type. For more information, use the question mark (?) online help function.

instance	Either a physical interface instance or a virtual interface instance as follows: • Physical interface instance. Naming notation is *rack/slot/module/port* and a slash between values is required as part of the notation. ◦ *rack*: Chassis number of the rack. ◦ *slot*: Physical slot number of the modular services card or line card. ◦ *module*: Module number. A physical layer interface module (PLIM) is always 0. ◦ *port*: Physical port number of the interface. **Note** In references to a Management Ethernet interface located on a route processor card, the physical slot number is alphanumeric (RP0 or RP1) and the module is CPU0. Example: interface MgmtEth0/RP1/CPU0/0. • Virtual interface instance. Number range varies depending on interface type. For more information about the syntax for the router, use the question mark (?) online help function.
show-only	(Optional) Collects only show command information.
rack	Displays the list of racks.
trace-only	(Optional) Collects only trace information.
location *node-id*	(Optional) Specifies a node. The *node-id* argument is entered in the *rack/slot/module* notation.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech/***name.tgz* **tftp://***server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

Use the **show tech-support serial** command for serial-related data, such as T1/E1. This command generates serial debugging information that can be useful for Cisco Technical Support representatives when troubleshooting a router.

Note This command is not required during normal use of the router.

See the Cisco IOS XR software command references for information about these commands and descriptions of their command output. The Cisco IOS XR software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
cisco-support	read

show tech-support services

To automatically run **show** commands that display information specific to tech-support information that relates to services, use the **show tech-support services** command in XR EXEC mode.

show tech-support services svi [**file** *send-to* **[background]** [**compressed**| **uncompressed**]] [**location** *node-id*] **[rack]**

Syntax Description

file	(Optional) Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.
rack	(Optional) Displays the list of racks.
location*node-id*	(Optional) Specifies a node. The *node-id* argument is entered in the *rack/slot/module* notation.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a

file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech/***name.tgz* **tftp://***server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

Use the **show tech-support services** command to run **show** commands that display information specific to the services diversion infrastructure, which is used with the service blade offerings for the Cisco IOS XR platforms. This command generates tech-support information that relates to services debugging information that can be useful for Cisco Technical Support representatives when troubleshooting a router.

Note This command is not required during normal use of the router.

See the Cisco IOS XR software command references for information about these commands and descriptions of their command output. The Cisco IOS XR software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
cisco-support	read

show tech-support snmp

To automatically run **show** commands that display information specific to tech-support information related to Simple Network Management Protocol (SNMP) agent, use the **show tech-support snmp** command in XR EXEC mode.

show tech-support snmp [**entitymib**| **ifmib**] **[rack]** [**location** *node-id*| **all**] [**file** *send-to* **[background]** [**compressed**| **uncompressed**]]

Syntax Description

entitymib	(Optional) Displays the entitymib debugging information.
ifmib	(Optional) Displays the ifmib debugging information.
rack	(Optional) Displays the list of racks.
file	(Optional) Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.
location*node-id*	(Optional) Specifies a node. The *node-id* argument is entered in the *rack/slot/module* notation.
all	(Optional) Specifies all locations.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech/***name.tgz* **tftp://***server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

Note This command is not required during normal use of the router.

See the Cisco IOS XR Software command references for information about these commands and descriptions of their command output. The Cisco IOS XR Software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
basic-services	read
cisco-support	read

show tech-support sysdb

To automatically run **show** commands that display information specific to the System Database (SysDB), use the **show tech-support sysdb** command in XR EXEC mode.

show tech-support sysdb [**file** *send-to* **[background]** [**compressed**| **uncompressed**]] **[rack]** [**location** *node-id*]

Syntax Description

file	(Optional) Specifies that the command output is saved to a specified file.
sent-to	Name of the file. The following valid options are listed: • *filename* • **disk0:** *filename* • **disk1:** *filename* • **harddisk:** *filename* • **tftp:** *filename*
background	(Optional) Specifies that the command runs in the background.
compressed	(Optional) Displays compressed command output.
uncompressed	(Optional) Displays the command output with no compression.
rack	(Optional) Displays the list of racks.
location	(Optional) Specifies a node.
node-id	(Optional). Node ID. The *node-id* argument is entered in the *rack/slot/module* notation.

Command Modes

XR EXEC

Command History

Release	Modification
Release 5.0.0	This command was introduced.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes appropriate task IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance.

This command generates tech-support information that is useful for Cisco Technical Support representatives when troubleshooting a router. By default, the output of this command is saved on the router's hard disk in a file with *.tgz* extension. You can share this file with Cisco Technical Support. To share, use the **copy** command to copy the *.tgz* file to a server or local machine. For example, **copy harddisk:/showtech/***name.tgz* **tftp://***server_path*.

For Cisco Technical Support contact information, see the 'Obtaining Documentation and Submitting a Service Request' section in the Preface.

Tip This command can generate a very large amount of output. You may want to redirect the output to a file using the **file** *send-to* keyword and argument. Redirecting the output to a file also makes sending the output to your Cisco Technical Support representative easier.

The SysDB is the memory database that is used to store configuration and statistical data with some IPC data. This command generates SysDB information that relates to debugging information that can be useful for Cisco Technical Support representatives when troubleshooting a router.

Note This command is not required during normal use of the router.

See the Cisco IOS XR software command references for information about these commands and descriptions of their command output. The Cisco IOS XR software command references are located at the following URL:

http://www.cisco.com/en/US/products/ps5845/prod_command_reference_list.html

Task ID

Task ID	Operations
cisco-support	read
basic-services	read