



System Management Debug Command Reference

Cisco IOS XR Software Release 3.2

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System Management Debug Command Reference

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Preface

The System Manager Debug Command Reference Guide contains debug commands used to debug the System Manager.

The preface contains the following sections:

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Document Revision History

The Document Revision History table records technical changes to this document. [Table 1](#) shows the document revision number for the change, the date of the change, and a brief summary of the change. Note that not all Cisco documents use a Document Revision History Table.

Table 1 *Document Revision History*

Revision	Date	Change Summary
OL-7953-01	August 31, 2005	Initial release of this document.

Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

Cisco.com

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- Report security vulnerabilities in Cisco products.
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http://www.cisco.com/en/US/products/products_psirt_rss_feed.html

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An emergency is either a condition in which a system is under active attack or a condition for which a severe and urgent security vulnerability should be reported. All other conditions are considered nonemergencies.

- Nonemergencies—psirt@cisco.com

In an emergency, you can also reach PSIRT by telephone:

- 1 877 228-7302
- 1 408 525-6532

**Tip**

We encourage you to use Pretty Good Privacy (PGP) or a compatible product to encrypt any sensitive information that you send to Cisco. PSIRT can work from encrypted information that is compatible with PGP versions 2.x through 8.x.

Never use a revoked or an expired encryption key. The correct public key to use in your correspondence with PSIRT is the one linked in the Contact Summary section of the Security Vulnerability Policy page at this URL:

http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html

The link on this page has the current PGP key ID in use.

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**Note**

Use the Cisco Product Identification (CPI) tool to locate your product serial number before submitting a web or phone request for service. You can access the CPI tool from the Cisco Technical Support & Documentation website by clicking the **Tools & Resources** link under Documentation & Tools. Choose **Cisco Product Identification Tool** from the Alphabetical Index drop-down list, or click the **Cisco Product Identification Tool** link under Alerts & RMAs. The CPI tool offers three search options: by product ID or model name; by tree view; or for certain products, by copying and pasting **show** command output. Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before placing a service call.

Submitting a Service Request

Using the online TAC Service Request Tool is the fastest way to open S3 and S4 service requests. (S3 and S4 service requests are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Service Request Tool provides recommended solutions. If your issue is not resolved using the recommended resources, your service request is assigned to a Cisco engineer. The TAC Service Request Tool is located at this URL:

<http://www.cisco.com/techsupport/servicerequest>

For S1 or S2 service requests or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.

To open a service request by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)

EMEA: +32 2 704 55 55

USA: 1 800 553-2447

For a complete list of Cisco TAC contacts, go to this URL:

<http://www.cisco.com/techsupport/contacts>

Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

Severity 1 (S1)—Your network is “down,” or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Severity 2 (S2)—Operation of an existing network is severely degraded, or significant aspects of your business operation are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

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Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

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- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:

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- Networking products offered by Cisco Systems, as well as customer support services, can be obtained at this URL:

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Alarm Management and Logging Correlation Debug Commands on Cisco IOS XR Software

This chapter describes the alarm logger debug command used to debug Cisco IOS XR software.

debug alarm-logger

To enable the debug messages for the alarm logging operation, use the **debug alarm-logger** command in EXEC mode. To disable the display of debug messages, use the **no** form of this command.

debug alarm-logger

no debug alarm-logger

Syntax Description

This command has no arguments or keywords.No default behavior or values

Defaults

No default behavior or values

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples

The following example shows how to enable alarm logging operation debug messages:

```
RP/0/RP0/CPU0:router# debug alarm-logger
```



CDP Debug Commands on Cisco IOS XR Software

This chapter describes the Cisco Discovery Protocol Adjacency (CDP) command used to debug Cisco IOS XR software.

debug cdp adjacency

To enable debugging output for neighbor entry updates that are processed by Cisco Discovery Protocol (CDP), use the **debug cdp adjacency** command in EXEC mode. To turn off the debugging output, use the **no** form of this command.

debug cdp adjacency [*location node-id* | **interface** *type instance*]

no debug cdp adjacency [*location node-id* | **interface** *type instance*]

Syntax Description

location <i>node-id</i>	(Optional) Displays CDP debug information for a specified location. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.
interface	(Optional) Displays CDP debug information for a specified interface.
<i>type</i>	(Optional) Interface type. For more information, use the question mark (?) online help function.
<i>instance</i>	(Optional) Either a physical interface instance or a virtual interface instance as follows: <ul style="list-style-type: none"> Physical interface instance. Naming notation is <i>rack/slot/module/port</i> and a slash between values is required as part of the notation. <ul style="list-style-type: none"> <i>rack</i>: Chassis number of the rack. <i>slot</i>: Physical slot number of the modular services card or line card. <i>module</i>: Module number. A physical layer interface module (PLIM) is always 0. <i>port</i>: Physical port number of the interface. <p>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.</p> <ul style="list-style-type: none"> Virtual interface instance. Number range varies depending on interface type. <p>For more information about the syntax for the router, use the question mark (?) online help function.</p>

Defaults

No default behavior or values

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

This command shows when an entry is added to or removed from the neighbor cache. When an interface is specified in the command syntax, debugging is turned on for the specified interface. Not specifying the interface turns on debugging for all interfaces.

Examples

The following example shows how to enable debugging output for neighbor entry updates that are processed by CDP:

```
RP/0/RP0/CPU0:router# debug cdp adjacency
```

■ debug cdp adjacency



Configuration Management Debug Commands on Cisco IOS XR Software

This chapter describes the configuration debug command used to debug Cisco IOS XR software.

debug config

To enable debugging of the configuration data manipulation, use the **debug config** command in EXEC mode. To turn off the debugging output, use the **no** form of this command.

debug config { **cfs** | **checkpoint** | **connections** | **distribution** | **errors** | **installops** | **oir** [*interface-type interface-instance*] | **requests** | **rollback** | **startup** | **versioning** }

no debug config { **cfs** | **checkpoint** | **connections** | **distribution** | **errors** | **installops** | **oir** [*interface-type interface-instance*] | **requests** | **rollback** | **startup** | **versioning** }

Syntax Description

cfs	Reports Configuration Manager configuration file system events.
checkpoint	Reports Configuration Manager configuration checkpoint events.
connections	Reports Configuration Manager connection events.
distribution	Reports Configuration Manager configuration distribution events.
errors	Reports Configuration Manager errors.
installops	Reports events during an install operation.
oir	Reports configuration saving and restoring.
<i>interface-type</i>	(Optional) Interface type. For more information, use the question mark (?) online help function.
<i>interface-instance</i>	(Optional) Either a physical interface instance or a virtual interface instance as follows: <ul style="list-style-type: none"> Physical interface instance. Naming notation is <i>rack/slot/module/port</i> and a slash between values is required as part of the notation. <ul style="list-style-type: none"> <i>rack</i>: Chassis number of the rack. <i>slot</i>: Physical slot number of the modular services card or line card. <i>module</i>: Module number. A physical layer interface module (PLIM) is always 0. <i>port</i>: Physical port number of the interface. <p>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.</p> <ul style="list-style-type: none"> Virtual interface instance. Number range varies depending on interface type. <p>For more information about the syntax for the router, use the question mark (?) online help function.</p>
requests	Reports Configuration Manager request information.
rollback	Reports Configuration Manager configuration rollback events.
startup	Reports Configuration Manager configuration startup events.
versioning	Reports Configuration Manager startup file versioning events.

Defaults No default behavior or values

Command Modes EXEC

Command History	Release	Modification
	Release 2.0	This command was introduced on the Cisco CRS-1.
	Release 3.0	No modification.
	Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples The following example shows how to enable debugging of the configuration data manipulation:

```
RP/0/RP0/CPU0:router# debug config cfs
```




Fault Manager Debug Commands on Cisco IOS XR Software

This chapter describes the commands used to debug the Fault Manager.

debug fault manager all

To turn on debugging for the Fault Manager, use the **debug fault manager all** command in EXEC mode. To turn off debugging for the Fault Manager, use the **no** form of this command.

debug fault manager all

no debug fault manager all

Syntax Description This command has no arguments or keywords.

Defaults Debugging is disabled.

Command Modes EXEC

Command History	Release	Modification
	Release 2.0	This command was introduced on the Cisco CRS-1.
	Release 3.0	No modification.
	Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples The following example shows how to enable Fault Manager debugging:

```
RP/0/RP0/CPU0:router# debug fault manager all
```

Related Commands	Command	Description
	debug fault manager api	Turns on debugging for the Fault Manager API.
	debug fault manager fd	Turns on debugging for a particular Fault Manager fault detector.
	debug fault manager metricdir	Turns on debugging for the Fault Manager reliability metric data (fm_metric_dir) process.
	debug fault manager perl	Turns on debugging for the Fault Manager perl process.
	debug fault manager scriptdir	Turns on debugging for the Fault Manager fm_script_dir process.
	debug fault manager server	Turns on debugging for the Fault Manager server process.
	debug fault manager tcl	Turns on debugging for the Fault Manager tclsh interpreter.
	undebug	Enters debugging mode to disable or reset multiple active debug command sessions.

debug fault manager api

To turn on debugging for the Fault Manager application program interface (API), use the **debug fault manager api** command in EXEC mode. To turn off debugging for the Fault Manager API, use the **no** form of this command.

```
debug fault manager api {calls | errors} [process process-name | job jobid] [location node-id]
```

```
no debug fault manager api {calls | errors} [process process-name | job jobid] [location node-id]
```

Syntax Description

calls	Debugs calls to Fault Manager client API.
errors	Debugs errors in the Fault Manager client API library.
process <i>process-name</i>	(Optional) Displays Fault Manager API debug information for a specific process. Process name or PID.
job <i>jobid</i>	(Optional) Displays Fault Manager API debug information for a specific job identifier. Job identifier. Range is 0 to 4294967295.
location <i>node-id</i>	(Optional) Displays Fault Manager API debug information for a specified location. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.

Defaults

Debugging is disabled.

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples

The following example shows how to enable Fault Manager API debugging:

```
RP/0/RP0/CPU0:router# debug fault manager api
```

Related Commands	Command	Description
	debug fault manager all	Turns on debugging for the Fault Manager.
	debug fault manager fd	Turns on debugging for a particular Fault Manager fault detector.
	debug fault manager metricdir	Turns on debugging for the Fault Manager reliability metric data (fm_metric_dir) process.
	debug fault manager perl	Turns on debugging for the Fault Manager perl process.
	debug fault manager scriptdir	Turns on debugging for the Fault Manager fm_script_dir process.
	debug fault manager server	Turns on debugging for the Fault Manager server process.
	debug fault manager tcl	Turns on debugging for the Fault Manager tclsh interpreter.
	undebug	Enters debugging mode to disable or reset multiple active debug command sessions.

debug fault manager fd

To turn on debugging for a particular Fault Manager fault detector, use the **debug fault manager fd** command in EXEC mode. To turn off debugging for a particular Fault Manager fault detector, use the **no** form of this command.

```
debug fault manager fd { cli | counter | drvinfra | hardware | statistics | syslog | sysmgr [location
node-id] | timer | wdsysmon [location node-id] }
```

```
no debug fault manager fd { cli | counter | drvinfra | hardware | statistics | syslog | sysmgr
[location node-id] | timer | wdsysmon [location node-id] }
```

Syntax Description

cli	Displays CLI fault detector debug information.
counter	Displays counter fault detector debug information.
drvinfra	Displays driver/infra fault detector debug information.
hardware	Displays hardware (envmon) fault detector debug information.
statistics	Displays statistics fault detector debug information.
syslog	Displays SYSLOG fault detector debug information.
sysmgr	Displays SYSMGR fault detector debug information.
location node-id	(Optional) Displays Fault Manager fault detector debug information for a specified location. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.
timer	Displays timer fault detector debug information.
wdsysmon	Displays WDSYSMON fault detector debug information.

Defaults

Debugging is disabled.

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples

The following example shows how to enable Fault Manager fault detector debugging:

```
RP/0/RP0/CPU0:router# debug fault manager fd
```

Related Commands	Command	Description
	debug fault manager all	Turns on debugging for the Fault Manager.
	debug fault manager api	Turns on debugging for the Fault Manager API.
	debug fault manager metricdir	Turns on debugging for the Fault Manager reliability metric data (fm_metric_dir) process.
	debug fault manager perl	Turns on debugging for the Fault Manager perl process.
	debug fault manager scriptdir	Turns on debugging for the Fault Manager fm_script_dir process.
	debug fault manager server	Turns on debugging for the Fault Manager server process.
	debug fault manager tcl	Turns on debugging for the Fault Manager tclsh interpreter.
	undebug	Enters debugging mode to disable or reset multiple active debug command sessions.

debug fault manager metricdir

To turn on debugging for the Fault Manager `fm_metric_dir` process, use the **debug fault manager metricdir** command in EXEC mode. To turn off debugging for the Fault Manager `fm_metric_dir` process, use the **no** form of this command.

debug fault manager metricdir

no debug fault manager metricdir

Syntax Description

This command has no arguments or keywords.

Defaults

Debugging is disabled.

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples

The following example shows how to enable Fault Manager `fm_metric_dir` process debugging:

```
RP/0/RP0/CPU0:router# debug fault manager metricdir
```

Related Commands

Command	Description
debug fault manager all	Turns on debugging for the Fault Manager.
debug fault manager api	Turns on debugging for the Fault Manager API.
debug fault manager fd	Turns on debugging for a particular Fault Manager fault detector.
debug fault manager perl	Turns on debugging for the Fault Manager perl process.
debug fault manager scriptdir	Turns on debugging for Fault Manager <code>fm_script_dir</code> process.
debug fault manager server	Turns on debugging for Fault Manager server process.
debug fault manager tcl	Turns on debugging for the Fault Manager tclsh interpreter.
undebug	Enters debugging mode to disable or reset multiple active debug command sessions.

debug fault manager perl

To turn on debugging for the Fault Manager perl process, use the **debug fault manager perl** command in EXEC mode. To turn off debugging for the Fault Manager perl process, use the **no** form of this command.

debug fault manager perl

no debug fault manager perl

Syntax Description This command has no arguments or keywords.

Defaults Debugging is disabled.

Command Modes EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples

The following example shows how to enable Fault Manager perl process debugging:

```
RP/0/RP0/CPU0:router# debug fault manager perl
```

Related Commands

Command	Description
debug fault manager all	Turns on debugging for the Fault Manager.
debug fault manager api	Turns on debugging for the Fault Manager API.
debug fault manager fd	Turns on debugging for a particular Fault Manager fault detector.
debug fault manager scriptdir	Turns on debugging for the Fault Manager fm_script_dir process.
debug fault manager server	Turns on debugging for the Fault Manager server process.
debug fault manager tcl	Turns on debugging for the Fault Manager tclsh interpreter.
undebug	Enters debugging mode to disable or reset multiple active debug command sessions.

debug fault manager scriptdir

To turn on debugging for the Fault Manager `fm_script_dir` process, use the **debug fault manager scriptdir** command in EXEC mode. To turn off debugging for the Fault Manager `fm_script_dir` process, use the **no** form of this command.

debug fault manager scriptdir

no debug fault manager scriptdir

Syntax Description

This command has no arguments or keywords.

Defaults

Debugging is disabled.

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples

The following example shows how to enable Fault Manager `fm_script_dir` process debugging:

```
RP/0/RP0/CPU0:router# debug fault manager scriptdir
```

Related Commands

Command	Description
debug fault manager all	Turns on debugging for the Fault Manager.
debug fault manager api	Turns on debugging for the Fault Manager API.
debug fault manager fd	Turns on debugging for a particular Fault Manager fault detector.
debug fault manager metricdir	Turns on debugging for the Fault Manager reliability metric data (<code>fm_metric_dir</code>) process.
debug fault manager perl	Turns on debugging for the Fault Manager perl process.
debug fault manager server	Turns on debugging for the Fault Manager server process.
debug fault manager tcl	Turns on debugging for the Fault Manager tclsh interpreter.
undebug	Enters debugging mode to disable or reset multiple active debug command sessions.

debug fault manager server

To turn on debugging for the Fault Manager server process, use the **debug fault manager server** command in EXEC mode. To turn off debugging for the Fault Manager server process, use the **no** form of this command.

debug fault manager server {events | scheduling}

no debug fault manager server {events | scheduling}

Syntax Description

events	Debugs Fault Manager server events.
scheduling	Debugs Fault Manager server policy scheduling.

Defaults

Debugging is disabled.

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use this command to turn on debugging for the Fault Manager server process.

Examples

The following example shows how to enable Fault Manager server process debugging:

```
RP/0/RP0/CPU0:router# debug fault manager server
```

Related Commands

Command	Description
debug fault manager all	Turns on debugging for the Fault Manager.
debug fault manager api	Turns on debugging for the Fault Manager API.
debug fault manager fd	Turns on debugging for a particular Fault Manager fault detector.
debug fault manager metricdir	Turns on debugging for the Fault Manager reliability metric data (fm_metric_dir) process.

Command	Description
debug fault manager tcl	Turns on debugging for the Fault Manager tclsh interpreter.
undebug	Enters debugging mode to disable or reset multiple active debug command sessions.

debug fault manager tcl

To turn on debugging for the Fault Manager tclsh interpreter, use the **debug fault manager tcl** command in EXEC mode. To turn off debugging for the Fault Manager tclsh interpreter, use the **no** form of this command.

debug fault manager tcl

no debug fault manager tcl

Syntax Description This command has no arguments or keywords.

Defaults Debugging is disabled.

Command Modes EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples

The following example shows how to enable Fault Manager tclsh interpreter debugging:

```
RP/0/RP0/CPU0:router# debug fault manager tcl
```

Related Commands

Command	Description
debug fault manager all	Turns on debugging for the Fault Manager.
debug fault manager api	Turns on debugging for the Fault Manager API.
debug fault manager fd	Turns on debugging for a particular Fault Manager fault detector.
debug fault manager metricdir	Turns on debugging for the Fault Manager reliability metric data (fm_metric_dir) process.
debug fault manager scriptdir	Turns on debugging for the Fault Manager fm_script_dir process.
debug fault manager server	Turns on debugging for Fault Manager server process.
undebug	Enters debugging mode to disable or reset multiple active debug command sessions.



File System Debug Commands on Cisco IOS XR Software

This chapter describes the filecopy debug command used to debug Cisco IOS XR software.

debug filecopy

To enable debugging of the file copy process, use the **debug filecopy** command in EXEC mode. To turn off the debugging output, use the **no** form of this command.

```
debug filecopy bag {all | gets | sets}
```

```
no debug filecopy bag {all | gets | sets}
```

Syntax Description

bag	Specifies filecopy bag operations.
all	Specifies filecopy bag all.
gets	Specifies filecopy bag gets.
sets	Specifies filecopy bag sets.

Defaults

No default behavior or values

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples

The following example shows how to enable file copy process debugging:

```
RP/0/RP0/CPU0:router# debug filecopy bag all
```




Manageability Debug Commands on Cisco IOS XR Software

This chapter describes the system manager commands used to debug Cisco IOS XR software.

debug sysmgr

To enable debugging of sysmgr-related activities that include the starting, restarting, and upgrading of processes and nodes, use the **debug sysmgr** command in EXEC mode. To turn off debugging output, use the **no** form of the command.

debug sysmgr [**location** *node-id*]

no debug sysmgr [**location** *node-id*]

Syntax Description

location *node-id* (Optional) Displays debugging information for a specified location. The *node-id* argument is entered in the *rack/slot/module* notation.

Defaults

No default behavior or values

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples

The following example shows how to enable system manager debugging:

```
RP/0/RP0/CPU0:router# debug sysmgr
RP/0/RP0/CPU0:router# process restart ntpd

RP/0/RP0/CPU0:Aug 15 19:13:34.091 : sysmgr[79]: sysmgr_control_ops: event PROC_RESTART
caller sysmgr_control name ntpd jid -1 RP/0/RP0/CPU0:Aug 15 19:13:34.093 : sysmgr[79]:
sysmgr_control_pcb: type PROC_RESTART state PRUN name ntpd(1) jid 196 caller
sysmgr_control RP/0/RP0/CPU0:Aug 15 19:13:34.098 : sysmgr[79]: sysmgr_kill_proc: ntpd
requested by sysmgr_control RP/0/RP0/CPU0:Aug 15 19:13:34.103 : sysmgr[79]: ntpd(1) (jid
196) is being killed with SIGTERM RP/0/RP0/CPU0:Aug 15 19:13:34.104
: sysmgr[79]:
timer_create: 5, 196, 3, 30
.
.
.
```

debug xml

To display Extensible Markup Language (XML) infrastructure messages, use the **debug xml** command in EXEC mode. To turn debugging off, use the **no** form of this command.

debug xml

no debug xml

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples

The following example shows how to enable XML infrastructure debugging:

```
RP/0/RP0/CPU0:router# debug xml
```

Related Commands

Command	Description
debug xml core	Displays core XML infrastructure messages.
debug xml dom	Displays DOM infrastructure messages.
debug xml parser	Displays messages related to the XML parser module.

debug xml core

To display Extensible Markup Language (XML) infrastructure core messages, use the **debug xml core** command in EXEC mode. To turn debugging off, use the **no** form of this command.

debug xml core

no debug xml core

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Command History	Release	Modification
	Release 2.0	This command was introduced on the Cisco CRS-1.
	Release 3.0	No modification.
	Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples The following example shows how to enable XML infrastructure core debugging:

```
RP/0/RP0/CPU0:router# debug xml core
```

Related Commands	Command	Description
	debug xml	Displays XML infrastructure messages.
	debug xml dom	Displays DOM infrastructure messages.
	debug xml parser	Displays messages related to the XML parser module.

debug xml dom

To display Document Object Model (DOM) infrastructure messages, use the **debug xml dom** command in EXEC mode. To turn debugging off, use the **no** form of this command.

debug xml dom

no debug xml dom

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Command History	Release	Modification
	Release 2.0	This command was introduced on the Cisco CRS-1.
	Release 3.0	No modification.
	Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples The following example shows how to enable XML DOM infrastructure debugging:

```
RP/0/RP0/CPU0:router# debug xml dom
```

Related Commands	Command	Description
	debug xml	Displays XML infrastructure messages.
	debug xml core	Displays core XML infrastructure messages.
	debug xml parser	Displays messages related to the XML parser module.

debug xml parser

To display messages from the Extensible Markup Language (XML) parser, use the **debug xml parser** command in EXEC mode. To turn debugging off, use the **no** form of this command.

debug xml parser

no debug xml parser

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Use the **debug xml parser** command to view messages from the XML parser.

Examples

The following example shows how to enable XML parser debugging:

```
RP/0/RP0/CPU0:router# debug xml parser
```

Related Commands

Command	Description
debug xml	Displays XML infrastructure messages.
debug xml core	Displays XML infrastructure core messages.
debug xml dom	Displays DOM infrastructure messages.



NTP Debug Commands on Cisco IOS XR Software

This chapter describes the Network Time Protocol (NTP) command used to debug Cisco IOS XR software.

debug ntp

To debug NTP functionality, use the **debug ntp** command in EXEC mode. To turn off debugging output, use the **no** form of this command.

```
debug ntp {adjust | authentication | broadcast | events | loopfilter | packets [peer peer-address]
| params | refclock | select | sync | validity}
```

```
no debug ntp {adjust | authentication | broadcast | events | loopfilter | packets [peer
peer-address] | params | refclock | select | sync | validity}
```

Syntax Description

adjust	Displays debug messages when adjusting system clock or stepping system time.
authentication	Displays debug messages that have authentication key values.
broadcast	Displays debug messages for NTP broadcasts.
events	Displays events reported by reference clocks.
loopfilter	Displays messages generated in broadcast handling or clock filtering.
packets	Displays messages generated with NTP packets.
peer <i>peer-address</i>	(Optional) Displays NTP packets for a specified peer IP address.
params	Displays system clock parameter messages.
refclock	Displays messages for reference clocks.
select	Displays clock selection messages.
sync	Displays clock synchronization messages.
validity	Displays peer clock validity messages.

Defaults

No default behavior or values

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples

The following example shows how to enable NTP events debugging:

```
RP/0/RP0/CPU0:router# debug ntp events
```




Process and Memory Management Debug Commands on Cisco IOS XR Software

This chapter describes the process and memory management debug commands used to debug Cisco IOS XR software.

debug dumper

To enable debugging of the memory dumper, use the **debug dumper** command in EXEC mode. To turn off the debugging output, use the **no** form of this command.

```
debug dumper {kernel {all | min} | process [location node-id]}
```

```
no debug dumper {kernel [all | min] | process [location node-id]}
```

Syntax Description

kernel	Kernel dumper debug.
all	Displays full kernel debug information.
min	Displays minimal debug information.
process	Process core dumper resource manager debug.
location <i>node-id</i>	(Optional) Displays memory dumper debugging information for a specified location. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.

Defaults

No default behavior or values

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples

The following example shows how to enable memory dumper debugging:

```
RP/0/RP0/CPU0:router# debug dumper kernel
```

debug placement

To debug the process placement daemon, use the **debug placement** command in EXEC mode. To turn off debugging output, use the **no** form of this command.

```
debug placement {algorithm | all | config | edm | main | nodes | placement | programs |
properties | typical}
```

```
no debug placement {algorithm | all | config | edm | main | nodes | placement | programs |
properties | typical}
```

Syntax Description		
	algorithm	Displays placed algorithm information.
	all	Displays all placed debugging.
	config	Displays placed config information.
	edm	Displays placed EDM information.
	main	Displays placed main information.
	nodes	Displays placed nodes information.
	placement	Displays placed placement information.
	programs	Displays placed programs information.
	properties	Displays placed properties information.
	typical	Displays typical placed debugging information (everything except edm and algorithm).

Defaults No default behavior or values

Command Modes EXEC

Command History	Release	Modification
	Release 2.0	This command was introduced on the Cisco CRS-1.
	Release 3.0	No modification.
	Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples The following example shows how to enable process placement daemon debugging:

```
RP/0/RP0/CPU0:router# debug placement all
```

debug sysdb

To configure the system database debug settings, use the **debug sysdb** command in EXEC mode. To turn off debugging output, use the **no** form of this command.

```
debug sysdb {access | backend | client internal oor connections | edm | explicitlocking | medusa
             {events | node-resolver | receives | registrations | sends} | notifications | server | startup-edm
             | transactions | verification | vs} {location node-id | job | path}
```

```
no debug sysdb {access | backend | client internal oor connections | edm | explicitlocking |
               medusa {events | node-resolver | receives | registrations | sends} | notifications | server |
               startup-edm | transactions | verification | vs} {location node-id | job | path}
```

Syntax Description

access	Displays access debug information.
backend	Displays backend debug information.
client	Displays client debug information.
internal	Displays internal client debug information.
oor	Displays oor information.
connections	Displays connection debug information.
edm	Displays edm debug information.
explicitlocking	Displays explicit locking debug information.
medusa	Displays medusa debug information.
events	Displays medusa callback events debug information.
node-resolver	Displays medusa node resolver debug information.
receives	Displays medusa transport receives debug information.
registrations	Displays medusa registrations debug information.
sends	Displays medusa transport sends debug information.
notification	Displays notification debug information.
server	Displays server debug information.
startup-edm	Displays edm startup debug information.
transaction	Displays transaction debug information.
verification	Displays verification debug information.
vs	Displays verification startup debug information.
location <i>node-id</i>	Displays system database debug information for a specified location. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.
job	Job ID.
path	Absolute path of the item being verified.

Defaults

No default behavior or values

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples

The following example shows how to configure the system database debug settings:

```
RP/0/RP0/CPU0:router# debug sysdb access location 0/0/cpu0
```

■ debug sysdb



SNMP Debug Commands on Cisco IOS XR Software

This chapter describes the commands used to debug the Cisco IOS XR Simple Network Management Protocol (SNMP) software.

debug snmp bag

To enable the debug messages for the Simple Network Management Protocol (SNMP) bag operation use the **debug snmp bag** command in EXEC mode. To disable the display of debug messages, use the **no** form of this command.

debug snmp bag

no debug snmp bag

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples

The following example shows how to enable SNMP bag operation debugging:

```
RP/0/RP0/CPU0:router# debug snmp bag
```

debug snmp config

To configure the Simple Network Management Protocol (SNMP) database transactions, use the **debug snmp config** command in EXEC mode. To disable SNMP configuration transactions, use the **no** form of this command.

debug snmp config

no debug snmp config

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Command History	Release	Modification
	Release 2.0	This command was introduced on the Cisco CRS-1.
	Release 3.0	No modification.
	Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples The following example shows how to enable SNMP database transaction debugging:

```
RP/0/RP0/CPU0:router# debug snmp config
```

debug snmp dll

To load or unload the Simple Network Management Protocol (SNMP) Management Information Base (MIB) Dynamic Link Library (DLL), use the **debug snmp dll** command in EXEC mode. To disable SNMP configuration transactions, use the **no** form of this command.

debug snmp dll

no debug snmp dll

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples

The following example shows how to enable SNMP MIB DLL debugging:

```
RP/0/RP0/CPU0:router# debug snmp dll
```

debug snmp io

To display the input or output to or from the Simple Network Management Protocol (SNMP) transports, use the **debug snmp io** command in EXEC mode. To disable SNMP configuration transactions, use the **no** form of this command.

debug snmp io

no debug snmp io

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples

The following example shows how to enable SNMP transport debugging:

```
RP/0/RP0/CPU0:router# debug snmp io
```

debug snmp packets

To display the Simple Network Management Protocol (SNMP) incoming or outgoing data packets, use the **debug snmp packets** command in EXEC mode. To disable SNMP configuration transactions, use the **no** form of this command.

debug snmp packets

no debug snmp packets

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples

The following example shows how to enable SNMP data packets debugging:

```
RP/0/RP0/CPU0:router# debug snmp packets
```

debug snmp mib

To display the Simple Network Management Protocol (SNMP) Management Information Base (MIB) data, use the **debug snmp mib** commands in EXEC mode. To disable SNMP configuration transactions, use the **no** form of this command.

```
debug snmp mib { entitymib | all | arpmib | bgpmib | cdpmib | ciscobgppamib |
ciscoprocessmib | ciscosyslogmib | ciscosystemmib | confcopymib | configmanmib |
dot3admib | enhancedmempoolmib | ethermib | fabhfrmib | fabmcastapplmib |
fabmcastmib | flashmib | hsrpmib | icmpmib [location node-id] | ietftcpmib | ietfudpmib |
ifmib | ipmib [location node-id] | ipv4forward | ipv6forward | ipv6mib | mempoolmib |
mldmib | mplsldpmib | mplsrmib | mplstemib | mroutemib | ospfmib | ospfv3mib | pimmib
| qosmib | sonetmib | tcpmib | udpmib | vlanifrelationmib }
```

```
no debug snmp mib { entitymib | all | arpmib | bgpmib | cdpmib | ciscobgppamib |
ciscoprocessmib | ciscosyslogmib | ciscosystemmib | confcopymib | configmanmib |
dot3admib | enhancedmempoolmib | ethermib | fabhfrmib | fabmcastapplmib |
fabmcastmib | flashmib | hsrpmib | icmpmib [location node-id] | ietftcpmib | ietfudpmib |
ifmib | ipmib [location node-id] | ipv4forward | ipv6forward | ipv6mib | mempoolmib |
mldmib | mplsldpmib | mplsrmib | mplstemib | mroutemib | ospfmib | ospfv3mib | pimmib
| qosmib | sonetmib | tcpmib | udpmib | vlanifrelationmib }
```

Syntax Description

<i>entitymib</i>	Enables Entity MIB debugging.
all	Enables or disable all MIB debugging.
arpmib	Enables ARP MIB debugging.
bgpmib	Enables BGP MIB debugging.
cdpmib	Enables CDP debugging.
ciscobgppamib	Enables Cisco BGP PA MIB debugging.
ciscoprocessmib	Enables Cisco process MIB debugging.
ciscosyslogmib	Enables Cisco system log MIB debugging.
ciscosystemmib	Enables Cisco system MIB debugging.
confcopymib	Enables configuration copy MIB debugging.
configmanmib	Enables configuration management MIB debugging.
dot3admib	Enables dot 3 administration MIB debugging.
enhancedmempoolmib	Enables enhanced memory pool MIB debugging.
enhimgemib	Enables enhance image MIB debugging.
ethermib	Enables Ethernet MIB debugging.
fabhfrmib	Enables fabric CRS-1 MIB debugging.
fabmcastapplmib	Enables fabric multicast application MIB debugging.
fabmcastmib	Enables fabric multicast MIB debugging.
flashmib	Enables flash MIB debugging.
hsrpmib	Enables HSRP MIB debugging.
icmpmib	Enables ICMP MIB debugging.
location <i>node-id</i>	Displays ICMP MIB debug information for a specified location. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.

ietfcpmib	Enables IETF TCP MIB debugging.
ietudpmib	Enables IET UDP MIB debugging.
ifmib	Enables interface MIB debugging.
ipmib	Enables IP MIB debugging.
location <i>node-id</i>	Displays IP MIB debug information for a specified location. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.
ipv4forward	Enables IPv4 forward MIB debugging.
ipv6forward	Enables IPv6 forward MIB debugging.
ipv6mib	Enables IPv6 MIB debugging.
mempoolmib	Enables memory pool MIB debugging.
mldmib	Enables MLD MIB debugging.
mplsldpmib	Enables MPLS LDP MIB debugging.
mplslsrmb	Enables MPLS LSRMIB debugging.
mplstemib	Enables MPLS TE MIB.
mroutemib	Enables mroute MIB debugging.
ospfmib	Enables OSPF MIB debugging.
ospfv3mib	Enables OSPFv3 MIB debugging.
pimmib	Enables PIM MIB debugging.
qosmib	Enables QoS MIB debugging.
sonetmib	Enables SONET MIB debugging.
tcpmib	Enables TCP MIB debugging.
udpmib	Enables UPD MIB debugging.
vlanifreltionmib	Enables VLAN interface relation MIB debugging.

Defaults

No default behavior or values

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples

The following example shows how to enable SNMP MIB data debugging:

```
RP/0/RP0/CPU0:router# debug snmp mib all
```

debug snmp sysdb

To display the Simple Network Management Protocol (SNMP) database transactions, use the **debug snmp sysdb** command in EXEC mode. To disable SNMP configuration transactions, use the **no** form of this command.

debug snmp sysdb

no debug snmp sysdb

Syntax Description This command has no arguments or keywords.

Defaults No default behavior or values

Command Modes EXEC

Command History	Release	Modification
	Release 2.0	This command was introduced on the Cisco CRS-1.
	Release 3.0	No modification.
	Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples The following example shows how to enable SNMP database transactions debugging:

```
RP/0/RP0/CPU0:router# debug snmp sysdb
```



Software Package Management Debug Commands on Cisco IOS XR Software

This chapter describes the commands used to debug Cisco IOS XR software package management.

debug install id

To enable the display of the debug messages for the installation director, use the **debug install id** command in EXEC mode. To disable the display of debug messages, use the **no** form of this command.

```
debug install id [chkpt | compatibility {checks | errors | parser} | config | db | ens | events |
install] location node-id
```

```
no debug install id [chkpt | compatibility {checks | errors | parser} | config | db | ens | events |
install] location node-id
```

Syntax Description		
chkpt		Displays checkpoint operations.
compatibility		Displays installation package compatibility operations.
checks		Displays installation package compatibility checking messages.
errors		Displays installation package compatibility error messages.
parser		Displays installation package compatibility parser operations messages.
config		Displays configuration operations messages.
db		Displays database operations messages.
ens		Displays ENS operations message.
events		Displays received events messages.
install		Displays installation operation messages.
location <i>node-id</i>		Displays debug messages for the installation director for a specified location. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.

Defaults No default behavior or values

Command Modes EXEC

Command History	Release	Modification
	Release 2.0	This command was introduced on the Cisco CRS-1.
	Release 3.0	No modification.
	Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples The following example shows how to enable installation director debugging:

```
RP/0/RP0/CPU0:router# debug install id location 0/1/cpu0
```

debug install ih

To enable the display of the debug messages for the installation helper, use the **debug install ih** command in EXEC mode. To disable the display of debug messages, use the **no** form of this command.

```
debug install ih [clean | ens | sync | sysdb] [location node-id]
```

```
no debug install ih [clean | ens | sync | sysdb] [location node-id]
```

Syntax Description

clean	(Optional) Displays debug messages for the install helper cleaning code.
ens	(Optional) Displays debug messages for the install helper ens code.
sync	(Optional) Displays debug messages for the install helper sync code.
sysdb	(Optional) Displays debug messages for the install helper system database code.
location <i>node-id</i>	(Optional) Displays debug messages for the install helper for a specified location. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.

Defaults

No default behavior or values

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples

The following example shows how to enable installation helper debugging:

```
RP/0/RP0/CPU0:router# debug install ih location 0/1/cpu0
```

debug install instcmd

To enable the display of the debug messages for executable installation commands, use the **debug install instcmd** command in EXEC mode. To disable the display of debug messages, use the **no** form of this command.

debug install instcmd [**location** *node-id*]

no debug install instcmd [**location** *node-id*]

Syntax Description	location <i>node-id</i>	(Optional) Displays debug messages for executable installation commands for a specified location. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.
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Defaults	No default behavior or values
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Command Modes	EXEC
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Command History	Release	Modification
	Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.	
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.	

Usage Guidelines	To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the <i>Configuring AAA Services on Cisco IOS XR Software</i> module of the <i>Cisco IOS XR System Security Configuration Guide</i> .
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Examples	The following example shows how to enable executable installation commands debugging:
-----------------	---

```
RP/0/RP0/CPU0:router# debug install instcmd location 0/1/cpu0
```

debug install inventory

To enable the display of the debug messages for the installed inventory commands, use the **debug install inventory** command in EXEC mode. To disable the display of debug messages, use the **no** form of this command.

```
debug install inventory [process process-name | job jobid] [location node-id]
```

```
no debug install inventory [process process-name | job jobid] [location node-id]
```

Syntax Description

process <i>process-name</i>	(Optional) Displays debug messages for the installed inventory commands for a specific process. Process name or PID.
job <i>jobid</i>	(Optional) Displays debug messages for the installed inventory commands for a specific job identifier. Job identifier. Range is 0 to 4294967295.
location <i>node-id</i>	(Optional) Displays debug messages for the installed inventory commands for a specified location. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.

Defaults

No default behavior or values

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples

The following example shows how to enable installed inventory commands debugging:

```
RP/0/RP0/CPU0:router# debug install inventory location 0/1/cpu0
```

debug install loadpath

To enable the display of the debug messages for loadpath library, use the **debug install loadpath** command in EXEC mode. To disable the display of debug messages, use the **no** form of this command.

debug install loadpath [**process** *process-name* | **job** *jobid*] [**location** *node-id*]

no debug install loadpath [**process** *process-name* | **job** *jobid*] [**location** *node-id*]

Syntax Description

process <i>process-name</i>	(Optional) Displays debug messages for a loadpath library for a specific process. Process name or PID.
job <i>jobid</i>	(Optional) Displays debug messages for a loadpath library for a specific job identifier. Job identifier. Range is 0 to 4294967295.
location <i>node-id</i>	(Optional) Displays debug messages for a loadpath library for a specified location. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.

Defaults

No default behavior or values

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples

The following example shows how to enable loadpath library debugging:

```
RP/0/RP0/CPU0:router# debug install loadpath location 0/1/cpu0
```


debug install notify

To enable the display of the debug notification messages, use the **debug install notify** command in EXEC mode. To disable the display of debug messages, use the **no** form of this command.

debug install notify [blobs | callbacks | dx | lists test | notifications | payload | transid] [process *process-name* | job *jobid*] [location *node-id*]

no debug install notify [callbacks | dx | lists test | notifications | payload | transid] [process *process-name* | job *jobid*] [location *node-id*]

Syntax Description		
blobs	(Optional)	Installs blobbification and deblobbification routines.
callbacks	(Optional)	Installs the callback routines.
dx	(Optional)	Installs the data exchange routines.
lists test	(Optional)	Displays the messages for the installation list management code.
notifications	(Optional)	Installs the notification routines.
payload	(Optional)	Installs the payload routines.
transid	(Optional)	Installs the transaction ID routines.
process <i>process-name</i>	(Optional)	Displays debug notification messages for a specific process. Process name or PID.
job <i>jobid</i>	(Optional)	Displays debug notification messages for a specific job identifier. Job identifier. Range is 0 to 4294967295.
location <i>node-id</i>	(Optional)	Displays debug notification messages for a specified location. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.

Defaults No default behavior or values

Command Modes EXEC

Command History	Release	Modification
	Release 2.0	This command was introduced on the Cisco CRS-1.
	Release 3.0	No modification.
	Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples The following example shows how to enable notification messages:

```
RP/0/RP0/CPU0:router# debug install notify location 0/1/cpu0
```

debug install replicator

To enable the display of the debug messages for the installation replicator code, use the **debug install replicator** command in EXEC mode. To disable the display of debug messages, use the **no** form of this command.

debug install replicator [**process** *process-name* | **job** *jobid*] [**location** *node-id*]

no debug install replicator [**process** *process-name* | **job** *jobid*] [**location** *node-id*]

Syntax Description

location <i>node-id</i>	(Optional) Displays debug messages for installation replicator code for a specified location. The <i>node-id</i> argument is entered in the <i>rack/slot/module</i> notation.
process <i>process-name</i>	(Optional) Displays debug messages for installation replicator code for a specific process. Process name or PID.
job <i>jobid</i>	(Optional) Displays debug messages for installation replicator code for a specific job identifier. Job identifier. Range is 0 to 4294967295.

Defaults

No default behavior or values

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

Examples

The following example shows how to enable installation replicator code debugging:

```
RP/0/RP0/CPU0:router# debug install replicator location 0/1/cpu0
```



Terminal Service Debug Commands on Cisco IOS XR Software

This chapter describes the terminal service debug command used to debug Cisco IOS XR software.

debug telnetd

To enable debugging for Telnet events or errors, use the **debug telnetd** command in EXEC mode. To disable debugging output, use the **no** form of this command.

```
debug telnetd {detail | events}
```

```
no debug telnetd {detail | events}
```

Syntax Description

detail	Displays generic debugging information about the flow of server code and its current state.
events	Displays protocol-specific debugging information on events between a Telnet client and its server.

Defaults

No default behavior or values

Command Modes

EXEC

Command History

Release	Modification
Release 2.0	This command was introduced on the Cisco CRS-1.
Release 3.0	No modification.
Release 3.2	This command was supported on the Cisco XR 12000 Series Router.

Usage Guidelines

To use this command, you must be in a user group associated with a task group that includes the proper task IDs. For detailed information about user groups and task IDs, see the *Configuring AAA Services on Cisco IOS XR Software* module of the *Cisco IOS XR System Security Configuration Guide*.

The **debug telnetd** command is used primarily for diagnostic purposes and to monitor Telnet events.

Examples

The following example shows how to enable Telnet event debugging:

```
RP/0/RP0/CPU0:router# debug telnetd events
```



DHR	Cisco IOS XR Interface and Hardware Component Debug Command Reference
DIR	Cisco IOS XR IP Addresses and Services Debug Command Reference
DMCR	Cisco IOS XR Multicast Debug Command Reference
DMPR	Cisco IOS XR MPLS Debug Command Reference
DQR	Cisco IOS XR Modular Quality of Service Debug Command Reference
DRR	Cisco IOS XR Routing Debug Command Reference
DSMR	Cisco IOS XR System Management Debug Command Reference
DSR	Cisco IOS XR System Security Debug Command Reference

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