

Manageability Commands

This chapter describes the Cisco IOS XR software commands used to enable the HTTP server, enable router management through Extensible Markup Language (XML) agent services, and support the Common Object Request Broker Architecture (CORBA) infrastructure.

The XML Parser Infrastructure provides parsing and generation of XML documents with Document Object Model (DOM), Simple API for XML (SAX), and Document Type Definition (DTD) validation capabilities:

- DOM allows customers to programmatically create, manipulate, and generate XML documents.
- SAX supports user-defined functions for XML tags.
- DTD allows for validation of defined document types.
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http server

To enable the HTTP server on the router and enable access to the Craft Works Interface (CWI), use the **http** server command in global configuration mode. To disable the HTTP server, use the **no** form of this command.

http server [ssl] [access-group name] no http server

Syntax Description	ssl	(Optional) Enables Secure Socket Layer (SSL).
	access-group name	(Optional) Enables access to the CWI from IP addresses that meet the conditions of the access control list (ACL) specified for the <i>name</i> argument.
Command Default	The HTTP server is disabled.	
Command Modes	Global configuration	
Command History	Release	Modification
	Release 2.0	This command was introduced.
	Release 3.2	Support for access groups was added. The access-group keyword and <i>name</i> argument were added to support access groups.
Usage Guidelines		ast be in a user group associated with a task group that includes appropriate task nent is preventing you from using a command, contact your AAA administrator
	Use the http server comman	nd to enable the HTTP server on your router.
	To display the home page of t IP address. If a name has bee	he router, use a Web browser pointed to http://x.x.x.x, where x.x.x.x is the router n set, use http://router-name.
		TTP over a secure socket. This command enables the HTTP server to run SSL files provided by the HTTP server of the router and disables access through the
•		ables authentication by default. After the HTTP server has been enabled, you a username and password to access web pages on the HTTP server.
Note	For information about how to a	hables the HTTP server process on Management Ethernet interfaces by default. enable HTTP server on other inband interfaces, see the <i>Implementing Management</i> <i>DS XR Software</i> module in <i>System Security Configuration Guide for Cisco CRS</i>

Task ID Task ID Operations config-services read,

write

The following example shows how to enable the HTTP server on the router:

RP/0/RP0/CPU0:router(config) # http server

The following example shows how to enable SSL to run HTTP over a secure socket:

RP/0/RP0/CPU0:router(config) # http server ssl

The following example shows how to enable SSL to run HTTP over a secure socket and to enable access to the CWI from only IP addresses that meet the conditions of the access group named test:

RP/0/RP0/CPU0:router(config) # http server ssl access-group test

The following sample output from the **show ipv4 access-lists** commands displays the IPv4 access list named test:

RP/0/RP0/CPU0:router# show ipv4 access-lists test

ipv4 access-list test 10 deny ip host 171.71.163.96 any 20 permit ip host 64.102.48.34 any

ipv4 disable

To disable IPv4 XML transport, use the **ipv4 disable** command in XML agent configuration mode. To enable IPv4 XML transport, use the **no** form of this command.

ipv4 disable no ipv4 disable

Syntax Description This command has no keywords or arguments.

Command Default IPv4 XML transport is enabled by default.

Command Modes XML agent configuration

 Command History
 Release
 Modification

 Release
 This command was introduced.

 4.1.0
 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.

Task ID	Task ID	Operation
	config-services	<i>,</i>
		write

This example illustrates how to disable IPv4 XML transport:

```
RP/0/RP0/CPU0:router# config
RP/0/RP0/CPU0:router(config)# xml agent
RP/0/RP0/CPU0:router(config-xml-agent) ipv4 disable
```

Related Topics

ipv6 enable (XML), on page 5

ipv6 enable (XML)

To enable IPv6 XML transport, use the **ipv6 enable** command in XML agent configuration mode. To disable IPv6 XML transport, use the **no** form of this command.

ipv6 enable no ipv6 enable

Syntax Description This command has no keywords or arguments.

Command Default IPv6 XML transport is disabled by default.

Command Modes XML agent configuration

 Command History
 Release
 Modification

 Release
 This command was introduced.

 4.1.0
 Release

 Solution
 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.

Task ID	Task ID	Operation	
	config-services	read, write	

This example illustrates how to enable IPv6 XML transport:

```
RP/0/RP0/CPU0:router# config
RP/0/RP0/CPU0:router(config)# xml agent
RP/0/RP0/CPU0:router(config-xml-agent) ipv6 enable
```

Related Topics

ipv4 disable, on page 4

iteration

To configure the iteration size for large XML agent responses, use the iteration command in xml agent configuration mode. To revert to the default iteration settings, use the **no** form of this command.

iteration {off |on size iteration-size} no iteration

Syntax Description	off	Disables iteration, meaning that the entire XML response is returned, regardless of its size. Use of this option is not recommended.		
	on	Enables iteration, meaning that large XML responses are broken into chunks according to the iteration chunk size.		
	size iteration-size	Specifies the size of the iteration chunk, in Kbytes. Values can range from 1 to 100,000.		
Command Default	Iteration is enabled	t; the <i>iteration-size</i> is 48.		
Command Modes	XML agent			
	TTY XML agent			
	SSL XML agent			
Command History	Release Mo	dification		
	Release 3.9.0 Thi	s command was introduced.		
Usage Guidelines		nd, you must be in a user group associated with a task group that includes appropriate task up assignment is preventing you from using a command, contact your AAA administrator		
	time. External clien command to contro a shorter period of chunks to be receiv	ent returns a large response, it splits the response into chunks and returns one chunk at a nts then need to send a GetNext request to obtain the next chunk. Use the iteration of the size of iteration chunks. A larger chunk value allows larger chunks to be received in time, possibly making the router system busier. A smaller chunk value allows smaller ved over a longer period of time, but does not make the router busy You can also specify completely using the iteration off command.		
Note	It is not recommen	ded to disable iteration, since this could result in large transient memory usage.		
	To specify the TTY command mode.	<i>t</i> or SSL iteration size specifically, use the iteration command from the appropriate		
Task ID	Task ID Op	perations		
	config-services re wi	ad, rite		

Example

The following example shows how to configure the iteration chunk size to 100 Kbytes.

RP/0/RP0/CPU0:router(config) # xml agent
RP/0/RP0/CPU0:router(config-xml)# iteration on size 100

The following example shows how to disable iteration:

```
RP/0/RP0/CPU0:router(config)# xml agent
RP/0/RP0/CPU0:router(config-xml)# iteration off
```

The following example shows how to turn on iteration with the default iteration size:

```
RP/0/RP0/CPU0:router(config)# xml agent
RP/0/RP0/CPU0:router(config-xml)# no iteration off
```

The following example shows how to change the iteration size to the default iteration size.

```
RP/0/RP0/CPU0:router(config) # xml agent
RP/0/RP0/CPU0:router(config-xml) # no iteration on size 100
```

The following example shows how to change the iteration size of the TTY agent to 3 Kbytes:

```
RP/0/RP0/CPU0:router(config) # xml agent tty
RP/0/RP0/CPU0:router(config-xml-tty) # iteration on size 3
```

The following example shows how to turn off the iteration of the SSL agent:

```
RP/0/RP0/CPU0:router(config) # xml agent ssl
RP/0/RP0/CPU0:router(config-xml-ssl)# iteration off
```

Related Topics

xml agent, on page 20 xml agent ssl, on page 21 xml agent tty, on page 22

streaming

To configure the streaming size of the response while the XML agent is retrieving data from the source, use the **streaming** command in the appropriate mode.

streaming on size size in kbytes

Syntax Description	size size in	n kbytes Stream	ing size of the xml response. Range is 1 to 100000.
Command Default	Default is 4	48 KB.	
Command Modes	XML agen	t mode	
Command History	Release	Modification	
	Release 4.1	This command	was introduced.
Usage Guidelines	on the rout	er (the XML age	p-response block size is a configurable value specific to each transport mechanisms int for the dedicated TCP connection and Secure Shell (SSH), Telnet, or Secure ted TCP connection).
Task ID	Task ID	Operation	
	config-serv	vices read, write	

Example

This example shows how to configure the streaming size to 100 KB:

RP/0/RP0/CPU0:router (config) # xml agent
RP/0/RP0/CPU0:router (config-xml) # streaming on size 100

session timeout

To configure an idle timeout for the XML agent, use the **session timeout** command in xml agent configuration mode. To remove the session timeout, use the **no** form of this command.

session timeout timeout

Syntax Description	<i>timeout</i> Amount of idle time in minutes that must pass before the XML agent closes the session. Values can range from 1 to 1440.
Command Default	There is no session timeout.
Command Modes	xml agent
	xml agent ssl
	xml agent tty
Command History	Release Modification
	Release 4.0.0 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.
Task ID	Task ID Operation
	config-services read, write
	The following example illustrates how to configure the dedicated agent to close the session after 5 minutes of idle time:
	<pre>RP/0/RP0/CPU0:router(config)# xml agent RP/0/RP0/CPU0:router(config-xml-agent)# session timeout 5</pre>
	The following example illustrates how to configure the XML TTY agent to close the session after 60 minutes of idle time:
	<pre>RP/0/RP0/CPU0:router(config)# xml agent tty RP/0/RP0/CPU0:router(config-xml-agent-tty)# session timeout 60</pre>
	The following example illustrates how to configure the XML TTY agent to have no timeout (the default):
	RP/0/RP0/CPU0:router(config)# xml agent tty

I

RP/0/RP0/CPU0:router(config-xml-agent)# no session timeout

Related Topics

xml agent, on page 20

show xml schema

To browse the XML schema and data, use the show xml schema command in

EXEC				
mode.				
show xml sch	ema			
This command h	nas no keywords or ar	guments.		
None				
EXEC				
Release		Modification		
Release 3.6.0		This command was introduced.		
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.				
The show xml s and data.	chema command run:	s the XML schema browser so that you can browse the XML schema		
Task ID	Operations			
config-services	read			
This example shows how to enter the XML schema browser and the available commands:				
RP/0/RP0/CPU0:router# show xml schema				
Password: Enter 'help' c	or '?' for help			
config adminoper pwd ls walkdata quit xml-schema[cor	oper adminaction classinfo datalist get exit hfig]:>	action cd list walk hierarchy help		
	mode. show xml school This command H None EXEC Release Release 3.6.0 To use this commission of the show sml signature of the series of the series of the show sml signature of the show small signature of the show sml signature of the show small signature of the show sml signature of the show small signature of the show sml signature of the show small sincluster of the show small signature of the show small si	mode. show xml schema This command has no keywords or arg None EXEC Release Release Release 3.6.0 To use this command, you must be in a IDs. If the user group assignment is pr for assistance. The show xml schema command runs and data. Task ID Operations config-services read This example shows how to enter the RP/0/RP0/CPU0:router# show xml s Username: xxxx Password: Enter 'help' or '?' for help xml-schema[config]:> ? config oper adminoper adminaction pwd classinfo ls datalist walkdata get		

show xml sessions

To display the status of an Extensible Markup Language (XML) session, use the **show xml sessions** command in EXEC mode. show xml sessions [{default|ssl|tty}] [detail] **Syntax Description** Displays the status of the default XML agent. default ssl Displays the status of the XML agents over secure socket layer (SSL). Displays the status of XML agents over telnet. tty detail Displays details regarding the XML sessions. None **Command Default** EXEC **Command Modes Command History** Release Modification Release 4.0.0 This command was introduced. To use this command, you must be in a user group associated with a task group that includes appropriate task **Usage Guidelines** IDs. If the user group assignment is preventing you from using a command, contact your AAA administrator for assistance. Task ID Task ID Operation config-services read Example This example illustrates sample output of the show xml sessions command with no optional keywords specified: RP/0/RP0/CPU0:router# show xml sessions Session Client Agent. User Date State 00000001 192.168.10.85 (default) tty cisco Fri Jun 19 22:42:29 2009 idle 10000001 10.12.24.15 (VRF1) Fri Jun 19 22:32:12 2009 busy default lab This example illustrates sample output of the **show xml sessions** command with the **tty** keyword:

RP/0/RP0/CPU0:router# show xml sessions tty

Session	Client	Agent	User	Date				State
00000001	192.168.10.85 (default)	tty	cisco	Fri Jun	19	22:42:29	2009	idle
00000002	10.12.24.15 (VRF1)	tty	lab	Fri Jun	19	22:32:12	2009	busy

This example illustrates sample output of the show xml sessions command with the detail keyword:

RP/0/RP0/CPU0:router#
show xml sessions detail

Session: 00000001	
Client:	192.168.10.85 (default)
Agent type:	tty
User:	cisco
State:	idle
Config session:	-
Alarm notification:	Registered
Start Date:	Tue Aug 24 18:21:29 2010
Elapsed Time:	00:00:27
Last State Changed:	00:00:27
Session: 10000001	
Client:	10.12.24.15 (VRF1)
Agent type:	default
User:	lab
State:	busy
Config session:	00000010-0005b105-00000000
Alarm notification:	Not registered
Start date:	Tue Aug 24 18:21:29 2010
Elapsed Time:	00:01:10
Last State Changed:	00:01:10

Related Topics

xml agent, on page 20

Command History

shutdown (VRF)

To configure the dedicated XML agent to not receive or send messages via the default VRF, use the **shutdown** command in xml agent vrf configuration mode. To enable the dedicated XML agent to receive or send messages via the default VRF, use the **no** form of this command.

no shutdown

This command has no keywords or arguments.

Modification

Command Default The default VRF instance is enabled by default.

Command Modes xml agent vrf configuration

Release

shutdown

xml agent ssl vrf configuration

 11010400	mounioution
Release 4.0.0	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.

Task ID	Task ID	Operation
	config-services	read,
		write

Example

The following example illustrates how to configure the XML dedicated agent to send and receive messages via VRF1 only:

```
RP/0/RP0/CPU0:router(config) # xml agent
RP/0/RP0/CPU0:router(config-xml-agent) # vrf VRF1
RP/0/RP0/CPU0:router(config-xml-agent) # vrf default
RP/0/RP0/CPU0:router(config-xml-agent-vrf) # shutdown
```

The following example illustrates how to configure the XML SSL agent to send and receive messages via VRF1 only:

```
RP/0/RP0/CPU0:router(config) # xml agent ssl
RP/0/RP0/CPU0:router(config-xml-agent-ssl) # vrf VRF1
RP/0/RP0/CPU0:router(config-xml-agent-ssl) # vrf default
RP/0/RP0/CPU0:router(config-xml-agent-ssl-vrf) # shutdown
```

The following example illustrates how to enable the default VRF after it has been disabled:

RP/0/RP0/CPU0:router(config) # xml agent
RP/0/RP0/CPU0:router(config-xml-agent) # vrf default
RP/0/RP0/CPU0:router(config-xml-agent-vrf) # no shutdown

Related Topics

vrf (XML), on page 18

streaming

To configure XML response streaming, use the **streaming** command in one of the XML agent configuration modes. To disable XML response streaming, use the **no** form of this command.

streaming on size size

Syntax Description	on	on Turns on XML streaming.			
	size size	Specifies the size of the stream in Kbytes			
Command Default	- XML stre	aming is disabled.			
Command Modes	- XML agent				
	XML agent ssl				
	XML age	nt tty			
Command History	Release	Modification			
	Release 4.1.0	This command was introduced.			
Usage Guidelines		s command, you must be in a user group a			

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.

Task IDOperationconfig-servicesread,
write

This example illustrates how to set the XML response streaming size to 5000 Kbytes.

RP/0/RP0/CPU0:router# config RP/0/RP0/CPU0:router(config)# xml agent RP/0/RP0/CPU0:router(config-xml-agent)# streaming on size 5000

throttle

To configure the XML agent processing capabilities, use the **throttle** command in XML agent configuration mode.

throttle {memory *size*|process-rate *tags*}

memory		Specifies the XML agent memory size.		
size		Maximum memory usage of XML agent per session in MB. Values can range from 100 to 600. The default is 300.		
process-rate		Specifies the XML agent processing rate.		
tags		Number of tags that the XML agent can process per second. Values can range from 1000 to 30000.		
The process rate is not throttled; memory size is 300 MB.				
XML agent cor	nfiguration			
Release Modification				
Release 3.8.2	This command was intro	duced.		
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 administrato for assistance.				
Use the throttle command to control CPU time used by the XML agent when it handles la				
Task ID	Operation			
config-services	read,			
	size size process-rate tags The process rat XML agent con Release Release 3.8.2 To use this com IDs. If the user for assistance. Use the thrott Task ID	size process-rate tags The process rate is not throttled; memor XML agent configuration Release Modification Release 3.8.2 This command was introd To use this command, you must be in a u IDs. If the user group assignment is prevention of the user group assignment is prevention. Use the throttle command to control C		

Example

This example illustrates how to configure the number of tags that the XML agent can process to 1000:

RP/0/RP0/CPU0:router(config) # xml agent RP/0/RP0/CPU0:router(config-xml-agent)# throttle process-rate 1000

vrf (XML)

To configure a dedicated agent to receive and send messages via the specified VPN routing and forwarding (VRF) instance, use the vrf command in one of the xml agent configuration mode. To disable the receiving and sending of messages via a specific VRF instance, use the **no** form of this command.

vrf {defaultvrf-name}

Syntax Description	default Configures the default VRF instance.				
	<i>vrf-name</i> Configures the specified VRF instance.				
Command Default	The default VRF is enabled by default.				
Command Modes	XML agent configuration				
	XML agent SSL configuration				
Command History	Release Modification				
	Release 4.0.0 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.				
	The default VRF is enabled by default. To disable the default VRF, use the shutdown command.				
Task ID	Task ID Operation				
	config-services read, write				
	Example				
	This example shows how to configure the dedicated XML agent to receive and send messages via VRF1, VRF2 and the default VRF:				
	RP/0/RP0/CPU0:router(config)# xml agent RP/0/RP0/CPU0:router(config-xml-agent)# vrf VRF1 RP/0/RP0/CPU0:router(config-xml-agent)# vrf VRF2				
	This example shows how to remove access to VRF2 from the dedicated agent:				
	<pre>RP/0/RP0/CPU0:router(config) # xml agent RP/0/RP0/CPU0:router(config-xml-agent) # no vrf VRF2</pre>				

Related Topics

xml agent, on page 20 xml agent ssl, on page 21 shutdown (VRF), on page 14

xml agent

To enable Extensible Markup Language (XML) requests over a dedicated TCP connection and enter XML agent configuration mode, use the xml agent command in

global configuration

mode. To disable XML requests over the dedicated TCP connection, use the no form of this command.

V

-	Note	This command enables a new, enhanced-performance XML agent. The xml agent tty command enables the legacy XML agent and is supported for backward compatibility.			
		xml agent no xml agen ⁻	t		
Command Defa	ult	XML requests are disabled.			
Command Mod	es	Global configuration			
Command History	ory	Release	Modification	1	
		Release 3.8.0	This comma	nd 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.			
		that you use the	e enhanced-pe command to	a legacy XML agent and an enhanced-performance XML agent. We recommend erformance agent. The legacy agent is supported for backward compatibility. Use enable the enhanced-performance XML agent. Use the xml agent tty command gent.	
		Use the no form	n of the xml	agent command to disable the enhanced-performance XML agent.	
Task ID		Task ID	Operations		
		config-services	read, write		

This example shows how to enable XML requests over a dedicated TCP connection:

RP/0/RP0/CPU0:router(config) # xml agent

xml agent ssl

To enable Extensible Markup Language (XML) requests over Secure Socket Layer (SSL) and enter SSL XML agent configuration mode, use the xml agent ssl command in

global configuration

mode. To disable XML requests over SSL, use the no form of this command.

xml agent ssl no xml agent ssl

SSL agent is disabled by default. **Command Default**

Release

Global configuration **Command Modes**

Command History

Modification Release 3.9.0 This command was introduced.

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

The k9sec package is required to use the SSL agent. The configuration is rejected during commit when the security software package is not active on the system. When the security software package is deactivated after configuring SSL agent, the following syslog message is displayed to report that the SSL agent is no longer available.

```
xml dedicated ssl agent[420]:
%MGBL-XML_TTY-7-SSLINIT : K9sec pie is not active, XML service over
SSL is not available.
```

Task ID Task ID Operations config-services read, write

This example shows how to enable XML requests over SSL:

RP/0/RP0/CPU0:router(config) # xml agent ssl

I

xml agent tty

To enable Extensible Markup Language (XML) requests over Secure Shell (SSH) and Telnet and enter TTY XML agent configuration mode, use the **xml agent tty** command in

global configuration

mode. To disable XML requests over SSH and Telnet, use the no form of this command.

Note	This command enables a legacy XML agent that has been superceded by an enhanced performance XML agent and is supported only for backward compatibility. To enable the enhanced-performance XML agent, use the xml agent command.						
	xml agent tty no xml agent tty						
Command Default	XML requests over SSH and Telnet are disabled.						
Command Modes	Global configur	ation					
Command History	Release		Modification				
	Release 3.2		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.						
	There are two XML agents: a legacy XML agent and an enhanced-performance XML agent. We recommend that you use the enhanced-performance agent. The legacy agent is supported for backward compatibility. The xml agent tty command enables the legacy XML agent. Use the xml agent command to enable the enhanced-performance XML agent.						
	Use the no form of the xml agent tty command to disable the legacy XML agent.						
Task ID	Task ID	Operations					
	config-services	read, write					

This example shows how to enable XML requests over Secure Shell (SSH) and Telnet:

RP/0/RP0/CPU0:router(config) # xml agent tty