



Configuring Manageability

This module describes the configuration required to enable the Extensible Markup Language (XML) agent services. The XML Parser Infrastructure provides parsing and generation of XML documents with Document Object Model (DOM), Simple Application Programming Interface (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.

Table 1: Feature History for Configuring Manageability on Cisco IOS XR Software

Release 3.2	This feature was introduced.
Release 3.8.0	An enhanced-performance XML agent was introduced.
Release 3.9.0	The ability to enable XML requests over Secure Socket Layer (SSL) was introduced. The ability to configure an idle timeout for the XML agent was introduced.
Release 4.0.0	The ability to configure a dedicated agent to receive and send messages via a specified VPN routing and forwarding (VRF) instance was introduced. The ability to control CPU time used by the XML agent was introduced.

This module contains the following topics:

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Information About XML Manageability

The Cisco IOS XR Extensible Markup Language (XML) API provides a programmable interface to the router for use by external management applications. This interface provides a mechanism for router configuration and monitoring utilizing XML formatted request and response streams. The XML interface is built on top of

the Management Data API (MDA), which provides a mechanism for Cisco IOS XR components to publish their data models through MDA schema definition files.

Cisco IOS XR software provides the ability to access the router via XML using a dedicated TCP connection, Secure Socket Layer (SSL), or a specific VPN routing and forwarding (VRF) instance.

How to Configure Manageability

Configuring the XML Agent

SUMMARY STEPS

1. `xml agent [ssl]`
2. `iteration on size iteration-size`
3. `session timeout timeout`
4. `throttle {memory size | process-rate tags}`
5. `vrf { default | vrf-name } [access-list access-list-name]`

DETAILED STEPS

	Command or Action	Purpose
Step 1	xml agent [ssl] Example: RP/0/RP0/CPU0:router:router(config)# xml agent	Enables Extensible Markup Language (XML) requests over a dedicated TCP connection and enters XML agent configuration mode. Use the ssl keyword to enable XML requests over Secure Socket Layer (SSL).
Step 2	iteration on size iteration-size Example: RP/0/RP0/CPU0:router:router(config-xml-agent)# iteration on size 500	Configures the iteration size for large XML agent responses in KBytes. The default is 48.
Step 3	session timeout timeout Example: RP/0/RP0/CPU0:router:router(config-xml-agent)# session timeout 5	Configures an idle timeout for the XML agent in minutes. By default, there is no timeout.
Step 4	throttle {memory size process-rate tags} Example: RP/0/RP0/CPU0:router:router(config-xml-agent)# throttle memory 300	Configures the XML agent processing capabilities. <ul style="list-style-type: none"> • Specify the throttle memory size in Mbytes per session. Values can range from 100 to 600. The default is 300. • Specify the process-rate as the number of tags that the XML agent can process per second. Values can range from 1000 to 30000. By default the process rate is not throttled.

	Command or Action	Purpose
Step 5	vrf { default vrf-name } [access-list access-list-name] Example: RP/0/RP0/CPU0:router:router(config-xml-agent)# vrf my-vrf	Configures the dedicated agent or SSL agent to receive and send messages via the specified VPN routing and forwarding (VRF) instance.

Configuration Examples for Manageability

Enabling VRF on an XML Agent: Examples

The following example illustrates how to configure the dedicated XML agent to receive and send messages via VRF1, VRF2 and the default VRF:

```
RP/0/RP0/CPU0:router:router(config)# xml agent
RP/0/RP0/CPU0:router:router(config-xml-agent)# vrf VRF1
RP/0/RP0/CPU0:router:router(config-xml-agent)# vrf VRF2
```

The following example illustrates how to remove access to VRF2 from the dedicated agent:

```
RP/0/RP0/CPU0:router:router(config)# xml agent
RP/0/RP0/CPU0:router:router(config-xml-agent)# no vrf VRF2
```

The following example shows how to configure the XML SSL agent to receive and send messages through VRF1, VRF2 and the default VRF:

```
RP/0/RP0/CPU0:router:router(config)# xml agent ssl
RP/0/RP0/CPU0:router:router(config-xml-agent)# vrf VRF1
RP/0/RP0/CPU0:router:router(config-xml-agent)# vrf VRF2
```

The following example removes access for VRF2 from the dedicated XML agent:

```
RP/0/RP0/CPU0:router:router(config)# xml agent ssl
RP/0/RP0/CPU0:router:router(config-xml-agent)# no vrf VRF2
```

Additional References

The following sections provide references related to configuring manageability on Cisco IOS XR software.

Related Documents

Related Topic	Document Title
Cisco IOS XR commands	<i>Cisco IOS XR Commands Master List for the Cisco CRS Router</i>
Cisco IOS XR XML API material	<i>Cisco IOS XR XML API Guide for the Cisco CRS Router</i>
Information about user groups and task IDs	<i>Configuring AAA Services on Cisco IOS XR Software module of System Security Configuration Guide for Cisco CRS Routers</i>

Standards and RFCs

Standard/RFC	Title
No new or modified standards are supported by this feature, and support for existing standards has not been modified by this feature.	—

MIBs

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

RFCs

RFCs	Title
No new or modified RFCs are supported by this feature, and support for existing RFCs has not been modified by this feature.	—

Technical Assistance

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