



# Extreme SLX-OS NETCONF Operations Guide, 20.4.1d

Supporting ExtremeRouting and ExtremeSwitching  
SLX 9740, SLX 9640, SLX 9540, SLX 9250,  
SLX 9150, Extreme 8720, and Extreme 8520

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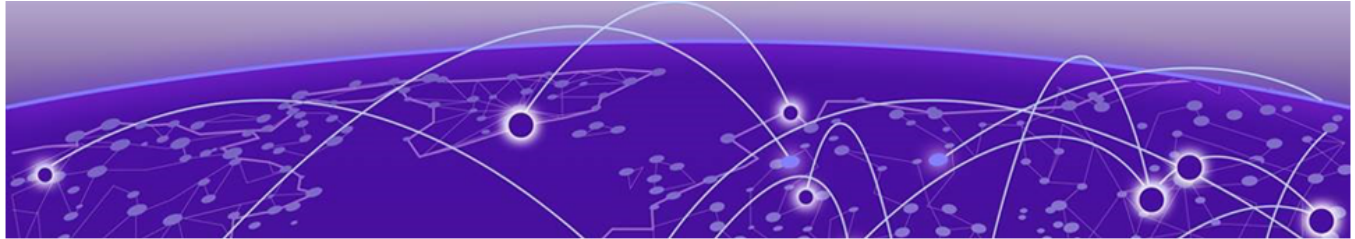
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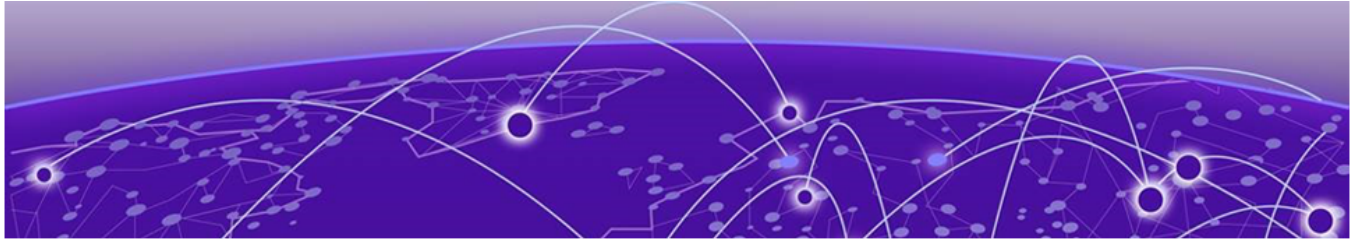


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# Preface

---

Read the following topics to learn about:

- The meanings of text formats used in this document.
- Where you can find additional information and help.
- How to reach us with questions and comments.

## Text Conventions

---

Unless otherwise noted, information in this document applies to all supported environments for the products in question. Exceptions, like command keywords associated with a specific software version, are identified in the text.

When a feature, function, or operation pertains to a specific hardware product, the product name is used. When features, functions, and operations are the same across an entire product family, such as ExtremeSwitching switches or SLX routers, the product is referred to as *the switch* or *the router*.

**Table 1: Notes and warnings**

| Icon                                                                                | Notice type | Alerts you to...                                        |
|-------------------------------------------------------------------------------------|-------------|---------------------------------------------------------|
|  | Tip         | Helpful tips and notices for using the product          |
|  | Note        | Useful information or instructions                      |
|  | Important   | Important features or instructions                      |
|  | Caution     | Risk of personal injury, system damage, or loss of data |
|  | Warning     | Risk of severe personal injury                          |

**Table 2: Text**

| Convention                             | Description                                                                                                                                                                                                     |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| screen displays                        | This typeface indicates command syntax, or represents information as it is displayed on the screen.                                                                                                             |
| The words <i>enter</i> and <i>type</i> | When you see the word <i>enter</i> in this guide, you must type something, and then press the Return or Enter key. Do not press the Return or Enter key when an instruction simply says <i>type</i> .           |
| <b>Key</b> names                       | Key names are written in boldface, for example <b>Ctrl</b> or <b>Esc</b> . If you must press two or more keys simultaneously, the key names are linked with a plus sign (+). Example: Press <b>Ctrl+Alt+Del</b> |
| <i>Words in italicized type</i>        | Italics emphasize a point or denote new terms at the place where they are defined in the text. Italics are also used when referring to publication titles.                                                      |
| <b>NEW!</b>                            | New information. In a PDF, this is searchable text.                                                                                                                                                             |

**Table 3: Command syntax**

| Convention                         | Description                                                                                                                                                                              |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>bold</b> text                   | Bold text indicates command names, keywords, and command options.                                                                                                                        |
| <i>italic</i> text                 | Italic text indicates variable content.                                                                                                                                                  |
| [ ]                                | Syntax components displayed within square brackets are optional. Default responses to system prompts are enclosed in square brackets.                                                    |
| { <b>x</b>   <b>y</b>   <b>z</b> } | A choice of required parameters is enclosed in curly brackets separated by vertical bars. You must select one of the options.                                                            |
| <b>x</b>   <b>y</b>                | A vertical bar separates mutually exclusive elements.                                                                                                                                    |
| < >                                | Nonprinting characters, such as passwords, are enclosed in angle brackets.                                                                                                               |
| ...                                | Repeat the previous element, for example, <i>member</i> [ <i>member</i> ...].                                                                                                            |
| \                                  | In command examples, the backslash indicates a “soft” line break. When a backslash separates two lines of a command input, enter the entire command at the prompt without the backslash. |

## Documentation and Training

Find Extreme Networks product information at the following locations:

[Current Product Documentation](#)

[Release Notes](#)

[Hardware and software compatibility](#) for Extreme Networks products

[Extreme Optics Compatibility](#)

[Other resources](#) such as white papers, data sheets, and case studies

Extreme Networks offers product training courses, both online and in person, as well as specialized certifications. For details, visit [www.extremenetworks.com/education/](http://www.extremenetworks.com/education/).

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## Help and Support

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If you require assistance, contact Extreme Networks using one of the following methods:

### Extreme Portal

Search the GTAC (Global Technical Assistance Center) knowledge base; manage support cases and service contracts; download software; and obtain product licensing, training, and certifications.

### The Hub

A forum for Extreme Networks customers to connect with one another, answer questions, and share ideas and feedback. This community is monitored by Extreme Networks employees, but is not intended to replace specific guidance from GTAC.

### Call GTAC

For immediate support: (800) 998 2408 (toll-free in U.S. and Canada) or 1 (408) 579 2826. For the support phone number in your country, visit: [www.extremenetworks.com/support/contact](http://www.extremenetworks.com/support/contact)

Before contacting Extreme Networks for technical support, have the following information ready:

- Your Extreme Networks service contract number, or serial numbers for all involved Extreme Networks products
- A description of the failure
- A description of any actions already taken to resolve the problem
- A description of your network environment (such as layout, cable type, other relevant environmental information)
- Network load at the time of trouble (if known)
- The device history (for example, if you have returned the device before, or if this is a recurring problem)
- Any related RMA (Return Material Authorization) numbers

## Subscribe to Product Announcements

You can subscribe to email notifications for product and software release announcements, Field Notices, and Vulnerability Notices.

1. Go to [The Hub](#).
2. In the list of categories, expand the **Product Announcements** list.
3. Select a product for which you would like to receive notifications.
4. Select **Subscribe**.
5. To select additional products, return to the **Product Announcements** list and repeat steps 3 and 4.

You can modify your product selections or unsubscribe at any time.

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## Send Feedback

---

The Information Development team at Extreme Networks has made every effort to ensure that this document is accurate, complete, and easy to use. We strive to improve our documentation to help you in your work, so we want to hear from you. We welcome all feedback, but we especially want to know about:

- Content errors, or confusing or conflicting information.

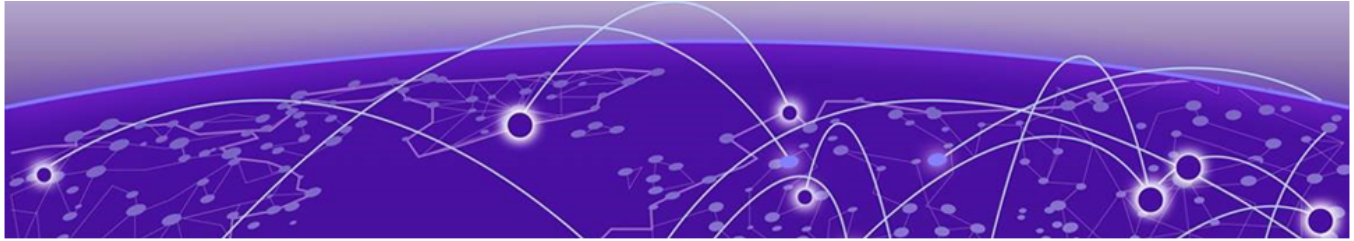
- Improvements that would help you find relevant information.
- Broken links or usability issues.

To send feedback, do either of the following:

- Access the feedback form at <https://www.extremenetworks.com/documentation-feedback/>.
- Email us at [documentation@extremenetworks.com](mailto:documentation@extremenetworks.com).

Provide the publication title, part number, and as much detail as possible, including the topic heading and page number if applicable, as well as your suggestions for improvement.





# About This Document

---

[What's New in this Document](#) on page 33  
[Supported Hardware](#) on page 33

## What's New in this Document

---

This document is released with the SLX-OS 20.4.1d software release.

The following new NETCONFs were introduced in this release.

- `snmp-server/use-vrf/{use-vrf-name}`
- `show snmp-server status`

For additional information, refer to the *Extreme SLX-OS Release Notes* for this version.

## Supported Hardware

---

For instances in which a topic or part of a topic applies to some devices but not to others, the topic specifically identifies the devices.

SLX-OS 20.4.1d supports the following hardware platforms.

- Devices based on the Broadcom XGS® chipset family:
  - Extreme 8720
  - Extreme 8520
  - ExtremeSwitching SLX 9250
  - ExtremeSwitching SLX 9150
- Devices based on the Broadcom DNX® chipset family:
  - ExtremeRouting SLX 9740
  - ExtremeRouting SLX 9640
  - ExtremeSwitching SLX 9540



### Note

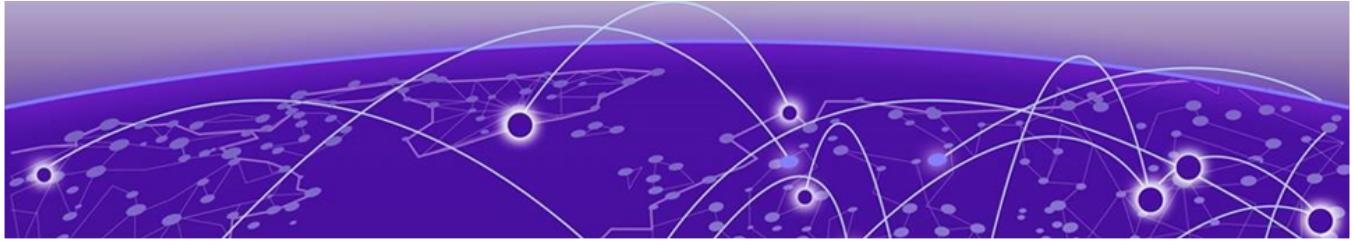
All configurations and software features that are applicable to SLX 9150 and SLX 9250 devices are also applicable for the Extreme 8520 and Extreme 8720 devices respectively.

The "Measured Boot with Remote Attestation" feature is only applicable to the Extreme 8520 and Extreme 8720 devices. It is not supported on the SLX 9150 and SLX 9250 devices.

**Note**

Although many software and hardware configurations are tested and supported for this release, documenting all possible configurations and scenarios is beyond this document's scope.

For information about other releases, see the documentation for those releases.



# NETCONF Overview

---

[NETCONF and YANG](#) on page 35

[NETCONF in client/server architecture](#) on page 35

[RPC request](#) on page 36

[RPC reply](#) on page 36

[RPC and error handling](#) on page 36

[SSH subsystem](#) on page 36

[RFC references](#) on page 37

## NETCONF and YANG

---

Extreme SLX-OS provides support for the Network Configuration Protocol (NETCONF) and the YANG data modeling language. Using Extensible Markup Language (XML) constructs, the NETCONF protocol provides the ability to manipulate configuration data and view state data modeled in YANG. NETCONF uses a client/server architecture in which remote procedure calls (RPCs) manipulate the modeled data across a secure transport, such as Secure Shell version 2 (SSHv2).

NETCONF provides mechanisms through which you can perform the following operations:

- Manage network devices
- Retrieve configuration data and operational state data
- Upload and manipulate configurations

NETCONF is partitioned conceptually into four layers.

## NETCONF in client/server architecture

---

The NETCONF protocol uses RPCs to facilitate communication between the client (NETCONF Manager or application) and the server (NETCONF Agent or managed device).

A client encodes an RPC request in XML and sends it to a server using a secure, connection-oriented session. The server responds with a reply encoded in XML.

The communication between the client and server consists of a series of alternating request and reply messages. The NETCONF peers use `<rpc>` and `<rpc-reply>` elements to provide transport protocol-independent framing of NETCONF requests and responses. The NETCONF server processes the RPC requests sequentially in the order in which they are received.

---

## RPC request

---

The <rpc> element is used for enclosing a NETCONF request sent from the client to the server.

Every <rpc> element contains a mandatory attribute, the message-id. This attribute has a unique value for every RPC request, and is used to associate every RPC request with the corresponding response. The message-id value is a monotonically increasing integer string. The maximum length of the string is 4095 characters. If the message-id is not present in the RPC request, the server rejects the request by returning an <rpc-error> with an <error-tag> element set to “missing-attribute”.

If there are any additional attributes present in the RPC request, the NETCONF server returns them unmodified in the corresponding RPC reply.

---

## RPC reply

---

An <rpc-reply> element is sent in response to every RPC request.

The <rpc-reply> element contains the mandatory attribute message-id copied from the corresponding RPC request, along with any additional attributes that are present in the RPC request.

For successfully processed <get> or <get-config> requests, the response data is encoded as the content of the <rpc-reply> element.

For successfully processed <edit-config> or <close-session> requests, the <ok> element is encoded as the content of the <rpc-reply> element.

For unsuccessful RPC requests, one or more <rpc-error> elements are encoded inside the <rpc-reply> element.

---

## RPC and error handling

---

If the RPC request fails, an <rpc-error> element is encoded inside the <rpc-reply> element and sent to the client.

The <rpc-error> element indicates the first detected error. The server is not required to detect or report multiple errors. If the server detects multiple errors then the order of the error detection and reporting is at the discretion of the server.

---

## SSH subsystem

---

The NETCONF client must use Secure Shell Version 2 (SSHv2) as the network transport to connect to the NETCONF server. Only the SSHv2 protocol is supported as the NETCONF transport protocol.

To run NETCONF over SSHv2, the client establishes an SSH transport connection using the SSH transport protocol to the NETCONF port. The default NETCONF port is 830. The underlying SSH client and server exchange keys for message integrity and encryption.

The SSHv2 client invokes the ssh-userauth service to authenticate the user. All currently supported SSH user authentication methods such as the public-key, password, and keyboard-interactive authentications are supported for a NETCONF session also. If the SSH user authentication is disabled, the user is allowed full access.

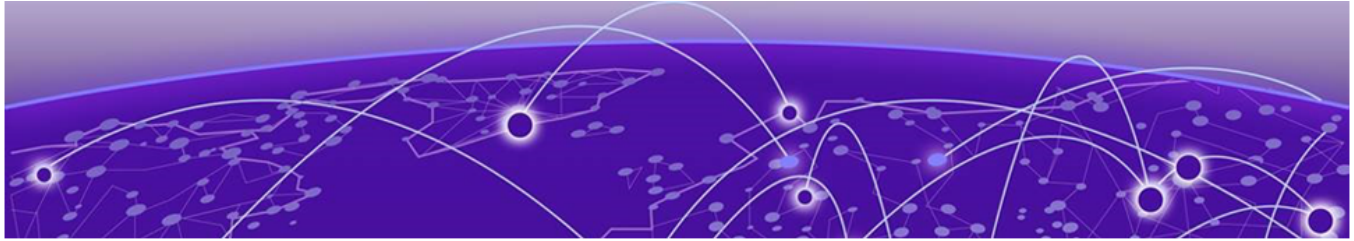
On successful user authentication, the client invokes the ssh-connection service, also known as the SSH connection protocol. After the SSH session is established, the NETCONF client invokes NETCONF as an SSH subsystem called netconf.

## RFC references

---

For details about NETCONF and YANG as defined by the Internet Engineering Task Force (IETF), refer to the following documents:

- RFC 6241, “NETCONF Configuration Protocol.”
- RFC 4742 “Using the NETCONF Configuration Protocol over Secure Shell (SSH).”
- RFC 6020, “YANG - A Data Modeling Language for the Network Configuration Protocol (NETCONF)”
- RFC 6021, “Common YANG Data Types”



# Using NETCONF

---

[Establishing a NETCONF session on page 38](#)

[Retrieving configuration data on page 40](#)

[Retrieving operational data on page 44](#)

[Editing the configuration on page 46](#)

[Managing the configuration on page 47](#)

[Disconnecting from a NETCONF session on page 48](#)

## Establishing a NETCONF session

---

Up to 16 concurrent sessions can be established with a NETCONF server. A session times out if it is idle for 30 minutes.

Each NETCONF session begins with a handshake in which the NETCONF server and the client specify the NETCONF capabilities they support. The following sections describe the message exchange on starting a NETCONF session.

### Hello messages exchange

After establishing a secure transport connection, both the NETCONF server and client send a `<hello>` element simultaneously to announce their capabilities and session identifier.

The NETCONF server must include the `<session-id>` element in the `<hello>` element. The `<session-id>` element contains the unique session value for the NETCONF session. If the client receives the `<hello>` element without the `<session-id>`, the client aborts the NETCONF session by closing the underlying SSH session.

The NETCONF client must not include the `<session-id>` element in the `<hello>` element. If the server receives the `<hello>` element with the `<session-id>`, the server aborts the NETCONF session by closing the underlying SSH session.

The NETCONF client must include a valid `xmlns` attribute in the `<hello>` element. If the server receives the `<hello>` element without a valid `xmlns` attribute, the server aborts the NETCONF session by closing the underlying SSH session.

The NETCONF client must include a base capability. The server receiving the `<hello>` element without a NETCONF base capability aborts the NETCONF session by closing the underlying SSH session.

The server receiving an `<rpc>` element without first receiving a `<hello>` element aborts the NETCONF session by closing the underlying SSH session.

The following example shows a <hello> element from the NETCONF server.

```
<hello xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <capabilities>
    <capability>urn:ietf:params:netconf:base:1.0</capability>
    <capability>urn:ietf:params:netconf:capability:writable-running:1.0    </
capability>
    <capability>urn:ietf:params:netconf:capability:startup:1.0</capability>
    <capability>urn:ietf:params:netconf:capability:xpath:1.0</capability>
    <capability>urn:ietf:params:netconf:capability:validate:1.0</capability>
    <capability>http://tail-f.com/ns/netconf/actions/1.0</capability>
    <capability>http://tail-f.com/ns/aaa/1.1?revision=2010-06-17&module=tailfaaa</
capability>
    <capability>urn:brocade.com:mgmt:brocade-aaa?revision=2010-10-21&module=brocade-
aaa</capability>
    <capability>urn:brocade.com:mgmt:brocade-aaa-ext?
revision=2010-09-21&module=brocade-aaa-ext</capability>
    <capability>urn:brocade.com:mgmt:brocade-cdp?revision=2010-08-17&module=brocade-
cdp</capability>
    <capability>urn:brocade.com:mgmt:brocade-cee-map?
revision=2011-04-18&module=brocade-cee-map</capability>
    <capability>urn:brocade.com:mgmt:brocade-chassis?
revision=2011-04-11&module=brocade-chassis</capability>
  </capabilities>
  (output truncated)
  <session-id>4</session-id>
</hello>
```

## Server capabilities

A NETCONF capability is a set of protocol extensions that supplements the base NETCONF specification.

A NETCONF capability is identified with a Uniform Resource Identifier (URI). Capabilities augment the base operations of the NETCONF server, describing both the additional operations and the contents allowed inside the operations. To support a capability, the NETCONF server must support all the dependent capabilities.

The following capabilities are supported on SLX-OS switches:

- **Base capability**—The set of operations and contents that any NETCONF implementation must support. The URI for the base capability is urn:ietf:params:xml:ns:netconf:base:1.0. Both the NETCONF client and server must support the base capability.
- **Writable-running capability**—Indicates that the device supports <edit-config> and <copy-config> operations where the <running> configuration is the target. The URI is urn:ietf:params:netconf:capability:writable-running:1.0.
- **Startup capability**—Supports separate datastores for the running and startup configuration. Operations performed on the running-config datastore do not affect the startup configuration until a <copy-config> operation is performed to explicitly copy the running configuration to the startup configuration. The URI for the startup capability is urn:ietf:params:netconf:capability:startup:1.0.
- **Xpath capability**—Supports XPath expressions in <filter> elements. <filter> elements are used in <get> and <get-config> operations to limit the scope of the retrieved data. The URI for the xpath capability is urn:ietf:params:netconf:capability:xpath:1.0.
- **Validate capability**—Allows validation to be performed on a configuration. The URI for the validate capability is urn:ietf:params:netconf:capability:validate:1.0.

- Actions capability—Allows operations to be performed on the datastore using the custom action mechanism for features that are supported by this mechanism in the YANG code. Refer to “Using the custom action mechanism” on page 17 for details. The URI for the actions capability is <http://tail-f.com/ns/netconf/actions/1.0>.
- tailf-aaa capability—Supports proprietary authentication, authorization, and accounting (AAA). The URI for the tailf-aaa capability is <http://tail-f.com/ns/aaa/1.1?revision=2010-06-17&module=tailf-aaa>.
- Extreme proprietary capabilities—A set of capabilities that support Extreme SLX-OS features. Each capability references a namespace containing instance data. Each namespace corresponds to a file containing the YANG module that models the data. For example, the brocade-cee-map capability at URI <urn:extreme.com:mgmt:extreme-cee-map?revision=2018-11-10&module=extreme-cee-map> provides support for the features modeled in the brocade-cee-map module.

For an overview of each YANG module and structural details, refer to the Extreme SLX-OS YANG Reference Manual. For element definitions, refer to the specific YANG file .



#### Note

The Candidate Configuration capability and Confirmed Commit capability are not supported.

## Client capabilities

The client must support the base capability.

In addition, Extreme recommends that the client specify the identification capability with URI <http://tail-f.com/ns/netconf/identification/1.0> while establishing a session with the server. This capability provides client information to the server, including the vendor, product name, and version of the client application in addition to user information. Server administrators can subsequently gather information about who is accessing the server using the `show netconf client-capabilities` command or the `<get-netconf-client-capabilities>` custom RPC. Refer to Appendix A, “Managing NETCONF,” for details.

The following example shows a `<hello>` element from the NETCONF client.

```
<hello xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <capabilities>
    <capability>urn:ietf:params:netconf:base:1.0</capability>
    <capability>http://tail-f.com/ns/netconf/identification/1.0?
      vendor=extreme&product=bn&version=3.0&client-identity=adminUser</capability>
  </capabilities>
</hello>
```

## Retrieving configuration data

You can retrieve configuration data using either the `<get-config>` or `<get>` RPC. RFC 4741, NETCONF Configuration Protocol specifies that the `<get-config>` RPC returns only configuration data while the `<get>` RPC returns configuration data and operational state data.

In the Extreme implementation, the `<get>` RPC does not return operational state data; Extreme instead provides a set of Custom RPCs and actions for returning operational state data. In the Extreme implementation, the `<get-config>` and `<get>` operations are essentially the same. This document will typically refer to the `<get-config>` operation, though `<get>` can be used equally.



The following example shows a client message that issues the <get-config> operation in its most basic form. It retrieves the entire running configuration.

```
<?xml version="1.0" encoding="UTF-8"?>
<rpc message-id="200" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <get-config>
    <source>
      <running/>
    </source>
  </get-config>
</rpc>
```

Such a request, however, typically results in an unwanted or unmanageable amount of output. To restrict the output to the portion of the configuration you want, Extreme supports two types of filtering: subtree filtering and xpath filtering.

For complete details about subtree filtering and xpath filtering, refer to the RFC 4741, The NETCONF Protocol. The following sections provide some examples.

## Subtree filtering

Subtree filtering defines a point in the configuration hierarchy that limits the returned configuration data.

Only data at this point and the subtrees below it are returned. For example, to retrieve the loopback configuration for all loopback interfaces configured on the device, use the following filter. This operation returns all configuration data for all loop ports on the managed device.

```
<?xml version="1.0" ?>
<rpc message-id="101" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <get-config>
    <source>
      <running/>
    </source>
    <filter type="subtree">
      <routing-system xmlns="urn:brocade.com:mgmt:brocade-common-def">
        <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
          <loopback xmlns="urn:brocade.com:mgmt:brocade-intf-loopback">
            <id>1</id>
          </loopback>
        </interface>
      </routing-system>
    </filter>
  </get-config>
</rpc>
```

The purpose of each filter element is as follows:

- The <filter> element tag contains a type statement that identifies the filter type as a subtree filter.
- The <interface> element constrains the output to the interface configuration in the urn:brocade.com:mgmt:brocade-interface namespace.
- The <loopback> element further constrains the output to the information under the <loopback> node. Used in this way, <loopback> is termed a containment node.

To further restrict the output and retrieve loopback configuration data for only one specific loopback interface, use the following filter. In this example, the `<id>` element is termed a content match node; the filter returns the values of all loopback attributes for the specified port.

```
<?xml version="1.0" ?>
<rpc message-id="101" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <get-config>
    <source>
      <running/>
    </source>
    <filter type="subtree">
      <routing-system xmlns="urn:brocade.com:mgmt:brocade-common-def">
        <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
          <loopback xmlns="urn:brocade.com:mgmt:brocade-intf-loopback">
            <id>1</id>
            <vrf/>
          </loopback>
        </interface>
      </routing-system>
    </filter>
  </get-config>
</rpc>
```

If all you want to know is the setting of one specific loopback port attribute, such as the name of VRF, use a filter such as the following. In this case, `<vrf>` suppresses the inclusion of all its sibling nodes. It is termed a selection node.

```
<?xml version="1.0" ?>
<rpc message-id="101" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <get-config>
    <source>
      <running/>
    </source>
    <filter type="subtree">
      <routing-system xmlns="urn:brocade.com:mgmt:brocade-common-def">
        <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
          <loopback xmlns="urn:brocade.com:mgmt:brocade-intf-loopback">
            <id>1</id>
            <vrf>
              <forwarding/>
            </vrf>
          </loopback>
        </interface>
      </routing-system>
    </filter>
  </get-config>
</rpc>
```

The following example retrieves the configuration for the loopback interface.

```
<?xml version="1.0" ?>
<rpc message-id="101" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <get-config>
    <source>
      <running/>
    </source>
    <filter type="subtree">
      <routing-system xmlns="urn:brocade.com:mgmt:brocade-common-def">
        <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
          <loopback xmlns="urn:brocade.com:mgmt:brocade-intf-loopback">
            <id>1</id>
            <shutdown/>
          </loopback>
        </interface>
      </routing-system>
    </filter>
  </get-config>
</rpc>
```

```

        </interface>
      </routing-system>
    </filter>
  </get-config>
</rpc>

```

## xpath filtering

Sometimes the data element that qualifies the information you want is at a lower level in the data hierarchy than the information you need.

For example, if you want to return a list of interfaces that are bound to a CoS-to-CoS mutation QoS map, the element to be used for the selection criteria (`<cos-mutation>name</cos-mutation>`) resides at a lower level in the hierarchy than the information to be retrieved (the interface name), as shown in the following representation of the QoS map structure. In such cases, you must use an xpath filter and not a subtree filter.

```

| +--rw ethernet [name]
|   +--rw name                          interface-type
|   .
|   .
|   .
|   +--rw qos:qos
|     +--rw qos:default-cos?            int32
|     +--rw qos:cos-mutation?          map-name-type
|     +--rw qos:cos-traffic-class?     map-name-type
|     +--rw qos:dscp-mutation?         map-name-type

```

The following example returns the interface names to which the CoS-to-CoS mutation QoS map named “test” is bound. In this case, the map named “test” is bound to interfaces 2/5 and 2/6. The `<filter>` element tag specifies that the filter type is xpath and also specifies the data path and selection criteria.

```

<?xml version="1.0" encoding="UTF-8"?>
<rpc xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="205">
  <get-config>
    <source>
      <running></running>
    </source>
    <filter type="xpath" select="/interface/ethernet/qos[cos-mutation='test']"></filter>
  </get-config>
</rpc>

<rpc-reply
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="205">
  <data>
    <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
      <ethernet>
        <name>0/5</name>
        <qos xmlns="urn:brocade.com:mgmt:brocade-qos">
          <default-cos>0</default-cos>
          <cos-mutation>test</cos-mutation>
        </qos>
      </ethernet>
      <ethernet>
        <name>0/6</name>
        <qos xmlns="urn:brocade.com:mgmt:brocade-qos">
          <default-cos>0</default-cos>
          <cos-mutation>test</cos-mutation>
        </qos>

```

```

        </ethernet>
      </interface>
    </data>
  </rpc-reply>

```

## Retrieving operational data

In the Extreme SLX-OS implementation of NETCONF, two mechanisms are used for retrieving operational data: Extreme custom RPCs and custom actions.

Custom RPC and action support is added to some of the YANG modules to support the return of specific operational data.

For a complete list of the Extreme Custom RPCs and actions, and their locations, refer to the *Extreme SLX-OS YANG Reference Manual*.

Extreme SLX-OS does not support retrieving operational data using the standard <get> RPC.

## Using custom RPCs

If an RPC is defined in a YANG module, you can use that RPC to return the associated namespace information defined in its output elements.

For example, to return information about port-profiles to which interfaces are applied, you can use the <get-port-profile-for-intf> RPC defined in the `brocade-port-profile-ext.yang` file.

*The following example shows the <rpc> message and reply. The <get-port-profile-for-intf> element contains an xmlns attribute that identifies the corresponding namespace.*

Refer to the *Extreme SLX-OS YANG Reference Manual* for a list of Custom RPCs, a brief description of their function, and their location.

### *Retrieving operational data with pagination*

Some RPCs return operational data that consists of lists of entities. For example, an RPC might return detailed information about every interface. For these kinds of applications, to make the output manageable, pagination is supported by providing a <has-more> element in the output of the RPC.

The following example shows how the <has-more> element works to provide pagination for the <get-vlan-brief> RPC. In the input, you can request information about a specific VLAN, or about all VLANs by not providing an input parameter. If you request input about all VLANs, you will first receive information about the VLAN with the lowest VLAN ID. You can then check the <has-more> element in the output to determine whether information is available for additional VLANs. If <has-more> is true, use the value returned in <last-vlan-id> as the <last-rcvd-vlan-id> input parameter to the next call to <get-vlan-brief>. The <get-vlan-brief> RPC then returns the next available VLAN. Continue until <has-more> returns false.

```

+---x get-vlan-brief
+---ro input
| +---ro (request-type)?
| +---: (get-request)
| | +---ro vlan-id? interface:vlan-type
| +---: (get-next-request)
| +---ro last-rcvd-vlan-id? interface:vlan-type
+---ro output

```

```

    +--ro vlan [vlan-id]
  | +--ro vlan-id interface:vlan-type
  | +--ro vlan-type? enumeration
  | +--ro vlan-name? string
  | +--ro vlan-state? enumeration
  | +--ro interface [interface-type interface-name]
  | +--ro interface-type enumeration
  | +--ro interface-name union
  | +--ro tag? enumeration
  +--ro last-vlan-id? interface:vlan-type
  +--ro has-more? boolean

```

The following example uses the <get-interface-brief> RPC to return information about the first VLAN. In this case, the first VLAN is VLAN 20.

```

<rpc message-id="207" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <get-vlan-brief xmlns="urn:brocade.com:mgmt:brocade-interface-ext">
    </get-vlan-brief>
  </rpc>

<rpc-reply message-id="207" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <vlan xmlns="urn:brocade.com:mgmt:brocade-interface-ext">
    <vlanid>20</vlanid>
    <vlan-type>static</vlan-type>
    <vlan-name>vlan-20</vlan-name>
    <vlan-state>active</vlan-state>
    <interface>
      <interface-type>ethernet</interface-type>
      <interface-name>2/5</interface-name>
      <tag>tagged</tag>
    </interface>
  </vlan>
  <last-vlan-id>20</last-vlan-id>
  <has-more>true</has-more>
</rpc-reply>

```

The <has-more> field is true, so use the value returned in <last-vlan-id> as the <last-rcvd-vlan-id> in the next call to <get-vlan-brief> to return information about the next VLAN.

```

<rpc message-id="208" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <get-vlan-brief xmlns="urn:brocade.com:mgmt:brocade-interface-ext">
    <last-rcvd-vlan-id>20</last-rcvd-vlan-id>
  </get-vlan-brief>
</rpc>

<rpc-reply message-id="208" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <vlan xmlns="urn:brocade.com:mgmt:brocade-interface-ext">
    <vlanid>30</vlanid>
    <vlan-type>static</vlan-type>
    <vlan-name>vlan-30</vlan-name>
    <vlan-state>active</vlan-state>
    <interface>
      <interface-type>ethernet</interface-type>
      <interface-name>2/5</interface-name>
      <tag>tagged</tag>
    </interface>
  </vlan>
  <last-vlan-id>30</last-vlan-id>
  <has-more>false</has-more>
</rpc-reply>

```

If the <has-more> field returns false, no more VLAN data can be retrieved.

## Using the custom action mechanism

An action is a proprietary mechanism used for implementing operations that do not affect the configuration datastore. Several implementations of actions exist in the Extreme SLX-OS implementation for retrieving operational information.

The following structure is defined in the `extreme-zone.yang` module for displaying operational data related to zoning.

```
<nc:rpc xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="10">
  <nca:action xmlns:nca="http://tail-f.com/ns/netconf/actions/1.0">
    nca:data>
      <show xmlns="urn:brocade.com:mgmt:brocade-common-def">
        <license xmlns="urn:brocade.com:mgmt:brocade-license">
          <id></id>
        </license>
      </show>
    </nca:data>
  </nca:action>
</nc:rpc>

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="10">
  <data>
    <show xmlns="urn:brocade.com:mgmt:brocade-common-def">
      <license xmlns="urn:brocade.com:mgmt:brocade-license">
        <id>
          <licenseid-list>
            <license-id>10:00:F4:6E:95:9F:2E:F0</license-id>
          </licenseid-list>
        </id>
      </license>
    </show>
  </data>
</rpc-reply>
```

For a list of available actions and their locations, refer to the *Extreme SLX-OS YANG Reference Manual*.

## Editing the configuration

All configuration editing is done using the merge or delete operations of the `<edit-config>` RPC. The create and replace operations are not supported.

Refer to RFC 4741, The NETCONF Protocol, for details about these operations.



### Note

Every NETCONF `<edit-config>` request should have a one-to-one mapping with a Extreme SLX-OS CLI command. You cannot combine two CLI operations into one NETCONF request.

The following example of the default merge operation adds a static address to the MAC address table. The operation is performed on the running configuration and configures the `<mac-address-table>` node in the `urn:brocade.com:mgmt:brocade-mac-address-table` namespace.

```
<?xml version="1.0" encoding="UTF-8"?>
<rpc message-id="210" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <edit-config>
    <target>
      <running/>
    </target>
```

```

    <config>
      <mac-address-table xmlns="urn:brocade.com:mgmt:brocade-mac-address-table">
        <static>
          <mac-address>0011.2222.3333</mac-address>
          <forward>forward</forward>
          <interface-type>ethernet</interface-type>
          <interface-name>2/5</interface-name>
          <vlan>vlan</vlan>
          <vlanid>100</vlanid>
        </static>
      </mac-address-table>
    </config>
  </edit-config>
</rpc>

<rpc-reply message-id="210" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <ok/>
</rpc-reply>

```

The delete operation is used to remove or disable part of the configuration. The following example disables MSTP on the managed device.

```

<?xml version="1.0" encoding="UTF-8"?>
<rpc message-id="211" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <edit-config>
    <target>
      <running/>
    </target>
    <config>
      <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
        <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
          <mstp xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
Operation="delete"/>
        </spanning-tree>
      </protocol>
    </config>
  </edit-config>
</rpc>

<rpc-reply message-id="211" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <ok/>
</rpc-reply>

```

## Managing the configuration

Extreme SLX-OS provides the custom `<bnacfg-cmd>` PRC for performing any of the following operations:

- Copy the *running-config* file to a remote file.
- Copy a remote file to the *running-config* file.

Some simple examples are provided here. Refer to the *Extreme SLX-OS Administrator's Guide* for the following related information:

- General configuration management concepts
- Details and recommendations about how to apply these operations in a modular chassis or a Extreme VCS Fabric or a IP Fabric
- How to perform management configuration using the Extreme SLX-OS command line interface (CLI)

To monitor the progress of the copy operation, issue the `<bna-config-cmd-status>` custom RPC. Provide the session-ID returned by the corresponding `<bna-config-cmd>` as the input parameter.

```
<rpc xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="212">
  <bna-config-cmd-status xmlns="urn:brocade.com:mgmt:brocade-ras">
    <session-id>5</session-id>
  </bna-config-cmd-status>
</rpc>

<rpc-reply message-id="212" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <status xmlns="urn:brocade.com:mgmt:brocade-ras">completed</status>
</rpc-reply>
```

To archive or back up the *running-config* file, specify `<running/>` as the `<src>` parameter, and the URL of the archive as the `<dest>` parameter. The following example archives the running-config file.

```
<rpc xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="212">
  <bna-config-cmd xmlns="urn:brocade.com:mgmt:brocade-ras">
    <src>running-config</src>
    <dest>https://user@brocade.com:passphrase/cfg/archiveMay7.txt</dest>
  </bna-config-cmd>
</rpc>

<rpc-reply message-id="212" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <session-id xmlns="urn:brocade.com:mgmt:brocade-ras">6</session-id>
  <status xmlns="urn:brocade.com:mgmt:brocade-ras">in-progress</status>
</rpc-reply>
```

To restore an archived configuration, specify the archive URL as the `<source>` parameter and `<running/>` as the `<target>`.

```
<rpc xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="212">
  <bna-config-cmd xmlns="urn:brocade.com:mgmt:brocade-ras">
    <src>https://user@brocade.com:passphrase/cfg/archiveMay7.txt</src>
    <dest>running-config</dest>
  </bna-config-cmd>
</rpc>

<rpc-reply message-id="212" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <session-id xmlns="urn:brocade.com:mgmt:brocade-ras">6</session-id>
  <status xmlns="urn:brocade.com:mgmt:brocade-ras">in-progress</status>
</rpc-reply>
```

## Disconnecting from a NETCONF session

To disconnect from a NETCONF session, issue the standard `<close-session>` RPC.

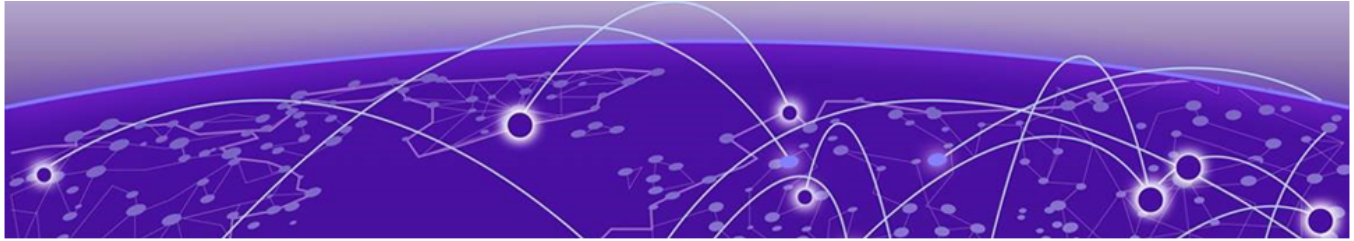
This operation causes the server to release any resources associated with the session and gracefully close any associated connections.

```
<rpc message-id="215" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <close-session/>
</rpc>

<rpc-reply message-id="215" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <ok/>
</rpc-reply>
```

The `<kill-session>` RPC is also supported. Issuing `<kill-session>` aborts all operations and closes the session.





# Basic switch management with NETCONF overview

---

[Connecting to the switch through an SSH session](#) on page 49

This chapter provides procedures for performing some basic switch operations using the NETCONF interface.

Refer to the *Extreme SLX-OS Administrator's Guide* for the following related information:

- Conceptual and overview information
- Using DHCP Automatic Deployment (DAD)
- Procedures for configuring the Ethernet management interface
- Basic switch configuration using the Extreme SLX-OS command line interface (CLI)

Using the NETCONF interface, you can perform the following basic switch configuration operations described in this chapter:

- Use the <edit-config> RPC to set host attributes, configure a switch banner, enable or disable first failure data capture (FFDC), and configure logging.
- Use custom actions to enable or disable a chassis, reboot a switch, obtain slot and module status, and upload supportSave data.
- Use the <show-raslog> custom RPC to return RASlog messages.

Switch management parameters described in this chapter are defined mostly in the *brocade-ras*, *brocade-linecard-management*, and *brocade-chassis* YANG modules. For structural maps of these YANG modules, refer to the *Extreme SLX-OS YANG Reference Manual*. For definitions and explanations of parameters, refer to the corresponding.yang file.

## Connecting to the switch through an SSH session

---

For NETCONF operations, you must connect to the device using SSH.

### Procedure

1. Connect through a serial port to the device
2. Verify that the network interface of the device is configured and that it is connected to the IP network through the RJ-45 Ethernet port.
3. Log off from the serial port of the device.
4. From a management station, open an SSH connection using the management IP address of the device to which you want to connect.
5. Enter the account user name at the login prompt.

6. Enter the password.

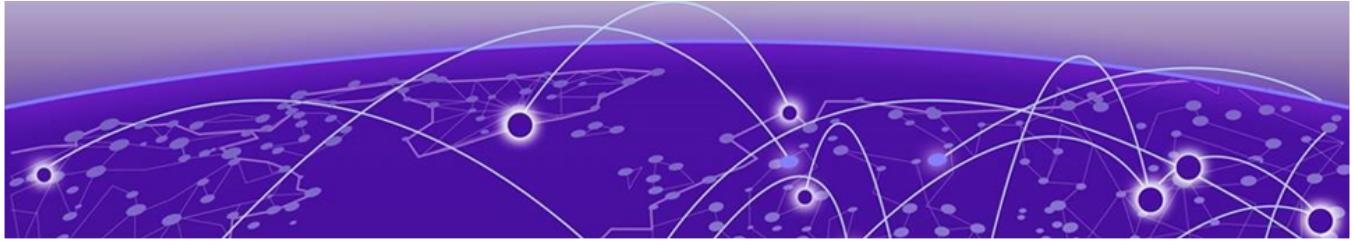
Extreme recommends that you change the default account password when you log in for the first time. For more information on changing the default password, refer to the Extreme SLX Hardware Installation Guide.

7. Verify that the login was successful.

The prompt displays the host name followed by a pound sign (#).

```
login as: admin
admin@10.20.49.112's password:*****

Welcome to the Extreme SLX-OS Software
admin connected from 10.1.1.1 using console on F115
```



# Sample use cases for SLX-OS NETCONF

---

[STP overview](#) on page 51

[VRF configuration](#) on page 54

This chapter discusses common use cases for the Extreme SLX-OS NETCONF.



## Note

The information provided in this chapter may not cover the end-to-end configuration. Refer to the *Extreme SLX-OS User Guide* for the complete set of configuration tasks.

## STP overview

---

A network topology of bridges typically contains redundant connections to provide alternate paths in case of link failures. However, because there is no concept of TTL in Ethernet frames, this could result in the permanent circulation of frames if there are loops in the network. To prevent loops, a spanning tree connecting all the bridges is formed in real time.

The redundant ports are put in a blocking (nonforwarding) state. They are enabled when required. In order to build a spanning tree for the bridge topology, the bridges must exchange control frames (BPDUs - Bridge Protocol Data Units). The protocols define the semantics of the BPDUs and the required state machine. The first Spanning Tree Protocol (STP) became part of the IEEE 802.1d standard.

The STP interface states for every Layer 2 interface running STP are as follows:

- *Blocking* - The interface does not forward frames.
- *Listening* - The interface is identified by the spanning tree as one that should participate in frame forwarding. This is a transitional state after the blocking state.
- *Learning* - The interface prepares to participate in frame forwarding.
- *Forwarding* - The interface forwards frames.
- *Disabled* - The interface is not participating in spanning tree because of a shutdown port, no link on the port, or no spanning tree instance running on the port.

A port participating in spanning tree moves through these states:

- From initialization to blocking
- From blocking to listening or to disabled
- From listening to learning or to disabled
- From learning to forwarding, blocking, or disabled
- From forwarding to disabled

## Configuring STP

The process for configuring STP is as follows:

### Procedure

1. Enable STP using the below NETCONF statement.

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <stp></stp>
  </spanning-tree>
</protocol>
```

2. Designate the root switch by using the bridge-priority command. The range is 0 through 61440 and the priority values can be set only in increments of 4096.

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <stp>
      <bridge-priority>32768</bridge-priority>
    </stp>
  </spanningtree>
</protocol>
```

3. Enable port fast on switch ports by using the **spanning-tree portfast** command.



#### Note

Note the following conditions:

- Port fast only needs to be enabled on ports that connect to workstations or PCs. Repeat these commands for every port connected to workstations or PCs. Do not enable port fast on ports that connect to other switches.
- If BPDUs are received on a port fast enabled interface, the interface loses the edge port status unless it receives a shut/no shut.
- Enabling port fast on ports can cause temporary bridging loops, in both trunking and nontrunking mode.

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>2/5</name>
    <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
      <portfast>
        <portfastbasic></portfastbasic>
      </portfast>
    </spanning-tree>
  </ethernet>
</interface>
```

## Configuring RSTP

The process for configuring RSTP is as follows.

### Procedure

1. Enable RSTP by using the global **protocol spanning-tree** command.

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rstp></rstp>
  </spanning-tree>
</protocol>
```

2. Designate the root switch by using the **bridge-priority** command. The range is 0 through 61440 and the priority values can be set only in increments of 4096.

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rstp>
      <bridge-priority>32768</bridge-priority>
    </rstp>
  </spanning-tree>
</protocol>
```

3. Configure the bridge forward delay value to set the time an interface spends in each of the listening and learning states.

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rstp>
      <forward-delay>30</forward-delay>
    </rstp>
  </spanning-tree>
</protocol>
```

4. Configure the bridge maximum aging time value to set the interval time in seconds between messages that the spanning tree receives from the interface.

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rstp>
      <max-age>40</max-age>
    </rstp>
  </spanning-tree>
</protocol>
```

5. Enable the error-disable-timeout timer.

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rstp>
      <error-disable-timeout>
        <enable></enable>
      </error-disable-timeout>
    </rstp>
  </spanning-tree>
</protocol>
```

6. Configure the error-disable-timeout interval value to set the timeout for errors on an interface.

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rstp>
      <error-disable-timeout>
        <interval>500</interval>
      </error-disable-timeout>
    </rstp>
  </spanning-tree>
</protocol>
```

```
</spanning-tree>
</protocol>
```

## VRF configuration

VRF (Virtual Routing and Forwarding) is a technology that controls information flow within a network by isolating the traffic by partitioning the network into different logical VRF domains.

Every VRF-capable router supports one routing table for each VRF instance. Each VRF-capable router can function as a group of multiple virtual routers on the same physical router. VRF, in conjunction with virtual private network (VPN) solutions, guarantees privacy of information and isolation of traffic within its logical VRF domain.

This chapter provides procedures and examples for configuring VRF using the NETCONF interface.

Using the NETCONF interface, you can perform the following VRF configuration operations:

- Use the `<edit-config>` remote procedure call (RPC) to activate and deactivate VRF globally, set global VRF parameters, activate and deactivate VRF on a port, and to set interface parameters on a specific port.
- Use the `<get-config>` RPC to verify all or part of the VRF configuration.

VRF parameters are defined in the *brocade-vrf* YANG module. For a structural map of the YANG module, refer to the *Extreme SLX-OS YANG Reference Manual*. For definitions and explanations of all VRF parameters, refer to the *brocade-vrf.yang* file.

## Configuring VRF

This chapter provides procedures and examples for configuring VRF using the NETCONF interface.

### Procedure

1. Configure VRF "red".

```
<vrf xmlns="urn:brocade.com:mgmt:brocade-vrf">
  <vrf-name>red</vrf-name>
</vrf>
```

2. Enable the IPv4 or IPv6 address-family support to configure a variety of VRF unicast routing options.

The below example shows how to enable IPv4 address-family support

```
<vrf xmlns="urn:brocade.com:mgmt:brocade-vrf">
  <vrf-name>Red</vrf-name>
  <address-family>
    <ip>
      <unicast></unicast>
    </ip>
  </address-family>
</vrf>
```

3. Configure the maximum number of routes to be used for the VRF

```
<vrf xmlns="urn:brocade.com:mgmt:brocade-vrf">
  <vrf-name>red</vrf-name>
  <address-family>
    <ip>
      <unicast>
        <max-route>200</max-route>
      </unicast>
    </ip>
  </address-family>
</vrf>
```

```
        </unicast>
      </ip>
    </address-family>
  </vrf>
```

4. Enable the Open Shortest Path First (OSPF) routing protocol over virtual forward and routing (VRF).

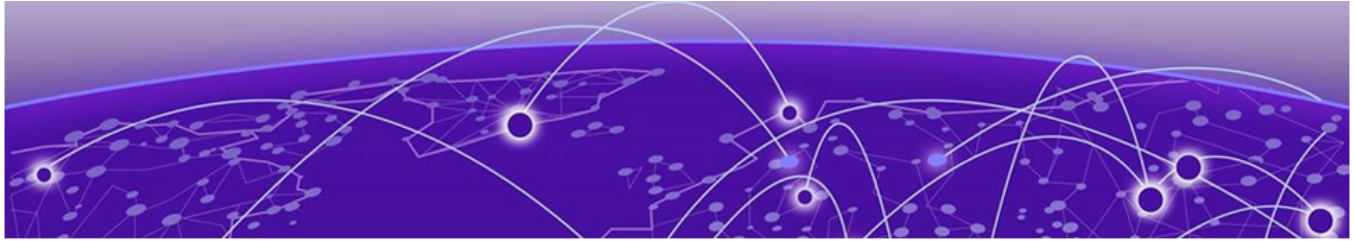
```
<router>
  <ospf xmlns="urn:brocade.com:mgmt:brocade-ospf">
    <vrf>red</vrf>
  </ospf>
</router>
```

5. Assign it to an area

```
<router>
  <ospf xmlns="urn:brocade.com:mgmt:brocade-ospfv3">
    <vrf>red</vrf>
    <area>
      <area-id>0</area-id>
    </area>
  </ospf>
</router>
```

6. Bind the interface to the VRF instance

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ve>
    <name>1</name>
    <vrf xmlns="urn:brocade.com:mgmt:brocade-ip-config">
      <forwarding>red</forwarding>
    </vrf>
  </ve>
</interface>
```



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## aaa

---

Configures AAA authentication.

### Usage

```
<aaa-config xmlns="urn:brocade.com:mgmt:brocade-aaa">  
  <aaa/>  
</aaa-config>
```

## aaa/accounting

---

Configures login or command accounting; either commands or login information are forwarded to accounting servers.

### Usage

```
<aaa-config xmlns="urn:brocade.com:mgmt:brocade-aaa">
  <aaa>
    <accounting/>
  </aaa>
</aaa-config>
```

## aaa/authentication

Configures the AAA login sequence.

### Usage

```
<aaa-config xmlns="urn:brocade.com:mgmt:brocade-aaa">
  <aaa>
    <authentication>
      <login>
        <first>local</first>
      </login>
    </authentication>
  </aaa>
</aaa-config>
```

### Parameters

#### *first*

Specifies the type of server that will be used for authentication, authorization, and accounting (AAA) on the switch. The local server is the default. Specify one of the following options:

##### **default**

Specifies the default mode (local server). Authenticates the user against the local database only. If the password does not match or the user is not defined, the login fails

##### **ldap**

Specifies the Lightweight Directory Access Protocol (LDAP) servers

##### **local**

Specifies to use the local switch database if prior authentication methods are inactive

##### **local-auth-failback**

Specifies to use the local switch database if prior authentication methods are not active or if authentication fails

##### **local**

Specifies the local switch database

##### **radius**

Specifies the RADIUS servers

##### **local**

Specifies to use the local switch database if prior authentication methods are inactive

##### **local-auth-failback**

Specifies to use the local switch database if prior authentication methods are not active or if authentication fails.

##### **tacacs+**

Specifies the TACACS+ servers

##### **local**

Specifies to use the local switch database if prior authentication methods are inactive

##### **local-auth-failback**

Specifies to use the local switch database if prior authentication methods are not active or if authentication fails

## aaa/authentication/login

---

Configures the AAA login sequence.

### Usage

```
<aaa-config xmlns="urn:brocade.com:mgmt:brocade-aaa">
  <aaa>
    <authentication>
      <login/>
    </authentication>
  </aaa>
</aaa-config>
```

### Parameters

#### **authentication**

Specifies the authentication, authorization, and accounting (AAA) on the switch.

## aaa/authentication/login/first

---

Configures the primary source of authentication.

### Usage

```
<aaa-config xmlns="urn:brocade.com:mgmt:brocade-aaa">
  <aaa>
    <authentication>
      <login>
        <first/>
      </login>
    </authentication>
  </aaa>
</aaa-config>
```

## aaa/authentication/login/second

---

Configures the secondary source of authentication.

### Usage

```
<aaa-config xmlns="urn:brocade.com:mgmt:brocade-aaa">
  <aaa>
    <authentication>
      <login>
        <second/>
      </login>
    </authentication>
  </aaa>
</aaa-config>
```

### Parameters

#### **authentication**

Specifies authentication.

#### **login**

Specifies login.

#### *second*

Specifies second.

## aaa/username

---

Configures a username for AAA login.

### Usage

```
<username xmlns="urn:brocade.com:mgmt:brocade-aaa">  
  <name>{req_val}</name>  
</username>
```



## aaa/username/desc

---

Adds describes for the username.

### Usage

```
<username xmlns="urn:brocade.com:mgmt:brocade-aaa">
  <name>{req_val}</name>
  <desc/>
</username>
```

### Parameters

*name*

Specifies the username.

## aaa/username/encryption-level

---

Configures the encryption level for a username.

### Usage

```
<username xmlns="urn:brocade.com:mgmt:brocade-aaa">  
  <name>{req_val}</name>  
  <encryption-level/>  
</username>
```

### Parameters

*name*

Specifies the username.

## aaa/username/role

---

Configures the role of the user.

### Usage

```
<username xmlns="urn:brocade.com:mgmt:brocade-aaa">  
  <name>{req_val}</name>  
  <role/>  
</username>
```

### Parameters

*name*

Specifies the username.

## acl-policy

---

Configures, modifies, or retrieves the ACL configuration.

### Usage

```
<acl-policy xmlns="urn:brocade.com:mgmt:brocade-acl-policy">  
  <global-acl-policy-conf-cmds/>  
</acl-policy>
```

### Parameters

*global-acl-policy-conf-cmds*

Enters the global ACL policy commands mode.

## acl-policy/allow-conflicting-rules

---

Allows conflicting rules in an ACL table.

### Usage

```
<acl-policy xmlns="urn:brocade.com:mgmt:brocade-acl-policy">
  <global-acl-policy-conf-cmds>
    <allow-conflicting-rules/>
  </global-acl-policy-conf-cmds>
</acl-policy>
```

### Parameters

*global-acl-policy-conf-cmds*

Enters the global ACL policy commands mode.

*allow-conflicting-rules*

Allows conflicting rules in an ACL table.

## acl-policy/allow-duplicate-rules

---

Allows duplicate rules in an ACL table..

### Usage

```
<acl-policy xmlns="urn:brocade.com:mgmt:brocade-acl-policy">
  <global-acl-policy-conf-cmds>
    <allow-duplicate-rules/>
  </global-acl-policy-conf-cmds>
</acl-policy>
```

### Parameters

*global-acl-policy-conf-cmds*

Enters the global ACL policy commands mode.

---

## arp

---

Configures, modifies, or retrieves Address Resolution Protocol (ARP).

### Usage

```
<arp-entry xmlns="urn:brocade.com:mgmt:brocade-arp">  
  <arp-ip-address>{req_val}</arp-ip-address>  
</arp-entry>
```

### Parameters

*arp-ip-address*

The IP adress of the ARP entry.

## bridge-domain

---

Configures a bridge domain.

### Usage

```
<bridge-domain xmlns="urn:brocade.com:mgmt:brocade-bridge-domain">
  <bridge-domain-id>{req_val}</bridge-domain-id>
  <bridge-domain-type>{req_val}</bridge-domain-type>
</bridge-domain>
```

### Parameters

*bridge-domain-id*

Specifies the bridge domain ID.

*bridge-domain-type*

Specifies the bridge domain type..

**peer**

Specifies the peer.

Specifies the peer IP address.

**load-balance**

Specifies load-balance.



## bridge-domain/(bridge-domain-id)/(bridge-domain-type)/bpdu-drop-enable

Enables the Bridge Protocol Data Units (BPDU)-drop feature.

### Usage

```
<bridge-domain xmlns="urn:brocade.com:mgmt:brocade-bridge-domain">
  <bridge-domain-id>{req_val}</bridge-domain-id>
  <bridge-domain-type>{req_val}</bridge-domain-type>
  <bpdu-drop-enable/>
</bridge-domain>
```

### Parameters

*bridge-domain-id*

Specifies the bridge-domain ID.

*bridge-domain-type*

Specifies the bridge domain type.

*bpdu-drop-enable*

Enables the BPDU drop.

## bridge-domain/(bridge-domain-id)/(bridge-domain-type)/logical-interface

Configures the logical interface.

### Usage

```
<bridge-domain xmlns="urn:brocade.com:mgmt:brocade-bridge-domain">
  <bridge-domain-id>{req_val}</bridge-domain-id>
  <bridge-domain-type>{req_val}</bridge-domain-type>
  <logical-interface>
    <port-channel>
      <pc-lif-bind-id>{req_val}</pc-lif-bind-id>
    </port-channel>
  </logical-interface>
</bridge-domain>
```

### Parameters

*port-channel*

Specifies Port Channel as the logical interface.

*pc-lif-bind-id*

Specifies the Port Channel LIF bind ID.

## bridge-domain/(bridge-domain-id)/(bridge-domain-type)/local-switching

---

Configures local switching.

### Usage

```
<bridge-domain xmlns="urn:brocade.com:mgmt:brocade-bridge-domain">
  <bridge-domain-id>{req_val}</bridge-domain-id>
  <bridge-domain-type>{req_val}</bridge-domain-type>
  <local-switching/>
</bridge-domain>
```

### Parameters

*bridge-domain-id*

Specifies the bridge-domain ID.

*bridge-domain-type*

Specifies the bridge domain type.

*local-switching*

Configures local switching.

---

## bridge-domain/(bridge-domain-id)/(bridge-domain-type)/peer/(peer-ip)/cos

---

Sets the cos value in the range 0 to 7.

### Usage

```
<bridge-domain xmlns="urn:brocade.com:mgmt:brocade-bridge-domain">
  <bridge-domain-id>{req_val}</bridge-domain-id>
  <bridge-domain-type>{req_val}</bridge-domain-type>
  <peer>
    <peer-ip>{req_val}</peer-ip>
    <cos/>
  </peer>
</bridge-domain>
```

### Parameters

#### **cos**

Specifies the CoS. The range is from 0 through 7.

## bridge-domain-id/(bridge-domain-type)/peer/(peer-ip)/load-balance

Retrieves load-balancing details.

### Usage

```
<bridge-domain xmlns="urn:brocade.com:mgmt:brocade-bridge-domain">
  <bridge-domain-id>{req_val}</bridge-domain-id>
  <bridge-domain-type>{req_val}</bridge-domain-type>
  <peer>
    <peer-ip>{req_val}</peer-ip>
    <load-balance/>
  </peer>
</bridge-domain>
```

### Parameters

#### **peer**

Specifies the peer.

#### *peer-ip*

Specifies the peer IP address.

#### *load-balance*

Specifies load balance.

## bridge-domain/(bridge-domain-id)/(bridge-domain-type)/peer/(peer-ip)/lsp

Configures label-switched paths (LSPs ).

### Usage

```
<bridge-domain xmlns="urn:brocade.com:mgmt:brocade-bridge-domain">
  <bridge-domain-id>{req_val}</bridge-domain-id>
  <bridge-domain-type>{req_val}</bridge-domain-type>
  <peer>
    <peer-ip>{req_val}</peer-ip>
    <lsp/>
  </peer>
</bridge-domain>
```

### Parameters

*bridge-domain-id*

Specifies the bridge domain ID.

*bridge-domain-id*

Specifies the bridge domain type.

#### **peer**

Specifies the peer.

*peer-ip*

Specifies the peer IP address.

#### **lsp**

Specifies the LSP.

---

## bridge-domain/(bridge-domain-id)/(bridge-domain-type)/pw-profile

---

Sets the Pw-profile name.

### Usage

```
<bridge-domain xmlns="urn:brocade.com:mgmt:brocade-bridge-domain">
  <bridge-domain-id>{req_val}</bridge-domain-id>
  <bridge-domain-type>{req_val}</bridge-domain-type>
  <pw-profile-name/>
</bridge-domain>
```

---

## bridge-domain/(bridge-domain-id)/(bridge-domain-type)/statistics

---

Configures statistics for a bridge domain?

### Usage

```
<bridge-domain xmlns="urn:brocade.com:mgmt:brocade-bridge-domain">
  <bridge-domain-id>{req_val}</bridge-domain-id>
  <bridge-domain-type>{req_val}</bridge-domain-type>
  <statistics/>
</bridge-domain>
```



---

## bridge-domain/(bridge-domain-id)/(bridge-domain-type)/vc-id

---

Configures the VC ID for the bridge domain.

### Usage

```
<bridge-domain xmlns="urn:brocade.com:mgmt:brocade-bridge-domain">
  <bridge-domain-id>{req_val}</bridge-domain-id>
  <bridge-domain-type>{req_val}</bridge-domain-type>
  <vc-id-num/>
</bridge-domain>
```

### Parameters

*vc-id-num*

Specifies the VC ID.

*bridge-domain-type*

Specifies the bridge domain type.

## chassis

---

Configures, modifies, or retrieves the IP address of the virtual chassis.

### Usage

```
<hide-virtual-ip-holder xmlns="urn:brocade.com:mgmt:brocade-chassis">
  <chassis>
    <virtual-ip>    10.1.1.1</virtual-ip/>
  </chassis>
</hide-virtual-ip-holder>
```

### Parameters

*virtual-ip*

The IP address of the virtual chassis.

## chassis/virtual-ip

---

Configures the chassis the virtual IPv4 address.

### Usage

```
<hide-virtual-ip-holder xmlns="urn:brocade.com:mgmt:brocade-chassis">
  <chassis>
    <virtual-ip/>
  </chassis>
</hide-virtual-ip-holder>
```

### Parameters

*virtual-ip*

Specifies the IP address of the virtual chassis.

## chassis/virtual-ipv6

---

Configures the chassis the virtual IPv4 address.

### Usage

```
<hide-virtual-ip-holder xmlns="urn:brocade.com:mgmt:brocade-chassis">
  <chassis>
    <virtual-ipv6/>
  </chassis>
</hide-virtual-ip-holder>
```

### Parameters

*virtual-ipv6*

Specifies the IPv6 address of the virtual chassis.

## clock

---

Configures, modifies, or retrieves the system time zone.

### Usage

```
<clock-sa xmlns="urn:brocade.com:mgmt:brocade-clock">  
  <clock/>  
</clock-sa>
```

## clock/time-zone

---

Configures, modifies, or retrieves the system time zone.

### Usage

```
<clock-sa xmlns="urn:brocade.com:mgmt:brocade-clock">
  <clock>
    <timezone/>
  </clock>
</clock-sa>
```

### Parameters

*timezone*

Specifies the time zone.

---

## cluster/{cluster-name}/

---

Configures, retrieves, and modifies Multi-Chassis Trunking (MCT) cluster.

### Usage

```
<cluster xmlns="urn:brocade.com:mgmt:brocade-mct">
  <cluster-name>{req_val}</cluster-name>
  <cluster-id>{req_val}</cluster-id>
</cluster>
```

### Parameters

*cluster-name*

Specifies the MCT cluster name .

*cluster-id*

Specifies the MCT cluster ID.

## config-drift-track/off

---

Disables configuration drift tracking for the current session.

### Usage

```
<config-drift-track xmlns="http://extremenetworks.com/yang/extreme-config-mgmt">  
  <off/>  
</config-drift-track>
```

### Parameters

#### **off**

Switches off configuration drift detection for the current session.



## config-drift-track/values

---

Fetches the configuration drift values for current session.

### Usage

```
<config-drift-track xmlns="http://extremenetworks.com/yang/extreme-config-mgmt">
  <values/>
</config-drift-track>
```

### Parameters

#### **values**

Fetches the Config Drift Timestamp (as number of seconds from EPOCH) and the Config Drift Counter values for the SLX device. The return values are enclosed in the responses *drift-ts* and *drift-counter* respectively.

## config-drift-track/status

---

Displays Configuration Drift Tracking status for the current session.

### Usage

```
<config-drift-track xmlns="http://extremenetworks.com/yang/extreme-config-mgmt">  
  <status/>  
</config-drift-track>
```

### Parameters

#### **status**

Displays Config Drift Tracking status for the current session. The current status is enclosed in the response *status*.

---

## dai

---

Manages the IP access list.

### Usage

```
<dai-config xmlns="urn:brocade.com:mgmt:brocade-dai">  
  <arp/>  
</dai-config>
```

### Parameters

*arp*

Specifies the ARP.

## dai/arp/access-list

---

Manages the IP access list.

### Usage

```
<dai-config xmlns="urn:brocade.com:mgmt:brocade-dai">
  <arp>
    <access-list>
      <acl-name>{req_val}</acl-name>
    </access-list>
  </arp>
</dai-config>
```

### Parameters

*acl-name*

Specifies the access control list (ACL) name.

## delay-link-event

---

Manages the delay link event (DLE).

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>{req_val}</name>
    <delay-link-event xmlns="urn:brocade.com:mgmt:brocade-dle">
      <delay-link operation="delete"/>
    </delay-link-event>
  </ethernet>
</interface>
```

### Parameters

#### **ethernet**

Specifies the Physical ethernet interface.

*name*

Specifies the interface name.

## dot1x

---

Configures, retrieves, and modifies 802.1X authentication.

### Usage

```
<dot1x xmlns="urn:brocade.com:mgmt:brocade-dot1x">
  <test>
    <timeout/>
  </test>
</dot1x>
```

### Parameters

*test* timeout

The readiness test interval value in seconds. Valid values range from 1 through 65535. The default readiness test interval is 10 seconds.

## dot1x/test

---

Configures the 802.1X readiness test timeout.

### Usage

```
<dot1x xmlns="urn:brocade.com:mgmt:brocade-dot1x">
  <test>
    <timeout>20</timeout>
  </test>
</dot1x>
```

### Parameters

*timeout*

Specifies the interval value in seconds. The value can range from 1 through 65535

## dot3ah

---

Manages the Link OAM Protocol.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <link-oam xmlns="urn:brocade.com:mgmt:brocade-dot3ah"/>
</protocol>
```

### Parameters

*protocol*

Specifies the protocol.



---

## event-handler

---

Creates an event-handler profile.

### Usage

```
<event-handler xmlns="urn:brocade.com:mgmt:brocade-event-handler">
  <event-handler-list>
    <name>{req_val}</name>
  </event-handler-list>
</event-handler>
```

### Parameters

*name*

Specifies the name of the event-handler profile. The value can range from 1 through 32 characters. The first character must be alphabetic.

## event-handler/{event-handler-name}/action

---

Creates or accesses an event-handler profile, which can execute a Python script when a specified trigger occurs.

### Usage

```
<event-handler xmlns="urn:brocade.com:mgmt:brocade-event-handler">
  <activate>
    <name>
      <name>{req_val}</name>
      <action-timeout/>
    </name>
  </activate>
</event-handler>
```

### Parameters

*name*

Specifies the name of the event-handler profile.

## hardware

---

Configures, modifies, or retrieves the hardware management configuration.

### Usage

```
<hardware xmlns="urn:brocade.com:mgmt:brocade-hardware">
  <connector>
    <name>{req_val}</name>
    <breakout>
      <cage-mode/>
    </breakout>
  </connector>
</hardware>
```

### Parameters

**connector** *name*

Specifies the hardware connector name.

**breakout** *name*

Specifies breakout and enters cage-mode.

## interface/{interface-type}/{interface-name}/ip/access-group

Applies rules specified in an access control list (ACL) to traffic entering or exiting an interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/5</name>
    <ip-acl-interface xmlns="urn:brocade.com:mgmt:brocade-ip-access-list">
      <ip>
        <access-group>
          <ip-access-list>acl11</ip-access-list>
          <ip-direction>out</ip-direction>
        </access-group>
      </ip>
    </ip-acl-interface>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name.

*ip-access-list*

Specifies the ACL name

*ip-direction*

Specifies the IP direction.

**in**

Specifies the ACL binding direction as ingress.

**out**

Specifies the ACL binding direction as egress.

## interface/{interface-type}/{interface-name}/ip/arp-aging-timeout

Configures how long an ARP entry stays in cache before the cache refreshes.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/5</name>
    <ip>
      <ip-config xmlns="urn:brocade.com:mgmt:brocade-ip-config">
        <arp-aging-timeout>220</arp-aging-timeout>
      </ip-config>
    </ip>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name.

*arp-aging-timeout*

Determines how long an ARP entry stays in cache. The timeout value can range from 0 through 240 minutes.

## interface/{interface-type}/{interface-name}/ip/dhcp/relay/gateway

Configures the IP DHCP Relay on a Layer 3 gateway interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/5</name>
    <ip>
      <interface-te-dhcp-conf xmlns="urn:brocade.com:mgmt:brocade-dhcp">
        <dhcp>
          <relay>
            <gateway>1.1.1.1</gateway>
          </relay>
        </dhcp>
      </interface-te-dhcp-conf>
    </ip>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*gateway*

Specifies the IPv4 gateway address of the DHCP server where the DHCP client requests are to be forwarded

## interface/{interface-type}/{interface-name}/ip/igmp/immediate-leave

Removes a group from the IGMP table immediately following receipt of a Leave Group request.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/5</name>
    <ip>
      <igmp-phy-intf-cfg xmlns="urn:brocade.com:mgmt:brocade-igmp">
        <igmp>
          <immediate-leave></immediate-leave>
        </igmp>
      </igmp-phy-intf-cfg>
    </ip>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

**immediate-leave**

Enables immediate leave processing

## interface/{interface-type}/{interface-name}/ip/igmp/last-member-query-count

Sets the last-member query count.

### Usage

```
<interface-vlan xmlns="urn:brocade.com:mgmt:brocade-interface">
  <interface>
    <vlan>
      <name>1</name>
      <ip>
        <igmp xmlns="urn:brocade.com:mgmt:brocade-igmp-snooping">
          <last-member-query-count>3</last-member-query-count>
        </igmp>
      </ip>
    </vlan>
  </interface>
</interface-vlan>
```

### Parameters

*name*

Specifies the interface name

*last-member-query-count*

Specifies the last member query count value. The value can range from 2 through 10. The default value is 2



## interface/{interface-type}/{interface-name}/ip/igmp/last-member-query-interval

Configures last member query interval.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/5</name>
    <ip>
      <igmp-phy-intf-cfg xmlns="urn:brocade.com:mgmt:brocade-igmp">
        <igmp>
          <last-member-query-interval>1500</last-member-query-interval>
        </igmp>
      </igmp-phy-intf-cfg>
    </ip>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*last-member-query-interval*

Specifies last member query interval in milliseconds. The interval can range from 100 through 25500. The default value is 1000 milliseconds

## interface/{interface-type}/{interface-name}/ip/igmp/query-interval

Configures the query interval for a VLAN. The query interval is the amount of time between IGMP query messages sent by the switch.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/5</name>
    <ip>
      <igmp-phy-intf-cfg xmlns="urn:brocade.com:mgmt:brocade-igmp">
        <igmp>
          <query-interval>150</query-interval>
        </igmp>
      </igmp-phy-intf-cfg>
    </ip>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name.

*query-interval*

Specifies the response time in seconds. The interval can range from 1 through 18000 seconds. The default value is 125 seconds.

## interface/{interface-type}/{interface-name}/ip/igmp/query-max-response-time

Configures the maximum response time for IGMP queries

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/5</name>
    <ip>
      <igmp-phy-intf-cfg xmlns="urn:brocade.com:mgmt:brocade-igmp">
        <igmp>
          <query-max-response-time>15</query-max-response-time>
        </igmp>
      </igmp-phy-intf-cfg>
    </ip>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name.

*query-max-response-time*

Specifies IGMP query max response time in seconds. The response time can range from 1 through 25 seconds. By default, the response time is set to 10 seconds.

---

## interface/{interface-type}/{interface-name}/ip/igmp/robustness-variable

---

Configures the robustness variable.

### Usage

```
<interface-vlan xmlns="urn:brocade.com:mgmt:brocade-interface">
  <interface>
    <vlan>
      <name>1</name>
      <ip>
        <igmp xmlns="urn:brocade.com:mgmt:brocade-igmp-snooping">
          <robustness-variable>3</robustness-variable>
        </igmp>
      </ip>
    </vlan>
  </interface>
</interface-vlan>
```

### Parameters

*name*

Specifies the interface name.

*robustness-variable*

Specifies the robustness value. The value can range from 2 through 10. The default value is 2.

## interface/{interface-type}/{interface-name}/ip/igmp/startup-query-count

Configures the start up query count.

### Usage

```
<interface-vlan xmlns="urn:brocade.com:mgmt:brocade-interface">
  <interface>
    <vlan>
      <name>1</name>
      <ip>
        <igmp>
          <startup-query-count>3</startup-query-count>
        </igmp>
      </ip>
    </vlan>
  </interface>
</interface-vlan>
```

### Parameters

*name*

Specifies the interface name.

*startup-query-count*

Specifies the startup query count value. The value can range from 1 through 10. The default value is 2.

## interface/{interface-type}/{interface-name}/ip/igmp/startup-query-interval

Configures the start up query interval.

### Usage

```
<interface-vlan xmlns="urn:brocade.com:mgmt:brocade-interface">
  <interface>
    <vlan>
      <name>1</name>
      <ip>
        <igmp xmlns="urn:brocade.com:mgmt:brocade-igmp-snooping">
          <startup-query-interval>10</startup-query-interval>
        </igmp>
      </ip>
    </vlan>
  </interface>
</interface-vlan>
```

### Parameters

*name*

Specifies the interface name.

*startup-query-interval*

Specifies the start up query interval value. The value can range from 1 through 450. The default value is 1.

## interface/{interface-type}/{interface-name}/ip/pim/dr-priority

Configures the designated router (DR) priority of a protocol Independent Multicast (PIM) enabled interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/5</name>
    <ip>
      <pim-intf-phy-cont xmlns="urn:brocade.com:mgmt:brocade-pim">
        <pim-int-cmd>
          <pim>
            <dr-priority>1</dr-priority>
          </pim>
        </pim-int-cmd>
      </pim-intf-phy-cont>
    </ip>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*dr-priority*

Specifies the DR priority value. The value can range from 0 through 65535. The default value is 1

## interface/{interface-type}/{interface-name}/ip/pim/neighbor-filter

By default, directly connected routers under protocol-independent multicast (PIM) form neighborship with one another. Using this command, you can block specified routers from neighborship.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/5</name>
    <ip>
      <pim-intf-phy-cont xmlns="urn:brocade.com:mgmt:brocade-pim">
        <pim-int-cmd>
          <pim>
            <dr-priority>1</dr-priority>
          </pim>
        </pim-int-cmd>
      </pim-intf-phy-cont>
    </ip>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name.

*neighbor-filter*

Specifies the name of a prefix list defined by the ip prefix-list command. Permitted values are between 1 and 63 characters. Although the first character must be alphabetic, the others can be alphanumeric, underscores (\_), or minus signs (-).



## interface/{interface-type}/{interface-name}/ip/pim-sparse

Enables Protocol Independent Multicast Sparse Mode.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/5</name>
    <ip>
      <pim-intf-phy-cont xmlns="urn:brocade.com:mgmt:brocade-pim">
        <pim-int-cmd>
          <pim-sparse></pim-sparse>
        </pim-int-cmd>
      </pim-intf-phy-cont>
    </ip>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name.

**pim-sparse**

Enables PIM sparse mode.

## interface/{interface-type}/{interface-name}/ip/policy

---

Enables policy-based routing (PBR) on any Layer 3 interface after ACLs and route map entries are configured.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/5</name>
    <ip-pbr-interface xmlns="urn:brocade.com:mgmt:brocade-ip-policy">
      <ip>
        <policy>
          <route-map>
            <route-map-name>map1</route-map-name>
          </route-map>
        </policy>
      </ip>
    </ip-pbr-interface>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*route-map-name*

Specifies the name of the route-map

## interface/{interface-type}/{interface-name}/ip/proxy-arp

---

Enables proxy ARP on an interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/5</name>
    <ip>
      <ip-config xmlns="urn:brocade.com:mgmt:brocade-ip-config">
        <proxy-arp></proxy-arp>
      </ip-config>
    </ip>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name.

**proxy-arp**

Enables proxy ARP.

---

## interface/{interface-type}/{interface-name}/ip/router/isis

---

Configures the Intermediate System-to-Intermediate System (IS-IS) routing at the interface level.

### Usage

```
<router xmlns="urn:brocade.com:mgmt:brocade-isis" xmlns:y="http://brocade.com/ns/rest"
y:self="/rest/
config/running/interface/Ve/101/ip/router">
<isis>true</isis>
</router>
</interface>
```

## interface/{interface-type}/{interfacename}/ipv6/router/isis

---

Configures the IS-IS routing protocol.

### Usage

```
<router xmlns="urn:brocade.com:mgmt:brocade-isis" xmlns:y="http://brocade.com/ns/rest"
y:self="/rest/
config/running/interface/Ve/101/ipv6/router">
<isis>true</isis>
</router>
</interface>
```

## interface/{interface-type}/{interface-name}/isis

---

Configures the Intermediate System-to-Intermediate System (IS-IS) routing at the interface level.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">1
  <ethernet>
    <name>{req_val}</name>
    <ip>
      <intf-router-isis xmlns="urn:brocade.com:mgmt:brocade-isis"/>
    </ip>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name.

**ip**

Specifies the IP address.

**ethernet**

Specifies the physical Ethernet interface.

## interface/{interface-type}/{interface-name}/link-error-disable

Configures port link dampening (PLD).

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>{req_val}</name>
    <link-error-disable xmlns="urn:brocade.com:mgmt:brocade-pld">
      <wait-time-in-sec/>
    </link-error-disable>
  </ethernet>
</interface>
```

### Parameters

#### **ethernet**

Specifies Ethernet interface.

#### *name*

Specifies the interface name.

#### *link-error-disable-entry*

Specifies the link error disable entry.

#### *wait-time-in-sec*

Specifies the wait time.

## interface/{interface-type}/{interface-name}/link-fault-signaling

---

Configures, retrieves, and modifies Link Fault Signaling (LFS).

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>{req_val}</name>
    <link-fault-signaling xmlns="urn:brocade.com:mgmt:brocade-lfs">
      <tx/>
    </link-fault-signaling>
  </ethernet>
</interface>
```

### Parameters

#### **ethernet**

Specifies Ethernet interface.

#### *name*

Specifies the interface name.

#### **tx**

Specifies the tx direction.



## interface/{interface-type}/{interface-name}/ipv6/access-group

Applies rules specified in an IPv6 access control list (ACL) to traffic entering or exiting an interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/1</name>
    <ipv6>
      <access-group xmlns="urn:brocade.com:mgmt:brocade-ipv6-access-list">
        <ipv6-access-list>acl12</ipv6-access-list>
        <ip-direction>in</ip-direction>
        <traffic-type>routed</traffic-type>
      </access-group>
    </ipv6>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*ipv6-access-list*

Specifies the name of the standard or extended IP access list

*ip-direction*

Specifies the binding direction

**ingress**

Ingress direction

**egress**

Egress direction

*traffic-type*

Specifies the traffic type

**routed**

Filter only routed traffic. This parameter is not valid for management or overlay-gateway interfaces

**switched**

Filter only switched traffic. This parameter is not valid for management or overlay-gateway interfaces.

## interface/{interface-type}/{interface-name}/ipv6/dhcp/relay/address

Configures the IPv6 DHCP Relay on a Layer 3 interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/2</name>
    <ipv6>
      <interface-phy-dhcp-conf xmlns="urn:brocade.com:mgmt:brocade-dhcpv6">
        <dhcp>
          <relay>
            <servers>
              <relay-ip-addr>2001:db8::12d:1300</relay-ip-addr>
              <use-vrf>mgmt-vrf</use-vrf>
              <interface>
                <interface-type>ethernet</interface-type>
                <interface-name>1/2</interface-name>
              </interface>
            </servers>
          </relay>
        </dhcp>
      </interface-phy-dhcp-conf>
    </ipv6>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*relay-ip-addr*

Specifies the IPv6 address of the DHCP server where the DHCP client requests are to be forwarded

*use-vrf*

Use this option if the VRF where the DHCP server is located is different from the VRF of the interface where the client is connected. Specifies the VRF name

*interface-type*

The type of interface, such as Ethernet or Ve interface.

*interface-name*

The interface number

## interface/{interface-type}/{interface-name}/ipv6/nd/broadcast-mac-trap

Enables the trap for all the IPv6 packets with broadcast mac.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/1</name>
    <ipv6>
      <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
        <ipv6-intf-cmds>
          <nd>
            <broadcast-mac-trap></broadcast-mac-trap>
          </nd>
        </ipv6-intf-cmds>
      </ipv6-nd-ra>
    </ipv6>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

#### **broadcast-mac-trap**

Enables the trap for all the IPv6 packets with broadcast mac

## interface/{interface-type}/{interface-name}/ipv6/nd/cache

Configures the time interval after which the IPv6 Neighbor Discovery cache is deleted or refreshed.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/1</name>
    <ipv6>
      <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
        <ipv6-intf-cmds>
          <nd>
            <cache>
              <expire>14000</expire>
            </cache>
          </nd>
        </ipv6-intf-cmds>
      </ipv6-nd-ra>
    </ipv6>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*expire*

Specifies the time interval in minutes. The interval can range from 1 through 240 minutes. The default value is 240 minutes

## interface/{interface-type}/{interface-name}/ipv6/nd/dad

Configures the number of IPv6 Neighbor Discovery Neighbor Solicitation (NS) messages to be sent as part of duplicate address detection (DAD).

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/0/1</name>
    <ipv6>
      <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
        <ipv6-intf-cmds>
          <nd>
            <dad>
              <attempts>3</attempts>
              <time>2</time>
            </dad>
          </nd>
        </ipv6-intf-cmds>
      </ipv6-nd-ra>
    </ipv6>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*attempts*

Specifies the number of solicitations. The value can range from 0 through 10. By default, the value is set to 2.

*time*

Specifies the time in seconds. The value can range from 1 through 5. The default value is 1

## interface/{interface-type}/{interface-name}/ipv6/nd/hoplimit

Configures the number of hops to be advertised in IPv6 Neighbor Discovery Router Advertisement (RA) messages.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/1</name>
    <ipv6>
      <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
        <ipv6-intf-cmds>
          <nd>
            <hoplimit>65</hoplimit>
          </nd>
        </ipv6-intf-cmds>
      </ipv6-nd-ra>
    </ipv6>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*hoplimit*

Specifies the number of hops to be advertised. The number can range from 0 through 255. The default value is 64

## interface/{interface-type}/{interface-name}/ipv6/nd/managed-config-flag

In IPv6 Neighbor Discovery, indicates to hosts on a local link that they must use the stateful autoconfiguration feature to obtain IPv6 addresses for their interfaces.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/1</name>
    <ipv6>
      <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
        <ipv6-intf-cmds>
          <nd>
            <managed-config-flag></managed-config-flag>
          </nd>
        </ipv6-intf-cmds>
      </ipv6-nd-ra>
    </ipv6>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

**managed-config-flag**

Indicates to hosts on a local link that they must use the stateful autoconfiguration feature to obtain IPv6 addresses for their interfaces

## interface/{interface-type}/{interface-name}/ipv6/nd/mtu

Sets the size of the maximum transmission unit (MTU) that is advertised in Neighbor Discovery Router Advertisement (RA) messages.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/</name>
    <ipv6>
      <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
        <ipv6-intf-cmds>
          <nd>
            <mtu>1550</mtu>
          </nd>
        </ipv6-intf-cmds>
      </ipv6-nd-ra>
    </ipv6>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the name of the interface

*mtu*

Specifies the size, in bytes, of the MTU that is advertised. The value can range from 1280 through 65535. The default value is 1500



## interface/{interface-type}/{interface-name}/ipv6/nd/ns-interval

Configures the interval for address resolution between IPv6 Neighbor Discovery Neighbor Solicitation (NS) messages.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/1</name>
    <ipv6>
      <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
        <ipv6-intf-cmds>
          <nd>
            <ns-interval>2</ns-interval>
          </nd>
        </ipv6-intf-cmds>
      </ipv6-nd-ra>
    </ipv6>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*ns-interval*

Specifies the number of seconds between neighbor solicitation messages. The value can range from 1 through 5 seconds. The default value is 1 second

## interface/{interface-type}/{interface-name}/ipv6/nd/other-config-flag

In IPv6 Neighbor Discovery, indicates to hosts on a local link that they can use the stateful autoconfiguration feature to obtain configuration settings other than IPv6 address information for their interfaces.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/1</name>
    <ipv6>
      <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
        <ipv6-intf-cmds>
          <nd>
            <other-config-flag></other-config-flag>
          </nd>
        </ipv6-intf-cmds>
      </ipv6-nd-ra>
    </ipv6>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

#### **other-config-flag**

indicates to hosts on a local link that they can use the stateful autoconfiguration feature to obtain configuration settings other than IPv6 address information for their interfaces

## interface/{interface-type}/{interface-name}/ipv6/nd/prefix

Configures which IPv6 prefixes are included in IPv6 Neighbor Discovery Router Advertisement (RA) messages.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/1</name>
    <ipv6>
      <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
        <ipv6-intf-cmds>
          <nd>
            <prefix>
              <prefix-ipv6-address>2001:db8:12d:1300::/64</prefix-ipv6-
address>
              <lifetime>
                <no-advertise></no-advertise>
              </lifetime>
            </prefix>
          </nd>
        </ipv6-intf-cmds>
      </ipv6-nd-ra>
    </ipv6>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*prefix-ipv6-address*

Specifies the IPv6 prefix in hexadecimal with 16-bit values between colons

**no-advertise**

Specifies no advertisement.

## interface/{interface-type}/{interface-name}/ipv6/nd/ra-interval

Configures the maximum interval range and minimum interval at which IPv6 Neighbor Discovery Router Advertisement (RA) messages are sent.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/1</name>
    <ipv6>
      <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
        <ipv6-intf-cmds>
          <nd>
            <ra-interval>
              <max-interval>650</max-interval>
              <min>250</min>
            </ra-interval>
          </nd>
        </ipv6-intf-cmds>
      </ipv6-nd-ra>
    </ipv6>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*max-interval*

Specifies the maximum interval range in seconds. The interval can range from 4 through 1800 seconds. The default interval is set from 200 through 600, with messages sent randomly within that interval

*min*

Specifies the minimum interval in seconds. The interval can range from 0 through 1800. The default interval is set to 200 seconds

## interface/{interface-type}/{interface-name}/ipv6/nd/ra-lifetime

Configures the amount of time in IPv6 Neighbor Discovery that a router is considered a valid default router.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/1</name>
    <ipv6>
      <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
        <ipv6-intf-cmds>
          <nd>
            <ra-lifetime>2000</ra-lifetime>
          </nd>
        </ipv6-intf-cmds>
      </ipv6-nd-ra>
    </ipv6>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*ra-lifetime*

Specifies the time in seconds. The time can range from 0 through 9000. The default value is 1800

## interface/{interface-type}/{interface-name}/ipv6/nd/reachable-time

Configures the amount of time in IPv6 Neighbor Discovery that a device considers a remove IPv6 node reachable.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/1</name>
    <ipv6>
      <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
        <ipv6-intf-cmds>
          <nd>
            <reachable-time>1</reachable-time>
          </nd>
        </ipv6-intf-cmds>
      </ipv6-nd-ra>
    </ipv6>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*reachable-time*

Specifies the time in milliseconds. The value can range from 0 through 3600000 milliseconds.  
The default time is set to 0

## interface/{interface-type}/{interface-name}/ipv6/nd/retrans-timer

Configures the time advertised between IPv6 Neighbor Discovery Neighbor Solicitation (NS) messages.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/1</name>
    <ipv6>
      <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
        <ipv6-intf-cmds>
          <nd>
            <retrans-timer>1</retrans-timer>
          </nd>
        </ipv6-intf-cmds>
      </ipv6-nd-ra>
    </ipv6>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*retrans-timer*

Specifies the interval in milliseconds, at which NS messages are sent. The interval can range from 0 through 4294967295. The default interval is set to 0

## interface/{interface-type}/{interface-name}/ipv6/nd/suppress-ra

Disables the sending of ICMPv6 Router Advertisement (RA) messages, including those sent in response to a solicitation as well as MTUs.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/1</name>
    <ipv6>
      <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
        <ipv6-intf-cmds>
          <nd>
            <suppress-ra>
              <suppress-ra-all></suppress-ra-all>
            </suppress-ra>
          </nd>
        </ipv6-intf-cmds>
      </ipv6-nd-ra>
    </ipv6>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*suppress-ra*

Disables the sending of ICMPv6 Router Advertisement (RA) messages

**all**

Disables the sending of all RA messages, including those sent in response to a solicitation

**mtu**

Disables the sending of MTUs in RA messages



## interface/{interface-type}/{interface-name}/ipv6/ra-dns-server

Configures, modifies, or retrieves the Domain Name System (DNS) server address and the lifetime multiplier information to IPv6 hosts in the Router Advertisement (RA) message.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>{req_val}</name>
    <ipv6>
      <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
        <ipv6-intf-cmds>
          <nd>
            <ra-dns-server>
              <dns-server-prefix>{req_val}</dns-server-prefix>
            </ra-dns-server>
          </nd>
        </ipv6-intf-cmds>
      </ipv6-nd-ra>
    </ipv6>
  </ethernet>
</interface>
```

### Parameters

#### **ethernet**

Specifies Ethernet interface.

*name*

Specifies the interface name.

#### **ipv6**

Specifies IPv6 address.

#### **nd**

Specifies the neighbor discovery protocol.

*dns-server-prefix*

Specifies the prefix of the DNS server.

## interface/{interface-type}/{interface-name}/ra-dns-server/hoplimit

---

Configures the number of hops to be advertised in IPv6 neighbor discovery router advertisement (RA) messages.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>{req_val}</name>
    <ipv6>
      <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
        <ipv6-intf-cmds>
          <nd>
            <hoplimit/>
          </nd>
        </ipv6-intf-cmds>
      </ipv6-nd-ra>
    </ipv6>
  </ethernet>
</interface>
```

### Parameters

#### **ethernet**

Specifies Ethernet interface.

*name*

Specifies the interface name.

#### **ipv6**

Specifies IPv6 address.

*number*

Specifies the number of hops to be advertised.

## interface/{interface-type}/{interface-name}/ra-dns-server/mtu

Sets the size of the maximum transmission unit (MTU) that is advertised in Neighbor Discovery Router Advertisement (RA) messages.

### Usage

```
<routing-system xmlns="urn:brocade.com:mgmt:brocade-common-def">
  <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
    <ve>
      <name>{req_val}</name>
      <ipv6 xmlns="urn:brocade.com:mgmt:brocade-ipv6-config">
        <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
          <ipv6-intf-cmds>
            <nd>
              <mtu/>
            </nd>
          </ipv6-intf-cmds>
        </ipv6-nd-ra>
      </ipv6>
    </ve>
  </interface>
</routing-system>
```

### Parameters

**ve**

Specifies virtual Ethernet interface.

*name*

Specifies the interface name.

**ipv6**

Specifies IPv6 address.

**mtu** *number*

Specifies the size, in bytes, of the MTU that is advertised.

## interface/{interface-type}/{interface-name}/ra-dns-server/other-config-flag

In IPv6 Neighbor Discovery, indicates to hosts on a local link that they can use the stateful autoconfiguration feature to obtain configuration settings other than IPv6 address information for their interfaces.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ve>
    <name>{req_val}</name>
    <ipv6 xmlns="urn:brocade.com:mgmt:brocade-ipv6-config">
      <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
        <ipv6-intf-cmds>
          <nd>
            <other-config-flag/>
          </nd>
        </ipv6-intf-cmds>
      </ipv6-nd-ra>
    </ipv6>
  </ve>
</interface>
```

### Parameters

**ve**

Specifies virtual Ethernet interface.

*name*

Specifies the interface name.

**ipv6**

Specifies IPv6 address.

## interface/{interface-type}/{interface-name}/ipv6/ra-domain-name

Configures the domain name of the Domain Name System (DNS) suffix and the lifetime multiplier information to IPv6 hosts in the Router Advertisement (RA) message.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>{req_val}</name>
    <ipv6>
      <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
        <ipv6-intf-cmds>
          <nd>
            <ra-domain-name>
              <domain-name-string>{req_val}</domain-name-string>
              <domain-name-lifetime-multiplier/>
            </ra-domain-name>
          </nd>
        </ipv6-intf-cmds>
      </ipv6-nd-ra>
    </ipv6>
  </ethernet>
</interface>
```

### Parameters

#### **ethernet**

Specifies Ethernet interface.

#### *name*

Specifies the interface name.

#### **ipv6**

Specifies IPv6.

#### **ra-domain-name**

Specifies the RA domain name.

#### *domain-name-string*

Specifies the domain name.

#### *domain-name-lifetime-multiplier*

Specifies domain name option and lifetime multiplier for DNS search list option.

---

## interface/{interface-type}/{interface-name}/lldp/dcbx-version

---

Specifies which version of the Data Center Bridging Exchange (DCBX) protocol to use.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/5</name>
    <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
      <dcbx-version>cee</dcbx-version>
    </lldp>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*dcbx-version*

Specifies the version

**auto**

Auto-adjusts the DCBX protocol version. This is the default setting

**cee**

Uses the Converged Enhanced Ethernet (CEE) DCBX version.

## interface/{interface-type}/{interface-name}/lldp/disable

---

Disables the Link Layer Discovery Protocol (LLDP) on the interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/5</name>
    <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
      <disable></disable>
    </lldp>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

**disable**

Disables the Link Layer Discovery Protocol (LLDP) on the interface

---

## interface/{interface-type}/{interface-name}/lldp/iscsi-priority

---

Configures the priority that will be advertised in the DCBX iSCSI TLV for a specified interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/5</name>
    <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
      <iscsi-priority>3</iscsi-priority>
    </lldp>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*iscsi-priority*

Specifies the priority value. The value can range from 0 through 7



## interface/{interface-type}/{interface-name}/lldp/profile

---

Applies a Link Layer Discovery Protocol (LLDP) profile to an interface

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/5</name>
    <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
      <profile>profile1</profile>
    </lldp>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*profile*

Specifies the profile name

## interface/{interface-type}/{interface-name}/isis/reverse-metric

Configures the reverse metric value on a single IS-IS interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>{req_val}</name>
    <interface-eth-isis-conf xmlns="urn:brocade.com:mgmt:brocade-isis">
      <intf-isis>
        <interface-isis>
          <interface-reverse-metric/>
        </interface-isis>
      </intf-isis>
    </interface-eth-isis-conf>
  </ethernet>
</interface>
```

### Parameters

#### **ethernet**

Specifies the physical Ethernet interface.

#### *name*

Specifies the interface name.

#### **intf-isis**

Specifies the ISIS interface.

#### **interface-reverse-metric**

Specifies interface reverse metric.

## interface/{interface-type}/{interface-name}/isis/priority

---

Determines the priority of the interface for being elected as a designated IS.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>{req_val}</name>
    <interface-eth-isis-conf xmlns="urn:brocade.com:mgmt:brocade-isis">
      <intf-isis>
        <interface-isis>
          <interface-priority/>
        </interface-isis>
      </intf-isis>
    </interface-eth-isis-conf>
  </ethernet>
</interface>
```

### Parameters

**ethernet**

Specifies the physical Ethernet interface.

*name*

Specifies the name of Ethernet interface.

**intf-isis**

Specifies the ISIS interface.

## interface/{interface-type}/{interface-name}/isis/point-to-point

---

Configures the network type for the IS-IS interface as point-to-point.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>{req_val}</name>
    <interface-eth-isis-conf xmlns="urn:brocade.com:mgmt:brocade-isis">
      <intf-isis>
        <interface-isis>
          <interface-point-to-point/>
        </interface-isis>
      </intf-isis>
    </interface-eth-isis-conf>
  </ethernet>
</interface>
```

### Parameters

#### **ethernet**

Specifies the physical Ethernet interface.

#### *name*

Specifies the ISIS interface name.

#### *intf-isis*

Configures the ISIS interface.

---

## interface/{interface-type}/{interface-name}/isis/passive

---

Disables adjacency formation and advertisements on an IS-IS interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>{req_val}</name>
    <interface-eth-isis-conf xmlns="urn:brocade.com:mgmt:brocade-isis">
      <intf-isis>
        <interface-isis>
          <interface-passive/>
        </interface-isis>
      </intf-isis>
    </interface-eth-isis-conf>
  </ethernet>
</interface>
```

### Parameters

#### **ethernet**

Specifies the physical Ethernet interface.

#### *name*

Specifies the ISIS interface name.

#### *intf-isis*

Configures the ISIS interface.

## interface/{interface-type}/{interface-name}/isis/metric

Configures the value of an IS-IS metric.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>{req_val}</name>
    <interface-eth-isis-conf xmlns="urn:brocade.com:mgmt:brocade-isis">
      <intf-isis>
        <interface-isis>
          <interface-metric>
            <interface-metric-level>{req_val}</interface-metric-
level>
          </interface-metric>
        </interface-isis>
      </intf-isis>
    </interface-eth-isis-conf>
  </ethernet>
</interface>
```

### Parameters

#### **ethernet**

Specifies the physical Ethernet interface.

*name*

Specifies the ISIS interface name.

*intf-isis*

Configures the ISIS interface.

*interface-metric*

Specifies the ISIS interface.

*interface-metric-level*

Specifies the metric level for the ISIS interface.

## interface/{interface-type}/{interface-name}/isis/ldp-sync

Enables synchronization with IS-IS for an interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>{req_val}</name>
    <interface-eth-isis-conf xmlns="urn:brocade.com:mgmt:brocade-isis">
      <intf-isis>
        <interface-isis>
          <interface-ldp-sync/>
        </interface-isis>
      </intf-isis>
    </interface-eth-isis-conf>
  </ethernet>
</interface>
```

### Parameters

#### **ethernet**

Specifies the physical Ethernet interface.

#### *name*

Specifies the ISIS interface name.

#### *intf-isis*

Configures the ISIS interface.

## interface/{interface-type}/{interface-name}/isis/ipv6-metric

---

Configures the metric value for an interface under IPv6 IS-IS MT.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>{req_val}</name>
    <interface-eth-isis-conf xmlns="urn:brocade.com:mgmt:brocade-isis">
      <intf-isis>
        <interface-isis>
          <interface-ipv6>
            <interface-ipv6-metric>
              <interface-ipv6-metric-level>{req_val}</interface-ipv6-metric-
level>
            </interface-ipv6-metric>
          </interface-ipv6>
        </interface-isis>
      </intf-isis>
    </interface-eth-isis-conf>
  </ethernet>
```

### Parameters

#### **ethernet**

Specifies the physical Ethernet interface.

*name*

Specifies the ISIS interface name.

#### **intf-isis**

Configures the ISIS interface.

#### **interface-ipv6**

Specifeis the IPv6 ISIS interface.

#### **interface-ipv6-metric**

Specifeis the IPv6 ISIS interface metric.

*interface-ipv6-metric-level*

Specifeis the metric level for the ISIS IPv6 interface .



## interface/{interface-type}/{interface-name}/isis/hello-multiplier

Specifies the number of IS-IS hello packets a neighbor must miss before a device declares adjacency as down.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>{req_val}</name>
    <interface-eth-isis-conf xmlns="urn:brocade.com:mgmt:brocade-isis">
      <intf-isis>
        <interface-isis>
          <interface-hello-multiplier>
            <interface-hello-multiplier-level>{req_val}</interface-hello-
multiplier-level>
          </interface-hello-multiplier>
        </interface-isis>
      </intf-isis>
    </interface-eth-isis-conf>
  </ethernet>
</interface>
```

### Parameters

#### **ethernet**

Specifies the physical Ethernet interface.

*name*

Specifies the interface name.

#### **intf-isis**

Specifies the ISIS interface.

#### **interface-hello-multiplier**

Specifies interface hello multiplier.

*interface-hello-multiplier-level*

Specifies the hello interval multiplier level .

## interface/{interface-type}/{interface-name}/isis/hello-interval

Specifies how often an IS-IS interface sends hello messages to its IS-IS neighbors.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>{req_val}</name>
    <interface-eth-isis-conf xmlns="urn:brocade.com:mgmt:brocade-isis">
      <intf-isis>
        <interface-isis>
          <interface-hello-interval>
            <interface-hello-interval-level>{req_val}</interface-hello-
interval-level>
          </interface-hello-interval>
        </interface-isis>
      </intf-isis>
    </interface-eth-isis-conf>
  </ethernet>
</interface>
```

### Parameters

#### **ethernet**

Specifies the physical Ethernet interface.

*name*

Specifies the interface name.

#### **intf-isis**

Specifies the ISIS interface.

#### **interface-hello-interval**

Specifies interface hello interval.

*interface-hello-interval-level*

Specifies the hello interval level.

## interface/{interface-type}/{interface-name}/isis/hello-padding

Re-enables IS-IS hello padding at the interface level.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>{req_val}</name>
    <interface-eth-isis-conf xmlns="urn:brocade.com:mgmt:brocade-isis">
      <intf-isis>
        <interface-isis>
          <interface-hello>
            <interface-hello-padding/>
          </interface-hello>
        </interface-isis>
      </intf-isis>
    </interface-eth-isis-conf>
  </ethernet>
</interface>
```

### Parameters

#### **ethernet**

Specifies the physical Ethernet interface.

*name*

Specifies the interface name.

#### **intf-isis**

Specifies the ISIS interface.

#### **interface-hello**

Specifies interface hello.

## interface/{interface-type}/{interface-name}/isis/circuit-type

Configures the type of adjacency used for an IS-IS interface.

### Usage

```
<routing-system xmlns="urn:brocade.com:mgmt:brocade-common-def">
  <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
    <loopback xmlns="urn:brocade.com:mgmt:brocade-intf-loopback">
      <id>{req_val}</id>
      <intf-isis xmlns="urn:brocade.com:mgmt:brocade-isis">
        <interface-isis>
          <circuit-type/>
        </interface-isis>
      </intf-isis>
    </loopback>
  </interface>
```

### Parameters

*id*

Specifies the ID.

#### **interface-isis**

Configures the ISIS interface.

#### **circuit-type**

Specifies the circuit type.

## interface/{interface-type}/{interface-name}/isis/auth-mode

Specifies the type of authentication used for an IS-IS interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>{req_val}</name>
    <interface-eth-isis-conf xmlns="urn:brocade.com:mgmt:brocade-isis">
      <intf-isis>
        <interface-isis>
          <interface-auth-mode/>
        </interface-isis>
      </intf-isis>
    </interface-eth-isis-conf>
  </ethernet>
</interface>
```

### Parameters

#### **ethernet**

Specifies the physical Ethernet interface.

#### *name*

Specifies the interface name.

#### *interface-auth-mode*

Specifies the authorization mode.

## interface/{interface-type}/{interface-name}/isis/auth-key

Configures an authentication key for a specified IS-IS interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>{req_val}</name>
    <interface-eth-isis-conf xmlns="urn:brocade.com:mgmt:brocade-isis">
      <intf-isis>
        <interface-isis>
          <interface-auth-key>
            <interface-auth-key-level>{req_val}</interface-auth-key-level>
          </interface-auth-key>
        </interface-isis>
      </intf-isis>
    </interface-eth-isis-conf>
  </ethernet>
</interface>
```

### Parameters

#### **ethernet**

Specifies the physical Ethernet interface.

*name*

Specifies the interface name.

*interface-isis*

Specifies the ISIS interface.

#### **interface-auth-key**

Configures the ISIS interface authorization key.

*interface-auth-key-level*

Specifies the authorization key level for the ISIS interface.

## interface/{interface-type}/{interface-name}/isis/auth-check

Enables authentication checking for an IS-IS interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>{req_val}</name>
    <interface-eth-isis-conf xmlns="urn:brocade.com:mgmt:brocade-isis">
      <intf-isis>
        <interface-isis>
          <auth-check/>
        </interface-isis>
      </intf-isis>
    </interface-eth-isis-conf>
  </ethernet>
</interface>
```

### Parameters

#### **ethernet**

Specifies the physical Ethernet interface.

#### *name*

Specifies the interface name.

#### *interface-isis*

Specifies the ISIS interface.

#### *auth-check-level1*

Specifies the authorization check level 1.

#### *interface-auth-check-level1-disable*

Disables the interface authorization check level 1.

#### *auth-check-level2*

Specifies the authorization check level 2.

#### *interface-auth-check-level2-disable*

Disables the interface authorization check level 2.

---

## interface/{interface-type}/{interface-name}/link-oam-interface

---

Configures the Link OAM protocol on an Ethernet interface.

### Usage

```
interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>{req_val}</name>
    <link-oam-interface xmlns="urn:brocade.com:mgmt:brocade-dot3ah">
      <enable/>
    </link-oam-interface>
  </ethernet>
</interface>
```



## interface/{interface-type}/{interface-name}/link-oam/link-fault/action

Sets action for a Link Fault event .

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>{req_val}</name>
    <link-oam-interface xmlns="urn:brocade.com:mgmt:brocade-dot3ah">
      <remote-failure>
        <link-fault>
          <link-fault-action/>
        </link-fault>
      </remote-failure>
    </link-oam-interface>
  </ethernet>
</interface>
```

---

## interface/{interface-type}/{interface-name}/link-oam-interface/allow-loopback

---

Enables or disables loopback.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>{req_val}</name>
    <link-oam-interface xmlns="urn:brocade.com:mgmt:brocade-dot3ah">
      <allow-loopback/>
    </link-oam-interface>
  </ethernet>
</interface>
```

## interface/{interface-type}/{interface-name}/rmon/collection/history

Collects Ethernet group statistics for later retrieval

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/5</name>
    <rmon xmlns="urn:brocade.com:mgmt:brocade-rmon">
      <collection>
        <history-control-entry>
          <history-control-index>25</history-control-index>
          <history-control-buckets-requested>10</history-control-buckets-
requested>
          <history-control-interval>2000</history-control-interval>
          <history-control-owner>admin</history-control-owner>
        </history-control-entry>
      </collection>
    </rmon>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name.

*history-control-index*

Specifies the RMON collection control index value. The value can range from 1 through 65535.

*history-control-buckets-requested*

Specifies the maximum number of buckets for the RMON collection history. The value can range from 1 through 65535.

*history-control-interval*

Specifies the alarm sample interval in seconds. The value can range from 1 through 3600. The default value is 1800.

*history-control-owner*

Specifies the identity of the owner. The maximum number of characters is 15.

## interface/{interface-type}/{interface-name}/rmon/collection/stats

Collects Ethernet group statistics on a specific interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/5</name>
    <rmon xmlns="urn:brocade.com:mgmt:brocade-rmon">
      <collection>
        <history-control-entry>
          <history-control-index>25</history-control-index>
          <history-control-buckets-requested>10</history-control-buckets-
requested>
          <history-control-interval>2000</history-control-interval>
          <history-control-owner>admin</history-control-owner>
        </history-control-entry>
      </collection>
    </rmon>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*ether-stats-index*

Specifies the RMON collection control index value. The value can range from 1 through 65535

*ether-stats-owner*

Specifies the identity of the owner

## interface/{interface-type}/{interface-name}/sflow/enable

---

Enables sFlow on an interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/5</name>
    <sflow xmlns="urn:brocade.com:mgmt:brocade-sflow">
      <enable></enable>
    </sflow>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name.

**enable**

Enables sFlow on the interface.

---

## interface/{interface-type}/{interface-name}/sflow/polling-interval

---

Configures the polling interval globally.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/5</name>
    <sflow xmlns="urn:brocade.com:mgmt:brocade-sflow">
      <polling-interval>25</polling-interval>
    </sflow>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name.

*polling-interval*

Specifies the polling interval in seconds. The value can range from 1 through 65535 seconds.

## interface/{interface-type}/{interface-name}/sflow/sample-rate

---

Sets the default sampling rate for an interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/5</name>
    <sflow xmlns="urn:brocade.com:mgmt:brocade-sflow">
      <sample-rate>33300</sample-rate>
    </sflow>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*sample-rate*

Specifies the sampling rate. The value can range from 2 through 16777215 packets

## interface/{interface-type}/{interface-name}/spanning-tree/autoedge

---

Enables automatic edge detection.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>2/1</name>
    <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
      <autoedge></autoedge>
    </spanning-tree>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name.

**autoedge**

Enables automatic edge detection.



## interface/{interface-type}/{interface-name}/spanning-tree/bpdu-mac

Sets the MAC address of the Bridge Protocol Data Unit (BPDU).

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>2/1</name>
    <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
      <bpdu-mac>0304.0800.0700</bpdu-mac>
    </spanning-tree>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*bpdu-mac*

Specifies the MAC address of the Bridge Protocol Data Unit

**0100.0ccc.cccd**

Cisco Control Mac

**0304.0800.0700**

Extreme Control Mac

## interface/{interface-type}/{interface-name}/spanning-tree/cost

---

Changes an interface's spanning-tree port path cost.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>2/1</name>
    <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
      <cost>10000</cost>
    </spanning-tree>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name.

*cost*

Specifies the path cost for the Spanning Tree Protocol (STP) calculations. The value can range from 1 through 200000000.

## interface/{interface-type}/{interface-name}/spanning-tree/edgeport

Enables the edge port on an interface to allow the interface to quickly transition to the forwarding state.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>2/1</name>
    <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
      <edgeport>
        <edgeportbasic></edgeportbasic>
      </edgeport>
    </spanning-tree>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name.

*edgeportbasic*

Enables the edge port on an interface.

## interface/{interface-type}/{interface-name}/spanning-tree/edgeport/bpdu-filter

Sets the edge port Bridge Protocol Data Unit (BPDU) filter for the port.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>2/1</name>
    <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
      <edgeport>
        <bpdu-filter></bpdu-filter>
      </edgeport>
    </spanning-tree>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

#### **bpdu-filter**

Sets the edge port Bridge Protocol Data Unit (BPDU) filter for the port

## interface/{interface-type}/{interface-name}/spanning-tree/edgeport/bpdu-guard

---

Guards the port against the reception of BPDUs.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>22/1</name>
    <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
      <edgeport>
        <bpdu-guard></bpdu-guard>
      </edgeport>
    </spanning-tree>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name.

#### **bpdu-guard**

Guards the port against the reception of BPDUs.

## interface/{interface-type}/{interface-name}/spanning-tree/guard/root

---

Enables the guard root to restrict which interface is allowed to be the spanning-tree root port or the path-to-the-root for the switch.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>2/1</name>
    <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
      <guard>
        <root></root>
      </guard>
    </spanning-tree>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

**root**

Enables the guard root

## interface/{interface-type}/{interface-name}/spanning-tree/hello-time

---

Configures the hello-time in seconds on the interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>2/1</name>
    <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
      <hello-time>5</hello-time>
    </spanning-tree>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*hello-time*

Sets the interval between the hello Bridge Protocol Data Units (BPDUs) sent by the root switch configuration messages. The value can range from 1 through 10.

## interface/{interface-type}/{interface-name}/spanning-tree/instance/priority

Sets restrictions for the port of particular MSTP instances.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>2/1</name>
    <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
      <instance>
        <id>5</id>
        <priority>240</priority>
      </instance>
    </spanning-tree>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*id*

Specifies the MSTP instance. The value can range from 1 through 32

*priority*

Specifies the port priority for a bridge in increments of 16. The value can range from 0 through 240



## interface/{interface-type}/{interface-name}/spanning-tree/instance/cost

Configures the path-cost for a port.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>2/1</name>
    <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
      <instance>
        <id>5</id>
        <cost>60</cost>
      </instance>
    </spanning-tree>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*id*

Specifies the MSTP instance. The value can range from 1 through 32

*cost*

Specifies the path-cost for a port. The value can range from 1 through 20000000

## interface/{interface-type}/{interface-name}/spanning-tree/instance/restricted-role

---

Specifies to restrict the role of a port.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>2/1</name>
    <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
      <instance>
        <id>5</id>
        <restricted-role></restricted-role>
      </instance>
    </spanning-tree>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*id*

Specifies the MSTP instance. The value can range from 1 through 32

**restricted-role**

Specifies to restrict the role of a port

## interface/{interface-type}/{interface-name}/spanning-tree/instance/restricted-tcn

Specifies to restrict the propagation of the topology change notifications from a port.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>2/1</name>
    <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
      <instance>
        <id>5</id>
        <restricted-tcn></restricted-tcn>
      </instance>
    </spanning-tree>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*id*

Specifies the MSTP instance. The value can range from 1 through 32

**restricted-tcn**

Specifies to restrict the propagation of the topology change notifications from a port

## interface/{interface-type}/{interface-name}/spanning-tree/link-type

Enables and disables the rapid transition for the Spanning Tree Protocol (STP).

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>2/1</name>
    <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
      <link-type>shared</link-type>
    </spanning-tree>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*link-type*

Enables and disables the rapid transition

**point-to-point**

Enables rapid transition

**shared**

Disables rapid transition

## interface/{interface-type}/{interface-name}/spanning-tree/peer-switch

When the Peer-Switch feature is enabled on a Cisco vPC domain, it broadcasts the same BPDUs from both vPC primary and secondary nodes to peer devices. But a VCS on a VLAG assumes that any logical interface receives only one BPDU from any of its member ports, so when it receives the two BPDUs from a Cisco vPC domain it creates a churn of VLAG mastership, and this increases the CPU load on a Extreme VDX. To avoid these problem, BPDUs received on the VLAG non-master are dropped. When the Peer-Switch functionality is enabled and the the VLAG Master is selected, BPDUs received on VLAG Non-Master are dropped unless there is a change in the status of the VLAG Master.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>2/1</name>
    <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
      <peer-switch></peer-switch>
    </spanning-tree>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

**peer-switch**

Enables the Peer-Switch functionality on a portchannel

## interface/{interface-type}/{interface-name}/spanning-tree/portfast

---

Enables the Port Fast feature on an interface to allow the interface to quickly transition to forwarding state.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>22/0/1</name>
    <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
      <portfast>
        <portfastbasic></portfastbasic>
      </portfast>
    </spanning-tree>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

## interface/{interface-type}/{interface-name}/spanning-tree/portfast/bpdu-filter

Sets the Port Fast BPDU filter for the port.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>2/1</name>
    <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
      <portfast>
        <bpdu-filter></bpdu-filter>
      </portfast>
    </spanning-tree>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

**bpdu-filter**

Sets the Port Fast BPDU filter for the port

## interface/{interface-type}/{interface-name}/spanning-tree/portfast/bpdu-guard

Guards the port against the reception of BPDUs.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>22/1</name>
    <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
      <portfast>
        <bpdu-guard></bpdu-guard>
      </portfast>
    </spanning-tree>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

**bpdu-guard**

Guards the port against the reception of BPDUs



## interface/{interface-type}/{interface-name}/spanning-tree/priority

---

Changes an interface's spanning-tree port priority.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>2/1</name>
    <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
      <priority>32</priority>
    </spanning-tree>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*priority*

Specifies the interface priority for the spanning tree. The value can range from 0 through 240.  
Port priority is in increments of 16

## interface/{interface-type}/{interface-name}/spanning-tree/restricted-role

---

Restricts the role of the port from becoming a root port.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>2/1</name>
    <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
      <restricted-role></restricted-role>
    </spanning-tree>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

**restricted-role**

Restricts the role of the port from becoming a root port

## interface/{interface-type}/{interface-name}/spanning-tree/restricted-tcn

Restricts the Topology Change Notification (TCN) Bridge Protocol Data Units (BPDUs) sent on the port.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>2/1</name>
    <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
      <restricted-tcn></restricted-tcn>
    </spanning-tree>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

**restricted-tcn**

Restricts the Topology Change Notification

## interface/{interface-type}/{interface-name}/spanning-tree/shutdown

---

Disables spanning tree on the interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>2/1</name>
    <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
      <shutdown></shutdown>
    </spanning-tree>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

**shutdown**

Disables spanning tree on the interface

## interface/{interface-type}/{interface-name}/spanning-tree/vlan

Configures the VLAN identifier for the spanning tree interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>2/1</name>
    <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
      <vlan>
        <id>200</id>
        <cost>10000</cost>
      </vlan>
    </spanning-tree>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*id*

Specifies the VLAN identifier for the spanning tree interface

*cost*

Specifies cost.

## interface/{interface-type}/{interface-name}/storm-control/ingress

Limits ingress traffic on a specified interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/5</name>
    <storm-control xmlns="urn:brocade.com:mgmt:brocade-bum-storm-control">
      <ingress>
        <protocol-type>broadcast</protocol-type>
        <rate-format>limit-bps</rate-format>
        <rate-bps>100</rate-bps>
        <rate-percent>458632240</rate-percent>
        <bum-action>monitor</bum-action>
      </ingress>
    </storm-control>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*protocol-type*

Specifies the protocol type

**broadcast**

Specifies that the command will operate on broadcast traffic only

**unknown-unicast**

Specifies that the command will operate on unknown-unicast traffic only

**multicast**

Specifies that the command will operate on multicast traffic only

*rate-format*

Specifies the rate format

**limit-bps**

Specifies that the value given to the rate parameter is in bits per second

**limit-percent**

Specifies that the value given to the rate parameter is in percentage of capacity of the interface

*rate-bps*

Specifies the amount of traffic allowed, either in bits per second or a percentage of the capacity of the interface, depending on which parameter was chosen with the rate

**monitor**

Specifies that, if a rate limit is reached within a five-second sampling period, a log message gets sent

**shutdown**

Specifies that, if a rate limit is exceeded within a five-second sampling period, the interface will be shut down

## interface/{interface-type}/{interface-name}/switchport

---

Puts the interface in Layer 2 mode and sets the switching characteristics of the Layer 2 interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>2//1</name>
    <switchport></switchport>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

**switchport**

Enables switching characteristics of the Layer 2 interface



---

## interface/{interface-type}/{interface-name}/switchport/access

---

Sets the Layer 2 interface as access.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>2/1</name>
    <switchport>
      <access>
        <accessvlan>20</accessvlan>
      </access>
    </switchport>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*accessvlan*

Specifies the VLAN ID

---

## interface/{interface-type}/{interface-name}/switchport/mode

---

Sets the mode of the Layer 2 interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/0/2</name>
    <switchport>
      <port-security>
        <oui>1122.2233.3322</oui>
      </port-security>
    </switchport>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*vlan-mode*

Sets the mode

*access*

Sets the Layer 2 interface as access. Access mode assigns the port to a VLAN

*trunk*

Sets the Layer 2 interface as trunk. Trunk mode makes the port linkable to other switches and routers

## interface/{interface-type}/{interface-name}/switchport/mode/private-vlan

Sets the private VLAN (PVLAN) mode of the Layer 2 interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/2</name>
    <switchport>
      <mode>
        <pvlan>trunk</pvlan>
      </mode>
    </switchport>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*pvlan*

Sets the private VLAN mode

**host**

Sets the port mode to host (community or isolated) mode. It accepts the untagged or priority tagged packet, and the outgoing packet is untagged

**promiscuous**

Sets the port mode to promiscuous mode

**trunk**

Sets the port mode to PVLAN trunk port. This port can carry multiple VLANs. The outgoing packets carry all VLANs, except for native VLANs

**trunk host**

Sets the port mode to host (community or isolated) mode. The trunk operand means the outgoing packet will be tagged "accept"

**trunk promiscuous**

Sets the trunk to promiscuous mode

## interface/{interface-type}/{interface-name}/switchport/mode/trunk-no-default-native

---

Configures a port to trunk mode without the implicit creation of default native VLAN 1 in a Virtual Fabrics context.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/2</name>
    <switchport>
      <mode>
        <trunk-no-default-native></trunk-no-default-native>
      </mode>
    </switchport>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

**trunk-no-default-native**

Enables a port to trunk mode

## interface/{interface-type}/{interface-name}/switchport/port-security

---

Enables port security on an interface port.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/2</name>
    <switchport>
      <port-security></port-security>
    </switchport>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

**port-security**

Enables port security

## interface/{interface-type}/{interface-name}/switchport/port-security/mac-address

---

Configures the MAC address option for port security on an interface port.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/2</name>
    <switchport>
      <port-security>
        <port-secutiry-mac-address>
          <mac-address>1122.2233.3322</mac-address>
          <port-sec-vlan>1</port-sec-vlan>
        </port-secutiry-mac-address>
      </port-security>
    </switchport>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*mac-address*

Specifies the MAC address-based VLAN classifier rule used to map to a specific VLAN

*port-sec-vlan*

Specifies a VLAN

## interface/{interface-type}/{interface-name}/switchport/port-security/max

Configures the maximum number of MAC addresses used for port security on an interface port.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/2</name>
    <switchport>
      <port-security>
        <port-sec-max>12</port-sec-max>
      </port-security>
    </switchport>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*port-sec-max*

Specifies the maximum number of secure MAC addresses. The value can range is from 1 through 8192

---

## interface/{interface-type}/{interface-name}/switchport/port-security/oui

---

Configures an Organizationally Unique Identifier (OUI) MAC address for port security on an interface port. All other addresses are ignored.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/2</name>
    <switchport>
      <port-security>
        <oui>1122.2233.3322</oui>
      </port-security>
    </switchport>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*oui*

Specifies the OUI MAC address from which to accept vendor traffic, in the format xxxx.xxxx.xxxx



## interface/{interface-type}/{interface-name}/switchport/port-security/shutdown-time

Configures the shutdown-time option for port security on an interface port.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/2</name>
    <switchport>
      <port-security>
        <shutdown-time>15</shutdown-time>
      </port-security>
    </switchport>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*shutdown-time*

Specifies the amount of time to shut down the interface port, in minutes. The value can range from 1 through 15

## interface/{interface-type}/{interface-name}/switchport/port-security/sticky

Converts dynamic MAC addresses to sticky secure MAC addresses.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/0/2</name>
    <switchport>
      <port-security>
        <sticky>
          <sticky-flag></sticky-flag>
          <port-secutiry-mac-address>
            <mac-address>1122.2255.5544</mac-address>
            <port-sec-vlan>100</port-sec-vlan>
          </port-secutiry-mac-address>
        </sticky>
      </port-security>
    </switchport>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*mac-address*

Specifies the MAC address-based VLAN classifier rule used to map to a specific VLAN

*port-sec-vlan*

Specifies a VLAN ID

## interface/{interface-type}/{interface-name}/switchport/port-security/violation

Configures the violation response options for port security on an interface.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>1/2</name>
    <switchport>
      <port-security>
        <port-sec-violation>restrict</port-sec-violation>
      </port-security>
    </switchport>
  </ethernet>
</interface>
```

### Parameters

*name*

Specifies the interface name

*port-sec-violation*

Specifies the violation response

**restrict**

Drops packets with unknown source addresses until you remove a sufficient number of secure MAC addresses to drop below the maximum value

**shutdown**

Puts the interface into the error-disabled state for a predetermined amount of time

## ip/access-list/extended

---

Configures extended IP access list.

### Usage

```
<ip-acl xmlns="urn:brocade.com:mgmt:brocade-ip-access-list">
  <ip>
    <access-list>
      <extended>
        <name>acl5</name>
      </extended>
    </access-list>
  </ip>
</ip-acl>
```

### Parameters

*name*

Specifies the access list name.

## ip/access-list/extended/{acl-name}/seq

Configures the sequence number.

### Usage

```
<ip-acl xmlns="urn:brocade.com:mgmt:brocade-ip-access-list">
  <ip>
    <access-list>
      <extended>
        <name>acl5</name>
        <hide-ip-acl-ext>
          <seq>
            <seq-id>14</seq-id>
            <action>deny</action>
            <protocol-type>ip</protocol-type>
            <src-host-any-sip>any</src-host-any-sip>
            <dst-host-any-dip>host</dst-host-any-dip>
            <dst-host-ip>1.1.1.1</dst-host-ip>
            <vlan>1</vlan>
            <count></count>
            <log></log>
          </seq>
        </hide-ip-acl-ext>
      </extended>
    </access-list>
  </ip>
</ip-acl>
```

### Parameters

*name*

Access list name

*seq-id*

Specifies the sequence number for the rule

*action*

Specifies the action to be performed. The following actions can be performed.

**deny**

Drops traffic.

**hard-drop**

Forces to drop traffic.

**permit**

Allows traffic.

*protocol-type*

The type of protocol used.

*src-host-any-sip*

Specifies any source host IP address.

*dst-host-any-dip*

Specifies any destination host IP address.

*dst-host-ip*

Specifies the destination host IP address.

*vlan*

VLAN interface numbe.

**count**

Enables the counting of the packets matching the rule.

**log**

Packets matching the filter are sent to the CPU and a corresponding log entry is generated by enabling the logging mechanism. This parameter is only available with permit and deny.

## ip/access-list/standard

---

Configures a standard IP access list.

### Usage

```
<ip-acl xmlns="urn:brocade.com:mgmt:brocade-ip-access-list">
  <ip>
    <access-list>
      <standard>
        <name>acl20</name>
      </standard>
    </access-list>
  </ip>
</ip-acl>
```

### Parameters

*name*

Specifies the access list name.

## ip/access-list/standard

---

Configures IPv6 standard access list.

### Usage

```
<ipv6-acl xmlns="urn:brocade.com:mgmt:brocade-ipv6-access-list">
  <ipv6>
    <access-list>
      <standard>
        <name>acl24</name>
      </standard>
    </access-list>
  </ipv6>
</ipv6-acl>
```

### Parameters

*name*

Specifies the access list name.



## ip/access-list/standard/{acl-name}/seq

Configures sequence number.

### Usage

```
<ip-acl xmlns="urn:brocade.com:mgmt:brocade-ip-access-list">
  <ip>
    <access-list>
      <standard>
        <name>acl20</name>
        <hide-ip-acl-std>
          <seq>
            <seq-id>20</seq-id>
            <action>permit</action>
            <src-host-any-sip>host</src-host-any-sip>
            <src-host-ip>1.1.1.1</src-host-ip>
            <count></count>
            <log></log>
          </seq>
        </hide-ip-acl-std>
      </standard>
    </access-list>
  </ip>
</ip-acl>
```

### Parameters

*name*

Accesses the list name.

*seq-id*

Specifies the sequence number for the rule.

*action*

Specifies the action to be performed. The following actions can be performed.

**deny**

Drops traffic.

**hard-drop**

Forces to drop traffic.

**permit**

Allows traffic.

*src-host-any-sip*

Specifies any source host IP address.

*src-host-ip*

Specifies the source host IP address.

**count**

Enables the counting of the packets matching the rule.

**log**

Packets matching the filter are sent to the CPU and a corresponding log entry is generated by enabling the logging mechanism. This parameter is only available with permit and deny.

## ip/dhcp/relay/servers

---

Configures DHCP relay servers.

### Usage

```
<ip xmlns="urn:brocade.com:mgmt:brocade-ip-config">
  <interface-ve-dhcp-conf xmlns="urn:brocade.com:mgmt:brocade-dhcp">
    <dhcp>
      <relay>
        <servers>
          <relay-ip-addr>{req_val}</relay-ip-addr>
          <server-vrf-name>{req_val}</server-vrf-name>
        </servers>
      </relay>
    </dhcp>
  </interface-ve-dhcp-conf>
</ip>
```

### Parameters

*relay-ip-addr*

Specifies the IP address of the relay server.

*server-vrf-name*

Specifies the VRF name of the server.

## ipv6/access-list/extended

---

Configure IPv6 extended access list.

### Usage

```
<ipv6-acl xmlns="urn:brocade.com:mgmt:brocade-ipv6-access-list">
  <ipv6>
    <access-list>
      <extended>
        <name>acl14</name>
      </extended>
    </access-list>
  </ipv6>
</ipv6-acl>
```

### Parameters

*name*

Specifies the list name.

## ipv6/access-list/extended/{acl-name}/seq

Configures the sequence number.

### Usage

```
<ipv6-acl xmlns="urn:brocade.com:mgmt:brocade-ipv6-access-list">
  <ipv6>
    <access-list>
      <extended>
        <name>acl14</name>
        <seq>
          <seq-id>14</seq-id>
          <action>deny</action>
          <protocol-type>ipv6</protocol-type>
          <src-host-any-sip>any</src-host-any-sip>
          <dst-host-any-dip>host</dst-host-any-dip>
          <dst-host-ip>2004:384d::24:23</dst-host-ip>
          <vlan>1</vlan>
          <count></count>
          <log></log>
        </seq>
      </extended>
    </access-list>
  </ipv6>
</ipv6-acl>
```

### Parameters

*name*

Specifies the access list name.

*seq-id*

Specifies the sequence number for the rule.

*action*

Specifies the action to be performed. The following actions can be performed.

**deny**

Drops traffic.

**hard-drop**

Forces to drop traffic.

**permit**

Allows traffic.

*protocol-type*

Specifies the type of protocol used.

*src-host-any-sip*

Specifies any source host IP address.

*dst-host-any-dip*

Specifies any destination host IP address.

*dst-host-ip*

Specifies the destination host IP address.

*vlan*

VLAN interface number

**count**

Enables the counting of the packets matching the rule.

**log**

Packets matching the filter are sent to the CPU and a corresponding log entry is generated by enabling the logging mechanism. This parameter is only available with permit and deny.

## ipv6/access-list/standard/{acl-name}/seq

Configures the sequence number.

### Usage

```
<ipv6-acl xmlns="urn:brocade.com:mgmt:brocade-ipv6-access-list">
  <ipv6>
    <access-list>
      <standard>
        <name>acl24</name>
        <seq>
          <seq-id>24</seq-id>
          <action>permit</action>
          <src-host-any-sip>any</src-host-any-sip>
          <count></count>
          <log></log>
        </seq>
      </standard>
    </access-list>
  </ipv6>
</ipv6-acl>
```

### Parameters

*name*

Specifies the access list name.

*seq-id*

Specifies the sequence number for the rule.

*action*

Specifies the action to be performed. The following actions can be performed.

**deny**

Drops traffic.

**hard-drop**

Forces to drop traffic.

**permit**

Allows traffic.

*src-host-any-sip*

Specifies any source host IP address.

**count**

Enables the counting of the packets matching the rule.

**log**

Packets matching the filter are sent to the CPU and a corresponding log entry is generated by enabling the logging mechanism. This parameter is only available with permit and deny.

## mac/access-list/extended/{acl-name}/seq

Configures the sequence number

### Usage

```
<mac xmlns="urn:brocade.com:mgmt:brocade-mac-access-list">
  <access-list>
    <extended>
      <name>acl21</name>
      <hide-mac-acl-ext>
        <seq>
          <seq-id>25</seq-id>
          <action>hard-drop</action>
          <source>0011.1122.2233</source>
          <src-mac-addr-mask>1212.2323.3131</src-mac-addr-mask>
          <dst>any</dst>
          <ethertype>arp</ethertype>
          <vlan>1</vlan>
          <count></count>
          <log></log>
        </seq>
      </hide-mac-acl-ext>
    </extended>
  </access-list>
</mac>
```

### Parameters

*name*

Specifies the access list name.

*seq-id*

Specifies the sequence ID.

*action*

Displays all rules with the specified action. The following actions are allowed.

**deny**

Drops traffic.

**hard-drop**

Forces to drop traffic.

**permit**

Allows traffic.

*source*

Specifies the source details.

*src-mac-addr-mask*

Specifies the source MAC address mask.

**dst**

Specifies details on the destination

*ethertype*



Filters extended ACLs traffic based on ethertype.

*vlan*

Specifies the VLAN number.

**count**

Displays the count of forwarding entries.

**log**

Specifies log.

## mac/access-list/standard

---

Configures standard MAC access-list.

### Usage

```
<mac xmlns="urn:brocade.com:mgmt:brocade-mac-access-list">
  <access-list>
    <standard>
      <name>acl25</name>
    </standard>
  </access-list>
</mac>
```

### Parameters

*name*

Specifies the access list name.

## mac/access-list/standard/{acl-name}/seq

Configures the sequence number.

### Usage

```
<mac xmlns="urn:brocade.com:mgmt:brocade-mac-access-list">
  <access-list>
    <standard>
      <name>acl25</name>
      <hide-mac-acl-std>
        <seq>
          <seq-id>21</seq-id>
          <action>permit</action>
          <source>0011.1122.2233</source>
          <src-mac-addr-mask>0101.0202.0303</src-mac-addr-mask>
          <count></count>
          <log></log>
        </seq>
      </hide-mac-acl-std>
    </standard>
  </access-list>
</mac>
```

### Parameters

*name*

Specifies the access list name.

*seq-id*

Specifies the sequence ID.

*action*

Displays all rules with the specified action. The following actions are allowed.

**deny**

Drops traffic.

**hard-drop**

Forces to drop traffic.

**permit**

Allows traffic.

*source*

Specifies the source details.

*src-mac-addr-mask*

Specifies the source MAC address mask.

**count**

Displays the count of forwarding entries.

**log**

Species log.

## mac-address-table/aging-time

---

Configures mac-address-table aging time.

### Usage

```
<mac-address-table xmlns="urn:brocade.com:mgmt:brocade-mac-address-table">
  <aging-time>
    <legacy-time-out>350</legacy-time-out>
  </aging-time>
</mac-address-table>
```

### Parameters

*legacy-time-out*

Specifies the aging time in seconds. The value can range from 60 through 100000 seconds.

## ntp/authentication-key

---

Configures NTP authentication key parameters.

### Usage

```
<ntp xmlns="urn:brocade.com:mgmt:brocade-ntp">
  <authentication-key>
    <keyid>650</keyid>
    <sha1>sha1</sha1>
    <encryption-level>0</encryption-level>
  </authentication-key>
</ntp>
```

### Parameters

*keyid*

Specifies authentication key ID. The value can range from 65535

*encryption-type*

Specifies the encryption type. Two types of encryption are allowed:

**sha1**

SHA1 encryption

**md5**

MD5 encryption

*encryption-level*

Specifies the encryption level. There are two encryption levels

**0**

Stores the key in clear-text format

## ntp/disable

---

Disables the NTP server/client mode.

### Usage

```
<ntp xmlns="urn:brocade.com:mgmt:brocade-ntp">
  <disable/>
</ntp>>
```

### Parameters

#### **serve**

If this keyword is specified, then NTP will not serve the time to downstream devices. This keyword disables the NTP server mode functionalities. If this keyword is not specified, then both NTP client mode and NTP server mode functionalities will be disabled.

## ntp/master

---

Configures the device as an authoritative NTP Server.

### Usage

```
<ntp xmlns="urn:brocade.com:mgmt:brocade-ntp">
  <master/>
</ntp>
```

### Parameters

**startum***number*

The NTP stratum number.

## ntp/peer

---

Configures the NTP peers and specify the peers to synchronize the system clock.

### Usage

```
<ntp xmlns="urn:brocade.com:mgmt:brocade-ntp">
  <peer>
    <peer-ip>%req_val%</peer-ip>
    <peer-maxpoll/>
  </peer>
```

### Parameters

**ipv4 address | ipv6 address**

IPv4 or IPv6 address of the NTP peer.

*use-vrf name*

Use VRF name to synchronize the time with server. If this option is not specified, it defaults to **mgmt-vrf**.

**key**

The symmetric key ID. By default, no symmetric key is configured. The range is 1 to 65,534.

**version3 | 4**

The NTP version supported by peer. If this option is not specified, then defaults to 4.

**minpollinterval**

The shortest polling interval. The range is 4 to 17. Default is 6. The interval argument is power of 2: 3=8s, 4=16s, 5=32s, 6=64s, 7=128s, 8=256s, 9=512s etc.

**maxpollinterval**

The longest polling interval. The range is 4 to 17. Default is 10. The interval argument is power of 2: 3=8s, 4=16s, 5=32s, 6=64s, 7=128s, 8=256s, 9=512s etc.



## ntp/server

---

Configures Network Time Protocol (NTP) server IP address.

### Usage

```
<ntp xmlns="urn:brocade.com:mgmt:brocade-ntp">
  <server>
    <ip>1.1.1.1</ip>
    <key>1</key>
  </server>
</ntp>
```

### Parameters

*ip*

NTP server IPv4 or IPv6 IP address.

*key*

Key from the key list to be associated with the specified server. The value can range from 1 through 65535.

## ntp/source-ip

---

Configures the source IP to be used for Network Time Protocol (NTP).

### Usage

```
<ntp xmlns="urn:brocade.com:mgmt:brocade-ntp">
  <source-ip>mm-ip</source-ip>
  <server>
    <ip>10.20.192.71</ip>
    <source-interface-type>loopback</source-interface-type>
    <source-interface-number>34</source-interface-number>
  </server>
</ntp>
```

### Parameters

*source-ip*

Specifies the source IP to be used for NTP. The following source IP can be configured.

**chassis-ip**

Uses chassis IP as source address.

**mm-ip**

Uses local MM IP as source address.

## ntp/trusted-key

---

configures additional subset of trusted key-IDs which can be used for NTP and client authentication.

### Usage

```
<ntp xmlns="urn:brocade.com:mgmt:brocade-ntp">  
  <trusted-key/>  
</ntp>
```

### Parameters

*key-id-1key-id-2key-id-n*

List of authentication keys.

## overlay-gateway

---

Configures overlay gateway instances.

### Usage

```
<overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">  
  <name>ogl</name>  
</overlay-gateway>
```

### Parameters

*name*

Overlay Gateway name.

## overlay-gateway/{gateway-name}/activate

---

Activates the Overlay Gateway instance.

### Usage

```
<overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
  <name>ogl</name>
  <activate></activate>
</overlay-gateway>
```

### Parameters

*name*

Specifies the Overlay Gateway name.

*activate*

Activates the overlay gateway instance.

## overlay-gateway/{gateway-name}/attach/vlan

---

Configures VLAN attachment for this gateway.

### Usage

```
<overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
  <name>og1</name>
  <attach>
    <vlan>
      <vid>1</vid>
      <mac>0011.1122.2233</mac>
    </vlan>
  </attach>
</overlay-gateway>
```

### Parameters

*vid*

Specifies the range of VLAN ids to add.

*mac*

Specifies MAC address in HHHH.HHHH.HHHH format.

## overlay-gateway/{gateway-name}/enable

---

Enables per VLAN statistics.

### Usage

```
<overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
  <name>ogl</name>
  <enable>
    <statistics>
      <stats-direction>both</stats-direction>
      <vlan-action>add</vlan-action>
      <vlan-list>1</vlan-list>
    </statistics>
  </enable>
</overlay-gateway>
```

### Parameters

*stats-direction*

Specifies the flow direction. The flow direction can be set to any one of the following.

**both**

Both transmitted and received packets.

**rx**

Received packets.

**tx**

Transmitted packets.

*vlan-action*

Specifies the action. Two actions are allowed.

**add**

Specifies the VLANs to add.

**remove**

Specifies the VLANs to remove.

*vlan-list*

Specifies the range of VLAN IDs.

## overlay-gateway/{gateway-name}/ip/access-group

---

Configures IPv4 access-group for the Overlay Gateway.

### Usage

```
<overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
  <name>ogl</name>
  <access-lists>
    <ipv4>
      <in>
        <ipv4-acl-in-name>acl4</ipv4-acl-in-name>
        <ipv4-acl-in-dir></ipv4-acl-in-dir>
      </in>
    </ipv4>
  </access-lists>
</overlay-gateway>
```

### Parameters

*ipv4-acl-in-name*

Specifies the access list name.

*ipv4-acl-in-dir*

Configures IPv4 access group in ingress direction.



## overlay-gateway/{gateway-name}/ip/interface/loopback

---

Configures Loopback interface for the Overlay Gateway

### Usage

```
<overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
  <name>ogl</name>
  <ip>
    <interface>
      <loopback>
        <loopback-id>1</loopback-id>
      </loopback>
    </interface>
  </ip>
</overlay-gateway>
```

### Parameters

*loopback-id*

Specifies loopback port number.

## overlay-gateway/{gateway-name}/ip/interface/ve/{ve-id}/fabric-virtual-gateway

Uses Fabric-Virtual-Gateway IP address.

### Usage

```
<overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
  <name>ogl</name>
  <ip>
    <interface>
      <ve>
        <ve-id>1</ve-id>
        <fabric-virtual-gateway></fabric-virtual-gateway>
      </ve>
    </interface>
  </ip>
</overlay-gateway>
```

### Parameters

*ve-id*

Specifies VE interface number.

**fabric-virtual-gateway**

Enables use of Fabric-Virtual-Gateway IP address.

## overlay-gateway/{gateway-name}/ip/interface/ve/{ve-id}/vrrp-extended-group

Configures virtual router

### Usage

```
<overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
  <name>ogl</name>
  <ip>
    <interface>
      <ve>
        <ve-id>1</ve-id>
        <vrrp-extended-group>1</vrrp-extended-group>
      </ve>
    </interface>
  </ip>
</overlay-gateway>
```

### Parameters

*ve-id*

Specifies VE interface number.

*vrrp-extended-group*

Specifies Virtual Router Identifier. The value can range from 1 through 255.

## overlay-gateway/{gateway-name}/ipv6/access-group

---

Configures IPv6 access-group for the Overlay Gateway.

### Usage

```
<overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
  <name>ogl</name>
  <access-lists>
    <ipv6>
      <in>
        <ipv6-acl-in-name>acl12</ipv6-acl-in-name>
        <ipv6-acl-in-dir></ipv6-acl-in-dir>
      </in>
    </ipv6>
  </access-lists>
</overlay-gateway>
```

### Parameters

*ipv6-acl-in-name*

Specifies IPv6 access group name.

*ipv6-acl-in-dir*

Configures IPv6 access group in ingress direction.

## overlay-gateway/{gateway-name}/mac

---

Configures MAC access-group for the Overlay Gateway.

### Usage

```
<overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
  <name>ogl</name>
  <access-lists>
    <mac>
      <in>
        <mac-acl-in-name>acl10</mac-acl-in-name>
        <mac-acl-in-dir></mac-acl-in-dir>
      </in>
    </mac>
  </access-lists>
</overlay-gateway>
```

### Parameters

*mac-acl-in-name*

Specifies the name of the MAC access list.

*mac-acl-in-dir*

Configures MAC access-group in ingress direction.

## overlay-gateway/{gateway-name}/map

---

Configures the VLAN to VNI mappings for the Overlay Gateway.

### Usage

```
<overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
  <name>gateway2</name>
  <map>
    <vlan>
      <vni>
        <auto/>
      </vni>
    </vlan>
  </map>
</overlay-gateway>
```

### Parameters

**vlan**

Specifies the VLAN.

**vni**

Specifies the VNI.

*auto*

Specifies automatic mapping.

## overlay-gateway/{gateway-name}/monitor

Configures SPAN for the tunnels of this gateway.

### Usage

```
<overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
  <name>name1</name>
  <monitor>
    <session>1</session>
    <direction>both</direction>
    <remote-endpoint>any</remote-endpoint>
    <vlan-add-remove>add</vlan-add-remove>
    <vlan-range>5,14-17</vlan-range>
  </monitor>
</overlay-gateway>
```

### Parameters

*session*

Specifies session number.

*direction*

Specifies flow direction. Flow direction can be set to the following.

**both**

Both transmitted and received packets.

**rx**

Received packets.

**tx**

Transmitted packets.

*remote-endpoint*

Specifies tunnel destination end point address. The destination end point address can be set to.

<A.B.C.D>

Specifies IP address of specific tunnel end point.

**any**

Specifies all tunnel end points.

*vlan-add-remove*

Adds or removes target VLAN IDs.

*vlan-range*

Specifies range of VLAN IDs to add or remove.

## overlay-gateway/{gateway-name}/sflow

---

Configures SFLOW for the tunnels of this gateway.

### Usage

```
<overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
  <name>ogl</name>
  <sflow>
    <sflow-profile-name>sflow1</sflow-profile-name>
    <sflow-remote-endpoint>any</sflow-remote-endpoint>
    <sflow-vlan-action>add</sflow-vlan-action>
    <sflow-vlan-range>100</sflow-vlan-range>
  </sflow>
</overlay-gateway>
```

### Parameters

*sflow-profile-name*

Specifies Sflow profile name.

*sflow-remote-endpoint*

Specifies tunnel destination end point address. The destination end point address can be set to.

<A.B.C.D>

Specifies IP address of specific tunnel end point.

**any**

Specifies all tunnel end points.

*sflow-vlan-action*

Specifies the action on target VLAN IDs. There are two action.

**add**

Specifies target VLAN IDs to add.

**remove**

Specifies target VLAN IDs to remove.

*sflow-vlan-range*

Specified the range of VLAN IDs to add or remove.



---

## overlay-gateway/{gateway-name}/site

---

Configures remote extension site.

### Usage

```
<overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
  <name>ogl</name>
  <site>
    <name>site1</name>
  </site>
</overlay-gateway>
```

### Parameters

*name*

Specifies the site name.

## overlay-gateway/{gateway-name}/site/{site-name}/bfd

Creates BFD session for the tunnels to the remote site.

### Usage

```
<overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
  <name>ogl</name>
  <site>
    <name>site1</name>
    <bfd>
      <params>
        <interval>
          <min-tx>110</min-tx>
          <min-rx>330</min-rx>
          <multiplier>3</multiplier>
        </interval>
      </params>
    </bfd>
  </site>
</overlay-gateway>
```

### Parameters

*name*

Specifies the site name

*min-tx*

Specifies BFD desired minimum transmit interval in milliseconds. The value can range from 100 through 30000. The default value is 100.

*min-rx*

Specifies BFD desired minimum receive interval in milliseconds. The value can range from 300 through 30000. The default value is 300.

*multiplier*

Specifies BFD detection time multiplier. The value can range from 3 through 50. The default value is 3.

## overlay-gateway/{gateway-name}/site/{site-name}/extend

Configures Layer2 domains to be extended towards this site.

### Usage

```
<overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
  <name>gateway2</name>
  <site>
    <name>sanjose</name>
    <extend>
      <vlan>
        <add>1-10</add>
      </vlan>
    </extend>
  </site>
</overlay-gateway>
```

### Parameters

*name*

Specifies site name.

**add**

Specifies VLAN IDs to add.

**remove**

Specifies VLAN IDs to remove.

## overlay-gateway/{gateway-name}/site/{site-name}/ip

---

Configures tunnel destination IP address.

### Usage

```
<overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
  <name>gateway2</name>
  <site>
    <name>sanjose</name>
    <tunnel-dst>
      <address>10.10.10.1</address>
    </tunnel-dst>
  </site>
</overlay-gateway>
```

### Parameters

*name*

Specifies site name.

*address*

Specifies tunnel destination IP address.

## overlay-gateway/{gateway-name}/site/{site-name}/mac-learning/protocol/bgp

By default, MAC address learning is enabled on VXLAN Layer 2 extension tunnels. Use this command to delegate the responsibility for MAC learning on a tunnel to the Layer 3 control-plane protocol, such as BGP EVPN.

### Usage

```
<overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
  <name>overlaygateway1</name>
  <site>
    <name>site1</name>
    <mac-learning>
      <protocol>bgp</protocol>
    </mac-learning>
  </site>
</overlay-gateway>
```

### Parameters

*name*

Specifies the site name.

*protocol*

Specifies control plane MAC learning protocol.

**bgp**

Sets BGP-EVPN based MAC learning

---

## overlay-gateway/{gateway-name}/site/{site-name}/shutdown

---

Disables tunnel to the remote site.

### Usage

```
<overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
  <name>gateway2</name>
  <site>
    <name>sanjose</name>
    <shutdown></shutdown>
  </site>
</overlay-gateway>
```

### Parameters

*name*

Specifies the name of the site.

**shutdown**

Disables tunnels to the remote site.

## overlay-gateway/{gateway-name}/type

---

pecifies whether a VXLAN overlay gateway uses NSX Controller or OpenStack integration, or Layer 2 extension.

### Usage

```
<overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
  <name>overlaygateway1</name>
  <gw-type>hardware-vtep</gw-type>
</overlay-gateway>
```

### Parameters

*name*

Specifies the overlay gateway name

*gw-type*

Specifies the type of Overlay Gateway. There are two types of Overlay Gateway

**hardware-vtep**

Specifies NSX Controller/OpenStack integration

**layer2-extension**

Specifies Layer 2 extension

## protocol/cfm

---

Configures the CFM protocol.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <cfm xmlns="urn:brocade.com:mgmt:brocade-dotlag">
    <domain-name>
      <domain-name>{req_val}</domain-name>
      <ma-name>
        <ma-name>{req_val}</ma-name>
        <cfm-ma-sub-commands>
          <mep>
            <mep-id>{req_val}</mep-id>
          </mep>
        </cfm-ma-sub-commands>
      </ma-name>
    </domain-name>
  </cfm>
</protocol>
```

### Parameters

*domain-name*

Specifies the maintenance domain name.

*ma-name*

Specifies the maintenance association name.

*mep-id*

Specifies maintenance endpoint ID.



## protocol/link-oam

---

Configures the Link OAM protocol.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <link-oam xmlns="urn:brocade.com:mgmt:brocade-dot3ah">
    <shutdown/>
  </link-oam>
</protocol>
```

## protocol/lldp/advertise/dcbx-fcoe-app-tlv

---

Enables IEEE data centre bridging exchange FCoE Application TLV.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
    <advertise>
      <dcbx-fcoe-app-tlv></dcbx-fcoe-app-tlv>
    </advertise>
  </lldp>
</protocol>
```

### Parameters

#### **dcbx-fcoe-app-tlv**

Enables IEEE data centre bridging exchange FCoE Application TLV.

## protocol/lldp/advertise/dcbx-fcoe-logical-link-tlv

---

Enables IEEE data centre bridging exchange FCoE logical link TLV.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
    <advertise>
      <dcbx-fcoe-logical-link-tlv></dcbx-fcoe-logical-link-tlv>
    </advertise>
  </lldp>
</protocol>
```

### Parameters

#### **dcbx-fcoe-logical-link-tlv**

Enables IEEE data centre bridging exchange FCoE logical link TLV.

## protocol/lldp/advertise/dcbx-iscsi-app-tlv

---

Enables IEEE data centre bridging exchange iSCSI application TLV.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
    <advertise>
      <dcbx-iscsi-app-tlv></dcbx-iscsi-app-tlv>
    </advertise>
  </lldp>
</protocol>
```

### Parameters

#### **dcbx-iscsi-app-tlv**

Enables IEEE data centre bridging exchange iSCSI application TLV.

## protocol/lldp/advertise/dcbx-tlv

---

Enables IEEE data centre bridging exchange TLV.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
    <advertise>
      <dcbx-tlv></dcbx-tlv>
    </advertise>
  </lldp>
</protocol>
```

### Parameters

#### **dcbx-tlv**

Enables IEEE data centre bridging exchange TLV.

## protocol/lldp/advertise/dot1-tlv

---

Enables IEEE 802.1 organizationally specific TLV.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
    <advertise>
      <dot1-tlv></dot1-tlv>
    </advertise>
  </lldp>
</protocol>
```

### Parameters

#### **dot1-tlv**

Enables IEEE 802.1 organizationally specific TLV.

## protocol/lldp/advertise/dot3-tlv

---

Enables IEEE 802.3 organizationally specific TLV.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
    <advertise>
      <dot3-tlv></dot3-tlv>
    </advertise>
  </lldp>
</protocol>
```

### Parameters

#### **dot3-tlv**

Enables IEEE 802.3 organizationally specific TLV.

## protocol/lldp/advertise/optional-tlv

---

Enables the optional TLVs.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
    <advertise>
      <optional-tlv>
        <management-address></management-address>
        <port-description></port-description>
        <system-capabilities></system-capabilities>
        <adv-tlv-system-description></adv-tlv-system-description>
        <adv-tlv-system-name></adv-tlv-system-name>
      </optional-tlv>
    </advertise>
  </lldp>
</protocol>
```

### Parameters

**management-address**

Enables management address TLV.

**port-description**

Enables port description TLV.

**system-capabilities**

Enables system capabilities TLV.

*adv-tlv-system-description*

Specifies the system description .

*adv-tlv-system-name*

Specifies the system name .



---

## protocol/lldp/description

---

Configures user description for LLDP.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
    <description>lldpconfig</description>
  </lldp>
</protocol>
```

### Parameters

*description*

Specifies user description for LLDP.

## protocol/lldp/disable

---

Disable LLDP configuration.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
    <disable></disable>
  </lldp>
</protocol>
```

### Parameters

#### **disable**

Disables LLDP configuration.

## protocol/lldp/hello

---

Configures the hello transmit interval.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
    <hello>35</hello>
  </lldp>
</protocol>
```

### Parameters

*hello*

Specifies the hello transmit interval. The value can range from 4 through 180 seconds.

## protocol/lldp/iscsi-priority

---

Configures the Ethernet priority to advertise for iSCSI.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
    <iscsi-priority>3</iscsi-priority>
  </lldp>
</protocol>
```

### Parameters

*iscsi-priority*

Specifies the iSCSI Ethernet priority value. The value can range from 0 through 7.

## protocol/lldp/mode

---

Configures the LLDP mode.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
    <mode>rx</mode>
  </lldp>
</protocol>
```

### Parameters

*mode*

Specifies the LLDP mode.

**rx**

LLDP receive only mode.

**tx**

LLDP transmit only mode.

## protocol/lldp/multiplier

---

Configures the timeout multiplier.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
    <multiplier>3</multiplier>
  </lldp>
</protocol>
```

### Parameters

*multiplier*

Specifies the timeout multiplier value. The value can range from 2 through 10.

## protocol/lldp/profile/{profile-name}/advertise

Applies a Link Layer Discovery Protocol (LLDP) profile to an interface.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
    <profile>
      <profile-name>profile1</profile-name>
      <advertise>
        <dcbx-tlv></dcbx-tlv>
      </advertise>
    </profile>
  </lldp>
</protocol>
```

### Parameters

*profile-name*

Specifies the profile name.

*advertise*

Specifies the advertise TLV configuration.

#### **dcbx-fcoe-app-tlv**

Advertises application Type, Length, Values (TLVs) to ensure interoperability of traffic over the Data Center Bridging eXchange protocol (DCBX), which runs over LLDP to negotiate an FCoE application TLV.

#### **dcbx-fcoe-logical-link-tlv**

Advertises to any attached device the FCoE status of the logical link.

#### **dcbx-iscsi-app-tlv**

Advertises the iSCSI traffic configuration parameters for Type, Length, Values (TLV) values.

#### **dcbx-tlv**

Advertises to any attached device mandatory Data Center Bridging eXchange protocol (DCBX) Type, Length, Values (TLV) values.

#### **dot1-tlv**

Advertises to any attached device IEEE 802.1 organizationally specific Type, Length, Values (TLV) values.

#### **dot3-tlv**

Advertises to any attached device IEEE 802.3 organizationally specific Type, Length, Values (TLV) values.

#### **optional-tlv**

Advertises the optional Type, Length, and Values (TLV) values.

## protocol/ldp/profile/{profile-name}/hello

---

Sets the interval between LLDP hello messages.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ldp xmlns="urn:brocade.com:mgmt:brocade-ldp">
    <profile>
      <profile-name>profile1</profile-name>
      <hello>100</hello>
    </profile>
  </ldp>
</protocol>
```

### Parameters

*profile-name*

Specifies the profile name.

*hello*

Specifies the interval between hello messages. The value can range from 4 through 180 seconds. The default interval is 30 seconds.



## protocol/lldp/profile/{profile-name}/mode

---

Sets the LLDP mode on the switch.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
    <profile>
      <profile-name>profile1</profile-name>
      <mode>rx</mode>
    </profile>
  </lldp>
</protocol>
```

### Parameters

*profile-name*

Specifies the profile name.

*mode*

Specifies the LLDP mode on the switch.

**tx**

Specifies to enable only the transmit mode.

**rx**

Specifies to enable only the receive mode.

## protocol/ldp/profile/{profile-name}/multiplier

---

Sets the number of consecutive misses of hello messages before LLDP declares the neighbor as dead.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ldp xmlns="urn:brocade.com:mgmt:brocade-ldp">
    <profile>
      <profile-name>profile1</profile-name>
      <multiplier>2</multiplier>
    </profile>
  </ldp>
</protocol>
```

### Parameters

*profile-name*

Specifies the profile name

*multiplier*

Specifies a multiplier value to use. The values can range from 2 through 10. The default value is 4.

## protocol/lldp/system-description

---

Configures the system description.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
    <system-description>Extreme-VDX-VCS 1</system-description>
  </lldp>
</protocol>
```

### Parameters

*system-description*

Specifies the system description.

## protocol/lldp/system-name

---

Configures the system name.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
    <system-name>client</system-name>
  </lldp>
</protocol>
```

### Parameters

*system-name*

Specifies the system-name.

## protocol/spanning-tree/mstp/bridge-priority

---

Configures bridge priority commands for multiple spanning tree protocol.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <mstp>
      <bridge-priority>32768</bridge-priority>
    </mstp>
  </spanning-tree>
</protocol>
```

### Parameters

*bridge-priority*

Specifies the bridge priority. The value can range from 0 through 61440 and bridge priority must be set in increments of 4096.

## protocol/spanning-tree/mstp/cisco-interoperability

---

Configures Cisco interoperability.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <mstp>
      <cisco-interoperability>disable</cisco-interoperability>
    </mstp>
  </spanning-tree>
</protocol>
```

### Parameters

*cisco-interoperability*

Enables or disables cisco interoperability.

**disable**

Disables cisco interoperability.

**enable**

Enables cisco interoperability.

## protocol/spanning-tree/mstp/description

---

Configures spanning tree description.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <mstp>
      <description>mstpsan</description>
    </mstp>
  </spanning-tree>
</protocol>
```

### Parameters

*description*

Specifies spanning tree description.

---

## protocol/spanning-tree/mstp/error-disable-timeout/enable

---

Enables timeout for the port to be enabled back.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <mstp>
      <error-disable-timeout>
        <enable></enable>
      </error-disable-timeout>
    </mstp>
  </spanning-tree>
</protocol>
```

### Parameters

#### **enable**

Enables timeout for the port to be enabled back.



## protocol/spanning-tree/mstp/error-disable-timeout/interval

---

Configures time interval after which port will be enabled.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <mstp>
      <error-disable-timeout>
        <interval>350</interval>
      </error-disable-timeout>
    </mstp>
  </spanning-tree>
</protocol>
```

### Parameters

*interval*

Specifies time interval after which port will be enabled. The value can range from 10 through 1000000 seconds.

## protocol/spanning-tree/mstp/forward-delay

---

Configures the forward delay time for the spanning tree.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <mstp>
      <forward-delay>20</forward-delay>
    </mstp>
  </spanning-tree>
</protocol>
```

### Parameters

*forward-delay*

Specifies forward delay time. The delay time can range from 4 through 30 seconds. The default delay time is set to 15 seconds.

## protocol/spanning-tree/mstp/hello-time

---

Configures the hello time interval for the spanning tree.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <mstp>
      <hello-time>3</hello-time>
    </mstp>
  </spanning-tree>
</protocol>
```

### Parameters

*hello-time*

Specifies the hello time. The hello time can range from 1 through 20 seconds. The default hello time is set to 2 seconds.

## protocol/spanning-tree/mstp/instance/priority

---

Configures bridge priority for the common instance.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <mstp>
      <instance>
        <id>1</id>
        <priority>4096</priority>
      </instance>
    </mstp>
  </spanning-tree>
</protocol>
```

### Parameters

*id*

Specifies MSTP instance Id. The value can range from 1 through 31.

*priority*

Specifies the bridge priority. The value can range from 0 through 61440.

## protocol/spanning-tree/mstp/instance/vlan

---

Configures VLAN for MSTP.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <mstp>
      <instance>
        <id>1</id>
        <vlan>1</vlan>
      </instance>
    </mstp>
  </spanning-tree>
</protocol>
```

### Parameters

*id*

Specifies MSTP instance ID.

*vlan*

Specifies VLAN.

## protocol/spanning-tree/mstp/max-age

---

Configures the max age for the spanning tree.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <mstp>
      <max-age>25</max-age>
    </mstp>
  </spanning-tree>
</protocol>
```

### Parameters

*max-age*

Specifies the maximum time to listen for root bridge in seconds. The value can range from 6 through 40 seconds. The default time is set to 20. seconds.

## protocol/spanning-tree/mstp/max-hops

---

Configures the maximum hops the BPDU will be valid for.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <mstp>
      <max-hops>25</max-hops>
    </mstp>
  </spanning-tree>
</protocol>
```

### Parameters

*max-hops*

Specifies the maximum hops the BPDU will be valid for. The value can range from 1 through 40.

## protocol/spanning-tree/mstp/port-channel

---

Controls port channel behavior for spanning tree

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <mstp>
      <port-channel>
        <path-cost>standard</path-cost>
      </port-channel>
    </mstp>
  </spanning-tree>
</protocol>
```

### Parameters

*path-cost*

Sets the path cost behavior.

**custom**

Custom behavior - pathcost will change according to bandwidth.

**standard**

Standard behavior - pathcost will not change according to bandwidth.



## protocol/spanning-tree/mstp/region

---

Sets the MST region.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <mstp>
      <region>region1</region>
    </mstp>
  </spanning-tree>
</protocol>
```

### Parameters

*region*

Specifies the name of the region.

## protocol/spanning-tree/mstp/revision

---

Sets the revision number.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <mstp>
      <revision>1</revision>
    </mstp>
  </spanning-tree>
</protocol>
```

### Parameters

*revision*

Specifies the revision number. The value can range from 0 through 255.

## protocol/spanning-tree/mstp/shutdown

---

Disables the Multiple Spanning Tree Protocol (MSTP) globally.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <mstp>
      <shutdown></shutdown>
    </mstp>
  </spanning-tree>
</protocol>
```

### Parameters

#### **shutdown**

Shuts down the spanning tree protocol.

## protocol/spanning-tree/mstp/transmit-holdcount

---

Configures transmit hold count of the bridge.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <mstp>
      <transmit-holdcount>7</transmit-holdcount>
    </mstp>
  </spanning-tree>
</protocol>
```

### Parameters

*transmit-holdcount*

Specifies the transmit hold count. The value can range from 1 through 10.

## protocol/spanning-tree/pvst/bridge-priority

---

Configures bridge priority for PVST Spanning-tree.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <pvst>
      <bridge-priority>32768</bridge-priority>
    </pvst>
  </spanning-tree>
</protocol>
```

### Parameters

*bridge-priority*

Specifies the bridge priority. Valid values range from 0 through 61440 in increments of 4096.

---

## protocol/spanning-tree/pvst/description

---

Configures the PVST spanning-tree description.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <pvst>
      <description>pvstspan</description>
    </pvst>
  </spanning-tree>
</protocol>
```

### Parameters

*description*

Specifies the PVST spanning-tree description.

## protocol/spanning-tree/pvst/error-disable-timeout/enable

---

Enables the timeout mechanism for the port to be enabled back.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <pvst>
      <error-disable-timeout>
        <enable></enable>
      </error-disable-timeout>
    </pvst>
  </spanning-tree>
</protocol>
```

### Parameters

*enable*

Enables timeout for PVST spanning tree.

---

## protocol/spanning-tree/pvst/error-disable-timeout/interval

---

Configures interval after which port shall be enabled.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <pvst>
      <error-disable-timeout>
        <interval>350</interval>
      </error-disable-timeout>
    </pvst>
  </spanning-tree>
</protocol>
```

### Parameters

*interval*

Specifies the time for the interface to time out. The interval can range from 10 through 1000000 seconds. Ther default interval is 300 seconds.



## protocol/spanning-tree/pvst/forward-delay

---

Specifies the time an interface spends in each of the listening and learning states.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <pvst>
      <forward-delay>20</forward-delay>
    </pvst>
  </spanning-tree>
</protocol>
```

### Parameters

*forward-delay*

Specifies the time that an interface spends in the Spanning Tree Protocol (STP) learning and listening states. Valid values range from 4 through 30 seconds. The default value is 15 seconds.

## protocol/spanning-tree/pvst/hello-time

---

Sets the interval between the hello Bridge Protocol Data Units (BPDUs) sent on an interface.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <pvst>
      <hello-time>3</hello-time>
    </pvst>
  </spanning-tree>
</protocol>
```

### Parameters

*hello-time*

Specifies the time interval between the hello BPDUs sent on an interface. The value can range from 1 through 10 seconds. The default value is 2 seconds.

## protocol/spanning-tree/pvst/max-age

---

Sets the interval time in seconds between messages that the PVST spanning tree receives from the interface.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <pvst>
      <max-age>25</max-age>
    </pvst>
  </spanning-tree>
</protocol>
```

### Parameters

*max-age*

Specifies the PVST Spanning Tree Protocol interface maximum age. The value can range from 6 through 40. The default value is 20 seconds.

## protocol/spanning-tree/pvst/port-channel

---

Sets the path-cost behavior.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <pvst>
      <port-channel>
        <path-cost>standard</path-cost>
      </port-channel>
    </pvst>
  </spanning-tree>
</protocol>
```

### Parameters

*path-cost*

Sets the path cost behaviour

**custom**

Specifies to use the custom behavior, which sets the path-cost changes according to the port-channel's bandwidth.

**standard**

Specifies to use the standard behavior, which sets that the path-cost does not change according to port-channel's bandwidth.

## protocol/spanning-tree/pvst/shutdown

---

Disables the Rapid Spanning Tree Protocol (RSTP) globally.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <pvst>
      <shutdown></shutdown>
    </pvst>
  </spanning-tree>
</protocol>
```

### Parameters

#### **shutdown**

Disables the Rapid Spanning Tree Protocol (RSTP) globally.

## protocol/spanning-tree/pvst/vlan/forward-delay

---

Configures the forward-delay for PVST spanning tree

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <pvst>
      <vlan>
        <id>1</id>
        <forward-delay>20</forward-delay>
      </vlan>
    </pvst>
  </spanning-tree>
</protocol>
```

### Parameters

*forward-delay*

Specifies the forward delay time in seconds. The value can range from 4 to 30 seconds. The default value is 15 seconds.

## protocol/spanning-tree/pvst/vlan/hello-time

---

Configures the hello interval for the PVST spanning tree.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <pvst>
      <vlan>
        <id>1</id>
        <hello-time>3</hello-time>
      </vlan>
    </pvst>
  </spanning-tree>
</protocol>
```

### Parameters

*id*

Specifies the VLAN ID.

*hello-time*

Specifies the hello interval. The interval can range from 4 to 30 seconds. The default value is 2 seconds.

## protocol/spanning-tree/pvst/vlan/max-age

---

Configures the max-age for the PVST spanning tree.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <pvst>
      <vlan>
        <id>1</id>
        <max-age>25</max-age>
      </vlan>
    </pvst>
  </spanning-tree>
</protocol>
```

### Parameters

*id*

Specifies the VLAN ID.

*max-age*

Specifies the max-age for the PVST spanning tree.



## protocol/spanning-tree/pvst/vlan/priority

---

Configures the bridge priority.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <pvst>
      <vlan>
        <id>1</id>
        <priority>4096</priority>
      </vlan>
    </pvst>
  </spanning-tree>
</protocol>
```

### Parameters

*id*

Specifies the VLAN ID.

*priority*

Specifies the bridge priority in increments of 4096.

## protocol/spanning-tree/rpvst/bridge-priority

---

Specifies the bridge priority for the common instance.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rpvst>
      <bridge-priority>32768</bridge-priority>
    </rpvst>
  </spanning-tree>
</protocol>
```

### Parameters

*bridge-priority*

Specifies the bridge priority. The values can range from 0 through 61440 in increments of 4096. The default value is 32768.

## protocol/spanning-tree/rpvst/description

---

Configures the RPVST Spanning tree description.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rpvst>
      <description>rpvstspan</description>
    </rpvst>
  </spanning-tree>
</protocol>
```

### Parameters

*decription*

Specifies the RPVST Spanning tree description.

---

## protocol/spanning-tree/rpvst/error-disable-timeout/enable

---

Enables the timer to bring the interface out of the error-disabled state.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rpvst>
      <error-disable-timeout>
        <enable></enable>
      </error-disable-timeout>
    </rpvst>
  </spanning-tree>
</protocol>
```

### Parameters

#### **enable**

Enables the timer to bring the interface out of the error-disabled state.

## protocol/spanning-tree/rpvst/error-disable-timeout/interval

---

Configures the timeout for errors on an interface.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rpvst>
      <error-disable-timeout>
        <interval>400</interval>
      </error-disable-timeout>
    </rpvst>
  </spanning-tree>
</protocol>
```

### Parameters

*interval*

Specifies the time for the interface to time out. The value can range from 10 through 1000000 seconds. The default value is 300 seconds.

## protocol/spanning-tree/rpvst/forward-delay

---

Specifies the time an interface spends in each of the listening and learning states.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rpvst>
      <forward-delay>20</forward-delay>
    </rpvst>
  </spanning-tree>
</protocol>
```

### Parameters

*forward-delay*

Specifies the time that an interface spends in the RPVST Spanning Tree Protocol (STP) learning and listening states. Valid values range from 4 through 30 seconds. The default value is 15 seconds.

## protocol/spanning-tree/rpvst/hello-time

---

Sets the interval between the hello Bridge Protocol Data Units (BPDUs) sent on an interface.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rpvst>
      <hello-time>3</hello-time>
    </rpvst>
  </spanning-tree>
</protocol>
```

### Parameters

*hello-time*

Specifies the time interval between the hello BPDUs sent on an interface. The value can range from 1 through 10 seconds. The default value is 2 seconds.

## protocol/spanning-tree/rpvst/max-age

---

Sets the interval time in seconds between messages that the spanning tree receives from the interface.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rpvst>
      <max-age>35</max-age>
    </rpvst>
  </spanning-tree>
</protocol>
```

### Parameters

*max-age*

Configures the Spanning Tree Protocol interface maximum age. The valid value can range from 6 through 40. The default value is 20 seconds.



## protocol/spanning-tree/rpvst/port-channel

---

Sets the path-cost behavior.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rpvst>
      <port-channel>
        <path-cost>standard</path-cost>
      </port-channel>
    </rpvst>
  </spanning-tree>
</protocol>
```

### Parameters

*path-cost*

Sets the path cost priority.

#### **custom**

Specifies to use the custom behavior, which sets the path-cost changes according to the port-channel's bandwidth.

#### **standard**

Specifies to use the standard behavior, which sets that the path-cost does not change according to port-channel's bandwidth.

## protocol/spanning-tree/rpvst/shutdown

---

Disables the Rapid PVST(RPVST) globally.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rpvst>
      <shutdown></shutdown>
    </rpvst>
  </spanning-tree>
</protocol>
```

### Parameters

#### **shutdown**

Disables the Rapid PVST(RPVST) globally.

## protocol/spanning-tree/rpvst/transmit-holdcount

---

Configures the maximum number of Bridge Protocol Data Units (BPDUs) transmitted per second for the R-PVST+.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rpvst>
      <transmit-holdcount>5</transmit-holdcount>
    </rpvst>
  </spanning-tree>
</protocol>
```

### Parameters

*transmit-holdcount*

Specifies the number of BPDUs than can be sent before pausing for 1 second. The value can range from 1 through 10. The default value is 6 units.

## protocol/spanning-tree/rpvst/vlan/forward-delay

---

Configures the forward-delay for RPVST spanning tree.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rpvst>
      <vlan>
        <id>1</id>
        <forward-delay>20</forward-delay>
      </vlan>
    </rpvst>
  </spanning-tree>
</protocol>
```

### Parameters

*id*

Specifies the VLAN ID.

*forward-delay*

Specifies the forward delay time in seconds. The value can range from 4 to 30 seconds. The default value is 15 seconds.

## protocol/spanning-tree/rpvst/vlan/hello-time

---

Configures the hello interval for the RPVST spanning tree.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rpvst>
      <vlan>
        <id>1</id>
        <hello-time>3</hello-time>
      </vlan>
    </rpvst>
  </spanning-tree>
</protocol>
```

### Parameters

*id*

Specifies the VLAN ID.

*hello-time*

Specifies the hello interval. The interval can range from 4 to 30 seconds. The default value is 2 seconds.

## protocol/spanning-tree/rpvst/vlan/max-age

---

Configures the max-age for the RPVST spanning tree.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rpvst>
      <vlan>
        <id>1</id>
        <max-age>25</max-age>
      </vlan>
    </rpvst>
  </spanning-tree>
</protocol>
```

### Parameters

*id*

Specifies the VLAN ID.

*max-age*

Specifies the max-age for the RPVST spanning tree.

## protocol/spanning-tree/rpvst/vlan/priority

---

Configures the bridge priority.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rpvst>
      <vlan>
        <id>1</id>
        <priority>4096</priority>
      </vlan>
    </rpvst>
  </spanning-tree>
</protocol>
```

### Parameters

*id*

Specifies the VLAN ID

*priority*

Specifies the bridge priority in increments of 4096. The value can range from.

## protocol/spanning-tree/rstp/bridge-priority

---

Specifies the bridge priority for the common instance.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rstp>
      <bridge-priority>32768</bridge-priority>
    </rstp>
  </spanning-tree>
</protocol>
```

### Parameters

*bridge-priority*

Specifies the bridge priority. The values can range from 0 through 61440 in increments of 4096. The default value is 32768.



---

## protocol/spanning-tree/rstp/description

---

Configures the Rapid Spanning tree (RSTP) description.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rstp>
      <description>rstpspan</description>
    </rstp>
  </spanning-tree>
</protocol>
```

### Parameters

*description*

Specifies the RPVST Spanning tree description.

---

## protocol/spanning-tree/rstp/error-disable-timeout/enable

---

Enables the timer to bring the interface out of the error-disabled state.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rstp>
      <error-disable-timeout>
        <enable></enable>
      </error-disable-timeout>
    </rstp>
  </spanning-tree>
</protocol>
```

### Parameters

*enable*

Enables the timer to bring the interface out of the error-disabled state.

## protocol/spanning-tree/rstp/error-disable-timeout/interval

---

Configures the timeout for errors on an interface.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rstp>
      <error-disable-timeout>
        <interval>500</interval>
      </error-disable-timeout>
    </rstp>
  </spanning-tree>
</protocol>
```

### Parameters

*interval*

Specifies the time for the interface to time out. The value can range from 10 through 1000000 seconds. The default value is 300 seconds.

## protocol/spanning-tree/rstp/forward-delay

---

Specifies the time an interface spends in each of the listening and learning states.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rstp>
      <forward-delay>30</forward-delay>
    </rstp>
  </spanning-tree>
</protocol>
```

### Parameters

*forward-delay*

Specifies the time that an interface spends in the RPVST Spanning Tree Protocol (STP) learning and listening states. Valid values range from 4 through 30 seconds. The default value is 15 seconds.

## protocol/spanning-tree/rstp/hello-time

---

Sets the interval between the hello Bridge Protocol Data Units (BPDUs) sent on an interface.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rstp>
      <hello-time>4</hello-time>
    </rstp>
  </spanning-tree>
</protocol>
```

### Parameters

*hello-time*

Specifies the time interval between the hello BPDUs sent on an interface. The value can range from 1 through 10 seconds. The default value is 2 seconds.

## protocol/spanning-tree/rstp/max-age

---

Sets the interval time in seconds between messages that the spanning tree receives from the interface.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rstp>
      <max-age>40</max-age>
    </rstp>
  </spanning-tree>
</protocol>
```

### Parameters

*max-age*

Specifies the Rapid Spanning Tree Protocol interface maximum age. The valid value can range from 6 through 40. The default value is 20 seconds.

## protocol/spanning-tree/rstp/port-channel

---

Sets the path-cost behavior.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rpvst>
      <port-channel>
        <path-cost>standard</path-cost>
      </port-channel>
    </rpvst>
  </spanning-tree>
</protocol>
```

### Parameters

*path-cost*

Sets the path cost priority

#### **custom**

Specifies to use the custom behavior, which sets the path-cost changes according to the port-channel's bandwidth .

#### **standard**

Specifies to use the standard behavior, which sets that the path-cost does not change according to port-channel's bandwidth.

## protocol/spanning-tree/rstp/shutdown

---

Disables the Rapid Spanning Tree Protocol (RSTP) globally.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rstp>
      <shutdown></shutdown>
    </rstp>
  </spanning-tree>
</protocol>
```

### Parameters

#### **shutdown**

Disables the Rapid Spanning Tree Protocol (RSTP) globally.



## protocol/spanning-tree/rstp/transmit-holdcount

---

Configures the maximum number of Bridge Protocol Data Units (BPDUs) transmitted per second for the RSTP.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rpvst>
      <transmit-holdcount>5</transmit-holdcount>
    </rpvst>
  </spanning-tree>
</protocol>
```

### Parameters

*transmit-holdcount*

Specifies the number of BPDUs than can be sent before pausing for 1 second. The value can range from 1 through 10. The default value is 6 units.

## protocol/spanning-tree/stp/bridge-priority

---

Specifies the bridge priority for the common instance.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <stp>
      <bridge-priority>32768</bridge-priority>
    </stp>
  </spanning-tree>
</protocol>
```

### Parameters

*bridge-priority*

Specifies the bridge priority. The values can range from 0 through 61440 in increments of 4096. The default value is 32768.

## protocol/spanning-tree/stp/description

---

Configures the STP Spanning tree description.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <stp>
      <description>stpspan</description>
    </stp>
  </spanning-tree>
</protocol>
```

### Parameters

*description*

Specifies the STP Spanning tree description.

---

## protocol/spanning-tree/stp/error-disable-timeout/enable

---

Enables the timer to bring the interface out of the error-disabled state.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <stp>
      <error-disable-timeout>
        <enable></enable>
      </error-disable-timeout>
    </stp>
  </spanning-tree>
</protocol>
```

### Parameters

#### **enable**

Enables the timer to bring the interface out of the error-disabled state.

## protocol/spanning-tree/stp/error-disable-timeout/interval

---

Configures the timeout for errors on an interface.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <rstp>
      <error-disable-timeout>
        <interval>550</interval>
      </error-disable-timeout>
    </rstp>
  </spanning-tree>
</protocol>
```

### Parameters

*interval*

Specifies the time for the interface to time out. The value can range from 10 through 1000000 seconds. The default value is 300 seconds.

## protocol/spanning-tree/stp/forward-delay

---

Specifies the time an interface spends in each of the listening and learning states.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <stp>
      <forward-delay>30</forward-delay>
    </stp>
  </spanning-tree>
</protocol>
```

### Parameters

*forward-delay*

Specifies the time that an interface spends in the RPVST Spanning Tree Protocol (STP) learning and listening states. Valid values range from 4 through 30 seconds. The default value is 15 seconds.

## protocol/spanning-tree/stp/hello-time

---

Sets the interval between the hello Bridge Protocol Data Units (BPDUs) sent on an interface.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <stp>
      <hello-time>5</hello-time>
    </stp>
  </spanning-tree>
</protocol>
```

### Parameters

*hello-time*

Specifies the time interval between the hello BPDUs sent on an interface. The value can range from 1 through 10 seconds. The default value is 2 seconds.

## protocol/spanning-tree/stp/max-age

---

Sets the interval time in seconds between messages that the spanning tree receives from the interface.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <stp>
      <max-age>40</max-age>
    </stp>
  </spanning-tree>
</protocol>
```

### Parameters

*max-age*

Specifies the Rapid Spanning Tree Protocol interface maximum age. The valid value can range from 6 through 40. The default value is 20 seconds.



## protocol/spanning-tree/stp/port-channel

---

Sets the path-cost behavior.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <stp>
      <port-channel>
        <path-cost>standard</path-cost>
      </port-channel>
    </stp>
  </spanning-tree>
</protocol>
```

### Parameters

*path-cost*

Sets the path cost priority

#### **custom**

Specifies to use the custom behavior, which sets the path-cost changes according to the port-channel's bandwidth.

#### **standard**

Specifies to use the standard behavior, which sets that the path-cost does not change according to port-channel's bandwidth.

## protocol/spanning-tree/stp/shutdown

---

Disables the STP Spanning Tree Protocol globally.

### Usage

```
<protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
  <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
    <stp>
      <shutdown></shutdown>
    </stp>
  </spanning-tree>
</protocol>
```

### Parameters

#### **shutdown**

Disables the STP Spanning Tree Protocol globally.

## radius-server

Configures a RADIUS server for AAA.

### Usage

```
<radius-server xmlns="urn:brocade.com:mgmt:brocade-aaa">
  <host>
    <hostname>1.1.1.1</hostname>
    <auth-port>1812</auth-port>
    <protocol>chap</protocol>
    <key>Yf0BKEhsc83gp+kIoGMQ/g==</key>
    <encryption-level>7</encryption-level>
    <retries>6</retries>
    <timeout>10</timeout>
  </host>
</radius-server>
```

### Parameters

*hostname*

Specifies the domain name or the IP address of this radius server

*auth-port*

Specifies UDP authentication port. The value can range from 1 through 65535. The default value is 1812

*protocol*

Specifies the authentication protocol to be used. Three protocol options are available

*key*

Specifies the secret shared with this server. The secret entered overrides the default secret

*encryption-level*

Specifies the encryption level. Encryption level can be set to

**0**

Stores the key in clear text format

**7**

Stores the key in encrypted format

*retries*

Specifies number of retries for this server connection. The value can range from 0 through 100. The default number of retries is set to 5

*timeout*

Specifies the wait time for this server to respond. The value can range from 1 through 60 seconds. The default value is 5 seconds

## ras

---

Collects data for SupportSave.

### Usage

```
<copy xmlns="urn:brocade.com:mgmt:brocade-ras">
  <support>
    <scp>
      <user>{req_val}</user>
      <host>{req_val}</host>
      <directory>{req_val}</directory>
      <password>{req_val}</password>
      <timeout>{req_val}</timeout>
    </scp>
  </support>
```

### Parameters

#### **support**

Specifies support.

#### **scp**

Specifies secure copy (SCP).

#### *user*

Specifies the username.

#### *host*

Specifies the IP address of the host.

#### *directory*

Specifies the directory.

#### *password*

Specifies the password.

#### *timeout*

Specifies the value for timeout.

## rmon/alarm

Configures Remote Monitoring Protocol (RMON) alarm.

### Usage

```
<rmon xmlns="urn:brocade.com:mgmt:brocade-rmon">
  <alarm-entry>
    <alarm-index>5</alarm-index>
    <snmp-oid>1.3.6.1.2.1.16.1.1.1.5.65535</snmp-oid>
    <alarm-interval>30</alarm-interval>
    <alarm-sample>absolute</alarm-sample>
    <alarm-rising-threshold>195</alarm-rising-threshold>
    <alarm-rising-event-index>25</alarm-rising-event-index>
    <alarm-falling-threshold>95</alarm-falling-threshold>
    <alarm-falling-event-index>27</alarm-falling-event-index>
    <alarm-owner>john_smith</alarm-owner>
  </alarm-entry>
</rmon>
```

### Parameters

*alarm-index*

Specifies the alarm index. The value can range from 1 through 65535.

*snmp-oid*

Specifies sampling object SNMP OID.

*alarm-interval*

Specifies alarm interval. The interval can range from 1 through 2147483648 seconds.

*alarm-sample*

Specifies alarm sample type.

**absolute**

Sample type absolute.

**delta**

Sample type delta.

*alarm-rising-threshold*

Specifies alarm rising threshold value. The value can range from 0 through 4294967295.

*alarm-rising-event-index*

Specifies event index for rising threshold. The value can range from 1 through 65535.

*alarm-falling-threshold*

Specifies alarm falling threshold value. The value can range from 0 through 4294967295.

*alarm-falling-event-index*

Specifies event index for falling threshold. The value can range from 1 through 65535.

*alarm-owner*

Specifies the owner identity.

---

## rmon/event

---

Configures Remote Monitoring Protocol (RMON) event.

### Usage

```
<rmon xmlns="urn:brocade.com:mgmt:brocade-rmon">
  <event-entry>
    <event-index>23</event-index>
    <event-description>event1</event-description>
    <log></log>
    <event-community>default</event-community>
    <event-owner>owner1</event-owner>
  </event-entry>
</rmon>
```

### Parameters

*event-index*

Specifies event index. The value can range from 1 through 65535.

*event-description*

Specifies event description.

**log**

Logs the event.

*event-community*

Sends traps for the event.

*event-owner*

Specifies owner name.

## interface/{interface-type}/{interface-name}/isis

---

Configures the IS-IS protocol.

### Usage

```
<interface xmlns="urn:brocade.com:mgmt:brocade-interface">
  <ethernet>
    <name>{req_val}</name>
    <ip>
      <intf-router-isis xmlns="urn:brocade.com:mgmt:brocade-isis">
        <int-router-isis>
          <interface-ip-router-isis/>
        </int-router-isis>
      </intf-router-isis>
    </ip>
  </ethernet>
</interface>
```

### Parameters

#### **ethernet**

Specifies the Ethernet interface.

#### *name*

Specifies the interface name.

#### **int-router-isis**

Specifies the ISIS router interface.

## router/isis/is-type

---

Changes the IS-IS level globally.

### Usage

```
<routing-system xmlns="urn:brocade.com:mgmt:brocade-common-def">
  <router>
    <isis xmlns="urn:brocade.com:mgmt:brocade-isis">
      <router-isis-cmds-holder>
        <router-isis-attributes>
          <is-type/>
        </router-isis-attributes>
      </router-isis-cmds-holder>
    </isis>
  </router>
</routing-system>
```

### Parameters

#### **router-isis-attributes**

Configures the ISIS router attributes.



---

## route-map

---

Configures, retrieves, and modifies route-map instance.

### Usage

```
<routing-system xmlns="urn:brocade.com:mgmt:brocade-common-def">
  <route-map xmlns="urn:brocade.com:mgmt:brocade-ip-policy">
    <name>{req_val}</name>
    <action-rm>{req_val}</action-rm>
    <instance>{req_val}</instance>
  </route-map>
</routing-system>
```

### Parameters

*name*

Specifies route-map name.

*action-rm*

Specifies the action.

*instance*

Specifies the route-map instance ID.

## router/mpls

---

Configures the MPLS protocol.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls/>
  </router>
</mpls-config>
```

## router/mpls/ldp

---

Configures the Label Distribution Protocol (LDP).

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <ldp/>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

*ldp-session-ip*

Specifies the LDP peer ip address.

*ldp-targeted-peer-ip*

Specifies the peer IP Address.

*load-sharing*

Specifies the number of load-sharing paths.

*hello-interval-link*

In seconds (1-32767, default 5).

*hello-interval-target*

In seconds (1-32767, default 15).

*hello-timeout-link*

In seconds (2-65535, default 15).

*hello-timeout-target*

In seconds (2-65535, default 45).

*ka-interval*

In seconds (1-65535 default 6).

*ka-int-count*

In seconds (1-65535 default 6).

*ka-timeout*

In seconds (1-65535).

*filter-fec-in*

Apply filtering on inbound FECs.

*filter-fec-out*

Apply filtering on inbound FECs.

*advertise-fec*

In seconds (1-65535).

*lsr-id*

IP address to be used as LSR id for LDP.

*filter-fec-out*

Apply filtering on outbound FECs.

*rx-label-silence-timer*

Specifies the receive label silence time (100-60000 ms). The default is 1000.

*key*

Enables TCP-MD5 authentication.

*rx-label-silence-timer*

Specifies the receive label silence time (100-60000 ms). The default value is 1000.

*max-neighbor-reconnect-time*

Specifies the maximum time to wait for neighbor to reconnect (60-300 sec). The default value is 120.

*max-neighbor-recovery-time*

Specifies the maximum time to wait for neighbor to recover (60-3600 sec). The default value is 120.

*reconnect-time*

Specifies the session reconnect time (60-300 sec). The default value is 120.

*recovery-time*

Recovery time (60-3600 sec). The default value is 120.

*tx-label-silence-timer*

Specifies the transmit label silence timer (100-60000 msec).The default value is 1000.

*notification-timer*

Specifies the notification timer (100-120000 msec). The default value is 60000.

*tunnel-metric*

Specifies the LDP tunnel metric value (1-65535; default 0).

*label-withdrawal-delay*

Specifies the label withdrawal delay. The range is from 0 to 300. The default value is 60.

## router/mpls/rsvp

---

Configures the MPLS RSVP.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <policy>
          <rsvp-periodic-flooding-time/>
        </policy>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

#### **policy**

Specifies the MPLS policy.

*rsvp-periodic-flooding-tim*

Specifies the periodic flooding time.

## router/mpls/policy

---

Configures an MPLS policy.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <policy/>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

*policy*

Specifies the MPLS policy.

## router/mpls/policy/transit-session-accounting

---

Enables traffic statistics for transit sessions.

### Usage

```
mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <policy>
          <transit-session-accounting/>
        </policy>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

*policy*

Specifies the MPLS policy.

*transit-session-accounting*

Specifies transit session account.

## router/mpls/policy/ingress-tunnel-accounting

---

Enables traffic statistics for tunnel interfaces.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <policy>
          <ingress-tunnel-accounting/>
        </policy>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>>
```

### Parameters

*policy*

Specifies the MPLS policy.

*ingress-tunnel-accounting*

Enables traffic statistics for tunnel interfaces



## router/mpls/policy/qos-ttl-mode

---

Configures the MPLS TTL and QOS propagation model.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <policy>
          <qos-ttl-mode/>
        </policy>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
</filter>
</get-config>
</rpc>
```

### Parameters

*policy*

Specifies the MPLS policy.

*qos-ttl-mode*

Configures the MPLS TTL and QOS propagation model.

## router/mpls/policy/traffic-engineering/isis

---

Defines timer value for soft preemption to happen.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <policy>
          <traffic-engineering>
            <isis-set-level/>
          </traffic-engineering>
        </policy>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

*policy*

Specifies the MPLS policy.

*traffic-engineering*

Specifies traffic engineering.

*isis-set-level*

Sets level for ISIS.

## router/mpls/policy/soft-preemption/cleanup-timer

---

Defines timer value for soft preemption to happen.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <policy>
          <soft-preemption>
            <cleanup-timer/>
          </soft-preemption>
        </policy>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

*policy*

Specifies the MPLS policy.

*soft-preemption*

Specifies the soft preemption.

*cleanup-timer*

Specifies the cleanup timer.

## router/mpls/policy/cspf-computation-mode/rsvp-periodic-flooding-time

---

Sets the interval for RSVP TE periodic flooding.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <policy>
          <rsvp-periodic-flooding-time/>
        </policy>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

*policy*

Specifies the MPLS policy.

*rsvp-periodic-flooding-time*

Specifies the RSVP periodic flooding time.

*cspf-metric-type*

Specifies the metric type.

## router/mpls/policy/qos-ttl-mode

---

Configures the MPLS TTL and QOS propagation model.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <policy>
          <qos-ttl-mode/>
        </policy>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

*policy*

Specifies the MPLS policy.

*qos-ttl-mode*

Configures the MPLS TTL and QOS propagation model.

## router/mpls/policy/cspf-computation-mode/rapid-retry

---

Configures the rapid retry option.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <policy>
          <rapid-retry/>
        </policy>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

*policy*

Specifies the MPLS policy.

*rapid-retry*

Specifies rapid retry.

## router/mpls/policy/cspf-computation-mode/retry-time

---

Configures LSP retry time.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <policy>
          <retry-time/>
        </policy>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

## router/mpls/policy/cspf-computation-mode/handle-ospf-neighbor-down

---

Configures MPLS to handle OSPF neighbor down event.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <policy>
          <handle-ospf-neighbor-down/>
        </policy>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

*policy*

Specifies the MPLS policy.

*handle-ospf-neighbor-down*

Handles a down OSPF neighbor.



## router/mpls/policy/cspf-computation-mode/handle-isis-neighbor-down

Configures MPLS to handle ISIS neighbor down event.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <policy>
          <handle-isis-neighbor-down/>
        </policy>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

*policy*

Specifies the MPLS policy.

*handle-isis-neighbor-down*

Handles a down ISIS neighbor.

## router/mpls/policy/cspf-computation-mode/cspf-interface-constraint

---

Uses interface IP address for Constrained Shortest Path First (CSPF) computation.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <policy>
          <cspf-interface-constraint/>
        </policy>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

*policy*

Specifies the MPLS policy.

*cspf-interface-constraint*

Specifies CSPF interface constraint.

## router/mpls/policy/cspf-computation-mode/add-penalty

Adds penalty of all matching Constrained Shortest Path First (CSPF)-groups to TE metric of TE link.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <policy>
          <cspf-group-computation>
            <add-penalty/>
          </cspf-group-computation>
        </policy>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

*policy*

Specifies the MPLS policy.

*cspf-group-computation*

Specifies CSPF group computation.

*add-penalty*

Adds penalty.

## router/mpls/policy/cspf-computation-mode/metric-type

Selects metric type for CSPF computation..

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <policy>
          <cspf-computation-mode>
            <cspf-metric-type/>
          </cspf-computation-mode>
        </policy>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

*policy*

Specifies the MPLS policy.

*cspf-computation-mode*

Specifies the CSPF computation mode.

*cspf-metric-type*

Specifies the metric type.

## router/mpls/policy/cspf-computation-mode/ignore-overload-bit

Ignores overload bit during CSPF computation.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <policy>
          <cspf-computation-mode>
            <ignore-overload-bit/>
          </cspf-computation-mode>
        </policy>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

*policy*

Specifies the MPLS policy.

*cspf-computation-mode*

Specifies the CSPF computation mode.

*ignore-overload-bit*

Ignore the overload bit.

---

## router/mpls/policy/backup-retry-time

---

Configures the backup retry time.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <policy>
          <backup-retry-time/>
        </policy>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

*policy*

Specifies the MPLS policy.

*backup-retry-time*

Specifies the backup retry time.

## router/mpls/cspf-group/(cspf-group-name)/penalty

Configures the Constrained Shortest Path First (CSPF) group penalty value.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <cspf-group>
          <cspf-group-name>{req_val}</cspf-group-name>
          <cspf-group-penalty-n>
            <cspf-group-penalty/>
          </cspf-group-penalty-n>
        </cspf-group>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

#### **cspf-group**

Configures a CSPF group.

#### *cspf-group-name*

Specifies the CSPF group name.

#### *cspf-group-penalty-n*

Specifies the CSPF group penalty name.

#### *cspf-group-penalty*

Specifies the CSPF group penalty.

## router/mpls/lsp-xc-traps/enable

---

Enable the LSP XC up, down logging and traps.

### Usage

```
<rpc message-id="101" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <get-config>
    <source>
      <running/>
    </source>
    <filter type="subtree">
      <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
        <router>
          <mpls>
            <mpls-cmds-holder>
              <lsp-xc-traps>
                <lsp-xc-traps-enable/>
              </lsp-xc-traps>
            </mpls-cmds-holder>
          </mpls>
        </router>
      </mpls-config>
    </filter>
  </get-config>
</rpc>
```



## router/mpls/cspf-group/(cspf-groupname)/penalty

---

Configures the CSPF group penalty value.

### Usage-DELETE

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <policy>
          <cspf-group-computation>
            <add-penalty/>
          </cspf-group-computation>
        </policy>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

#### **policy**

Specifies the policy.

## router/mpls/lsp-xc-traps/enable

---

Enables the LSP cross connect up, down, logging, and traps.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <lsp-xc-traps>
          <lsp-xc-traps-enable/>
        </lsp-xc-traps>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

#### **`lsp-xc-traps`**

Specifies LSP cross connect traps.

#### *`lsp-xc-traps-enable`*

Enables LSP cross connect traps.

## router/mpls/rsvp

---

Configures the MPLS RSVP.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <policy>
          <rsvp-periodic-flooding-time/>
        </policy>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

#### **policy**

Specifies the MPLS policy.

*rsvp-periodic-flooding-tim*

Specifies the periodic flooding time.

## router/mpls/rsvp/reliable-messaging/rapid-retry-limit

---

Configures the maximum number of retries for an unacknowledged message.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <rsvp>
          <g-reliable-messaging>
            <rapid-retry-limit/>
          </g-reliable-messaging>
        </rsvp>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

#### **rsvp**

Specifies the MPLS Resource Reservation Protocol (RSVP).

#### **g-reliable-messaging**

Specifies the group reliable messaging.

#### *bundle-message*

Specifies the bundle message.

## router/mpls/rsvp/reliable-messaging/rapid-retrans-interval

Configures an interval for an unacknowledged message to be resent.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <rsvp>
          <g-reliable-messaging>
            <rapid-retrans-interval/>
          </g-reliable-messaging>
        </rsvp>
      </mpls-cmds-holder>
    </mpls>
  </router>
```

### Parameters

#### **rsvp**

Specifies the MPLS Resource Reservation Protocol (RSVP).

#### **g-reliable-messaging**

Specifies group reliable messaging.

#### *rapid-retrans-interval*

Specifies interval for rapid retransmission.

## router/mpls/rsvp/reliable-messaging/rapid-retrans-decay

Percentage increase in the rapid retransmission interval for each consecutive unacknowledged RSVP message.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <rsvp>
          <g-reliable-messaging>
            <rapid-retrans-decay/>
          </g-reliable-messaging>
        </rsvp>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

#### **rsvp**

Specifies the MPLS Resource Reservation Protocol (RSVP).

#### **g-reliable-messaging**

Specifies group reliable messaging.

#### *rapid-retrans-decay*

Specifies rapid retransmission decay.

## router/mpls/rsvp/refresh-reduction/bundle-message/bundle-send-delay

Configure the bundle send delay value.

bundle-send-delay

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <rsvp>
          <g-refresh-reduction>
            <bundle-message>
              <bundle-send-delay/>
            </bundle-message>
          </g-refresh-reduction>
        </rsvp>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

#### **rsvp**

Specifies the MPLS Resource Reservation Protocol (RSVP).

#### **g-refresh-reduction**

Specifies the group refresh reduction value.

#### *bundle-message*

Specifies the bundle message.

#### *bundle-send-delay*

Specifies the bundle send delay.

## router/mpls/rsvp/refresh-multiple

---

Configures the MPLS RSVP refresh multiple.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <rsvp>
          <refresh-multiple/>
        </rsvp>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

#### **rsvp**

Specifies the MPLS Resource Reservation Protocol (RSVP).

#### *refresh-multiple*

Specifies refresh multiple.



## router/mpls/rsvp/refresh-interval

---

Configures the MPLS RSVP refresh interval.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <rsvp>
          <refresh-interval/>
        </rsvp>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

#### **rsvp**

Specifies the MPLS Resource Reservation Protocol (RSVP).

#### *refresh-interval*

Specifies the refresh interval.

## router/mpls/rsvp/g-rsvp-backup-bw-guarantee

---

Sets up a backup path requesting bandwidth.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <rsvp>
          <g-rsvp-backup-bw-guarantee/>
        </rsvp>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

#### **rsvp**

Specifies the MPLS Resource Reservation Protocol (RSVP).

#### **g-rsvp-backup-bw-guarantee**

Specifies bandwidth guarantee for the group RSVP backup.

## router/mpls/rsvp/global-rsvp-hello-acknowledgements

---

Acknowledges the RSVP hellos on interfaces supporting RSVP hello and not having RSVP sessions.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <rsvp>
          <global-rsvp-hello-acknowledgements/>
        </rsvp>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

#### **rsvp**

Specifies the MPLS Resource Reservation Protocol (RSVP).

#### **global-rsvp-hello-acknowledgements**

Specifies global RSVP hello acknowledgements.

## router/mpls/rsvp/global-rsvp-hello/tolerance

---

Configures the number of unacknowledged RSVP hello requests before timeout.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <rsvp>
          <global-rsvp-hello>
            <global-rsvp-hello-tolerance/>
          </global-rsvp-hello>
        </rsvp>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

**rsvp**

Specifies the MPLS Resource Reservation Protocol (RSVP).

**global-rsvp-hello**

Specifies the global RSVP hello.

*global-rsvp-hello-tolerance*

Specifies the tolerance value for global RSVP hello.

## router/mpls/rsvp/global-rsvp-hello

---

Configures the interval between two RSVP hello requests.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <rsvp>
          <global-rsvp-hello>
            <global-rsvp-hello-interval/>
          </global-rsvp-hello>
        </rsvp>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

#### **rsvp**

Specifies the MPLS Resource Reservation Protocol (RSVP).

#### **global-rsvp-hello**

Specifies global RSVP hello

#### *global-rsvp-hello-interval*

Specifies the interval for global RSVP hello.

## router/mpls/rsvp/refresh-reduction/summary-refresh

---

Configures the refresh reduction summary refresh feature.

### Usage

```
<mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <router>
    <mpls>
      <mpls-cmds-holder>
        <rsvp>
          <g-refresh-reduction>
            <summary-refresh/>
          </g-refresh-reduction>
        </rsvp>
      </mpls-cmds-holder>
    </mpls>
  </router>
</mpls-config>
```

### Parameters

#### **rsvp**

Specifies the MPLS Resource Reservation Protocol (RSVP).

#### **summary-refresh**

Specifies summary refresh.

## qos-mpls

Configures, retrieves, and modifies MPLS Quality of Service (QoS).

### Usage

```
<qos-mpls xmlns="urn:brocade.com:mgmt:brocade-qos-mpls">
  <map>
    <exp-traffic-class>
      <exp-traffic-class-map-name>{req_val}</exp-traffic-class-map-name>
    </exp-traffic-class>
  </map>
</qos-mpls>
```

### Parameters

#### **map**

Specifies the map.

#### *exp-traffic-class*

The EXP traffic class value. Valid values range from 0 through 7.

#### *exp-traffic-class-map-name*

The EXP traffic class map name.

## show/selinux/status

Displays the current SE Linux configuration for this SLX-OS device.

### Usage

```
<rpc xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="1">
  <action xmlns="http://tail-f.com/ns/netconf/actions/1.0">
    <data>
      <show xmlns="urn:brocade.com:mgmt:brocade-common-def">
        <selinux xmlns="urn:brocade.com:mgmt:brocade-sec-services">
          <status/>
        </selinux>
      </show>
    </data>
  </action>
</rpc>
]]>]]>
```

### Parameters

#### *status*

Displays the SE Linux status for this SLX-OS device.

## Response

The response received for this RPC call is

```
<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="1">
  <data>
    <show xmlns='urn:brocade.com:mgmt:brocade-common-def'>
      <selinux xmlns='urn:brocade.com:mgmt:brocade-sec-services'>
        <status>
          <sestatus-output>
            SELinux status: enabled
            SELinuxfs mount: /sys/fs/selinux
            SELinux root directory: /etc/selinux
            Loaded policy name: mls
            Current mode: permissive
            Mode from config file: enforcing
            Policy MLS status: enabled
            Policy deny_unknown status: allowed
            Memory protection checking: actual (secure)
            Max kernel policy version: 31
          </sestatus-output>
        </status>
      </selinux>
    </show>
  </data>
</rpc-reply>
]]>]]>
```



## sflow/agent-address

---

Configures the sFlow agent-ID address..

### Usage

```
<sflow xmlns="urn:brocade.com:mgmt:brocade-sflow">
  <agent-address>
    <agent-interface-name/>
  </agent-address>
</sflow>
```

### Parameters

**ipv4**

Specifies an agent-address configuration for IPv4 collectors.

**ipv6**

Specifies an agent-address configuration for IPv6 collectors.

**ethernet** *slot/port*

Specifies an Ethernet slot and port..

**loopback** *loopback-number*

Specifies a loopback interface. Valid values range from 1 through 255.

**management** *slot*

Specifies a management interface.

**ve** *ve-inteface*

Specifies a virtual Ethernet (VE) interface. Valid values range from 1 through 4096.

## sflow/collector

---

Configures sFlow collector.

### Usage

```
<sflow xmlns="urn:brocade.com:mgmt:brocade-sflow">
  <collector>
    <collector-ip-address>1.1.1.1</collector-ip-address>
    <collector-port-number>50</collector-port-number>
    <use-vrf>mgmt-vrf</use-vrf>
  </collector>
</sflow>
```

### Parameters

*collector-ip-address*

Specifies the IP address of the sFlow collector

*collector-port-number*

Specifies the port number used by the sFlow collector. The value can range from 1 through 65535

*use-vrf*

Specifies the VRF to use for sending data to the collector

## sflow/enable

---

Enables sFlow globally.

### Usage

```
<sflow xmlns="urn:brocade.com:mgmt:brocade-sflow">  
  <enable></enable>  
</sflow>
```

### Parameters

#### **enable**

Enable sFlow globally

## sflow/polling-interval

---

Configures interface counter polling interval.

### Usage

```
<sflow xmlns="urn:brocade.com:mgmt:brocade-sflow">  
  <polling-interval>25</polling-interval>  
</sflow>
```

### Parameters

*polling-interval*

Specifies polling interval value. The value can range from 1 through 65535. The default value is 20

## sflow/sample-rate

---

Configures interface sampling rate.

### Usage

```
<sflow xmlns="urn:brocade.com:mgmt:brocade-sflow">  
  <sample-rate>32768</sample-rate>  
</sflow>
```

### Parameters

*sample-rate*

Specifies sampling rate value. The value can range from 2 through 16777215. The default value is 32768

## sflow/source-ip

---

Configures source IP address to use.

### Usage

```
<sflow xmlns="urn:brocade.com:mgmt:brocade-sflow">  
  <source-ip>chassis-ip</source-ip>  
</sflow>
```

### Parameters

*source-ip*

Specifies the source IP address to use

**chassis-ip**

Uses chassis IP as source address

**mm-ip**

Uses local MM IP as source address

## sflow-profile

Configures sflow profile sampling rate.

### Usage

```
<sflow-profile xmlns="urn:brocade.com:mgmt:brocade-sflow">
  <profile-name>sflow1</profile-name>
  <profile-sampling-rate>4</profile-sampling-rate>
</sflow-profile>
```

### Parameters

*profile-name*

Specifies Sflow profile name

*profile-sampling-rate*

Specifies Sflow sampling rate. The value can range from 2 through 8388608

## show-grub-version

Displays the current grub version for this SLX-OS device.

### Usage

```
<rpc xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="1">
  <action xmlns="http://tail-f.com/ns/netconf/actions/1.0">
    <data>
      <show xmlns="urn:brocade.com:mgmt:brocade-common-def">
        <update xmlns="urn:brocade.com:mgmt:brocade-firmware">
          <grubversion/>
        </update>
      </show>
    </data>
  </action></rpc>]]]]>
<?xml version="1.0" encoding="UTF-8"?>
```

### Parameters

*grubversion*

Displays the grub version for this SLX-OS device.

### Response

The response received for this RPC call is

```
<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" messageid="1">
  <data>
    <showxmlns='urn:brocade.com:mgmt:brocade-common-def'>
      <update xmlns='urn:brocade.com:mgmt:brocade-firmware'>
        <grubversion>
          <grub-ver>grub_version="2.06"
        </grub-ver>
        </grubversion>
      </update>
    </show>
  </data>
</rpc-reply>
```

```

    </update>
  </show>
</data>
</rpc-reply>]]>]]>

```

## show-onie-version

Displays the current onie version for this SLX-OS device.

### Usage

```

<rpc xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="1">
  <action xmlns="http://tail-f.com/ns/netconf/actions/1.0">
    <data>
      <show xmlns="urn:brocade.com:mgmt:brocade-common-def">
        <update xmlns="urn:brocade.com:mgmt:brocade-firmware">
          <onieversion/>
        </update>
      </show>
    </data>
  </action>
</rpc>]]>]]>
<?xml version="1.0" encoding="UTF-8"?><?xml version="1.0" encoding="UTF-8"?>

```

### Parameters

*onieversion*

Displays the onie version for this SLX-OS device.

### Response

The response received for this RPC call is

```

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="1">
  <data>
    <show xmlns='urn:brocade.com:mgmt:brocade-common-def'>
      <update xmlns='urn:brocade.com:mgmt:brocade-firmware'>
        <onieversion>
          <onie-ver>ONIE Version="2020.05.00.07"</onie-ver>
        </onieversion>
      </update>
    </show>
  </data>
</rpc-reply>]]>]]>

```



## snmp-server/trap/bfd-std-mib

---

Configures *Standard MIB* for BFD Traps.

### Usage

```
<snmp-server xmlns="urn:brocade.com:mgmt:brocade-snmp">
  <trap>
    <bfd-std-mib/>
  </trap>
</snmp-server>
```

## snmp-server/use-vrf/{vrf-name}

---

Starts or stops SNMP service on the specified VRF.

### Usage

```
<snmp-server xmlns="urn:brocade.com:mgmt:brocade-snmp">
  <use-vrf>
    <use-vrf-name>vrf-name</use-vrf-name>
    <shutdown/>
  </use-vrf>
</snmp-server>
```

### Parameters

**use-vrf-name** *vrf-name*

Specifies the VRF name on which to enable/disable SNMP service.

**shutdown**

Initiates shutdown of SNMP service on the selected VRF.

## system-monitor

---

Configures, modifies, or retrieves FRU threshold and alert setting.

### Usage

```
<system-monitor xmlns="urn:brocade.com:mgmt:brocade-system-monitor">
  <fan>
    <alert>
      <action/>
    </alert>
  </fan>
</system-monitor>

<system-monitor xmlns="urn:brocade.com:mgmt:brocade-system-monitor">
  <power>
    <threshold/>
  </power>
</system-monitor>
```

### Parameters

**fan**

Specifies the fan.

*alert*

The fan alert notification.

*action*

Specifies the action to be taken.

**power**

Specifies power supply.

*threshold*

The power supply threshold.

## system-monitor-mail/fru (email)

---

Configures e-mail address for FRU alerts.

### Usage

```
<system-monitor-mail xmlns="urn:brocade.com:mgmt:brocade-system-monitor">
  <fru>
    <email-list>
      <email>abc@brocade.com</email>
    </email-list>
  </fru>
</system-monitor-mail>
```

### Parameters

*email*

Specifies e-mail address for FRU alerts

## system-monitor-mail/fru/enable

---

Enables FRU e-mail alerts.

### Usage

```
<system-monitor-mail xmlns="urn:brocade.com:mgmt:brocade-system-monitor">
  <fru>
    <enable></enable>
  </fru>
</system-monitor-mail>
```

### Parameters

#### **enable**

Enables FRU e-mail alerts

## system-monitor-mail/interface (email)

---

Configures e-mail address for interface alerts.

### Usage

```
<system-monitor-mail xmlns="urn:brocade.com:mgmt:brocade-system-monitor">
  <interface>
    <email-list>
      <email>abc@brocade.com</email>
    </email-list>
  </interface>
</system-monitor-mail>
```

### Parameters

*email*

Specifies e-mail address for interface alerts

---

## system-monitor-mail/interface/enable

---

Enables interface e-mail alerts.

### Usage

```
<system-monitor-mail xmlns="urn:brocade.com:mgmt:brocade-system-monitor">  
  <interface>  
    <enable></enable>  
  </interface>  
</system-monitor-mail>
```

### Parameters

#### **enable**

Enables interface e-mail alerts

## system-monitor-mail/relay

---

Configures relay IP mail settings.

### Usage

```
<system-monitor-mail xmlns="urn:brocade.com:mgmt:brocade-system-monitor">
  <relay>
    <host-ip>1.1.1.1</host-ip>
    <domain-name>domain1</domain-name>
  </relay>
</system-monitor-mail>
```

### Parameters

*host-ip*

Specifies host IP address

*domain-name*

Specifies domain server name



## system-monitor-mail/security (email)

---

Configures e-mail address for security alerts.

### Usage

```
<system-monitor-mail xmlns="urn:brocade.com:mgmt:brocade-system-monitor">
  <security>
    <email-list>
      <email>abc@brocade.com</email>
    </email-list>
  </security>
</system-monitor-mail>
```

### Parameters

*email*

Specifies e-mail address for security alerts

## system-monitor-mail/security/enable

---

Enables security e-mail alerts.

### Usage

```
<system-monitor-mail xmlns="urn:brocade.com:mgmt:brocade-system-monitor">
  <security>
    <enable></enable>
  </security>
</system-monitor-mail>
```

### Parameters

#### **enable**

Enables security e-mail alerts

## system-monitor-mail/sfp (email)

---

Configures e-mail address for SFP alerts.

### Usage

```
<system-monitor-mail xmlns="urn:brocade.com:mgmt:brocade-system-monitor">
  <sfp>
    <email-list>
      <email>abc@brocade.com</email>
    </email-list>
  </sfp>
</system-monitor-mail>
```

### Parameters

*email*

Specifies e-mail address for SFP alerts

## system-monitor-mail/sfp/enable

---

Enables sfp e-mail alerts.

### Usage

```
<system-monitor-mail xmlns="urn:brocade.com:mgmt:brocade-system-monitor">
  <sfp>
    <enable></enable>
  </sfp>
</system-monitor-mail>
```

### Parameters

#### **enable**

Enables sfp e-mail alerts

## system-watermark

---

Defines system-related information.

### Usage

```
<system-config xmlns="urn:brocade.com:mgmt:brocade-system-watermark">
  <interface>
    <utilization-watermark/>
  </interface>
```

### Parameters

#### **interface**

Specifies the protocol.

#### **utilization-watermark**

Specifies the utilization watermark.

## topology-group

---

Configures topology VLAN group for L2 protocols.

### Usage

```
<topology-group xmlns="urn:brocade.com:mgmt:brocade-topology-group">
  <topology-group-id>{req_val}</topology-group-id>
  <member-vlan>
    <member-vlan-add/>
  </member-vlan>
</topology-group>>
```

### Parameters

*topology-group-id*

Specifies topology group ID.

**member-vlan**

Configures member VLANs.

**master-vlan**

Configures master VLANs.

## vlan/{vlan-name}/mac

---

Configures a MAC access group.

### Usage

```
<interface-vlan xmlns="urn:brocade.com:mgmt:brocade-interface">
  <vlan>
    <name>{req_val}</name>
    <mac xmlns="urn:brocade.com:mgmt:brocade-mac-access-list">
      <access-group>
        <mac-access-list>{req_val}</mac-access-list>
        <mac-direction>{req_val}</mac-direction>
        <traffic-type/>
      </access-group>
    </mac>
  </vlan>
</interface-vlan>
```

### Parameters

**vlan**

Specifies vlan.

*name*

Specifies the VLAN name.

**access-group**

Specifies the MAC access- group.

*mac-access-list*

Specifies the mac-access list.

*mac-direction*

Specifies the MAC direction.

*traffic-type*

Specifies the traffic type.

## vlan/classifier/group

---

Configures VLAN classification group commands.

### Usage

```
<vlan xmlns="urn:brocade.com:mgmt:brocade-vlan">
  <classifier>
    <group>
      <groupid>2</groupid>
      <oper>add</oper>
      <rule-name>rule</rule-name>
      <ruleid>2</ruleid>
    </group>
  </classifier>
</vlan>
```

### Parameters

*groupid*

Specifies VLAN classifier group ID. The value can range from 1 through 16

*oper*

Specifies the operation

**add**

Add rule

**delete**

Delete rule

*rule-name*

Specifies VLAN classifier rule name

*ruleid*

Specifies VLAN classifier rule ID



## vlan/classifier/rule/mac

---

Configures VLAN classification rule commands.

### Usage

```
<vlan xmlns="urn:brocade.com:mgmt:brocade-vlan">
  <classifier>
    <rule>
      <ruleid>2</ruleid>
      <mac>
        <address>0011.1122.2233</address>
      </mac>
    </rule>
  </classifier>
</vlan>
```

### Parameters

*ruleid*

Specifies the rule ID. The value can range from 1 through 256

*address*

Specifies MAC address in HHHH.HHHH.HHHH format

## vlan/classifier/rule/proto

---

Configures the protocol to use for the VLAN classifier rule.

### Usage

```
<vlan xmlns="urn:brocade.com:mgmt:brocade-vlan">
  <classifier>
    <rule>
      <ruleid>2</ruleid>
      <proto>
        <proto-val>arp</proto-val>
        <encap>ethv2</encap>
      </proto>
    </rule>
  </classifier>
</vlan>
```

### Parameters

*ruleid*

Specifies the VLAN identification rule. The values can range from 1 through 2556

*proto-val*

Specifies the protocol to use for the VLAN classifier rule

*hex\_addr*

Specifies an Ethernet hexadecimal value. The value can range from 0x0000 through 0xffff

**arp**

Specifies to use the Address Resolution Protocol

**ip**

Specifies to use the Internet Protocol

**ipv6**

Specifies to use the Internet Protocol version 6

*encap*

Specifies to encapsulate the Ethernet frames sent for the VLAN classifier rule

**ethv2**

Specifies to use the Ethernet version 2 encapsulated frames

**nosnap11c**

Specifies to use the Ethernet version 2 non-SNA frames

**snap11c**

Specifies to use the Ethernet version 2 with SNA frames

## vlan/dot1q

---

Configures dot1q parameters.

### Usage

```
<vlan xmlns="urn:brocade.com:mgmt:brocade-vlan">
  <dot1q>
    <tag>
      <native></native>
    </tag>
  </dot1q>
</vlan>
```

### Parameters

#### **native**

Enables tagged behavior for native-VLANs

## vrf

---

Configures the virtual rounding and forwarding (VRF).

### Usage

```
<vrf xmlns="urn:brocade.com:mgmt:brocade-vrf">  
  <vrf-name>{req_val}</vrf-name>  
</vrf>
```

### Parameters

*vrf-name*

Specifies the VRF name.

## vrf/{vrf-name}/address-family/ipv4/unicast

---

Configures the IPv4 address family configurations.

### Usage

```
<vrf xmlns="urn:brocade.com:mgmt:brocade-vrf">
  <vrf-name>{req_val}</vrf-name>
  <address-family>
    <ip>
      <unicast/>
    </ip>
  </address-family>
</vrf>
```

### Parameters

*vrf-name*

Specifies the VRF name.

**address-family**

Specifies address family.

**ip**

Specifies the IP address.

## vrf/{vrf-name}/address-family/ipv4/unicast/max-route

---

Configures IPv4 address family maximum route.

### Usage

```
<vrf xmlns="urn:brocade.com:mgmt:brocade-vrf">
  <vrf-name>{req_val}</vrf-name>
  <address-family>
    <ip>
      <unicast>
        <max-route/>
      </unicast>
    </ip>
  </address-family>
</vrf>
```

### Parameters

*vrf-name*

Specifies the VRF name.

**address-family**

Specifies address family.

**ip**

Specifies the IP address.

## vrf/{vrf-name}/address-family/ipv6/unicast

---

Configures the IPv6 address family configurations.

### Usage

```
<vrf xmlns="urn:brocade.com:mgmt:brocade-vrf">
  <vrf-name>{req_val}</vrf-name>
  <address-family>
    <ipv6>
      <unicast/>
    </ipv6>
  </address-family>
</vrf>
```

### Parameters

*vrf-name*

Specifies the VRF name.

**address-family**

Specifies address family.

**ipv6**

Specifies the IP address.

## vrf/{vrf-name}/address-family/ipv6/unicast/max-route

---

Configures IPv6 address family maximum route.

### Usage

```
<vrf xmlns="urn:brocade.com:mgmt:brocade-vrf">
  <vrf-name>{req_val}</vrf-name>
  <address-family>
    <ipv6>
      <unicast>
        <max-route/>
      </unicast>
    </ipv6>
  </address-family>
</vrf>
```

### Parameters

*vrf-name*

Specifies the VRF name.

**address-family**

Specifies address family.

**ipv6**

Specifies the IP address.



## vrf/{vrf-name}/ip/router-id

---

Configures the IP route details..

### Usage

```
<vrf xmlns="urn:brocade.com:mgmt:brocade-vrf">
  <vrf-name>{req_val}</vrf-name>
  <ip>
    <vrf-router-id/>
  </ip>
</vrf>
```

### Parameters

*vrf-name*

Specifies the VRF name.

**vrf-router-id**

Specifies the VRF router ID..

## vxlan-visibility

---

Configures an overlay transit.

### Usage

```
<overlay xmlns="urn:brocade.com:mgmt:brocade-vxlan-visibility">
  <access-list>
    <type>
      <vxlan/>
    </type>
  </access-list>
</overlay>
```

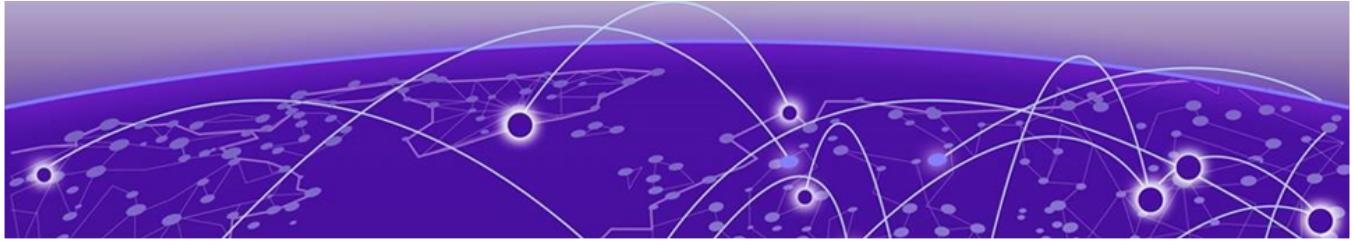
### Parameters

**access-list**

Specifies the access list.

**type**

Specifies the VXLAN type: extended or standard.



## Remote Procedure Calls (RPCs)

---

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## bna-config-cmd

---

Copies configuration data to and from the system.

### Usage

```
<rpc xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="212">
  <bna-config-cmd xmlns="urn:brocade.com:mgmt:brocade-ras">
    <src>default-config</src>
    <dest>startup-config</dest>
  </bna-config-cmd>
</rpc>

<rpc-reply message-id="212" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <session-id xmlns="urn:brocade.com:mgmt:brocade-ras">5</session-id>
  <status xmlns="urn:brocade.com:mgmt:brocade-ras">in-progress</status>
</rpc-reply>
```

### Parameters

*session-id*

This id is used along with bna-config-cmd-status API to get the status of this operation (inprogress/complete).

*status*

Displays the status of this operation (inprogress/complete).

## bna-config-cmd-status

This RPC displays the status of a previous config-cmd.

### Usage

```
nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="8">
  <bna-config-cmd xmlns="urn:brocade.com:mgmt:brocade-ras">
    <src>running-config</src>
    <dest>startup-config</dest>
  </bna-config-cmd>
</nc:rpc>

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="8">
  <session-id xmlns="urn:brocade.com:mgmt:brocade-ras">0</session-id>
  <status xmlns="urn:brocade.com:mgmt:brocade-ras">in-progress</status>
</rpc-reply>

[2020-01-09 16:39:16] SEND admin@10.20.192.65
<nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="8">
  <bna-config-cmd-status xmlns="urn:brocade.com:mgmt:brocade-ras">
    <session-id>0</session-id>
  </bna-config-cmd-status>
</nc:rpc>

[2020-01-09 16:39:17] RECV admin@10.20.192.65
<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="8">
  <status xmlns="urn:brocade.com:mgmt:brocade-ras">completed</status>
  <status-string xmlns="urn:brocade.com:mgmt:brocade-ras"></status-string>
</rpc-reply>
```

### Parameters

*session-id*

This id is that of a previous config-cmd (inprogress/complete) operation.

*status*

Displays the status of this operation.

## brocade-sec-services

Fetches the current SE Linux status.

### Usage

```
<rpc xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="1">
  <action xmlns="http://tail-f.com/ns/netconf/actions/1.0">
    <data>
      <show xmlns="urn:brocade.com:mgmt:brocade-common-def">
        <selinux xmlns="urn:brocade.com:mgmt:brocade-sec-services">
          <status/>
        </selinux>
      </show>
    </data>
  </action>
</rpc>
]]>]]>
```

### Parameters

#### status

Fetches the SE Linux Status.

### Response

```
<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="1">
  <data>
    <show xmlns='urn:brocade.com:mgmt:brocade-common-def'>
      <selinux xmlns='urn:brocade.com:mgmt:brocade-sec-services'>
        <status>
          <sestatus-output>
            SELinux status: enabled
            SELinuxfs mount: /sys/fs/selinux
            SELinux root directory: /etc/selinux
            Loaded policy name: mls
            Current mode: permissive
            Mode from config file: enforcing
            Policy MLS status: enabled
            Policy deny_unknown status: allowed
            Memory protection checking: actual (secure)
            Max kernel policy version: 31
          </sestatus-output>
        </status>
      </selinux>
    </show>
  </data>
</rpc-reply>
]]>]]>
```

## brocade-ip-policy

Configures brocade-ip-policy.

### Usage

```
module brocade-ip-policy
  namespace "urn:brocade.com:mgmt:brocade-ip-policy";
  <rpc message-id="101" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
    <edit-config>
      <target>
        <running/>
      </target>
      <config>
        <routing-system xmlns="urn:brocade.com:mgmt:brocade-common-def">
          <route-map xmlns="urn:brocade.com:mgmt:brocade-ip-policy">
            <name>%req_val%</name>
            <action-rm>%req_val%</action-rm>
            <instance>%req_val%</instance>
            <content>
              <set>
                <ipv6>
                  <next-ip>
                    <ipv6-peer-address/>
                  </next-ip>
                </ipv6>
              </set>
            </content>
          </route-map>
        </routing-system>
      </config>
    </edit-config>
  </rpc>
]]>]]>
```

## brocade-interface

Configures the selected interface's speed.

### Usage

```
module brocade-interface
namespace "urn:brocade.com:mgmt:brocade-interface-ext";
<rpc message-id="101" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <edit-config>
    <target>
      <running/>
    </target>
    <config>
      <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
        <ethernet>
          <name>0/5</name>
          <speed>1000-auto-full-duplex</speed>
        </ethernet>
      </interface>
    </config>
  </edit-config>
</rpc>
]]>]]>
<?xml version="1.0" encoding="UTF-8"?>
```

## clear-tm-voq-stat-ing-all-egr-all

### Usage

```
<nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="9">
  <clear-tm-voq-stat-ing-all-egr-all xmlns="urn:brocade.com:mgmt:brocade-tm-stats"></
clear-tm-voq-stat-ing-all-egr-all>
</nc:rpc>
```

```
<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="9">
  <ok></ok>
</rpc-reply>
```

## clear-tm-voq-stat-ing-all-egr-ifname

Clears per port voq statistics on all devices.

### Usage

```
<nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="9">
  <clear-tm-voq-stat-ing-all-egr-ifname xmlns="urn:brocade.com:mgmt:brocade-tm-stats"></
clear-tm-voq-stat-ing-all-egr-ifname>
</nc:rpc>
```

```
<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="9">
  <rpc-error>
    <error-type>application</error-type>
```



```

    <error-tag>operation-failed</error-tag>
    <error-severity>error</error-severity>
    <nc:error-path xmlns:tm="urn:brocade.com:mgmt:brocade-tm-stats"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0">
    /nc:rpc/tm:clear-tm-voq-stat-ing-all-egr-ifname
  </nc:error-path>
  <error-message unknown:lang="en">% Error: INTERFACE IS EITHER NOT PRESENT OR NOT
YET ACTIVE</error-message>
  <error-info>
    <bad-element>clear-tm-voq-stat-ing-all-egr-ifname</bad-element>
  </error-info>
</rpc-error>
</rpc-reply>

```

## Parameters

*clear-tm-voq-ing-all-egress-port-name*

The port name of the cleared voq statistics of the device.

## clear-tm-voq-stat-slot-id-egr-all

Clears all voq statistics for the selected slot.

## Usage

```

<nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="9">
  <clear-tm-voq-stat-slot-id-egr-all xmlns="urn:brocade.com:mgmt:brocade-tm-stats">
    <slot-id>l</slot-id>
  </clear-tm-voq-stat-slot-id-egr-all>
</nc:rpc>

```

```

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="9">
  <ok></ok>
</rpc-reply>

```

## Parameters

*slot-id*

The id of the slot whose voq statistics are cleared.

## clear-tm-voq-slot-id-egress-port-name

Clears the per port voq statistics for the selected slot.

## Usage

```

<nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="9">
  <clear-tm-voq-slot-id-egress-port-name xmlns="urn:brocade.com:mgmt:brocade-tm-stats">
    <slot-id>l</slot-id>
    <clear-tm-voq-slot-egress-port-name></clear-tm-voq-slot-egress-port-name>
  </clear-tm-voq-slot-id-egress-port-name>
</nc:rpc>

```

```
</clear-tm-voq-slot-id-egress-port-name>  
</nc:rpc>
```

```
<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"  
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="9">  
  <ok></ok>  
</rpc-reply>
```

## Parameters

*slot-id*

The id of the slot.

## clear-mpls-ldp-statistics

---

Clears the MPLS LDP control plane statistics.

### Usage

```
<clear-mpls-ldp-statistics xmlns="urn:brocade.com:mgmt:brocade-mpls"/>
```

---

## clear-mpls-lsp

---

Resets a tunnel and enables it back.

### Usage

```
<clear-mpls-lsp xmlns="urn:brocade.com:mgmt:brocade-mpls">  
  <mpls-clear-lsp-name-in>lspto</mpls-clear-lsp-name-in>  
</clear-mpls-lsp>
```

### Parameters

*mpls-clear-lsp-name-in*

Specifies the LSP name.

## clear-mpls-rsvp-statistics

---

Clears the MPLS RSVP control plane statistics.

### Usage

```
<clear-mpls-rsvp-statistics xmlns="urn:brocade.com:mgmt:brocade-mpls"/>
```

---

## clear-mpls-rsvp-statistics-neighbor-address

---

Clears an RSVP neighbor.

### Usage

```
<clear-mpls-rsvp-statistics-neighbor xmlns="urn:brocade.com:mgmt:brocade-mpls">  
  <clear-mpls-rsvp-statistics-neighbor-address>29.19.1.19</clear-mpls-rsvp-statistics-  
neighbor-address>  
</clear-mpls-rsvp-statistics-neighbor>
```

### Parameters

*clear-mpls-rsvp-statistics-neighbor-address*

Specifies the RSVP neighbor with the specific IP address.

## clear-mpls-rsvp-statistics-neighbor-all

---

Clears all RSVP neighbors.

### Usage

```
<clear-mpls-rsvp-statistics-neighbor xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <clear-mpls-rsvp-statistics-neighbor-all>true</clear-mpls-rsvp-statistics-neighbor-all>
</clear-mpls-rsvp-statistics-neighbor>
```

### Parameters

*clear-mpls-rsvp-statistics-neighbor-all*

Clears all MPLS RSVP neighbors.

## firmware-commit

---

This is the firmware commit RPC.

### Usage

```
<nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="3">
  <firmware-commit xmlns="urn:brocade.com:mgmt:brocade-firmware">
  </firmware-commit>
</nc:rpc>
```

```
<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="3">
  <result xmlns="urn:brocade.com:mgmt:brocade-firmware">firmwarecommit initiated</result>
</rpc-reply>
```

## firmware-restore

---

Starts firmware restore on the device.

### Usage

```
<nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="3">
  <firmware-restore xmlns="urn:brocade.com:mgmt:brocade-firmware">
  </firmware-restore>
</nc:rpc>
```

```
<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="3">
  <result xmlns="urn:brocade.com:mgmt:brocade-firmware">firmwarerestore initiated</
result>
</rpc-reply>
```

## fwdl-status

Returns the status of the firmware download operation.

### Usage

```
<fwdl-status></fwdl-status>

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="71">
  <fwdl-state xmlns="urn:brocade.com:mgmt:brocade-firmware">completed</fwdl-state>
  <number-of-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">24</number-of-entries>
  <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
    <index>1</index>
    <blade-name>SW/0</blade-name>
    <message-id>0</message-id>
    <date-and-time-info>2016-11-29/01:20:20</date-and-time-info>
    <message>Firmware install begins.</message>
  </fwdl-entries>
  <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
    <index>2</index>
    <blade-name>SW/0</blade-name>
    <message-id>0</message-id>
    <date-and-time-info>2016-11-29/01:23:25</date-and-time-info>
    <message>Firmware install ends.</message>
  </fwdl-entries>
  <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
    <index>3</index>
    <blade-name>SW/1</blade-name>
    <message-id>0</message-id>
    <date-and-time-info>2016-11-29/01:23:25</date-and-time-info>
    <message>Firmware install begins.</message>
  </fwdl-entries>
  <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
    <index>4</index>
    <blade-name>SW/1</blade-name>
    <message-id>0</message-id>
    <date-and-time-info>2016-11-29/01:26:27</date-and-time-info>
    <message>Firmware install ends.</message>
  </fwdl-entries>
  <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
    <index>5</index>
    <blade-name>SW/0</blade-name>
    <message-id>0</message-id>
    <date-and-time-info>2016-11-29/01:26:28</date-and-time-info>
    <message>Firmware starts to swap.</message>
  </fwdl-entries>
  <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
    <index>6</index>
    <blade-name>SW/1</blade-name>
    <message-id>0</message-id>
    <date-and-time-info>2016-11-29/01:26:28</date-and-time-info>
    <message>Firmware starts to swap.</message>
  </fwdl-entries>
  <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
    <index>7</index>
    <blade-name>SW/1</blade-name>
    <message-id>0</message-id>
    <date-and-time-info>2016-11-29/01:26:34</date-and-time-info>
    <message>Firmware is swapped.</message>
  </fwdl-entries>
  <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
```



```

<index>8</index>
<blade-name>SW/0</blade-name>
<message-id>0</message-id>
<date-and-time-info>2016-11-29/01:26:36</date-and-time-info>
<message>Firmware is swapped.</message>
</fwdl-entries>
<fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
  <index>9</index>
  <blade-name>SW/0</blade-name>
  <message-id>0</message-id>
  <date-and-time-info>2016-11-29/01:26:36</date-and-time-info>
  <message>Firmware is downloaded successfully.</message>
</fwdl-entries>
<fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
  <index>10</index>
  <blade-name>SW/1</blade-name>
  <message-id>0</message-id>
  <date-and-time-info>2016-11-29/01:26:37</date-and-time-info>
  <message>Firmware is downloaded successfully.</message>
</fwdl-entries>
<fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
  <index>11</index>
  <blade-name>SW/1</blade-name>
  <message-id>0</message-id>
  <date-and-time-info>2016-11-29/01:34:17</date-and-time-info>
  <message>The DB/filesystem starts shutting down.</message>
</fwdl-entries>
<fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
  <index>12</index>
  <blade-name>SW/0</blade-name>
  <message-id>0</message-id>
  <date-and-time-info>2016-11-29/01:34:17</date-and-time-info>
  <message>The DB/filesystem starts shutting down.</message>
</fwdl-entries>
<fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
  <index>13</index>
  <blade-name>SW/1</blade-name>
  <message-id>0</message-id>
  <date-and-time-info>2016-11-29/01:34:35</date-and-time-info>
  <message>The DB/filesystem has been shut down.</message>
</fwdl-entries>
<fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
  <index>14</index>
  <blade-name>SW/0</blade-name>
  <message-id>0</message-id>
  <date-and-time-info>2016-11-29/01:34:37</date-and-time-info>
  <message>The DB/filesystem has been shut down.</message>
</fwdl-entries>
<fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
  <index>15</index>
  <blade-name>SW/1</blade-name>
  <message-id>0</message-id>
  <date-and-time-info>2016-11-29/01:34:38</date-and-time-info>
  <message>The blade begins to reboot.</message>
</fwdl-entries>
<fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
  <index>16</index>
  <blade-name>SW/0</blade-name>
  <message-id>0</message-id>
  <date-and-time-info>2016-11-29/01:34:38</date-and-time-info>
  <message>The blade begins to reboot.</message>
</fwdl-entries>
<fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
  <index>17</index>

```

```

    <blade-name>SW/1</blade-name>
    <message-id>0</message-id>
    <date-and-time-info>2016-11-29/01:44:23</date-and-time-info>
    <message>The blade is rebooted.</message>
  </fwdl-entries>
  <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
    <index>18</index>
    <blade-name>SW/1</blade-name>
    <message-id>0</message-id>
    <date-and-time-info>2016-11-29/01:44:23</date-and-time-info>
    <message>Firmware commit begins.</message>
  </fwdl-entries>
  <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
    <index>19</index>
    <blade-name>SW/0</blade-name>
    <message-id>0</message-id>
    <date-and-time-info>2016-11-29/01:44:23</date-and-time-info>
    <message>The blade is rebooted.</message>
  </fwdl-entries>
  <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
    <index>20</index>
    <blade-name>SW/0</blade-name>
    <message-id>0</message-id>
    <date-and-time-info>2016-11-29/01:44:23</date-and-time-info>
    <message>Firmware commit begins.</message>
  </fwdl-entries>
  <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
    <index>21</index>
    <blade-name>SW/0</blade-name>
    <message-id>0</message-id>
    <date-and-time-info>2016-11-29/01:48:42</date-and-time-info>
    <message>Firmware commit ends.</message>
  </fwdl-entries>
  <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
    <index>22</index>
    <blade-name>SW/0</blade-name>
    <message-id>0</message-id>
    <date-and-time-info>2016-11-29/01:48:42</date-and-time-info>
    <message>Firmware is downloaded successfully.</message>
  </fwdl-entries>
  <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
    <index>23</index>
    <blade-name>SW/1</blade-name>
    <message-id>0</message-id>
    <date-and-time-info>2016-11-29/01:48:51</date-and-time-info>
    <message>Firmware commit ends.</message>
  </fwdl-entries>
  <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
    <index>24</index>
    <blade-name>SW/1</blade-name>
    <message-id>0</message-id>
    <date-and-time-info>2016-11-29/01:48:51</date-and-time-info>
    <message>Firmware is downloaded successfully.</message>
  </fwdl-entries>
</rpc-reply>

```

## Parameters

*fwdl-state*

Specifies the firmware download state.

*number-of-entries*

Specifies the number of status entries.

*index*

Specifies the sequence number for the message.

*blade-name*

Specifies the name of the blade.

*message-id*

Specifies the message identifier.

*date-and-time-info*

Specifies the date and time of the message. The format is YYYY-MM-DD/HH:MM:SS.SSSS.

*message*

Displays the textual description of the status.

## get-arp

---

Retrieves the ARP cache information.

### Usage

```
<get-arp xmlns="urn:brocade.com:mgmt:brocade-arp"></get-arp>

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="1">
  <arp-entry>
    <ip-address>20.0.0.122</ip-address>
    <mac-address>0005.3379.407a</mac-address>
    <interface-type>unknown</interface-type>
    <interface-name></interface-name>
    <is-resolved>true</is-resolved>
    <age>03:16:05</age>
    <entry-type>dynamic</entry-type>
  </arp-entry>
</rpc-reply>
```

### Parameters

*ip-address*

Displays the IP address of the ARP entry.

*mac-address*

Displays the MAC address of the ARP entry.

*interface-type*

Displays the interface type.

*interface-name*

Displays the interface name.

*is-resolved*

Indicates whether the ARP entry is resolved or not.

*age*

Displays the age of the ARP entry.

*entry-type*

Displays the type of the ARP entry.

## get-contained-in-ID

---

Retrieves enclosure related information on embedded platforms.

### Usage

```
<get-contained-in-ID xmlns="urn:brocade.com:mgmt:brocade-entity"></get-contained-in-ID>

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="1">
  <contained-in-ID>Bay 7</contained-in-ID>
</rpc-reply>
```

### Parameters

*contained-in-ID*

Displays present slot ID of switch.

## get-interface-detail

Returns operational details of all the possible interfaces of the managed entity. Use this RPC to discover basic characteristics of all the interfaces in the system. Each sublayer below the internetwork layer of a network interface is considered to be an interface.

### Usage

```
<?xml version="1.0" ?>
<hello xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <capabilities>
    <capability>urn:ietf:params:netconf:base:1.0</capability>
  </capabilities>
</hello>
]]>]]>

<rpc xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="95d5b8a8-dcb8-4e14-b35c-d3bb9ele9f4a">
  <get-interface-detail xmlns="urn:brocade.com:mgmt:brocade-interface-ext"/>
</rpc>]]>]]>

<?xml version="1.0" encoding="UTF-8"?>
<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="95d5b8a8-dcb8-4e14-b35c-d3bb9ele9f4a">
  <interface xmlns='urn:brocade.com:mgmt:brocade-interface-ext'>
    <interface-type>port-channel</interface-type>
    <interface-name>9</interface-name>
    <port-mode>l3</port-mode>
    <if-name>Port-channel 9</if-name>
    <if-state>down</if-state>
    <line-protocol-state>down</line-protocol-state>
    <line-protocol-state-info> (admin down)</line-protocol-state-info>
    <hardware-type>aggregate</hardware-type>
    <current-hardware-address>00:00:00:00:00:00</current-hardware-address>
    <logical-hardware-address>00:00:00:00:00:00</logical-hardware-address>
    <ifindex>671088649</ifindex>
    <mtu>9216</mtu>
    <ip-mtu>1500</ip-mtu>
    <actual-line-speed>nil</actual-line-speed>
    <configured-line-speed>10Gbps</configured-line-speed>
    <bfd-software-session>>false</bfd-software-session>
    <queuing-strategy>fifo</queuing-strategy>
    <ifHCInOctets>0</ifHCInOctets>
    <ifHCInUcastPkts>0</ifHCInUcastPkts>
    <ifHCInMulticastPkts>0</ifHCInMulticastPkts>
    <ifHCInBroadcastPkts>0</ifHCInBroadcastPkts>
    <ifHCInErrors>0</ifHCInErrors>
    <ifHCOctets>0</ifHCOctets>
    <ifHCOUcastPkts>0</ifHCOUcastPkts>
    <ifHCOMulticastPkts>0</ifHCOMulticastPkts>
    <ifHCOBroadcastPkts>0</ifHCOBroadcastPkts>
    <ifHCOErrors>0</ifHCOErrors>
  </interface>
  <interface xmlns='urn:brocade.com:mgmt:brocade-interface-ext'>
    <interface-type>ethernet</interface-type>
    <interface-name>0/1</interface-name>
    <port-role>edge</port-role>
    <port-mode>unknown</port-mode>
    <if-name>Ethernet 0/1</if-name>
    <if-state>up</if-state>
    <line-protocol-state>down</line-protocol-state>
```

```

<line-protocol-state-info> (link protocol down)</line-protocol-state-info>
<hardware-type>ethernet</hardware-type>
<current-hardware-address>f0:64:26:f2:c4:0c</current-hardware-address>
<logical-hardware-address>f0:64:26:f2:c4:0c</logical-hardware-address>
<media-type>fixed</media-type>
<wavelength>0</wavelength>
<ifindex>201334784</ifindex>
<mtu>9216</mtu>
<actual-line-speed>nil</actual-line-speed>
<configured-line-speed>1000-auto-full-duplex</configured-line-speed>
<line-duplex-state>full</line-duplex-state>
<bfd-software-session>false</bfd-software-session>
<queuing-strategy>fifo</queuing-strategy>
<ifHCInOctets>0</ifHCInOctets>
<ifHCInUcastPkts>0</ifHCInUcastPkts>
<ifHCInMulticastPkts>0</ifHCInMulticastPkts>
<ifHCInBroadcastPkts>0</ifHCInBroadcastPkts>
<ifHCInErrors>0</ifHCInErrors>
<ifHCOutOctets>0</ifHCOutOctets>
<ifHCOutUcastPkts>0</ifHCOutUcastPkts>
<ifHCOutMulticastPkts>0</ifHCOutMulticastPkts>
<ifHCOutBroadcastPkts>0</ifHCOutBroadcastPkts>
<ifHCOutErrors>0</ifHCOutErrors>
</interface>
<interface xmlns='urn:brocade.com:mgmt:brocade-interface-ext'>
  <interface-type>ethernet</interface-type>
  <interface-name>0/2</interface-name>
  <port-role>edge</port-role>
  <port-mode>unknown</port-mode>
  <if-name>Ethernet 0/2</if-name>
  <if-state>up</if-state>
  <line-protocol-state>down</line-protocol-state>
  <line-protocol-state-info> (link protocol down)</line-protocol-state-info>
  <hardware-type>ethernet</hardware-type>
  <current-hardware-address>f0:64:26:f2:c4:0d</current-hardware-address>
  <logical-hardware-address>f0:64:26:f2:c4:0d</logical-hardware-address>
  <media-type>fixed</media-type>
  <wavelength>0</wavelength>
  <ifindex>201342976</ifindex>
  <mtu>9216</mtu>
  <actual-line-speed>nil</actual-line-speed>
  <configured-line-speed>1000-master-full-duplex</configured-line-speed>
  <line-duplex-state>full</line-duplex-state>
  <bfd-software-session>false</bfd-software-session>
  <queuing-strategy>fifo</queuing-strategy>
  <ifHCInOctets>0</ifHCInOctets>
  <ifHCInUcastPkts>0</ifHCInUcastPkts>
  <ifHCInMulticastPkts>0</ifHCInMulticastPkts>
  <ifHCInBroadcastPkts>0</ifHCInBroadcastPkts>
  <ifHCInErrors>0</ifHCInErrors>
  <ifHCOutOctets>0</ifHCOutOctets>
  <ifHCOutUcastPkts>0</ifHCOutUcastPkts>
  <ifHCOutMulticastPkts>0</ifHCOutMulticastPkts>
  <ifHCOutBroadcastPkts>0</ifHCOutBroadcastPkts>
  <ifHCOutErrors>0</ifHCOutErrors>
</interface>
<interface xmlns='urn:brocade.com:mgmt:brocade-interface-ext'>
  <interface-type>ethernet</interface-type>
  <interface-name>0/3</interface-name>
  <port-role>edge</port-role>
  <port-mode>unknown</port-mode>
  <if-name>Ethernet 0/3</if-name>
  <if-state>up</if-state>
  <line-protocol-state>down</line-protocol-state>

```

```

<line-protocol-state-info> (link protocol down)</line-protocol-state-info>
<hardware-type>ethernet</hardware-type>
<current-hardware-address>f0:64:26:f2:c4:0e</current-hardware-address>
<logical-hardware-address>f0:64:26:f2:c4:0e</logical-hardware-address>
<media-type>fixed</media-type>
<wavelength>0</wavelength>
<ifindex>201351168</ifindex>
<mtu>9216</mtu>
<actual-line-speed>nil</actual-line-speed>
<configured-line-speed>1000-master-full-duplex</configured-line-speed>
<line-duplex-state>full</line-duplex-state>
<bfd-software-session>false</bfd-software-session>
<queuing-strategy>fifo</queuing-strategy>
<ifHCInOctets>0</ifHCInOctets>
<ifHCInUcastPkts>0</ifHCInUcastPkts>
<ifHCInMulticastPkts>0</ifHCInMulticastPkts>
<ifHCInBroadcastPkts>0</ifHCInBroadcastPkts>
<ifHCInErrors>0</ifHCInErrors>
<ifHCOutOctets>0</ifHCOutOctets>
<ifHCOutUcastPkts>0</ifHCOutUcastPkts>
<ifHCOutMulticastPkts>0</ifHCOutMulticastPkts>
<ifHCOutBroadcastPkts>0</ifHCOutBroadcastPkts>
<ifHCOutErrors>0</ifHCOutErrors>
</interface>
<interface xmlns='urn:brocade.com:mgmt:brocade-interface-ext'>
  <interface-type>ethernet</interface-type>
  <interface-name>0/4</interface-name>
  <port-role>edge</port-role>
  <port-mode>unknown</port-mode>
  <if-name>Ethernet 0/4</if-name>
  <if-state>up</if-state>
  <line-protocol-state>down</line-protocol-state>
  <line-protocol-state-info> (link protocol down)</line-protocol-state-info>
  <hardware-type>ethernet</hardware-type>
  <current-hardware-address>f0:64:26:f2:c4:0f</current-hardware-address>
  <logical-hardware-address>f0:64:26:f2:c4:0f</logical-hardware-address>
  <media-type>fixed</media-type>
  <wavelength>0</wavelength>
  <ifindex>201359360</ifindex>
  <mtu>9216</mtu>
  <actual-line-speed>nil</actual-line-speed>
  <configured-line-speed>1000-master-full-duplex</configured-line-speed>
  <line-duplex-state>full</line-duplex-state>
  <bfd-software-session>false</bfd-software-session>
  <queuing-strategy>fifo</queuing-strategy>
  <ifHCInOctets>0</ifHCInOctets>
  <ifHCInUcastPkts>0</ifHCInUcastPkts>
  <ifHCInMulticastPkts>0</ifHCInMulticastPkts>
  <ifHCInBroadcastPkts>0</ifHCInBroadcastPkts>
  <ifHCInErrors>0</ifHCInErrors>
  <ifHCOutOctets>0</ifHCOutOctets>
  <ifHCOutUcastPkts>0</ifHCOutUcastPkts>
  <ifHCOutMulticastPkts>0</ifHCOutMulticastPkts>
  <ifHCOutBroadcastPkts>0</ifHCOutBroadcastPkts>
  <ifHCOutErrors>0</ifHCOutErrors>
</interface>
<interface xmlns='urn:brocade.com:mgmt:brocade-interface-ext'>
  <interface-type>ethernet</interface-type>
  <interface-name>0/5</interface-name>
  <port-role>edge</port-role>
  <port-mode>unknown</port-mode>
  <if-name>Ethernet 0/5</if-name>
  <if-state>up</if-state>
  <line-protocol-state>down</line-protocol-state>

```



```

<line-protocol-state-info> (link protocol down)</line-protocol-state-info>
<hardware-type>ethernet</hardware-type>
<current-hardware-address>f0:64:26:f2:c4:10</current-hardware-address>
<logical-hardware-address>f0:64:26:f2:c4:10</logical-hardware-address>
<media-type>fixed</media-type>
<wavelength>0</wavelength>
<ifindex>201367552</ifindex>
<mtu>9216</mtu>
<actual-line-speed>nil</actual-line-speed>
<configured-line-speed>1000-master-full-duplex</configured-line-speed>
<line-duplex-state>full</line-duplex-state>
<bfd-software-session>false</bfd-software-session>
<queuing-strategy>fifo</queuing-strategy>
<ifHCInOctets>0</ifHCInOctets>
<ifHCInUcastPkts>0</ifHCInUcastPkts>
<ifHCInMulticastPkts>0</ifHCInMulticastPkts>
<ifHCInBroadcastPkts>0</ifHCInBroadcastPkts>
<ifHCInErrors>0</ifHCInErrors>
<ifHCOutOctets>0</ifHCOutOctets>
<ifHCOutUcastPkts>0</ifHCOutUcastPkts>
<ifHCOutMulticastPkts>0</ifHCOutMulticastPkts>
<ifHCOutBroadcastPkts>0</ifHCOutBroadcastPkts>
<ifHCOutErrors>0</ifHCOutErrors>
</interface>

<-- Other interfaces -->

<interface-name>0/54</interface-name>
<port-role>edge</port-role>
<port-mode>unknown</port-mode>
<if-name>Ethernet 0/54</if-name>
<if-state>up</if-state>
<line-protocol-state>down</line-protocol-state>
<line-protocol-state-info> (link protocol down)</line-protocol-state-info>
<hardware-type>ethernet</hardware-type>
<current-hardware-address>f0:64:26:f2:c4:41</current-hardware-address>
<logical-hardware-address>f0:64:26:f2:c4:41</logical-hardware-address>
<ifindex>201769216</ifindex>
<mtu>9216</mtu>
<actual-line-speed>nil</actual-line-speed>
<configured-line-speed>100Gbps</configured-line-speed>
<line-duplex-state>full</line-duplex-state>
<bfd-software-session>false</bfd-software-session>
<queuing-strategy>fifo</queuing-strategy>
<ifHCInOctets>0</ifHCInOctets>
<ifHCInUcastPkts>0</ifHCInUcastPkts>
<ifHCInMulticastPkts>0</ifHCInMulticastPkts>
<ifHCInBroadcastPkts>0</ifHCInBroadcastPkts>
<ifHCInErrors>0</ifHCInErrors>
<ifHCOutOctets>0</ifHCOutOctets>
<ifHCOutUcastPkts>0</ifHCOutUcastPkts>
<ifHCOutMulticastPkts>0</ifHCOutMulticastPkts>
<ifHCOutBroadcastPkts>0</ifHCOutBroadcastPkts>
<ifHCOutErrors>0</ifHCOutErrors>
</interface>
<has-more xmlns='urn:brocade.com:mgmt:brocade-interface-ext'>false</has-more>
</rpc-reply>]]>]]>

```

## Parameters

### *interface-type*

Specifies the interface type.

*interface-name*

Specifies the interface name.

*port-role*

Displays the current role that the particular interface is playing. This is applicable only for physical interfaces.

*port-mode*

Displays the operational mode of the particular interface. This is applicable only for physical interfaces or port-channel interfaces.

*if-name*

Displays the interface display name as in MIB-II's ifTable. However interface-name and interface-type values of this instance forms fully qualified name for this interface.

*if-state*

Displays the current operational state of this interface.

*line-protocol-state*

Displays the 'Line protocol' state of the interface.

*line-protocol-state-info*

Displays the reason for the current line protocol state of the interface.

*hardware-type*

Displays the hardware type

*current-hardware-address*

Displays the address of the interface at its protocol sub-layer.

*logical-hardware-address*

Displays the address of the interface at its protocol sub-layer.

*ifindex*

Displays a unique value, greater than zero, for each interface.

*mtu*

Displays the IP MTU value of the interface.

*actual-line-speed*

Displays the actual line speed of this interface.

*configured-line-speed*

Displays the administratively configured line speed of the interface.

*line-duplex-state*

Displays the 'Line duplex state' of the interface.

*flow-control*

Displays the 'Flow control' for the interface.

*queuing-strategy*

Displays the 'Queuing strategy' for the interface.

*ifHCInOctets*

Displays the total number of octets received on the interface, including framing characters.

*ifHCInUcastPkts*

Displays the The number of packets, delivered by this sub-layer to a higher (sub-)layer, which were not addressed to a multicast or broadcast address at this sub-layer.

*ifHCInMulticastPkts*

Displays The number of packets, delivered by this sub-layer to a higher (sub-)layer, which were addressed to a multicast address at the sub-layer. For a MAC layer protocol, this includes both Group and Functional addresses.

*ifHCInBroadcastPkts*

Displays the The number of packets, delivered by the sub-layer to a higher (sub-)layer, which were addressed to a broadcast address at the sub-layer.

*ifHCInErrors*

For packet-oriented interfaces, the number of inbound packets that contained errors preventing them from being deliverable to a higher-layer protocol. For character-oriented or fixed-length interfaces, the number of inbound transmission units that contained errors preventing them from being deliverable to a higher-layer protocol.

*ifHCOctets*

Displays the total number of octets transmitted out of the interface, including framing characters

*ifHCOUcastPkts*

Displays the total number of packets that higher-level protocols requested be transmitted, and which were not addressed to a multicast or broadcast address at the sub-layer, including those that were discarded or not sent.

*ifHCOMulticastPkts*

Dispalys the total number of packets that higher-level protocols requested be transmitted, and which were addressed to a multicast address at this sub-layer, including those that were discarded or not sent. For a MAC layer protocol, this includes both Group and Functional addresses.

*ifHCOBroadcastPkts*

Displays the total number of packets that higher-level protocols requested be transmitted, and which were addressed to a broadcast address at this sub-layer, including those that were discarded or not sent.

*ifHCOErrors*

For packet-oriented interfaces, the number of outbound packets that could not be transmitted because of errors. For character-oriented or fixed-length interfaces, the number of outbound transmission units that could not be transmitted because of errors.

*ip-mtu*

Displays the IP MTU value of this interface.

*line-protocol-exception-info*

Displays the 'Exception information' of line protocol.

*media-type*

Displays the media type.

*wavelength*

Displays the wavelength of pluggable media.

*if-description*

Displays the textual string containing information about the interface.

*queuing-strategy*

Displays the 'Queuing strategy' for this interface.

## get-interface-switchport

Returns switch-port or Layer 2 characteristics of all the interfaces in the managed device.

### Usage

```
<get-interface-switchport></get-interface-switchport>

<rpc-reply message-id="303" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <switchport xmlns="urn:brocade.com:mgmt:brocade-brocade-interface-ext">
    <interface-name>2/1</interface-name>
    <interface-type>ethernet</interface-type>
    <mode>access</mode>
    <ingress-filter-enabled>true</ingress-filter-enabled>
    <acceptable-frame-type>admit-all</acceptable-frame-type>
    <default-vlan>1</default-vlan>
    <active-vlans>
      <vlanid>1</vlanid>
    </active-vlans>
  </switchport>
</rpc-reply>
```

### Parameters

*interface-name*

Specifies the interface value.

*interface-type*

Displays the type of the interface.

*mode*

Displays the mode of the port-channel.

*ingress-filter-enabled*

Indicates if the 'Ingress filtering' is enabled for the interface.

*acceptable-frame-type*

The switch-port ingress Frame admission policy - whether only tagged Frames are allowed or all.

*default-vlan*

Displays 'default vlan' identifier value for this switch-port.

*vlanid*

Displays the list of active VLAN identifiers.

## get-ip-interface

---

Returns brief details of all interfaces, loopback and VE interface details of particular managed entity.

### Usage

```
<get-ip-interface></get-ip-interface>

<rpc-reply message-id="307" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
    <interface-type>ethernet</interface-type>
    <interface-name>2/4</interface-name>
    <if-name>ethernet 2/4</if-name>
    <if-state>up</if-state>
    <line-protocol-state>down</line-protocol-state>
    <ip-address>
      <ipv4>unassigned</ipv4>
    </ip-address>
  </interface>
</rpc-reply>
```

### Parameters

*interface-type*

Displays the network interface name in a VCS environment in the format: slot/port .

*interface-name*

Displays the interface value.

*if-name*

The interface display name as in MIB-II's ifTable. However interface-name and interface-type values of this instance forms fully qualified name for this interface.

*if-state*

Displays the current operational state of the interface.

*line-protocol-state*

Displays the 'Line protocol' state of the interface.

*ipv4*

Displays the IP address in dotted decimal/Mask (A.B.C.D/M).

## get-last-config-update-time

Returns the time stamp of the last configuration change done on the managed device.

### Usage

```
<nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="14">
  <get-last-config-update-time xmlns="urn:brocade.com:mgmt:brocade-vcs"></get-last-
config-update-time>
</nc:rpc>

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="14">
  <last-config-update-time xmlns="urn:brocade.com:mgmt:brocade-vcs">1577432165</last-
config-update-time>
</rpc-reply>
```

### Parameters

*last-config-update-time*

Displays the time stamp of the last configuration change.

## get-last-config-update-time-for-xpaths

Returns the time stamp of the last configuration update.

### Usage

```
<nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="7">
  <get-last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs"></get-
last-config-update-time-for-xpaths>
</nc:rpc>

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="7">
  <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
    <xpath-string></xpath-string>
    <last-config-update-time>1578483090</last-config-update-time>
  </last-config-update-time-for-xpaths>
  <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
    <xpath-string>/cee-map</xpath-string>
    <last-config-update-time>1578380033</last-config-update-time>
  </last-config-update-time-for-xpaths>
  <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
    <xpath-string>/fcoe/fcoe-fabric-map</xpath-string>
    <last-config-update-time>1578380033</last-config-update-time>
  </last-config-update-time-for-xpaths>
  <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
    <xpath-string>/hardware/flexport/flexport_type</xpath-string>
    <last-config-update-time>1578380033</last-config-update-time>
  </last-config-update-time-for-xpaths>
  <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
    <xpath-string>/interface-vlan</xpath-string>
    <last-config-update-time>1578380033</last-config-update-time>
  </last-config-update-time-for-xpaths>
  <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
```

[illegible]



```

    <xpath-string>/interface/port-channel/switchport</xpath-string>
    <last-config-update-time>1578380033</last-config-update-time>
  </last-config-update-time-for-xpaths>
  <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
    <xpath-string>/interface/port-channel/vlan</xpath-string>
    <last-config-update-time>1578380033</last-config-update-time>
  </last-config-update-time-for-xpaths>
  <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
    <xpath-string>/interface/tengigabitethernet</xpath-string>
    <last-config-update-time>1578380033</last-config-update-time>
  </last-config-update-time-for-xpaths>
  <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
    <xpath-string>/interface/tengigabitethernet/channel-group</xpath-string>
    <last-config-update-time>1578380033</last-config-update-time>
  </last-config-update-time-for-xpaths>
  <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
    <xpath-string>/interface/tengigabitethernet/switchport</xpath-string>
    <last-config-update-time>1578380033</last-config-update-time>
  </last-config-update-time-for-xpaths>
  <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
    <xpath-string>/interface/tengigabitethernet/vlan</xpath-string>
    <last-config-update-time>1578380033</last-config-update-time>
  </last-config-update-time-for-xpaths>
  <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
    <xpath-string>/mac-group</xpath-string>
    <last-config-update-time>1578380033</last-config-update-time>
  </last-config-update-time-for-xpaths>
  <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
    <xpath-string>/mac/access-list</xpath-string>
    <last-config-update-time>1578380033</last-config-update-time>
  </last-config-update-time-for-xpaths>
  <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
    <xpath-string>/port-profile</xpath-string>
    <last-config-update-time>1578380033</last-config-update-time>
  </last-config-update-time-for-xpaths>
  <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
    <xpath-string>/port-profile-global/port-profile</xpath-string>
    <last-config-update-time>1578380033</last-config-update-time>
  </last-config-update-time-for-xpaths>
  <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
    <xpath-string>/protocol/spanning-tree</xpath-string>
    <last-config-update-time>1578380033</last-config-update-time>
  </last-config-update-time-for-xpaths>
  <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
    <xpath-string>/rbridge-id/interface/ve</xpath-string>
    <last-config-update-time>1578380033</last-config-update-time>
  </last-config-update-time-for-xpaths>
  <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
    <xpath-string>/snmp-server/agtconfig</xpath-string>
    <last-config-update-time>1578380033</last-config-update-time>
  </last-config-update-time-for-xpaths>
</rpc-reply>

```

## Parameters

### *xpath-strings*

Displays the xpath strings.

### *last-config-update-time*

Displays the time of the last.

## get-lldp-neighbor-detail

Returns the details of all the neighboring interfaces of the managed entity.

### Usage

```
<get-lldp-neighbor-detail></get-lldp-neighbor-detail>

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="4">
  <lldp-neighbor-detail xmlns="urn:brocade.com:mgmt:brocade-lldp-ext">
    <local-interface-name>ethernet 1/3</local-interface-name>
    <local-interface-ifindex>203448320</local-interface-ifindex>
    <local-interface-mac>0005.3379.6de0</local-interface-mac>
    <remote-interface-name>port1</remote-interface-name>
    <remote-interface-mac>0005.3348.3043</remote-interface-mac>
    <dead-interval>120</dead-interval>
    <remaining-life>114</remaining-life>
    <remote-chassis-id>0005.3348.3043</remote-chassis-id>
    <lldp-pdu-transmitted>16159</lldp-pdu-transmitted>
    <lldp-pdu-received>15846</lldp-pdu-received>
  </lldp-neighbor-detail>
  <has-more xmlns="urn:brocade.com:mgmt:brocade-lldp-ext">false</has-more>
</rpc-reply>
```

### Parameters

*local-interface-name*

Indicates the local interface display name.

*local-interface-ifindex*

Indicates the local interface index.

*local-interface-mac*

Indicates the local interface MAC address.

*remote-interface-name*

Indicates the remote interface display name .

*remote-interface-mac*

Indicates the remote interface MAC address.

*dead-interval*

Indicates the dead interval.

*remaining-life*

Indicates the remaining life period.

*remote-chassis-id*

Indicates the remote chassis ID.

*lldp-pdu-transmitted*

Number of LLDP PDUs transmitted from the interface.

*lldp-pdu-received*

Number of LLDP PDUs received by the interface.

## get-mac-acl-for-intf

---

Returns information about the MAC ACL applied on the specified interfaces.

### Usage

```
<get-mac-acl-for-intf></get-mac-acl-for-intf>

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="2407">
  <get-mac-acl-for-intf xmlns="urn:brocade.com:mgmt:brocade-mac-access-list">
    <interface>
      <interface-type>l2vlan</interface-type>
      <interface-name>50</interface-name>
      <ingress-policy>
        <policy-name>test_02</policy-name>
      </ingress-policy>
      <egress-policy>
        <policy-name>test_01</egress-policy>
      </egress-policy>
    </interface>
  </get-mac-acl-for-intf>
</rpc-reply>
```

### Parameters

*interface-type*

Displays the interface type.

*interface-name*

Displays the interface name.

*policy-name*

Displays the MAC ACL policy name.

## get-mac-address-table

Returns the MAC address table for a given MAC address.

### Usage

```
<get-mac-address-table> <forwarding-interface> <interface-type>ethernet</interface-type>
<interface-name>2/4</interface-name> </forwarding-interface> <mac-type>static</mac-type>
</get-mac-address-table>

<rpc-reply
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="2">
  <mac-address-table xmlns="urn:brocade.com:mgmt:brocade-mac-address-table">
    <vlanid>10</vlanid>
    <mac-address>00:11:11:11:44:44</mac-address>
    <mac-type>static</mac-type>
    <mac-state>active</mac-state>
    <forwarding-interface>
      <interface-type>ethernet</interface-type>
      <interface-name>2/4</interface-name>
    </forwarding-interface>
  </mac-address-table>
  <has-more xmlns="urn:brocade.com:mgmt:brocade-mac-address-table">false</has-more>
</rpc-reply>

<get-mac-address-table>
  <last-mac-address-details>
    <last-mac-address>00:11:11:82:12:92</last-mac-address>
    <last-vlan-id>10</last-vlan-id>
    <last-mac-type>static</last-mac-type>
  </last-mac-address-details>
  <forwarding-interface-type>ethernet</forwarding-interface-type>
  <forwarding-interface-name>2/4</forwarding-interface-name>
  <mac-address-type>static</mac-address-type>
</get-mac-address-table>

<rpc-reply
xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="2">
  <mac-address-table xmlns="urn:brocade.com:mgmt:brocade-mac-address-table">
    <vlanid>10</vlanid>
    <mac-address>00:11:11:82:12:92</mac-address>
    <mac-type>static</mac-type>
    <mac-state>active</mac-state>
    <forwarding-interface>
      <interface-type>ethernet</interface-type>
      <interface-name>2/4</interface-name>
    </forwarding-interface>
  </mac-address-table>
  <has-more xmlns="urn:brocade.com:mgmt:brocade-mac-address-table">false</has-more>
</rpc-reply>
```

### Parameters

*vlanid*

Displays the VLAN ID.

*mac-address*

Displays the MAC address.

*mac-type*

Displays the MAC type.

*mac-state*

Displays the MAC state.

*interface-type*

Displays the interface type.

*interface-name*

Displays the interface name.

## get-maint-mode-status

This RPC is equivalent to the show system config-status CLI and retrieves the maintenance mode status.

### Usage

```
<nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="9">
  <get-maint-mode-status xmlns="urn:broadcom.com:mgmt:brocade-system-maintenance"></get-
maint-mode-status>
</nc:rpc>
```

```
<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="9">
  <config-status xmlns="urn:broadcom.com:mgmt:brocade-system-maintenance">enabled</
config-status>
  <overall-status xmlns="urn:broadcom.com:mgmt:brocade-system-maintenance">complete</
overall-status>
  <num-stages xmlns="urn:broadcom.com:mgmt:brocade-system-maintenance">2</num-stages>
  <current-stage xmlns="urn:broadcom.com:mgmt:brocade-system-maintenance">2</current-
stage>
  <max-time xmlns="urn:broadcom.com:mgmt:brocade-system-maintenance">100</max-time>
  <stages xmlns="urn:broadcom.com:mgmt:brocade-system-maintenance">
    <stage>
      <stage-num>1</stage-num>
      <time-taken>0</time-taken>
      <daemons>
        <daemon>
          <daemon-name>bgp</daemon-name>
          <status>complete</status>
        </daemon>
        <daemon>
          <daemon-name>mct</daemon-name>
          <status>complete</status>
        </daemon>
      </daemons>
    </stage>
    <stage>
      <stage-num>2</stage-num>
      <time-taken>0</time-taken>
      <daemons>
        <daemon>
          <daemon-name>bgp</daemon-name>
          <status>complete</status>
        </daemon>
        <daemon>
```

```
        <daemon-name>mct</daemon-name>
        <status>complete</status>
    </daemon>
</daemons>
</stage>
</stages>
</rpc-reply>
```

## Parameters

### *config-status*

This is the Maintenance Mode configuration status.

### *overall-status*

This is the overall status of the Maintenance Mode operation.

### *num-stages*

This is the total number of stages involved in entering/exiting the Maintenance Mode.

### *current-stage*

This is the current active state for the operation.

### *max-time*

The maximum time required to enter/exit Maintenance Mode.

### *container stages*

This is the place holder for stages.

### *stage number*

Displays the number of the active state.

### *time-taken*

This is the time taken for this stage in seconds.

### *container daemons*

This denotes the place holder for daemons.

### *daemon-name*

The name of the daemon.

### *leaf status*

This denotes the current status of the daemon.

## get-media-detail

Returns the media properties of all the interfaces of the managed entity.

### Usage

```
<get-media-detail></get-media-detail>

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="59">
  <interface xmlns="urn:brocade.com:mgmt:brocade-interface-ext">
    <interface-type>ethernet</interface-type>
    <interface-name>2/5</interface-name>
    <qsfp>
      <speed>40Gbps</speed>
      <connector>lc</connector>
      <encoding>ieee-802-3ab</encoding>
      <vendor-name>BROCADE </vendor-name>
      <vendor-oui>00:05:1e</vendor-oui>
      <vendor-pn>57-1000263-01 </vendor-pn>
      <vendor-rev>A </vendor-rev>
      <distance>long-dist</distance>
      <media-form-factor>unknown</media-form-factor>
      <wavelength>26020</wavelength>
      <serial-no>LDF113390001CBS </serial-no>
      <date-code>130928 </date-code>
      <temperature>31</temperature>
      <voltage>3305.7</voltage>
      <current>37.364</current>
      <tx-power>0.0</tx-power>
      <rx-power>2.7</rx-power>
    </qsfp>
  </interface>
  <interface xmlns="urn:brocade.com:mgmt:brocade-interface-ext">
    <interface-type>ethernet</interface-type>
    <interface-name>2/5</interface-name>
    <sfp>
      <speed>10Gbps</speed>
      <connector>lc</connector>
      <encoding>unknown</encoding>
      <vendor-name>BROCADE</vendor-name>
      <vendor-oui>00:05:1e</vendor-oui>
      <vendor-pn>57-0000076-01</vendor-pn>
      <vendor-rev>A</vendor-rev>
      <distance>unknown</distance>
      <media-form-factor>unknown</media-form-factor>
      <wavelength>1310</wavelength>
      <serial-no>ADF21346000071B </serial-no>
      <date-code>131110</date-code>
      <temperature>36</temperature>
      <voltage>3292.0</voltage>
      <current>38.602</current>
      <tx-power>700.5</tx-power>
      <rx-power>741.6</rx-power>
    </sfp>
  </interface>
</rpc-reply>
```



## Parameters

*interface-type*

Displays the interface type.

*interface-name*

Displays the interface name.

*speed*

Specifies the speed.

*connector*

Specifies the connector.

*encoding*

Displays the type of encoding used to transmit the data on this interface.

*vendor-name*

Displays the vendor of the interface.

*vendor-oui*

Displays the vendor IEEE company ID.

*vendor-pn*

Displays the vendor part number.

*vendor-rev*

Displays the vendor revision level.

*distance*

Displays the SFP distance.

*media-form-factor*

Displays the media form factor.

*wavelength*

Displays the wavelength of pluggable media.

*serial-no*

Displays the serial number.

*date-code*

Displays the vendor's manufacturing date code.

*temperature*

Displays the module temperature (degrees C).

*voltage*

Indicates the supply voltage (Volts).

*current*

Displays the laser diode drive current (milliAmps).

*tx-power*

Displays the transmitted optical power (microWatts).

*rx-power*

Displays the received optical power (microWatts).

## get-nameserver-detail

Retrieves the detailed information of the devices stored in the name server database.

### Usage

```
<get-nameserver-detail xmlns="urn:extreme.com:mgmt:extreme-nameserver"></get-nameserver-
detail>

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="1">
  <show-nameserver>
    <nameserver-portid>0d0000</nameserver-portid>
    <nameserver-portname>20:00:8C:7C:FF:21:C0:00</nameserver-portname>
    <nameserver-nodename>20:00:8C:7C:FF:21:C0:01</nameserver-nodename>
    <nameserver-cos>3</nameserver-cos>
    <nameserver-scr>0</nameserver-scr>
    <nameserver-fc4s>FCP </nameserver-fc4s>
    <nameserver-portsymb>[7] "13/0/52"</nameserver-portsymb>
    <nameserver-nodesymb>NULL</nameserver-nodesymb>
    <nameserver-fabric-portname>50:02:7F:8C:31:32:30:82</nameserver-fabric-portname>
    <nameserver-permanent-portname>20:00:8C:7C:FF:21:C0:00</nameserver-permanent-
portname>
    <nameserver-devicetype>Physical Target</nameserver-devicetype>
    <nameserver-porttype>N</nameserver-porttype>
    <nameserver-index>130</nameserver-index>
    <nameserver-sharearea>Yes</nameserver-sharearea>
    <nameserver-redirect>No</nameserver-redirect>
    <nameserver-xlatedomain>No</nameserver-xlatedomain>
    <nameserver-connected-via-ag>No</nameserver-connected-via-ag>
    <nameserver-ag-base-device>No</nameserver-ag-base-device>
    <nameserver-real>No</nameserver-real>
    <nameserver-cascaded>No</nameserver-cascaded>
  </show-nameserver>
</rpc-reply>
```

### Parameters

*nameserver-portid*

Displays the list of all Nx\_Ports registered in the name server database of this managed device.

*nameserver-portname*

Displays the Port\_Name (WWN) of this Nx\_Port.

*nameserver-nodename*

Displays the Node\_Name (WWN) of this Nx\_Port.

*nameserver-cos*

Displays the Fibre Channel Class of service supported by the device.

*nameserver-scr*

Displays the state change notifications that the device has registered for.

*nameserver-fc4s*

Displays the Fibre Channel FC4 services supported by the device.

*nameserver-portsymb*

Displays the user-defined name of this port.

*nameserver-nodesymb*

Displays the user-defined name of the node of this port.

*nameserver-fabric-portname*

Displays the Fabric port name (WWN) of this port.

*nameserver-permanent-portname*

Displays the type and role of the device.

*nameserver-devicetype*

Displays the type and role of the device.

*nameserver-porttype*

Displays the Fibre Channel port type.

*nameserver-index*

Displays the Port index number.

*nameserver-sharearea*

Indicates whether or not the port utilizes the Extreme shared area method of fibre channel addressing.

*nameserver-redirect*

Indicates whether or not the device is involved in Extreme frame redirection zoning.

*nameserver-xlatedomain*

Indicates whether or not the device enters the fabric via a translate domain.

*nameserver-connected-via-ag*

Indicates whether or not the device enters the fabric via access gateway.

*nameserver-ag-base-device*

Indicates whether or not the device is a base access gateway device.

*nameserver-real*

Indicates whether or not the device entered in the fabric via AG is a physical device.

*nameserver-cascaded*

Indicates whether or not the device enters the fabric via a cascaded AG.

## get-netconf-client-capabilities

Returns the vendor information for all NETCONF clients.

### Usage

```
<get-netconf-client-capabilities></get-netconf-client-capabilities>

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="57">
  <session xmlns="urn:extreme.com:mgmt:extreme-netconf-ext">
    <session-id>30</session-id>
    <user-name>admin</user-name>
    <vendor>Extreme</vendor>
    <product>NOS Netconf Client</product>
    <version>0.8 beta</version>
    <identity>sgajaraj</identity>
    <af-type>IPv4</af-type>
    <host-ip>172.22.8.111</host-ip>
    <time>2014-06-04T11:00:35+00:00</time>
  </session>
</rpc-reply>
```

### Parameters

*session-id*

Displays the session ID of the NETCONF client session.

*user-name*

Displays the login name of the user for the NETCONF client session.

*vendor*

Displays the vendor name of the NETCONF client session.

*product*

Displays the product name of the NETCONF client session.

*version*

Displays the product version of the NETCONF client session.

*identity*

Displays the identity of the NETCONF client session.

*af-type*

Specifies the address family type.

*host-ip*

Displays IP address of NETCONF client session.

*time*

Displays the login time of NETCONF client session.

## get-port-channel-detail

Returns link aggregation control configuration parameters for all the port-channels in the system.

### Usage

```
<get-port-channel-detail></get-port-channel-detail>

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="1002">
  <get-port-channel-detail xmlns="urn:brocade.com:mgmt:brocade-lag">
    <lacp>
      <aggregator-id>27</aggregator-id>
      <aggregator-type>standard</aggregator-type>
      <isvlag>false</isvlag>
      <aggregator-mode>none</aggregator-mode>
      <admin-key>0027</admin-key>
      <oper-key>0027</oper-key>
      <actor-system-id>00-05-33-6f-18-18</actor-system-id>
      <partner-system-id>00-05-1e-cd-6e-9f</partner-system-id>
      <system-priority>32768</system-priority>
      <partner-oper-priority>32768</partner-oper-priority>
      <rx-link-count>4</rx-link-count>
      <tx-link-count>4</tx-link-count>
      <individual-agg>0</individual-agg>
      <ready-agg>1</ready-agg>
      <partner-oper-key>0027</partner-oper-key>
      <aggr-member>
        <interface-type>ethernet</interface-type>
        <interface-name>231/0/22</interface-name>
        <actor-port>0xE718160201</actor-port>
        <sync>1</sync>
      </aggr-member>
    </lacp>
    <has-more>true</has-more>
  </get-port-channel-detail>
</rpc-reply>
```

### Parameters

*aggregator-id*

Displays the aggregator ID.

*aggregator-type*

Displays the aggregator type.

*isvlag*

Specifies if aggregator is VLAG.

*aggregator-mode*

Displays aggregator mode.

*admin-key*

Displays the admin key.

*oper-key*

Displays the operational key.

*actor-system-id*

Displays the actor system ID.

*partner-system-id*

Displays the partner system ID.

*system-priority*

Displays the system priority.

*partner-oper-priority*

Displays the partner operational priority.

*rx-link-count*

Displays the RX link counter.

*tx-link-count*

Displays the TX link counter.

*individual-agg*

Displays the Individual aggregator.

*ready-agg*

Displays the Ready aggregator.

*partner-oper-key*

Displays the Partner Operational key.

*interface-type*

Displays the interface type .

*interface-name*

Displays the interface name.

*actor-port*

Displays the actor port number.

*sync*

Displays the sync information.

## get-portchannel-info-by-intf

This function returns the Link Aggregation Control configuration parameters for a given 'Aggregation Port' in the system.

### Usage

```
<nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="1">
  <get-portchannel-info-by-intf xmlns="urn:brocade.com:mgmt:brocade-lag">
    <interface-type>ethernet</interface-type>
    <interface-name>0/13</interface-name>
  </get-portchannel-info-by-intf>
</nc:rpc>
```

```
<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="1">
  <lagp xmlns="urn:brocade.com:mgmt:brocade-lag">
    <interface-type>ethernet</interface-type>
```

```
<interface-name>0/13</interface-name>
<actor-port>201433088</actor-port>
<system-priority>32768</system-priority>
<actor-system-id>d8:84:66:e9:fb:14</actor-system-id>
<partner-oper-priority>32768</partner-oper-priority>
<partner-system-id>76:8e:f8:05:98:00</partner-system-id>
<actor-priority>32768</actor-priority>
<admin-key>150</admin-key>
<oper-key>150</oper-key>
<receive-machine-state>current</receive-machine-state>
<periodic-transmission-machine-state>slow-periodic</periodic-transmission-machine-
state>
<mux-machine-state>collecting-distributing</mux-machine-state>
<admin-state>activity aggregation defaulted</admin-state>
<oper-state>activity aggregation synchronization collecting distributing</oper-
state>
<partner-oper-state>activity aggregation synchronization collecting distributing</
partner-oper-state>
<partner-oper-port>3082</partner-oper-port>
</lACP>
</rpc-reply>
```



## get-stp-brief-info

Returns Spanning Tree Protocol (STP) information.

### Usage

```
<get-stp-brief-info></get-stp-brief-info>

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="2025">
  <get-stp-brief-info xmlns="urn:brocade.com:mgmt:brocade-xstp-ext">
    <spanning-tree-info>
      <stp-mode>STP</stp-mode>
      <stp>
        <route-bridge>
          <priority>32768</priority>
          <bridge-id>22</bridge-id>
          <hello-time>2</hello-time>
          <max-age>20</max-age>
          <forward-delay>15</forward-delay>
        </route-bridge>
        <bridge>
          <priority>32768</priority>
          <hello-time>2</hello-time>
          <max-age>20</max-age>
          <forward-delay>15</forward-delay>
          <transmit-hold-count>6</transit-hold-count>
          <migrate-time>3</migrate-time>
          <port>
            <interface-type>ethernet</interface-type>
            <interface-name>2/5</interface-name>
            <spanningtree-enabled>true</spanningtree-enabled>
            (output truncated)
          </spanning-tree-info>
        </spanning-tree-info>
        <has-more>true</has-more>
        <last-instance>
          <instance-id>91</instance-id>
        </last-instance>
      </get-stp-brief-info>
    </rpc-reply>
```

### Parameters

*stp-mode*

Displays the type of the Spanning Tree Protocol configured on the switch.

*priority*

Displays the Bridge priority.

*hello-time*

Displays the interval between two transmissions of BPDU packets sent by the Root Bridge to tell all other switches that it is indeed the Root Bridge (1 to 10 sec).

*max-age*

The Max Age may be set to ensure that old information does not endlessly circulate through redundant paths in the network, preventing the effective propagation of new information (6 to 40 sec).

*forward-delay*

Port on the Switch spends this time in the listening state while moving from the blocking state to the forwarding state (4 to 30 sec).

*transmit-hold-count*

Displays the transmin hold count.

*migrate-time*

Displays the migrate time.

*interface-type*

Displays the interface type.

*interface-name*

Displays the interface name.

*spanningtree-enabled*

Displays if the spanning tree is enabled.

*instance-id*

Specifies the instance ID.

## get-stp-mst-detail

This RPC returns the MSTP details, equivalent to the CLI 'show spanning-tree mst detail.

### Usage

```
<nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="24">
  <get-stp-mst-detail xmlns="urn:brocade.com:mgmt:brocade-xstp-ext"></get-stp-mst-detail>
</nc:rpc>
```

```
<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="9">
  <cist xmlns="urn:brocade.com:mgmt:brocade-xstp-ext">
    <cist-root-id>1000.f46e.959f.2ef6</cist-root-id>
    <cist-bridge-id>1000.f46e.959f.2ef6</cist-bridge-id>
    <cist-reg-root-id>1000.f46e.959f.2ef6</cist-reg-root-id>
    <root-forward-delay>15</root-forward-delay>
    <hello-time>2</hello-time>
    <max-age>20</max-age>
    <max-hops>20</max-hops>
    <migrate-time>3</migrate-time>
    <vlans>
      <vlan-id>1</vlan-id>
      <vlan-id>10</vlan-id>
      <vlan-id>13</vlan-id>
      <vlan-id>14</vlan-id>
      <vlan-id>15</vlan-id>
      <vlan-id>16</vlan-id>
      <vlan-id>17</vlan-id>
      <vlan-id>18</vlan-id>
      <vlan-id>19</vlan-id>
      <vlan-id>20</vlan-id>
      <vlan-id>21</vlan-id>
      <vlan-id>22</vlan-id>
      <vlan-id>23</vlan-id>
      <vlan-id>24</vlan-id>
      <vlan-id>25</vlan-id>
```

```

        <vlan-id>26</vlan-id>
        <vlan-id>27</vlan-id>
        <vlan-id>28</vlan-id>
        <vlan-id>29</vlan-id>
        <vlan-id>30</vlan-id>
        <vlan-id>31</vlan-id>
        <vlan-id>32</vlan-id>
        <vlan-id>33</vlan-id>
        <vlan-id>34</vlan-id>
        <vlan-id>35</vlan-id>
        <vlan-id>36</vlan-id>
        <vlan-id>37</vlan-id>
        <vlan-id>38</vlan-id>
        <vlan-id>39</vlan-id>
        <vlan-id>40</vlan-id>
        <vlan-id>41</vlan-id>
        <vlan-id>42</vlan-id>
        <vlan-id>43</vlan-id>
        <vlan-id>44</vlan-id>
        <vlan-id>45</vlan-id>
    </vlans>
</cist>
<msti xmlns="urn:brocade.com:mgmt:brocade-xstp-ext">
    <instance-id>2</instance-id>
    <msti-root-id>8002.f46e.959f.2ef6</msti-root-id>
    <msti-bridge-id>8002.f46e.959f.2ef6</msti-bridge-id>
    <msti-bridge-priority>32770</msti-bridge-priority>
    <vlans>
        <vlan-id>11</vlan-id>
    </vlans>
</msti>
<msti xmlns="urn:brocade.com:mgmt:brocade-xstp-ext">
    <instance-id>3</instance-id>
    <msti-root-id>8003.f46e.959f.2ef6</msti-root-id>
    <msti-bridge-id>8003.f46e.959f.2ef6</msti-bridge-id>
    <msti-bridge-priority>32771</msti-bridge-priority>
    <vlans>
        <vlan-id>12</vlan-id>
    </vlans>
</msti>
    <has-more xmlns="urn:brocade.com:mgmt:brocade-xstp-ext">false</has-more>
</rpc-reply>

```

## Parameters

### *session-id*

This id is used along with `bnacfg-cmd-status` API to get the status of this operation (inprogress/complete).

### *status*

Displays the status of this operation (inprogress/complete).

## get-system-uptime

Returns the time since the managed entity was last reinitialized.

### Usage

```
<get-system-uptime></get-system-uptime>

<rpc-reply message-id="307" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <show-system-uptime xmlns="urn:brocade.com:mgmt:brocade-system">
    <days>0</days>
    <hours>5</hours>
    <minutes>53</minutes>
    <seconds>4</seconds>
  </show-system-uptime>
</rpc-reply>
```

### Parameters

*days*

Displays the number of days the managed node is up since its last re-initialization

*hours*

Displays the number of hours the managed node is up since its last re-initialization

*minutes*

Displays the number of minutes the managed node is up since its last re-initialization

*seconds*

Displays the number of seconds the managed node is up since its last re-initialization

## get-tunnel-info

Retrieves summary of one or more tunnels from the switch. Output contains tunnel records sorted in the ascending order of the tunnel id. This RPC is equivalent of 'show tunnel brief' CLI.

### Usage

```
<nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="8">
  <get-tunnel-info xmlns="urn:brocade.com:mgmt:brocade-tunnels-ext">
    </get-tunnel-info>
  </nc:rpc>
```

```
<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="8">
  <tunnel xmlns="urn:brocade.com:mgmt:brocade-tunnels-ext">
    <id>61441</id>
    <mode>vxlan</mode>
    <src-ip>107.107.107.10</src-ip>
    <dest-ip>107.107.107.2</dest-ip>
    <vrf>default-vrf</vrf>
    <config-src>site-config</config-src>
    <admin-state>up</admin-state>
    <oper-state>up</oper-state>
    <nodes>
```

```
        <node-id>1</node-id>
      </nodes>
    </tunnel>
  </rpc-reply>
```

## get-tunnel-statistics

This RPC retrieves the tunnel statistics - count of bytes and frames transmitted and received. Output records are sorted in ascending order of the tunnel id. This RPC is equivalent of 'show tunnel statistics' CLI.

## Usage

```
<nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="8">
  <get-tunnel-statistics xmlns="urn:brocade.com:mgmt:brocade-tunnels-ext">
    </get-tunnel-statistics>
  </nc:rpc>
```

```
<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="8">
  <tunnel-stat xmlns="urn:brocade.com:mgmt:brocade-tunnels-ext">
    <id>61441</id>
    <tx-frames>0</tx-frames>
    <tx-bytes>0</tx-bytes>
    <rx-frames>0</rx-frames>
    <rx-bytes>0</rx-bytes>
  </tunnel-stat>
</rpc-reply>
```

## get-vlan-brief

Returns operational data for a given VLAN and enumeration of all the interfaces belonging to this VLAN.

### Usage

```
<get-vlan-brief></get-vlan-brief>

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="47">
  <configured-vlans-count xmlns="urn:brocade.com:mgmt:brocade-interface-ext">13</
configured-vlans-count>
  <provisioned-vlans-count xmlns="urn:brocade.com:mgmt:brocade-interface-ext">13</
provisioned-vlans-count>
  <unprovisioned-vlans-count xmlns="urn:brocade.com:mgmt:brocade-interface-ext">0</
unprovisioned-vlans-count>
  <vlan xmlns="urn:brocade.com:mgmt:brocade-interface-ext">
    <vlan-id>1</vlan-id>
    <vlan-type>static</vlan-type>
    <vlan-name>default</vlan-name>
    <vlan-state>members-down</vlan-state>
    <interface>
      <interface-type>unknown</interface-type>
      <interface-name></interface-name>
      <tag>tagged</tag>
      <classification>
        <classification-type>vni</classification-type>
        <classification-value>2</classification-value>
      </classification>
    </interface>
  </vlan>
  <last-vlan-id xmlns="urn:brocade.com:mgmt:brocade-interface-ext">200</last-vlan-id>
  <has-more xmlns="urn:brocade.com:mgmt:brocade-interface-ext">true</has-more>
</rpc-reply>
```

### Parameters

*configured-vlans-count*

Displays the number of VLANs configured.

*provisioned-vlans-count*

Displays the number of VLANs provisioned.

*unprovisioned-vlans-count*

Displays the number of VLANs unprovisioned.

*vlan-id*

Displays the VLAN ID

*vlan-type*

Displays the VLAN type

*vlan-name*

Displays the administrative name of the VLAN

*vlan-state*

Displays the operational state of the VLAN

*interface-type*

Displays the interface type

*interface-name*

Displays the interface name

*tag*

Displays the state of the interface - untagged, tagged, or converged

*classification-type*

Displays the type of classification

*classification-value*

Displays the value of the VLAN classification

*last-vlan-id*

Displays the last VLAN record that has been fetched

---

## mpls-clear-all-ldp-sessions

---

Clears all LDP sessions.

### Usage

```
<clear-mpls-ldp-neighbor xmlns=""urn:brocade.com:mgmt:brocade-mpls">  
  <mpls-clear-all-ldp-sessions>true</mpls-clear-all-ldp-sessions>  
</clear-mpls-ldp-neighbor>
```

### Parameters

*mpls-clear-all-ldp-sessions*

Clears all LDP sessions.



## mpls-clear-one-ldp-sessions

---

Clears an LDP session.

### Usage

```
<clear-mpls-ldp-neighbor xmlns=""urn:brocade.com:mgmt:brocade-mpls"">  
  <mpls-clear-one-ldp-sessions>14.14.14.14</mpls-clear-one-ldp-sessions>  
</clear-mpls-ldp-neighbor>
```

### Parameters

*mpls-clear-one-ldp-sessions*

Clears an LDP session with a specific IP address.

## mpls-clear-statistics-type

---

Clears the MPLS statistics of a specific type.

### Usage

```
<clear-mpls-statistics xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <mpls-clear-statistics-type>3</mpls-clear-statistics-type>
  <tunnel-name>t2</tunnel-name>
</clear-mpls-statistics>
```

### Parameters

*mpls-clear-statistics-type*

Specifies the MPLS statistics type.

*tunnel-name*

Specifies the tunnel name.

## mpls-reopt-lsp

Directs the router to consider configuration changes made to an LSP and to optimize the LSP path based on those changes.

### Usage

```
<mpls-reopt-lsp xmlns="urn:brocade.com:mgmt:brocade-mpls">
  <mpls-reoptimize-lsp-name-in>reopt1</mpls-reoptimize-lsp-name-in>
</mpls-reopt-lsp>
```

### Parameters

*mpls-reoptimize-lsp-name-in*

Specifies the LSP name.

## prefix-independent-convergence-static

reduces the convergence time for the static routes when a failover from the primary static nexthop to the backup static nexthop happens.

### Usage

```
<rpc message-id="101" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <edit-config>
    <target>
      <running/>
    </target>
    <config>
      <prefix-independent-convergence-static xmlns="urn:brocade.com:mgmt:brocade-
rtm"/>
    </config>
  </edit-config>
</rpc>
```

```
<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="101"><ok/></rpc-
reply>
```

```
<rpc message-id="101" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <get-config>
    <source>
      <running/>
    </source>
    <filter type="subtree">
      <prefix-independent-convergence-static xmlns="urn:brocade.com:mgmt:brocade-
rtm"/>
    </filter>
  </get-config>
</rpc>
```

```
<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="101"><data><prefix-
independent-convergence-static xmlns="urn:brocade.com:mgmt:brocade-rtm"/></data></rpc-
reply>
```

```
<rpc message-id="101" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <edit-config>
    <target>
```

```
        <running/>
      </target>
    <config>
      <prefix-independent-convergence-static operation="delete"
xmlns="urn:brocade.com:mgmt:brocade-rtm"/>
    </config>
  </edit-config>
</rpc>

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="101"><ok/></rpc-
reply>
```

---

## reload

---

Reloads the switch.

## Usage

```
<reload xmlns="urn:brocade.com:mgmt:brocade-ha"></reload>
```

---

## set-http-application-url

---

Updates the HTTP application URL.

### Usage

```
<set-http-application-url xmlns="urn:brocade.com:mgmt:brocade-http-redirect">
  <config-http-app-url>
    <url>www.google.com</url>
    <op-type>1</op-type>
  </config-http-app-url>
</set-http-application-url>

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="1">
  <status-code>0</status-code>
  <status-string>Success</status-string>
</rpc-reply>
```

### Parameters

*status-code*

Displays the status code as URL updated successfully - 0, Error not able to update configuration - 1 or Error not able to remove configuration - 2.

*status-string*

Displays the error in string format.

## show-clock

---

Returns the date, time, and time zone.

### Usage

```
<show-clock></show-clock>

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="7">
  <clock-time xmlns="urn:brocade.com:mgmt:brocade-clock">
    <current-time>2014-06-04T11:03:31+00:00</current-time>
    <timezone>Etc/GMT</timezone>
  </clock-time>
</rpc-reply>
```

### Parameters

*current-time*

Displays the switch date and time

*timezone*

Displays the region/city or region/state/city

## show-ntp

---

Returns the active NTP server for the Extreme VCS fabric or specified switch.

### Usage

```
<show-ntp></show-ntp>

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="12">
  <node-active-server xmlns="urn:extreme.com:mgmt:extreme-ntp">
    <LOCL>true</LOCL>
  </node-active-server>
</rpc-reply>
```

### Parameters

*LOCL*

Indicates whether the LOCL is true or false



## show-raslog

Returns RASLog entries.

### Usage

```
<show-raslog></show-raslog>

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="14">
  <show-all-raslog xmlns="urn:brocade.com:mgmt:brocade-ras-ext">
    <number-of-entries>2842</number-of-entries>
    <raslog-entries>
      <index>8288</index>
      <message-id>NSM-1019</message-id>
      <date-and-time-info>2013/12/07-03:21:17:69</date-and-time-info>
      <severity>informational</severity>
      <log-type>dce</log-type>
      <repeat-count>1</repeat-count>
      <message> Interface Ve 4093 is administratively up.</message>
      <message-flag>unknown</message-flag>
      <switch-or-chassis-name>sw0</switch-or-chassis-name>
    </raslog-entries>
    <raslog-entries>
      <index>13584</index>
      <message-id>SEC-3022</message-id>
      <date-and-time-info>2014/06/03-14:03:52:25</date-and-time-info>
      <severity>informational</severity>
      <log-type>system</log-type>
      <repeat-count>1</repeat-count>
      <message>Event: logout, Status: success, Info: Successful logout by user
[admin].</message>
      <message-flag>unknown</message-flag>
      <switch-or-chassis-name>sw0</switch-or-chassis-name>
    </raslog-entries>
  </show-all-raslog>
</rpc-reply>
```

### Parameters

*number-of-entries*

Displays the number of recent events to be fetched from the RASLOG entries

*index*

Displays the sequence number for the message

*message-id*

Displays the message identifier

*date-and-time-info*

Displays the date and time of the message. The format is: YYYY-MM-DD/HH:MM:SS.SSSS

*severity*

Displays the severity of the message. Valid values include: INFO, WARNING, ERROR, and CRITICAL

*log-type*

Specifies if the message is a SYSTEM or DCE log

*repeat-count*

Displays the number of times the particular event has occurred

*message*

Displays the textual description of the event

*message-flag*

Displays the type of the message

*switch-or-chassis-name*

Displays the switch name for the generator of the message, or chassis

## show snmp-server status

Displays the SNMP server status on a VRF.

### Usage

```
<rpc message-id="101" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
  <action xmlns="http://tail-f.com/ns/netconf/actions/1.0">
    <data>
      <show xmlns="urn:brocade.com:mgmt:brocade-common-def">
        <snmp-server xmlns="urn:brocade.com:mgmt:brocade-snmp">
          <status/>
        </snmp-server>
      </show>
    </data>
  </action>
</rpc>]]>]]>

<?xml version="1.0" encoding="UTF-8"?>
<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="101">
  <data>
    <show xmlns='urn:brocade.com:mgmt:brocade-common-def'>
      <snmp-server xmlns='urn:brocade.com:mgmt:brocade-snmp'>
        <status>
          <server>
            <vrf>mgmt-vrf</vrf>
            <status>enabled</status>
          </server>
          <server>
            <vrf>default-vrf</vrf>
            <status>enabled</status>
          </server>
          <server>
            <vrf>red</vrf>
            <status>disabled</status>
          </server>
        </status>
      </snmp-server>
    </show>
  </data>
</rpc-reply>]]>]]>
```

### Parameters

#### status

In the RPC request, fetches the status of the SNMP server on all VRFs.

#### server

A container for each of the various VRFs.

#### vrf

Name of the VRF for which the status is being displayed.

#### status

The SNMP server status for the VRF as named in the *vrf* tag.

---

## show-support-save-status

---

This RPC provides information on the status of the recent support save request.

### Usage

```
<nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="9">
  <show-support-save-status xmlns="urn:brocade.com:mgmt:brocade-ras-ext"></show-support-
save-status>
</nc:rpc>
```

```
<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="9">
  <show-support-save-status xmlns="urn:brocade.com:mgmt:brocade-ras-ext">
    <status>inProgress</status>
    <message>The Support Save is in progress and has completed 71%.</message>
    <percentage-of-completion>1</percentage-of-completion>
  </show-support-save-status>
</rpc-reply>
```

---

## show-system-info

---

This RPC shows the system information.

### Usage

```
<nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="6">
  <show-system-info xmlns="urn:brocade.com:mgmt:brocade-ras-ext"></show-system-info>
</nc:rpc>
```

```
<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="6">
  <show-system-info xmlns="urn:brocade.com:mgmt:brocade-ras-ext">
    <stack-mac>f4:6e:95:9f:2e:f6</stack-mac>
  </show-system-info>
</rpc-reply>
```

## show-system-monitor

Returns system status information.

### Usage

```
<show-system-monitor></show-system-monitor>

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="17">
  <switch-status xmlns="urn:brocade.com:mgmt:brocade-system-monitor-ext">
    <switch-name>sw0</switch-name>
    <switch-ip>10.25.224.18</switch-ip>
    <switch-state>state-marginal</switch-state>
    <switch-state-reason>Switch Status is MARGINAL. Contributors: * Power Supply: 1
bad. (MARGINAL).</switch-state-reason>
    <report-time>2017-04-04T11:10:57.11.668484+31:03</report-time>
    <component-status>
      <component-name>Power supplies monitor</component-name>
      <component-state>state-marginal</component-state>
    </component-status>
    <component-status>
      <component-name>Temperatures monitor</component-name>
      <component-state>state-healthy</component-state>
    </component-status>
    <component-status>
      <component-name>Fans monitor</component-name>
      <component-state>state-healthy</component-state>
    </component-status>
  </switch-status>
</rpc-reply>
```

### Parameters

*switch-name*

Displays the name of the switch

*switch-ip*

Displays the IP address of the switch

*switch-state*

Displays the switch status based on components

*switch-state-reason*

Displays the component reason for switch status

*report-time*

Displays the switch report time stamp

*component-name*

Displays the component name

*component-state*

Displays the component status based on thresholds

---

## user-session-info

---

Returns user role information.

### Usage

```
<user-session-info></user-session-info>

<rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="20">
  <user-role xmlns="urn:brocade.com:mgmt:brocade-aaa-ext">admin</user-role>
</rpc-reply>
```

### Parameters

*user-role*

Displays the user role.