



Extreme SLX-OS NETCONF Operations Guide, 20.3.2h

Supporting ExtremeRouting and ExtremeSwitching
SLX 9740, SLX 9640, SLX 9540, SLX 9250 and SLX
9150

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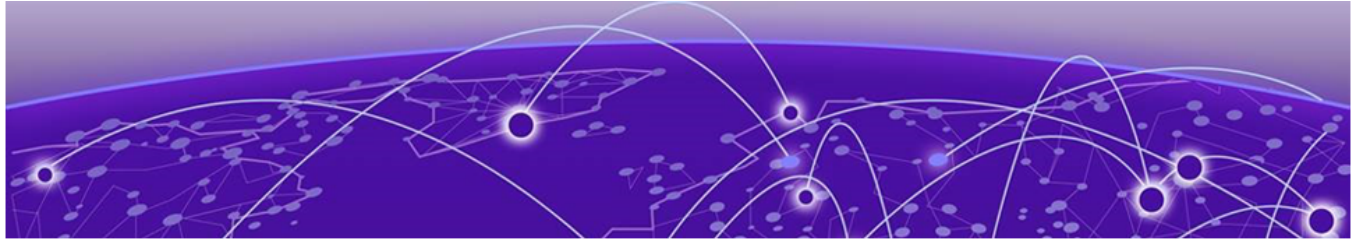


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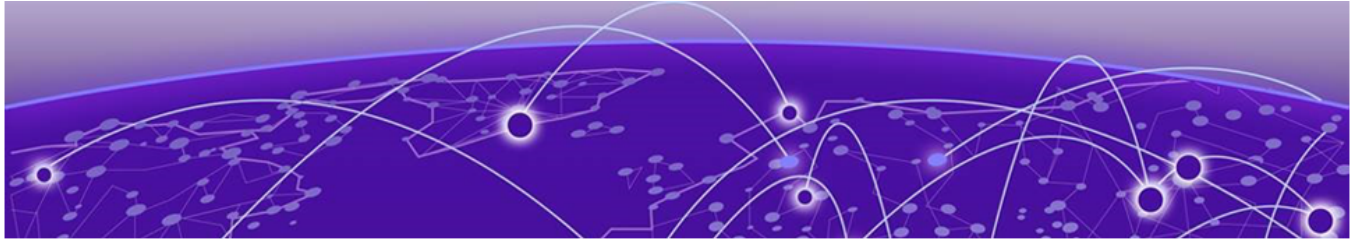
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Preface

This section describes the text conventions used in this document, where you can find additional information, and how you can provide feedback to us.

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> .
Key names	Key names are written in boldface, for example Ctrl or Esc . If you must press two or more keys simultaneously, the key names are linked with a plus sign (+). Example: Press Ctrl+Alt+Del .
Words in italicized type	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.
NEW!	New information. In a PDF, this is searchable text.

Table 3: Command syntax

Convention	Description
bold 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.
{ x y z }	A choice of required parameters is enclosed in curly brackets separated by vertical bars. You must select one of the options.
x y	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.

1 Documentation and Training

2 Find Extreme Networks product information at the following locations:

3 [Current Product Documentation](#)

4 [Release Notes](#)

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

6 [Extreme Optics Compatibility](#)

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

8 Extreme Networks offers product training courses, both online and in person, as well as specialized
9 certifications. For details, visit www.extremenetworks.com/education/.

Getting Help

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

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.

Providing Feedback

The Information Development team at Extreme Networks has made every effort to ensure the accuracy and completeness of this document. We are always striving to improve our documentation and help you work better, 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.

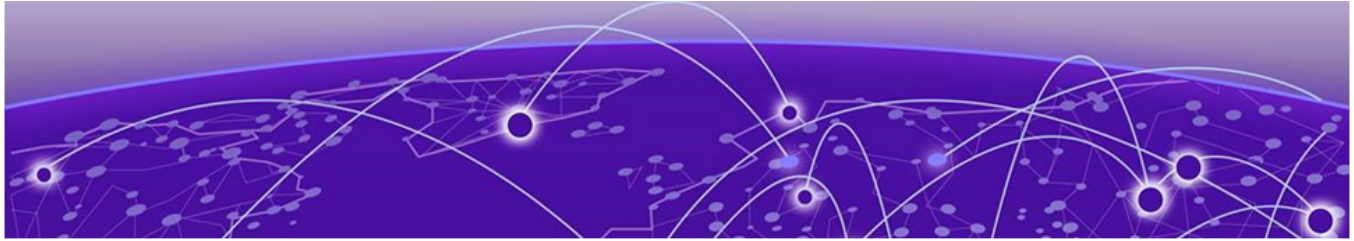
- Improvements that would help you find relevant information in the document.
- Broken links or usability issues.

If you would like to provide feedback, you can do so in three ways:

- In a web browser, select the feedback icon and complete the online feedback form.
- Access the feedback form at <https://www.extremenetworks.com/documentation-feedback/>.
- Email us at 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.

DRAFT



About This Document

[What's New in this Document](#) on page 32
[Supported Hardware](#) on page 32

What's New in this Document

This document is released with the SLX-OS 20.3.2h release.

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 20.3.2h supports the following hardware platforms.

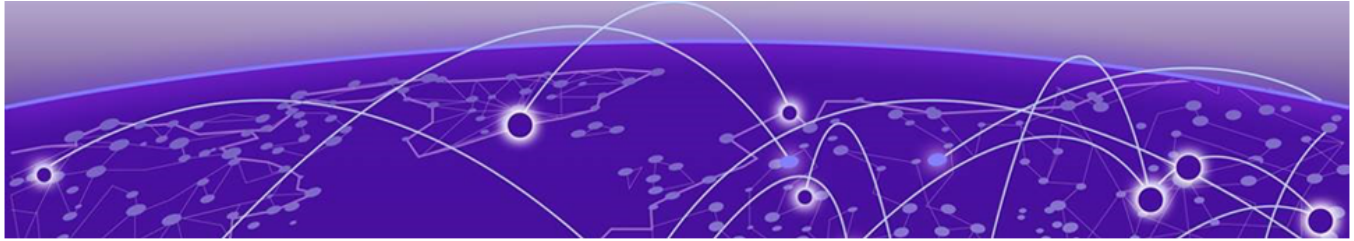
- Devices based on the Broadcom XGS® chipset family:
 - ExtremeSwitching SLX 9250
 - ExtremeSwitching SLX 9150
- Devices based on the Broadcom DNX® chipset family:
 - ExtremeRouting SLX 9740
 - ExtremeRouting SLX 9640
 - ExtremeSwitching SLX 9540



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 33
[NETCONF in client/server architecture](#) on page 33
[RPC request](#) on page 34
[RPC reply](#) on page 34
[RPC and error handling](#) on page 34
[SSH subsystem](#) on page 34
[RFC references](#) on page 35

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.

1 RPC request

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

3 Every <rpc> element contains a mandatory attribute, the message-id. This attribute has a unique value
4 for every RPC request, and is used to associate every RPC request with the corresponding response.
5 The message-id value is a monotonically increasing integer string. The maximum length of the string is
6 4095 characters. If the message-id is not present in the RPC request, the server rejects the request by
7 returning an <rpc-error> with an <error-tag> element set to “missing-attribute”.

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

10 RPC reply

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

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

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

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

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

20 RPC and error handling

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

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

26 SSH subsystem

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

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

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

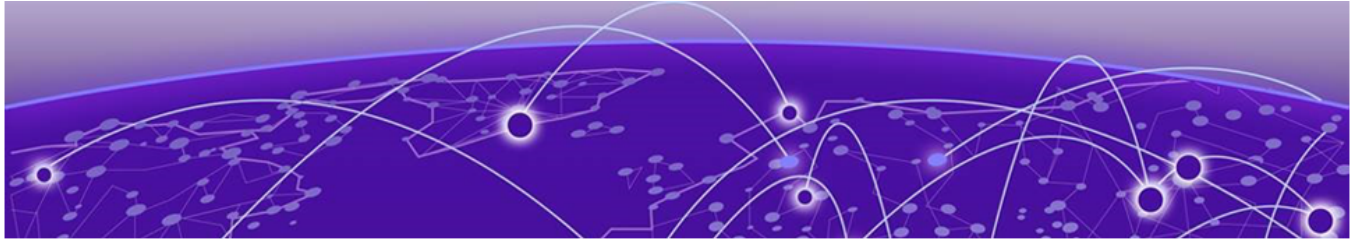
On successful user authentication, the client invokes the ssh-connection service, also known as the SSH connection protocol. After the SSH session is established, the NETCONF client invokes NETCONF as an SSH subsystem called netconf.

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”

DRAFT



Using NETCONF

- Establishing a NETCONF session on page 36
- Retrieving configuration data on page 38
- Retrieving operational data on page 42
- Editing the configuration on page 44
- Managing the configuration on page 45
- Disconnecting from a NETCONF session on page 46

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>
```



```

1         </interface>
2     </routing-system>
3 </filter>
4 </get-config>
5 </rpc>

```

6 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.

```

14 | +--rw ethernet [name]
15 |   +--rw name                               interface-type
16 |   .
17 |   .
18 |   .
19 |   +--rw qos:qos
20 |     +--rw qos:default-cos?                 int32
21 |     +--rw qos:cos-mutation?               map-name-type
22 |     +--rw qos:cos-traffic-class?          map-name-type
23 |     +--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.

```

27 <?xml version="1.0" encoding="UTF-8"?>
28 <rpc xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="205">
29   <get-config>
30     <source>
31       <running></running>
32     </source>
33     <filter type="xpath" select="/interface/ethernet/qos[cos-mutation='test']"></filter>
34   </get-config>
35 </rpc>
36
37
38 <rpc-reply
39   xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns="urn:ietf:params:xml:ns:netconf:base:
40   1.0" message-id="205">
41   <data>
42     <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
43       <ethernet>
44         <name>0/5</name>
45         <qos xmlns="urn:brocade.com:mgmt:brocade-qos">
46           <default-cos>0</default-cos>
47           <cos-mutation>test</cos-mutation>
48         </qos>
49       </ethernet>
50       <ethernet>
51         <name>0/6</name>
52         <qos xmlns="urn:brocade.com:mgmt:brocade-qos">
53           <default-cos>0</default-cos>
54           <cos-mutation>test</cos-mutation>
55         </qos>

```

```

1         </ethernet>
2     </interface>
3 </data>
4 </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.

```

34 +---x get-vlan-brief
35   +---ro input
36   | +---ro (request-type)?
37   | +---: (get-request)
38   | | +---ro vlan-id? interface:vlan-type
39   | +---: (get-next-request)
40   | +---ro last-rcvd-vlan-id? interface:vlan-type
41   +---ro output

```

```

1      +--ro vlan [vlan-id]
2      | +--ro vlan-id interface:vlan-type
3      | +--ro vlan-type? enumeration
4      | +--ro vlan-name? string
5      | +--ro vlan-state? enumeration
6      | +--ro interface [interface-type interface-name]
7      | +--ro interface-type enumeration
8      | +--ro interface-name union
9      | +--ro tag? enumeration
10     +--ro last-vlan-id? interface:vlan-type
11     +--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.

```

14     <rpc message-id="207" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
15       <get-vlan-brief xmlns="urn:brocade.com:mgmt:brocade-interface-ext">
16         </get-vlan-brief>
17     </rpc>
18
19     <rpc-reply message-id="207" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
20       <vlan xmlns="urn:brocade.com:mgmt:brocade-interface-ext">
21         <vlanid>20</vlanid>
22         <vlan-type>static</vlan-type>
23         <vlan-name>vlan-20</vlan-name>
24         <vlan-state>active</vlan-state>
25         <interface>
26           <interface-type>ethernet</interface-type>
27           <interface-name>2/5</interface-name>
28           <tag>tagged</tag>
29         </interface>
30       </vlan>
31       <last-vlan-id>20</last-vlan-id>
32       <has-more>true</has-more>
33     </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.

```

36     <rpc message-id="208" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
37       <get-vlan-brief xmlns="urn:brocade.com:mgmt:brocade-interface-ext">
38         <last-rcvd-vlan-id>20</last-rcvd-vlan-id>
39       </get-vlan-brief>
40     </rpc>
41
42     <rpc-reply message-id="208" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
43       <vlan xmlns="urn:brocade.com:mgmt:brocade-interface-ext">
44         <vlanid>30</vlanid>
45         <vlan-type>static</vlan-type>
46         <vlan-name>vlan-30</vlan-name>
47         <vlan-state>active</vlan-state>
48         <interface>
49           <interface-type>ethernet</interface-type>
50           <interface-name>2/5</interface-name>
51           <tag>tagged</tag>
52         </interface>
53       </vlan>
54       <last-vlan-id>30</last-vlan-id>
55       <has-more>false</has-more>
56     </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>
```

```

1      <config>
2          <mac-address-table xmlns="urn:brocade.com:mgmt:brocade-mac-address-table">
3              <static>
4                  <mac-address>0011.2222.3333</mac-address>
5                  <forward>forward</forward>
6                  <interface-type>ethernet</interface-type>
7                  <interface-name>2/5</interface-name>
8                  <vlan>vlan</vlan>
9                  <vlanid>100</vlanid>
10             </static>
11         </mac-address-table>
12     </config>
13 </edit-config>
14 </rpc>
15
16 <rpc-reply message-id="210" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
17     <ok/>
18 </rpc-reply>

```

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

```

21 <?xml version="1.0" encoding="UTF-8"?>
22 <rpc message-id="211" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
23     <edit-config>
24         <target>
25             <running/>
26         </target>
27         <config>
28             <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
29                 <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
30                     <mstp xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
31 Operation="delete"/>
32                 </spanning-tree>
33             </protocol>
34         </config>
35     </edit-config>
36 </rpc>
37
38 <rpc-reply message-id="211" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
39     <ok/>
40 </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

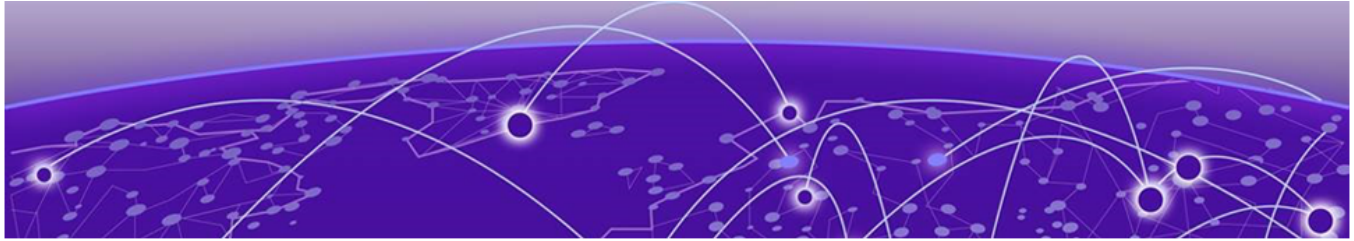
To disconnect from a NETCONF session, issue the standard `<close-session>` RPC.

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 47

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.

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.

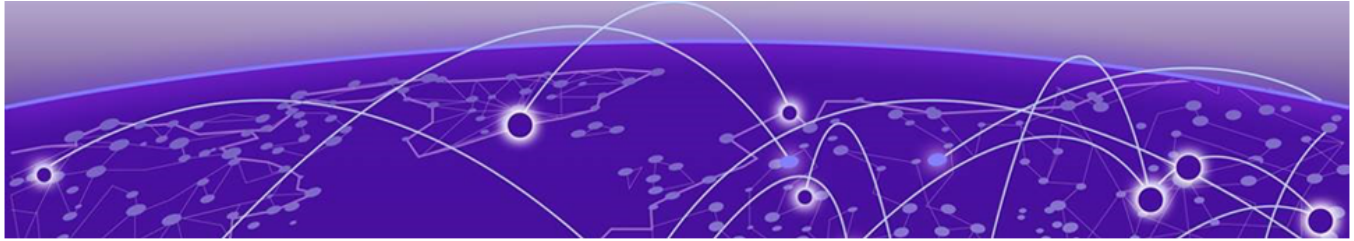
7. Verify that the login was successful.

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
```

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Sample use cases for SLX-OS NETCONF

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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

1 Configuring STP

The process for configuring STP is as follows:

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>
```

39 Configuring RSTP

The process for configuring RSTP is as follows.

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>
```

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.

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>
```

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">
```

```
1      <vrf>red</vrf>
2      <area>
3        <area-id>0</area-id>
4      </area>
5    </ospf>
6  </router>
```

6. Bind the interface to the VRF instance

```
8  <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
9    <ve>
10      <name>1</name>
11      <vrf xmlns="urn:brocade.com:mgmt:brocade-ip-config">
12        <forwarding>red</forwarding>
13      </vrf>
14    </ve>
15  </interface>
```

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30 aaa

31 Configures AAA authentication.

32 Usage

```

33 <aaa-config xmlns="urn:brocade.com:mgmt:brocade-aaa">
34   <aaa/>
35 </aaa-config>

```


1 aaa/accounting

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

4 Usage

```
5 <aaa-config xmlns="urn:brocade.com:mgmt:brocade-aaa">  
6   <aaa>  
7     <accounting/>  
8   </aaa>  
9 </aaa-config>
```

DRAFT

1 aaa/authentication

2 Configures the AAA login sequence.

3 Usage

```

4 <aaa-config xmlns="urn:brocade.com:mgmt:brocade-aaa">
5   <aaa>
6     <authentication>
7       <login>
8         <first>local</first>
9       </login>
10    </authentication>
11  </aaa>
12 </aaa-config>

```

13 Parameters

14 *first*

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

17 **default**

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

20 **ldap**

21 Specifies the Lightweight Directory Access Protocol (LDAP) servers

22 **local**

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

24 **local-auth-failback**

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

27 **local**

28 Specifies the local switch database

29 **radius**

30 Specifies the RADIUS servers

31 **local**

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

33 **local-auth-failback**

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

36 **tacacs+**

37 Specifies the TACACS+ servers

38 **local**

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

40 **local-auth-failback**

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

DRAFT

1 aaa/authentication/login

2 Configures the AAA login sequence.

3 Usage

```
4 <aaa-config xmlns="urn:brocade.com:mgmt:brocade-aaa">
5   <aaa>
6     <authentication>
7       <login/>
8     </authentication>
9   </aaa>
10 </aaa-config>
```

11 Parameters

12 **authentication**

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

DRAFT

1 aaa/authentication/login/first

2 Configures the primary source of authentication.

3 Usage

```
4 <aaa-config xmlns="urn:brocade.com:mgmt:brocade-aaa">
5   <aaa>
6     <authentication>
7       <login>
8         <first/>
9       </login>
10    </authentication>
11  </aaa>
12 </aaa-config>
```

DRAFT

1 aaa/authentication/login/second

2 Configures the secondary source of authentication.

3 Usage

```
4 <aaa-config xmlns="urn:brocade.com:mgmt:brocade-aaa">
5   <aaa>
6     <authentication>
7       <login>
8         <second/>
9       </login>
10    </authentication>
11  </aaa>
12 </aaa-config>
```

13 Parameters

14 **authentication**

15 Specifies authentication.

16 **login**

17 Specifies login.

18 *second*

19 Specifies second.

DRAFT

1 aaa/username

2 Configures a username for AAA login.

3 Usage

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

DRAFT

1 aaa/username/desc

2 Adds describes for the username.

3 Usage

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

8 Parameters

9 *name*
10 Specifies the username.

DRAFT

1 aaa/username/encryption-level

2 Configures the encryption level for a username.

3 Usage

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

8 Parameters

9 *name*
10 Specifies the username.

DRAFT

1 aaa/username/role

2 Configures the role of the user.

3 Usage

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

8 Parameters

9 *name*
10 Specifies the username.

DRAFT

1 acl-policy

2 Configures, modifies, or retrieves the ACL configuration.

3 Usage

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

7 Parameters

8 *global-acl-policy-conf-cmds*
9 Enters the global ACL policy commands mode.

DRAFT

1 acl-policy/allow-conflicting-rules

2 Allows conflicting rules in an ACL table.

3 Usage

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

9 Parameters

10 *global-acl-policy-conf-cmds*
11 Enters the global ACL policy commands mode.
12 *allow-conflicting-rules*
13 Allows conflicting rules in an ACL table.

DRAFT

1 acl-policy/allow-duplicate-rules

2 Allows duplicate rules in an ACL table..

3 Usage

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

9 Parameters

10 *global-acl-policy-conf-cmds*
11 Enters the global ACL policy commands mode.

DRAFT

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 address of the ARP entry.

DRAFT

1 bridge-domain

2 Configures a bridge domain.

3 Usage

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

8 Parameters

- 9 *bridge-domain-id*
10 Specifies the bridge domain ID.
- 11 *bridge-domain-type*
12 Specifies the bridge domain type..
- 13 **peer**
14 Specifies the peer.
- 15
16 Specifies the peer IP address.
- 17 **load-balance**
18 Specifies load-balance.

DRAFT

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

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

3 Usage

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

9 Parameters

10 *bridge-domain-id*
11 Specifies the bridge-domain ID.

12 *bridge-domain-type*
13 Specifies the bridge domain type.

14 *bpdu-drop-enable*
15 Enables the BPDU drop.

DRAFT

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

2 Configures the logical interface.

3 Usage

```
4 <bridge-domain xmlns="urn:brocade.com:mgmt:brocade-bridge-domain">
5   <bridge-domain-id>{req_val}</bridge-domain-id>
6   <bridge-domain-type>{req_val}</bridge-domain-type>
7   <logical-interface>
8     <port-channel>
9       <pc-lif-bind-id>{req_val}</pc-lif-bind-id>
10    </port-channel>
11  </logical-interface>
12 </bridge-domain>
```

13 Parameters

- 14 *port-channel*
15 Specifies Port Channel as the logical interface.
- 16 *pc-lif-bind-id*
17 Specifies the Port Channel LIF bind ID.

DRAFT

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

2 Configures local switching.

3 Usage

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

9 Parameters

10 *bridge-domain-id*
11 Specifies the bridge-domain ID.

12 *bridge-domain-type*
13 Specifies the bridge domain type.

14 *local-switching*
15 Configures local switching.

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

2 Sets the cos value in the range 0 to 7.

3 Usage

```
4 <bridge-domain xmlns="urn:brocade.com:mgmt:brocade-bridge-domain">  
5   <bridge-domain-id>{req_val}</bridge-domain-id>  
6   <bridge-domain-type>{req_val}</bridge-domain-type>  
7   <peer>  
8     <peer-ip>{req_val}</peer-ip>  
9     <cos/>  
10  </peer>  
11 </bridge-domain>
```

12 Parameters

13 **cos**

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

DRAFT

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

2 Retrieves load-balancing details.

3 Usage

```
4 <bridge-domain xmlns="urn:brocade.com:mgmt:brocade-bridge-domain">
5   <bridge-domain-id>{req_val}</bridge-domain-id>
6   <bridge-domain-type>{req_val}</bridge-domain-type>
7   <peer>
8     <peer-ip>{req_val}</peer-ip>
9     <load-balance/>
10  </peer>
11 </bridge-domain>
```

12 Parameters

- 13 **peer**
14 Specifies the peer.
- 15 *peer-ip*
16 Specifies the peer IP address.
- 17 *load-balance*
18 Specifies load balance.

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

2 Configures label-switched paths (LSPs).

3 Usage

```
4 <bridge-domain xmlns="urn:brocade.com:mgmt:brocade-bridge-domain">
5   <bridge-domain-id>{req_val}</bridge-domain-id>
6   <bridge-domain-type>{req_val}</bridge-domain-type>
7   <peer>
8     <peer-ip>{req_val}</peer-ip>
9     <lsp/>
10  </peer>
11 </bridge-domain>
```

12 Parameters

13 *bridge-domain-id*
14 Specifies the bridge domain ID.

15 *bridge-domain-id*
16 Specifies the bridge domain type.

17 **peer**
18 Specifies the peer.

19 *peer-ip*
20 Specifies the peer IP address.

21 **lsp**
22 Specifies the LSP.

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

2 Sets the Pw-profile name.

3 Usage

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

DRAFT

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

2 Configures statistics for a bridge domain?

3 Usage

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

DRAFT

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

2 Configures the VC ID for the bridge domain.

3 Usage

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

9 Parameters

10 *vc-id-num*
11 Specifies the VC ID.

12 *bridge-domain-type*
13 Specifies the bridge domain type.

DRAFT

1 chassis

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

3 Usage

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

9 Parameters

10 *virtual-ip*
11 The IP address of the virtual chassis.

DRAFT

1 chassis/virtual-ip

2 Configures the chassis the virtual IPv4 address.

3 Usage

```
4 <hide-virtual-ip-holder xmlns="urn:brocade.com:mgmt:brocade-chassis">  
5   <chassis>  
6     <virtual-ip/>  
7   </chassis>  
8 </hide-virtual-ip-holder>
```

9 Parameters

10 *virtual-ip*
11 Specifies the IP address of the virtual chassis.

1 chassis/virtual-ipv6

2 Configures the chassis the virtual IPv4 address.

3 Usage

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

9 Parameters

10 *virtual-ipv6*
11 Specifies the IPv6 address of the virtual chassis.

DRAFT

clock

Configures, modifies, or retrieves the system time zone.

Usage

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

DRAFT

1 clock/time-zone

2 Configures, modifies, or retrieves the system time zone.

3 Usage

```
4 <clock-sa xmlns="urn:brocade.com:mgmt:brocade-clock">
5   <clock>
6     <timezone/>
7   </clock>
8 </clock-sa>
```

9 Parameters

10 *timezone*
11 Specifies the time zone.

DRAFT

1 cluster/{cluster-name}/

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

3 Usage

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

8 Parameters

9 *cluster-name*
10 Specifies the MCT cluster name .
11 *cluster-id*
12 Specifies the MCT cluster ID.

DRAFT

1 dai

2 Manages the IP access list.

3 Usage

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

7 Parameters

8 *arp*
9 Specifies the ARP.

DRAFT

1 dai/arp/access-list

2 Manages the IP access list.

3 Usage

```
4 <dai-config xmlns="urn:brocade.com:mgmt:brocade-dai">
5   <arp>
6     <access-list>
7       <acl-name>{req_val}</acl-name>
8     </access-list>
9   </arp>
10 </dai-config>
```

11 Parameters

12 *acl-name*
13 Specifies the access control list (ACL) name.

DRAFT

1 delay-link-event

2 Manages the delay link event (DLE).

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>{req_val}</name>
7     <delay-link-event xmlns="urn:brocade.com:mgmt:brocade-dle">
8       <delay-link operation="delete"/>
9     </delay-link-event>
10   </ethernet>
11 </interface>
```

12 Parameters

13 **ethernet**

14 Specifies the Physical ethernet interface.

15 *name*

16 Specifies the inetafce name.

DRAFT

1 dot1x

2 Configures, retrieves, and modifies 802.1X authentication.

3 Usage

```
4 <dot1x xmlns="urn:brocade.com:mgmt:brocade-dot1x">  
5   <test>  
6     <timeout/>  
7   </test>  
8 </dot1x>
```

9 Parameters

10 *test* timeout

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

DRAFT

1 dot1x/test

2 Configures the 802.1X readiness test timeout.

3 Usage

```
4 <dot1x xmlns="urn:brocade.com:mgmt:brocade-dot1x">  
5   <test>  
6     <timeout>20</timeout>  
7   </test>  
8 </dot1x>
```

9 Parameters

10 *timeout*

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

DRAFT

1 dot3ah

2 Manages the Link OAM Protocol.

3 Usage

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

7 Parameters

8 *protocol*

9 Specifies the protocol.

DRAFT

1 event-handler

2 Creates an event-handler profile.

3 Usage

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

9 Parameters

10 *name*

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

DRAFT

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

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

4 Usage

```
5 <event-handler xmlns="urn:brocade.com:mgmt:brocade-event-handler">  
6   <activate>  
7     <name>  
8       <name>{req_val}</name>  
9       <action-timeout/>  
10    </name>  
11  </activate>  
12 </event-handler>
```

13 Parameters

14 *name*
15 Specifies the name of the event-handler profile.

1 hardware

2 Configures, modifies, or retrieves the hardware management configuration.

3 Usage

```
4 <hardware xmlns="urn:brocade.com:mgmt:brocade-hardware">
5   <connector>
6     <name>{req_val}</name>
7     <breakout>
8       <cage-mode/>
9     </breakout>
10  </connector>
11 </hardware>
```

12 Parameters

13 **connector** *name*

14 Specifies the hardware connector name.

15 **breakout** *name*

16 Specifies breakout and enters cage-mode.

DRAFT

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.

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

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

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>1/5</name>
7     <ip>
8       <ip-config xmlns="urn:brocade.com:mgmt:brocade-ip-config">
9         <arp-aging-timeout>220</arp-aging-timeout>
10      </ip-config>
11    </ip>
12  </ethernet>
13 </interface>
```

14 Parameters

15 *name*

16 Specifies the interface name.

17 *arp-aging-timeout*

18 Determines how long an ARP entry stays in cache. The timeout value can range from 0 through
19 240 minutes.

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

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

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>1/5</name>
7     <ip>
8       <interface-te-dhcp-conf xmlns="urn:brocade.com:mgmt:brocade-dhcp">
9         <dhcp>
10           <relay>
11             <gateway>1.1.1.1</gateway>
12           </relay>
13         </dhcp>
14       </interface-te-dhcp-conf>
15     </ip>
16   </ethernet>
17 </interface>
```

18 Parameters

19 *name*

20 Specifies the interface name

21 *gateway*

22 Specifies the IPv4 gateway address of the DHCP server where the DHCP client requests are to be
23 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

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

2 Sets the last-member query count.

3 Usage

```
4 <interface-vlan xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <interface>
6     <vlan>
7       <name>1</name>
8       <ip>
9         <igmp xmlns="urn:brocade.com:mgmt:brocade-igmp-snooping">
10           <last-member-query-count>3</last-member-query-count>
11         </igmp>
12       </ip>
13     </vlan>
14   </interface>
15 </interface-vlan>
```

16 Parameters

17 *name*

18 Specifies the interface name

19 *last-member-query-count*

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

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

2 Configures last member query interval.

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>1/5</name>
7     <ip>
8       <igmp-phy-intf-cfg xmlns="urn:brocade.com:mgmt:brocade-igmp">
9         <igmp>
10           <last-member-query-interval>1500</last-member-query-interval>
11         </igmp>
12       </igmp-phy-intf-cfg>
13     </ip>
14   </ethernet>
15 </interface>
```

16 Parameters

17 *name*

18 Specifies the interface name

19 *last-member-query-interval*

20 Specifies last member query interval in milliseconds. The interval can range from 100 through
21 25500. The default value is 1000 milliseconds

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

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

4 Usage

```
5 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
6   <ethernet>
7     <name>1/5</name>
8     <ip>
9       <igmp-phy-intf-cfg xmlns="urn:brocade.com:mgmt:brocade-igmp">
10        <igmp>
11          <query-interval>150</query-interval>
12        </igmp>
13      </igmp-phy-intf-cfg>
14    </ip>
15  </ethernet>
16 </interface>
```

17 Parameters

18 *name*
19 Specifies the interface name.

20 *query-interval*
21 Specifies the response time in seconds. The interval can range from 1 through 18000 seconds.
22 The default value is 125 seconds.

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

2 Configures the maximum response time for IGMP queries

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>1/5</name>
7     <ip>
8       <igmp-phy-intf-cfg xmlns="urn:brocade.com:mgmt:brocade-igmp">
9         <igmp>
10           <query-max-response-time>15</query-max-response-time>
11         </igmp>
12       </igmp-phy-intf-cfg>
13     </ip>
14   </ethernet>
15 </interface>
```

16 Parameters

17 *name*

18 Specifies the interface name.

19 *query-max-response-time*

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

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

2 Configures the robustness variable.

3 Usage

```
4 <interface-vlan xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <interface>
6     <vlan>
7       <name>1</name>
8       <ip>
9         <igmp xmlns="urn:brocade.com:mgmt:brocade-igmp-snooping">
10           <robustness-variable>3</robustness-variable>
11         </igmp>
12       </ip>
13     </vlan>
14   </interface>
15 </interface-vlan>
```

16 Parameters

17 *name*

18 Specifies the interface name.

19 *robustness-variable*

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

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

2 Configures the start up query count.

3 Usage

```
4 <interface-vlan xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <interface>
6     <vlan>
7       <name>1</name>
8       <ip>
9         <igmp>
10           <startup-query-count>3</startup-query-count>
11         </igmp>
12       </ip>
13     </vlan>
14   </interface>
15 </interface-vlan>
```

16 Parameters

17 *name*

18 Specifies the interface name.

19 *startup-query-count*

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

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

2 Configures the start up query interval.

3 Usage

```
4 <interface-vlan xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <interface>
6     <vlan>
7       <name>1</name>
8       <ip>
9         <igmp xmlns="urn:brocade.com:mgmt:brocade-igmp-snooping">
10           <startup-query-interval>10</startup-query-interval>
11         </igmp>
12       </ip>
13     </vlan>
14   </interface>
15 </interface-vlan>
```

16 Parameters

17 *name*

18 Specifies the interface name.

19 *startup-query-interval*

20 Specifies the start up query interval value. The value can range from 1 through 450. The default
21 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 (-).

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

2 Enables Protocol Independent Multicast Sparse Mode.

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>1/5</name>
7     <ip>
8       <pim-intf-phy-cont xmlns="urn:brocade.com:mgmt:brocade-pim">
9         <pim-int-cmd>
10           <pim-sparse></pim-sparse>
11         </pim-int-cmd>
12       </pim-intf-phy-cont>
13     </ip>
14   </ethernet>
15 </interface>
```

16 Parameters

17 *name*
18 Specifies the interface name.

19 **pim-sparse**
20 Enables PIM sparse mode.

DRAFT

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

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

2 Enables proxy ARP on an interface.

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>1/5</name>
7     <ip>
8       <ip-config xmlns="urn:brocade.com:mgmt:brocade-ip-config">
9         <proxy-arp></proxy-arp>
10      </ip-config>
11    </ip>
12  </ethernet>
13 </interface>
```

14 Parameters

15 *name*
16 Specifies the interface name.

17 **proxy-arp**
18 Enables proxy ARP.

DRAFT

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

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

3 Usage

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

DRAFT

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

2 Configures the IS-IS routing protocol.

3 Usage

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

DRAFT

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

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

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">1
5   <ethernet>
6     <name>{req_val}</name>
7     <ip>
8       <intf-router-isis xmlns="urn:brocade.com:mgmt:brocade-isis"/>
9     </ip>
10   </ethernet>
11 </interface>
```

12 Parameters

- 13 *name*
14 Specifies the interface name.
- 15 **ip**
16 Specifies the IP address.
- 17 **ethernet**
18 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.

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

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

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>{req_val}</name>
7     <link-fault-signaling xmlns="urn:brocade.com:mgmt:brocade-lfs">
8       <tx/>
9     </link-fault-signaling>
10   </ethernet>
11 </interface>
```

12 Parameters

13 **ethernet**

14 Specifies Ethernet interface.

15 *name*

16 Specifies the interface name.

17 **tx**

18 Specifies the tx direction.

DRAFT

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

```

1 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
2   <ethernet>
3     <name>1/1</name>
4     <ipv6>
5       <access-group xmlns="urn:brocade.com:mgmt:brocade-ipv6-access-list">
6         <ipv6-access-list>acl12</ipv6-access-list>
7         <ip-direction>in</ip-direction>
8         <traffic-type>routed</traffic-type>
9       </access-group>
10    </ipv6>
11  </ethernet>
12</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.

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

2 Configures the IPv6 DHCP Relay on a Layer 3 interface.

3 Usage

```

4      <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5          <ethernet>
6              <name>1/2</name>
7              <ipv6>
8                  <interface-phy-dhcp-conf xmlns="urn:brocade.com:mgmt:brocade-dhcpv6">
9                      <dhcp>
10                          <relay>
11                              <servers>
12                                  <relay-ip-addr>2001:db8::12d:1300</relay-ip-addr>
13                                  <use-vrf>mgmt-vrf</use-vrf>
14                                  <interface>
15                                      <interface-type>ethernet</interface-type>
16                                      <interface-name>1/2</interface-name>
17                                  </interface>
18                              </servers>
19                          </relay>
20                      </dhcp>
21                  </interface-phy-dhcp-conf>
22              </ipv6>
23          </ethernet>
24      </interface>

```

25 Parameters

- 26 *name*
- 27 Specifies the interface name
- 28 *relay-ip-addr*
- 29 Specifies the IPv6 address of the DHCP server where the DHCP client requests are to be
- 30 forwarded
- 31 *use-vrf*
- 32 Use this option if the VRF where the DHCP server is located is different from the VRF of the
- 33 interface where the client is connected. Specifies the VRF name
- 34 *interface-type*
- 35 The type of interface, such as Ethernet or Ve interface.
- 36 *interface-name*
- 37 The interface number

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

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

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>1/1</name>
7     <ipv6>
8       <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
9         <ipv6-intf-cmds>
10           <nd>
11             <broadcast-mac-trap></broadcast-mac-trap>
12           </nd>
13         </ipv6-intf-cmds>
14       </ipv6-nd-ra>
15     </ipv6>
16   </ethernet>
17 </interface>
```

18 Parameters

19 *name*

20 Specifies the interface name

21 **broadcast-mac-trap**

22 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

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

Usage

```

5 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
6   <ethernet>
7     <name>1/1</name>
8     <ipv6>
9       <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
10        <ipv6-intf-cmds>
11          <nd>
12            <hoplimit>65</hoplimit>
13          </nd>
14        </ipv6-intf-cmds>
15      </ipv6-nd-ra>
16    </ipv6>
17  </ethernet>
18 </interface>

```

Parameters

- 20 *name*
21 Specifies the interface name
- 22 *hoplimit*
23 Specifies the number of hops to be advertised. The number can range from 0 through 255. The
24 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

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

Usage

```

5 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
6   <ethernet>
7     <name>1/</name>
8     <ipv6>
9       <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
10        <ipv6-intf-cmds>
11          <nd>
12            <mtu>1550</mtu>
13          </nd>
14        </ipv6-intf-cmds>
15      </ipv6-nd-ra>
16    </ipv6>
17  </ethernet>
18 </interface>
  
```

Parameters

- 20 *name*
 21 Specifies the name of the interface
- 22 *mtu*
 23 Specifies the size, in bytes, of the MTU that is advertised. The value can range from 1280 through
 24 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

```

1 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
2   <ethernet>
3     <name>1/1</name>
4     <ipv6>
5       <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
6         <ipv6-intf-cmds>
7           <nd>
8             <prefix>
9               <prefix-ipv6-address>2001:db8:12d:1300::/64</prefix-ipv6-
10 address>
11               <lifetime>
12                 <no-advertise></no-advertise>
13               </lifetime>
14             </prefix>
15           </nd>
16         </ipv6-intf-cmds>
17       </ipv6-nd-ra>
18     </ipv6>
19   </ethernet>
20 </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

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

Usage

```

5 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
6   <ethernet>
7     <name>1/1</name>
8     <ipv6>
9       <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
10        <ipv6-intf-cmds>
11          <nd>
12            <ra-interval>
13              <max-interval>650</max-interval>
14              <min>250</min>
15            </ra-interval>
16          </nd>
17        </ipv6-intf-cmds>
18      </ipv6-nd-ra>
19    </ipv6>
20  </ethernet>
21 </interface>
  
```

Parameters

- 23 *name*
 24 Specifies the interface name
- 25 *max-interval*
 26 Specifies the maximum interval range in seconds. The interval can range from 4 through 1800
 27 seconds. The default interval is set from 200 through 600, with messages sent randomly within
 28 that interval
- 29 *min*
 30 Specifies the minimum interval in seconds. The interval can range from 0 through 1800. The
 31 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

- 2 Sets the size of the maximum transmission unit (MTU) that is advertised in Neighbor Discovery Router Advertisement (RA) messages.
- 3

Usage

```

5 <routing-system xmlns="urn:brocade.com:mgmt:brocade-common-def">
6   <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
7     <ve>
8       <name>{req_val}</name>
9       <ipv6 xmlns="urn:brocade.com:mgmt:brocade-ipv6-config">
10        <ipv6-nd-ra xmlns="urn:brocade.com:mgmt:brocade-ipv6-nd-ra">
11          <ipv6-intf-cmds>
12            <nd>
13              <mtu/>
14            </nd>
15          </ipv6-intf-cmds>
16        </ipv6-nd-ra>
17      </ipv6>
18    </ve>
19  </interface>
20 </routing-system>

```

Parameters

- 22 **ve**
- 23 Specifies virtual Ethernet interface.
- 24 *name*
- 25 Specifies the interface name.
- 26 **ipv6**
- 27 Specifies IPv6 address.
- 28 **mtu** *number*
- 29 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

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

Usage

```

4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>1/5</name>
7     <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
8       <dcbx-version>cee</dcbx-version>
9     </lldp>
10    </ethernet>
11 </interface>

```

Parameters

13 *name*

14 Specifies the interface name

15 *dcbx-version*

16 Specifies the version

17 **auto**

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

19 **cee**

20 Uses the Converged Enhanced Ethernet (CEE) DCBX version.

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

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

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>1/5</name>
7     <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
8       <disable></disable>
9     </lldp>
10   </ethernet>
11 </interface>
```

12 Parameters

13 *name*

14 Specifies the interface name

15 **disable**

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

DRAFT

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

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

3 Usage

```

4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>1/5</name>
7     <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
8       <iscsi-priority>3</iscsi-priority>
9     </lldp>
10    </ethernet>
11 </interface>

```

12 Parameters

- 13 *name*
14 Specifies the interface name
- 15 *iscsi-priority*
16 Specifies the priority value. The value can range from 0 through 7

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

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

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>1/5</name>
7     <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
8       <profile>profile1</profile>
9     </lldp>
10   </ethernet>
11 </interface>
```

12 Parameters

13 *name*
14 Specifies the interface name

15 *profile*
16 Specifies the profile name

DRAFT

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

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

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>{req_val}</name>
7     <interface-eth-isis-conf xmlns="urn:brocade.com:mgmt:brocade-isis">
8       <intf-isis>
9         <interface-isis>
10          <interface-reverse-metric/>
11        </interface-isis>
12      </intf-isis>
13    </interface-eth-isis-conf>
14  </ethernet>
15 </interface>
```

16 Parameters

17 **ethernet**

18 Specifies the physical Ethernet interface.

19 *name*

20 Specifies the interface name.

21 **intf-isis**

22 Specifies the ISIS interface.

23 **interface-reverse-metric**

24 Specifies interface reverse metric.

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

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

Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>{req_val}</name>
7     <interface-eth-isis-conf xmlns="urn:brocade.com:mgmt:brocade-isis">
8       <intf-isis>
9         <interface-isis>
10          <interface-priority/>
11        </interface-isis>
12      </intf-isis>
13    </interface-eth-isis-conf>
14  </ethernet>
15 </interface>
```

Parameters

17 **ethernet**

18 Specifies the physical Ethernet interface.

19 *name*

20 Specifies the name of Ethernet interface.

21 **intf-isis**

22 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.

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

2 Configures the value of an IS-IS metric.

3 Usage

```

4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>{req_val}</name>
7     <interface-eth-isis-conf xmlns="urn:brocade.com:mgmt:brocade-isis">
8       <intf-isis>
9         <interface-isis>
10          <interface-metric>
11            <interface-metric-level>{req_val}</interface-metric-
12 level>
13          </interface-metric>
14        </interface-isis>
15      </intf-isis>
16    </interface-eth-isis-conf>
17  </ethernet>
18 </interface>

```

19 Parameters

20 **ethernet**

21 Specifies the physical Ethernet interface.

22 *name*

23 Specifies the ISIS interface name.

24 *intf-isis*

25 Configures the ISIS interface.

26 *interface-metric*

27 Specifies the ISIS interface.

28 *interface-metric-level*

29 Specifies the metric level for the ISIS interface.

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

2 Enables synchronization with IS-IS for an interface.

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>{req_val}</name>
7     <interface-eth-isis-conf xmlns="urn:brocade.com:mgmt:brocade-isis">
8       <intf-isis>
9         <interface-isis>
10           <interface-ldp-sync/>
11         </interface-isis>
12       </intf-isis>
13     </interface-eth-isis-conf>
14   </ethernet>
15 </interface>
```

16 Parameters

17 **ethernet**

18 Specifies the physical Ethernet interface.

19 *name*

20 Specifies the ISIS interface name.

21 *intf-isis*

22 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

```

1  <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
2    <ethernet>
3      <name>{req_val}</name>
4      <interface-eth-isis-conf xmlns="urn:brocade.com:mgmt:brocade-isis">
5        <intf-isis>
6          <interface-isis>
7            <interface-ipv6>
8              <interface-ipv6-metric>
9                <interface-ipv6-metric-level>{req_val}</interface-ipv6-metric-
10 level>
11              </interface-ipv6-metric>
12            </interface-ipv6>
13          </interface-isis>
14        </intf-isis>
15      </interface-eth-isis-conf>
16    </ethernet>

```

Parameters

ethernet

Specifies the physical Ethernet interface.

name

Specifies the ISIS interface name.

intf-isis

Configures the ISIS interface.

interface-ipv6

Specifies the IPv6 ISIS interface.

interface-ipv6-metric

Specifies the IPv6 ISIS interface metric.

interface-ipv6-metric-level

Specifies 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

```

5 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
6   <ethernet>
7     <name>{req_val}</name>
8     <interface-eth-isis-conf xmlns="urn:brocade.com:mgmt:brocade-isis">
9       <intf-isis>
10        <interface-isis>
11          <interface-hello-multiplier>
12            <interface-hello-multiplier-level>{req_val}</interface-hello-
13 multiplier-level>
14          </interface-hello-multiplier>
15        </interface-isis>
16      </intf-isis>
17    </interface-eth-isis-conf>
18  </ethernet>
19 </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 .

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

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

3 Usage

```

4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>{req_val}</name>
7     <interface-eth-isis-conf xmlns="urn:brocade.com:mgmt:brocade-isis">
8       <intf-isis>
9         <interface-isis>
10          <interface-hello-interval>
11            <interface-hello-interval-level>{req_val}</interface-hello-
12 interval-level>
13          </interface-hello-interval>
14        </interface-isis>
15      </intf-isis>
16    </interface-eth-isis-conf>
17  </ethernet>
18 </interface>

```

19 Parameters

20 **ethernet**

21 Specifies the physical Ethernet interface.

22 *name*

23 Specifies the interface name.

24 **intf-isis**

25 Specifies the ISIS interface.

26 **interface-hello-interval**

27 Specifies interface hello interval.

28 *interface-hello-interval-level*

29 Specifies the hello interval level.

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

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

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>{req_val}</name>
7     <interface-eth-isis-conf xmlns="urn:brocade.com:mgmt:brocade-isis">
8       <intf-isis>
9         <interface-isis>
10           <interface-hello>
11             <interface-hello-padding/>
12           </interface-hello>
13         </interface-isis>
14       </intf-isis>
15     </interface-eth-isis-conf>
16   </ethernet>
17 </interface>
```

18 Parameters

19 **ethernet**

20 Specifies the physical Ethernet interface.

21 *name*

22 Specifies the interface name.

23 **intf-isis**

24 Specifies the ISIS interface.

25 **interface-hello**

26 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

2 Enables authentication checking for an IS-IS interface.

Usage

```

4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>{req_val}</name>
7     <interface-eth-isis-conf xmlns="urn:brocade.com:mgmt:brocade-isis">
8       <intf-isis>
9         <interface-isis>
10          <auth-check/>
11        </interface-isis>
12      </intf-isis>
13    </interface-eth-isis-conf>
14  </ethernet>
15 </interface>

```

Parameters

17 ethernet

18 Specifies the physical Ethernet interface.

19 name

20 Specifies the interface name.

21 interface-isis

22 Specifies the ISIS interface.

23 auth-check-level1

24 Specifies the authorization check level 1.

25 interface-auth-check-level1-disable

26 Disables the interface authorization check level 1.

27 auth-check-level2

28 Specifies the authorization check level 2.

29 interface-auth-check-level2-disable

30 Disables the interface authorization check level 2.

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

2 Configures the Link OAM protocol on an Ethernet interface.

3 Usage

```

4 interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>{req_val}</name>
7     <link-oam-interface xmlns="urn:brocade.com:mgmt:brocade-dot3ah">
8       <enable/>
9     </link-oam-interface>
10   </ethernet>
11 </interface>

```

DRAFT

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

2 Sets action for a Link Fault event .

Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>{req_val}</name>
7     <link-oam-interface xmlns="urn:brocade.com:mgmt:brocade-dot3ah">
8       <remote-failure>
9         <link-fault>
10           <link-fault-action/>
11         </link-fault>
12       </remote-failure>
13     </link-oam-interface>
14   </ethernet>
15 </interface>
```

DRAFT

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

2 Enables or disables loopback.

Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>{req_val}</name>
7     <link-oam-interface xmlns="urn:brocade.com:mgmt:brocade-dot3ah">
8       <allow-loopback/>
9     </link-oam-interface>
10   </ethernet>
11 </interface>
```

DRAFT

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

2 Collects Ethernet group statistics for later retrieval

3 Usage

```

4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>1/5</name>
7     <rmon xmlns="urn:brocade.com:mgmt:brocade-rmon">
8       <collection>
9         <history-control-entry>
10          <history-control-index>25</history-control-index>
11          <history-control-buckets-requested>10</history-control-buckets-
12 requested>
13          <history-control-interval>2000</history-control-interval>
14          <history-control-owner>admin</history-control-owner>
15        </history-control-entry>
16      </collection>
17    </rmon>
18  </ethernet>
19 </interface>

```

20 Parameters

- 21 *name*
- 22 Specifies the interface name.
- 23 *history-control-index*
- 24 Specifies the RMON collection control index value. The value can range from 1 through 65535.
- 25 *history-control-buckets-requested*
- 26 Specifies the maximum number of buckets for the RMON collection history. The value can range
- 27 from 1 through 65535.
- 28 *history-control-interval*
- 29 Specifies the alarm sample interval in seconds. The value can range from 1 through 3600. The
- 30 default value is 1800.
- 31 *history-control-owner*
- 32 Specifies the identity of the owner. The maximum number of characters is 15.

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

2 Collects Ethernet group statistics n a specific interface.

3 Usage

```

4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>1/5</name>
7     <rmon xmlns="urn:brocade.com:mgmt:brocade-rmon">
8       <collection>
9         <history-control-entry>
10          <history-control-index>25</history-control-index>
11          <history-control-buckets-requested>10</history-control-buckets-
12 requested>
13          <history-control-interval>2000</history-control-interval>
14          <history-control-owner>admin</history-control-owner>
15        </history-control-entry>
16      </collection>
17    </rmon>
18  </ethernet>
19 </interface>

```

20 Parameters

21 *name*
 22 Specifies the interface name

23 *ether-stats-index*
 24 Specifies the RMON collection control index value. The value can range from 1 through 65535

25 *ether-stats-owner*
 26 Specifies the identity of the owner

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

2 Enables sFlow on an interface.

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">  
5   <ethernet>  
6     <name>1/5</name>  
7     <sflow xmlns="urn:brocade.com:mgmt:brocade-sflow">  
8       <enable></enable>  
9     </sflow>  
10   </ethernet>  
11 </interface>
```

12 Parameters

13 *name*
14 Specifies the interface name.

15 **enable**
16 Enables sFlow on the interface.

DRAFT

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

2 Configures the polling interval globally.

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>1/5</name>
7     <sflow xmlns="urn:brocade.com:mgmt:brocade-sflow">
8       <polling-interval>25</polling-interval>
9     </sflow>
10   </ethernet>
11 </interface>
```

12 Parameters

13 *name*

14 Specifies the interface name.

15 *polling-interval*

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

DRAFT

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

2 Sets the default sampling rate for an interface.

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">  
5   <ethernet>  
6     <name>1/5</name>  
7     <sflow xmlns="urn:brocade.com:mgmt:brocade-sflow">  
8       <sample-rate>33300</sample-rate>  
9     </sflow>  
10   </ethernet>  
11 </interface>
```

12 Parameters

- 13 *name*
14 Specifies the interface name
- 15 *sample-rate*
16 Specifies the sampling rate. The value can range from 2 through 16777215 packets

DRAFT

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

2 Enables automatic edge detection.

3 Usage

```

4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>2/1</name>
7     <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
8       <autoedge></autoedge>
9     </spanning-tree>
10   </ethernet>
11 </interface>

```

12 Parameters

13 *name*
14 Specifies the interface name.

15 **autoedge**
16 Enables automatic edge detection.

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

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

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>2/1</name>
7     <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
8       <bpdu-mac>0304.0800.0700</bpdu-mac>
9     </spanning-tree>
10   </ethernet>
11 </interface>
```

12 Parameters

13 *name*

14 Specifies the interface name

15 *bpdu-mac*

16 Specifies the MAC address of the Bridge Protocol Data Unit

17 **0100.0ccc.cccd**

18 Cisco Control Mac

19 **0304.0800.0700**

20 Extreme Control Mac

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

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

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>2/1</name>
7     <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
8       <cost>10000</cost>
9     </spanning-tree>
10   </ethernet>
11 </interface>
```

12 Parameters

13 *name*

14 Specifies the interface name.

15 *cost*

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

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

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

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>2/1</name>
7     <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
8       <edgeport>
9         <edgeportbasic></edgeportbasic>
10      </edgeport>
11    </spanning-tree>
12  </ethernet>
13 </interface>
```

14 Parameters

15 *name*
16 Specifies the interface name.

17 *edgeportbasic*
18 Enables the edge port on an interface.

DRAFT

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

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

3 Usage

```

4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>2/1</name>
7     <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
8       <edgeport>
9         <bpdu-filter></bpdu-filter>
10      </edgeport>
11    </spanning-tree>
12  </ethernet>
13 </interface>

```

14 Parameters

15 *name*

16 Specifies the interface name

17 **bpdu-filter**

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

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

3 Guards the port against the reception of BPDUs.

4 Usage

```
5 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
6   <ethernet>
7     <name>22/1</name>
8     <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
9       <edgeport>
10        <bpdu-guard></bpdu-guard>
11      </edgeport>
12    </spanning-tree>
13  </ethernet>
14 </interface>
```

15 Parameters

16 *name*

17 Specifies the interface name.

18 **bpdu-guard**

19 Guards the port against the reception of BPDUs.

DRAFT

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

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

Usage

```
5 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">  
6   <ethernet>  
7     <name>2/1</name>  
8     <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">  
9       <guard>  
10        <root></root>  
11      </guard>  
12    </spanning-tree>  
13  </ethernet>  
14 </interface>
```

Parameters

- 16 *name*
17 Specifies the interface name
- 18 **root**
19 Enables the guard root

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

2 Configures the hello-time in seconds on the interface.

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>2/1</name>
7     <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
8       <hello-time>5</hello-time>
9     </spanning-tree>
10   </ethernet>
11 </interface>
```

12 Parameters

13 *name*

14 Specifies the interface name

15 *hello-time*

16 Sets the interval between the hello Bridge Protocol Data Units (BPDUs) sent by the root switch
17 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

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

2 Configures the path-cost for a port.

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>2/1</name>
7     <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
8       <instance>
9         <id>5</id>
10        <cost>60</cost>
11      </instance>
12    </spanning-tree>
13  </ethernet>
14 </interface>
```

15 Parameters

16 *name*

17 Specifies the interface name

18 *id*

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

20 *cost*

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

1 interface/{interface-type}/{interface-name}/spanning-tree/instance/restricted- 2 role

3 Specifies to restrict the role of a port.

4 Usage

```
5 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
6   <ethernet>
7     <name>2/1</name>
8     <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
9       <instance>
10        <id>5</id>
11        <restricted-role></restricted-role>
12      </instance>
13    </spanning-tree>
14  </ethernet>
15 </interface>
```

16 Parameters

17 *name*

18 Specifies the interface name

19 *id*

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

21 **restricted-role**

22 Specifies to restrict the role of a port

1 interface/{interface-type}/{interface-name}/spanning-tree/instance/restricted- 2 tcn

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

4 Usage

```
5 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">  
6   <ethernet>  
7     <name>2/1</name>  
8     <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">  
9       <instance>  
10        <id>5</id>  
11        <restricted-tcn></restricted-tcn>  
12      </instance>  
13    </spanning-tree>  
14  </ethernet>  
15 </interface>
```

16 Parameters

17 *name*

18 Specifies the interface name

19 *id*

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

21 **restricted-tcn**

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

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

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

Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>2/1</name>
7     <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
8       <link-type>shared</link-type>
9     </spanning-tree>
10   </ethernet>
11 </interface>
```

Parameters

13 *name*
14 Specifies the interface name

15 *link-type*
16 Enables and disables the rapid transition
17 **point-to-point**
18 Enables rapid transition
19 **shared**
20 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, BDPUs 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

- 2 Enables the Port Fast feature on an interface to allow the interface to quickly transition to forwarding state.
- 3

Usage

```
5 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
6   <ethernet>
7     <name>22/0/1</name>
8     <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
9       <portfast>
10        <portfastbasic></portfastbasic>
11      </portfast>
12    </spanning-tree>
13  </ethernet>
14 </interface>
```

Parameters

- 16 *name*
- 17 Specifies the interface name

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

2 Sets the Port Fast BPDU filter for the port.

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>2/1</name>
7     <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
8       <portfast>
9         <bpdu-filter></bpdu-filter>
10      </portfast>
11    </spanning-tree>
12  </ethernet>
13 </interface>
```

14 Parameters

15 *name*
16 Specifies the interface name

17 **bpdu-filter**
18 Sets the Port Fast BPDU filter for the port

DRAFT

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

2 Guards the port against the reception of BPDUs.

3 Usage

```

4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>22/1</name>
7     <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
8       <portfast>
9         <bpdu-guard></bpdu-guard>
10      </portfast>
11    </spanning-tree>
12  </ethernet>
13 </interface>

```

14 Parameters

15 *name*

16 Specifies the interface name

17 **bpdu-guard**

18 Guards the port against the reception of BPDUs

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

2 Changes an interface's spanning-tree port priority.

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>2/1</name>
7     <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
8       <priority>32</priority>
9     </spanning-tree>
10   </ethernet>
11 </interface>
```

12 Parameters

13 *name*

14 Specifies the interface name

15 *priority*

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

DRAFT

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

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

3 Usage

```

4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>2/1</name>
7     <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
8       <restricted-role></restricted-role>
9     </spanning-tree>
10   </ethernet>
11 </interface>

```

12 Parameters

13 *name*

14 Specifies the interface name

15 **restricted-role**

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

DRAFT

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

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

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>2/1</name>
7     <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
8       <restricted-tcn></restricted-tcn>
9     </spanning-tree>
10   </ethernet>
11 </interface>
```

12 Parameters

13 *name*
14 Specifies the interface name

15 **restricted-tcn**
16 Restricts the Topology Change Notification

DRAFT

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

2 Disables spanning tree on the interface.

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>2/1</name>
7     <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
8       <shutdown></shutdown>
9     </spanning-tree>
10   </ethernet>
11 </interface>
```

12 Parameters

13 *name*

14 Specifies the interface name

15 **shutdown**

16 Disables spanning tree on the interface

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

2 Configures the VLAN identifier for the spanning tree interface.

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>2/1</name>
7     <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
8       <vlan>
9         <id>200</id>
10        <cost>10000</cost>
11      </vlan>
12    </spanning-tree>
13  </ethernet>
14 </interface>
```

15 Parameters

16 *name*
17 Specifies the interface name

18 *id*
19 Specifies the VLAN identifier for the spanning tree interface

20 *cost*
21 Specifies cost.

DRAFT

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

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

DRAFT

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

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

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>2//1</name>
7     <switchport></switchport>
8   </ethernet>
9 </interface>
```

10 Parameters

11 *name*

12 Specifies the interface name

13 **switchport**

14 Enables switching characteristics of the Layer 2 interface

DRAFT

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

2 Sets the Layer 2 interface as access.

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">  
5   <ethernet>  
6     <name>2/1</name>  
7     <switchport>  
8       <access>  
9         <accessvlan>20</accessvlan>  
10      </access>  
11    </switchport>  
12  </ethernet>  
13 </interface>
```

14 Parameters

15 *name*
16 Specifies the interface name
17 *accessvlan*
18 Specifies the VLAN ID

DRAFT

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

2 Sets the mode of the Layer 2 interface.

3 Usage

```

4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>1/0/2</name>
7     <switchport>
8       <port-security>
9         <oui>1122.2233.3322</oui>
10      </port-security>
11    </switchport>
12  </ethernet>
13 </interface>

```

14 Parameters

15 *name*
16 Specifies the interface name

17 *vlan-mode*
18 Sets the mode
19 *access*
20 Sets the Layer 2 interface as access. Access mode assigns the port to a VLAN
21 *trunk*
22 Sets the Layer 2 interface as trunk. Trunk mode makes the port linkable to other switches and
23 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

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

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

5 Usage

```
6 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">  
7   <ethernet>  
8     <name>1/2</name>  
9     <switchport>  
10       <mode>  
11         <trunk-no-default-native></trunk-no-default-native>  
12       </mode>  
13     </switchport>  
14   </ethernet>  
15 </interface>
```

16 Parameters

17 *name*
18 Specifies the interface name
19 **trunk-no-default-native**
20 Enables a port to trunk mode

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

2 Enables port security on an interface port.

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">  
5   <ethernet>  
6     <name>1/2</name>  
7     <switchport>  
8       <port-security></port-security>  
9     </switchport>  
10   </ethernet>  
11 </interface>
```

12 Parameters

13 *name*
14 Specifies the interface name
15 **port-security**
16 Enables port security

DRAFT

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

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

4 Usage

```

5 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
6   <ethernet>
7     <name>1/2</name>
8     <switchport>
9       <port-security>
10        <port-secutiry-mac-address>
11          <mac-address>1122.2233.3322</mac-address>
12          <port-sec-vlan>1</port-sec-vlan>
13        </port-secutiry-mac-address>
14      </port-security>
15    </switchport>
16  </ethernet>
17 </interface>

```

18 Parameters

19 *name*
20 Specifies the interface name

21 *mac-address*
22 Specifies the MAC address-based VLAN classifier rule used to map to a specific VLAN

23 *port-sec-vlan*
24 Specifies a VLAN

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

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

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>1/2</name>
7     <switchport>
8       <port-security>
9         <port-sec-max>12</port-sec-max>
10      </port-security>
11    </switchport>
12  </ethernet>
13 </interface>
```

14 Parameters

15 *name*

16 Specifies the interface name

17 *port-sec-max*

18 Specifies the maximum number of secure MAC addresses. The value can range is from 1 through
19 8192

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

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

Usage

```
5 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">  
6   <ethernet>  
7     <name>1/2</name>  
8     <switchport>  
9       <port-security>  
10        <oui>1122.2233.3322</oui>  
11      </port-security>  
12    </switchport>  
13  </ethernet>  
14 </interface>
```

Parameters

- 16 *name*
17 Specifies the interface name
- 18 *oui*
19 Specifies the OUI MAC address from which to accept vendor traffic, in the format xxxx.xxxx.xxxx

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

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

4 Usage

```
5 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">  
6   <ethernet>  
7     <name>1/2</name>  
8     <switchport>  
9       <port-security>  
10        <shutdown-time>15</shutdown-time>  
11       </port-security>  
12     </switchport>  
13   </ethernet>  
14 </interface>
```

15 Parameters

16 *name*

17 Specifies the interface name

18 *shutdown-time*

19 Specifies the amount of time to shut down the interface port, in minutes. The value can range
20 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

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

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

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>1/2</name>
7     <switchport>
8       <port-security>
9         <port-sec-violation>restrict</port-sec-violation>
10      </port-security>
11    </switchport>
12  </ethernet>
13 </interface>
```

14 Parameters

15 *name*

16 Specifies the interface name

17 *port-sec-violation*

18 Specifies the violation response

19 **restrict**

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

22 **shutdown**

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

1 ip/access-list/extended

2 Configures extended IP access list.

3 Usage

```
4 <ip-acl xmlns="urn:brocade.com:mgmt:brocade-ip-access-list">
5   <ip>
6     <access-list>
7       <extended>
8         <name>acl5</name>
9       </extended>
10    </access-list>
11  </ip>
12 </ip-acl>
```

13 Parameters

14 *name*

15 Specifies the access list name.

DRAFT

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

2 Configures the sequence number.

3 Usage

```

4 <ip-acl xmlns="urn:brocade.com:mgmt:brocade-ip-access-list">
5   <ip>
6     <access-list>
7       <extended>
8         <name>acl5</name>
9         <hide-ip-acl-ext>
10          <seq>
11            <seq-id>14</seq-id>
12            <action>deny</action>
13            <protocol-type>ip</protocol-type>
14            <src-host-any-sip>any</src-host-any-sip>
15            <dst-host-any-dip>host</dst-host-any-dip>
16            <dst-host-ip>1.1.1.1</dst-host-ip>
17            <vlan>1</vlan>
18            <count></count>
19            <log></log>
20          </seq>
21        </hide-ip-acl-ext>
22      </extended>
23    </access-list>
24  </ip>
25 </ip-acl>

```

26 Parameters

27 *name*
28 Access list name

29 *seq-id*
30 Specifies the sequence number for the rule

31 *action*
32 Specifies the action to be performed. The following actions can be performed.

33 **deny**
34 Drops traffic.

35 **hard-drop**
36 Forces to drop traffic.

37 **permit**
38 Allows traffic.

39 *protocol-type*
40 The type of protocol used.

41 *src-host-any-sip*
42 Specifies any source host IP address.

43 *dst-host-any-dip*
44 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.

DRAFT

1 ip/access-list/standard

2 Configures a standard IP access list.

3 Usage

```
4 <ip-acl xmlns="urn:brocade.com:mgmt:brocade-ip-access-list">
5   <ip>
6     <access-list>
7       <standard>
8         <name>acl20</name>
9       </standard>
10    </access-list>
11  </ip>
12 </ip-acl>
```

13 Parameters

14 *name*
15 Specifies the access list name.

DRAFT

1 ip/access-list/standard

2 Configures IPv6 standard access list.

3 Usage

```
4 <ipv6-acl xmlns="urn:brocade.com:mgmt:brocade-ipv6-access-list">
5   <ipv6>
6     <access-list>
7       <standard>
8         <name>acl24</name>
9       </standard>
10    </access-list>
11  </ipv6>
12 </ipv6-acl>
```

13 Parameters

14 *name*

15 Specifies the access list name.

DRAFT

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

2 Configures sequence number.

3 Usage

```

4 <ip-acl xmlns="urn:brocade.com:mgmt:brocade-ip-access-list">
5   <ip>
6     <access-list>
7       <standard>
8         <name>acl20</name>
9         <hide-ip-acl-std>
10          <seq>
11            <seq-id>20</seq-id>
12            <action>permit</action>
13            <src-host-any-sip>host</src-host-any-sip>
14            <src-host-ip>1.1.1.1</src-host-ip>
15            <count></count>
16            <log></log>
17          </seq>
18        </hide-ip-acl-std>
19      </standard>
20    </access-list>
21  </ip>
22 </ip-acl>

```

23 Parameters

24 *name*
 25 Accesses the list name.

26 *seq-id*
 27 Specifies the sequence number for the rule.

28 *action*
 29 Specifies the action to be performed. The following actions can be performed.

30 **deny**
 31 Drops traffic.

32 **hard-drop**
 33 Forces to drop traffic.

34 **permit**
 35 Allows traffic.

36 *src-host-any-sip*
 37 Specifies any source host IP address.

38 *src-host-ip*
 39 Specifies the source host IP address.

40 **count**
 41 Enables the counting of the packets matching the rule.

42 **log**

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

DRAFT

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.

1 ipv6/access-list/extended

2 Configure IPv6 extended access list.

3 Usage

```
4 <ipv6-acl xmlns="urn:brocade.com:mgmt:brocade-ipv6-access-list">
5   <ipv6>
6     <access-list>
7       <extended>
8         <name>acl14</name>
9       </extended>
10    </access-list>
11  </ipv6>
12 </ipv6-acl>
```

13 Parameters

14 *name*
15 Specifies the list name.

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

2 Configures the sequence number.

3 Usage

```

4 <ipv6-acl xmlns="urn:brocade.com:mgmt:brocade-ipv6-access-list">
5   <ipv6>
6     <access-list>
7       <extended>
8         <name>acl14</name>
9         <seq>
10           <seq-id>14</seq-id>
11           <action>deny</action>
12           <protocol-type>ipv6</protocol-type>
13           <src-host-any-sip>any</src-host-any-sip>
14           <dst-host-any-dip>host</dst-host-any-dip>
15           <dst-host-ip>2004:384d::24:23</dst-host-ip>
16           <vlan>1</vlan>
17           <count></count>
18           <log></log>
19         </seq>
20       </extended>
21     </access-list>
22   </ipv6>
23 </ipv6-acl>

```

24 Parameters

25 *name*
 26 Specifies the access list name.

27 *seq-id*
 28 Specifies the sequence number for the rule.

29 *action*
 30 Specifies the action to be performed. The following actions can be performed.

31 **deny**
 32 Drops traffic.

33 **hard-drop**
 34 Forces to drop traffic.

35 **permit**
 36 Allows traffic.

37 *protocol-type*
 38 Specifies the type of protocol used.

39 *src-host-any-sip*
 40 Specifies any source host IP address.

41 *dst-host-any-dip*
 42 Specifies any destination host IP address.

43 *dst-host-ip*

- 1 Specifies the destination host IP address.
- 2 *vlan*
- 3 VLAN interface number
- 4 **count**
- 5 Enables the counting of the packets matching the rule.
- 6 **log**
- 7 Packets matching the filter are sent to the CPU and a corresponding log entry is generated by
- 8 enabling the logging mechanism. This parameter is only available with permit and deny.

DRAFT

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

2 Configures the sequence number.

3 Usage

```

4 <ipv6-acl xmlns="urn:brocade.com:mgmt:brocade-ipv6-access-list">
5   <ipv6>
6     <access-list>
7       <standard>
8         <name>acl24</name>
9         <seq>
10          <seq-id>24</seq-id>
11          <action>permit</action>
12          <src-host-any-sip>any</src-host-any-sip>
13          <count></count>
14          <log></log>
15        </seq>
16      </standard>
17    </access-list>
18  </ipv6>
19 </ipv6-acl>

```

20 Parameters

21 *name*

22 Specifies the access list name.

23 *seq-id*

24 Specifies the sequence number for the rule.

25 *action*

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

27 **deny**

28 Drops traffic.

29 **hard-drop**

30 Forces to drop traffic.

31 **permit**

32 Allows traffic.

33 *src-host-any-sip*

34 Specifies any source host IP address.

35 **count**

36 Enables the counting of the packets matching the rule.

37 **log**

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

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

2 Configures the sequence number

3 Usage

```

4      <mac xmlns="urn:brocade.com:mgmt:brocade-mac-access-list">
5          <access-list>
6              <extended>
7                  <name>acl21</name>
8                  <hide-mac-acl-ext>
9                      <seq>
10                         <seq-id>25</seq-id>
11                         <action>hard-drop</action>
12                         <source>0011.1122.2233</source>
13                         <src-mac-addr-mask>1212.2323.3131</src-mac-addr-mask>
14                         <dst>any</dst>
15                         <ethertype>arp</ethertype>
16                         <vlan>1</vlan>
17                         <count></count>
18                         <log></log>
19                     </seq>
20                 </hide-mac-acl-ext>
21             </extended>
22         </access-list>
23     </mac>

```

24 Parameters

25 *name*
26 Specifies the access list name.

27 *seq-id*
28 Specifies the sequence ID.

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

31 **deny**
32 Drops traffic.

33 **hard-drop**
34 Forces to drop traffic.

35 **permit**
36 Allows traffic.

37 *source*
38 Specifies the source details.

39 *src-mac-addr-mask*
40 Specifies the source MAC address mask.

41 **dst**
42 Specifies details on the destination

43 *ethertype*

1 Filters extended ACLs traffic based on ethertype.

2 *vlan*

3 Specifies the VLAN number.

4 **count**

5 Displays the count of forwarding entries.

6 **log**

7 Specifies log.

DRAFT

1 mac/access-list/standard

2 Configures standard MAC access-list.

3 Usage

```
4 <mac xmlns="urn:brocade.com:mgmt:brocade-mac-access-list">
5   <access-list>
6     <standard>
7       <name>acl25</name>
8     </standard>
9   </access-list>
10 </mac>
```

11 Parameters

12 *name*
13 Specifies the access list name.

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

2 Configures the sequence number.

3 Usage

```

4      <mac xmlns="urn:brocade.com:mgmt:brocade-mac-access-list">
5          <access-list>
6              <standard>
7                  <name>acl25</name>
8                  <hide-mac-acl-std>
9                      <seq>
10                         <seq-id>21</seq-id>
11                         <action>permit</action>
12                         <source>0011.1122.2233</source>
13                         <src-mac-addr-mask>0101.0202.0303</src-mac-addr-mask>
14                         <count></count>
15                         <log></log>
16                     </seq>
17                 </hide-mac-acl-std>
18             </standard>
19         </access-list>
20     </mac>

```

21 Parameters

22 *name*

23 Specifies the access list name.

24 *seq-id*

25 Specifies the sequence ID.

26 *action*

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

28 **deny**

29 Drops traffic.

30 **hard-drop**

31 Forces to drop traffic.

32 **permit**

33 Allows traffic.

34 *source*

35 Specifies the source details.

36 *src-mac-addr-mask*

37 Specifies the source MAC address mask.

38 **count**

39 Displays the count of forwarding entries.

40 **log**

41 Species log.

1 mac-address-table/aging-time

2 Configures mac-address-table aging time.

3 Usage

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

9 Parameters

10 *legacy-time-out*

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

DRAFT

1 ntp/authentication-key

2 Configures NTP authentication key parameters.

3 Usage

```
4 <ntp xmlns="urn:brocade.com:mgmt:brocade-ntp">
5   <authentication-key>
6     <keyid>650</keyid>
7     <sha1>sha1</sha1>
8     <encryption-level>0</encryption-level>
9   </authentication-key>
10 </ntp>
```

11 Parameters

12 *keyid*

13 Specifies authentication key ID. The value can range from 65535

14 *encryption-type*

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

16 **sha1**

17 SHA1 encryption

18 **md5**

19 MD5 encryption

20 *encryption-level*

21 Specifies the encryption level. There are two encryption levels

22 **0**

23 Stores the key in clear-text format

1 ntp/disable

2 Disables the NTP server/client mode.

3 Usage

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

7 Parameters

8 **serve**

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

DRAFT

1 ntp/master

2 Configures the device as an authoritative NTP Server.

3 Usage

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

7 Parameters

8 **startum***number*
9 The NTP stratum number.

DRAFT

1 ntp/peer

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

3 Usage

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

9 Parameters

10 **ipv4 address | ipv6 address**

11 IPv4 or IPv6 address of the NTP peer.

12 *use-vrf name*

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

15 **key**

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

17 **version 3 | 4**

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

19 **minpoll interval**

20 The shortest polling interval. The range is 4 to 17. Default is 6. The interval argument is power of
21 2: 3=8s, 4=16s, 5=32s, 6=64s, 7=128s, 8=256s, 9=512s etc.

22 **maxpoll interval**

23 The longest polling interval. The range is 4 to 17. Default is 10. The interval argument is power of
24 2: 3=8s, 4=16s, 5=32s, 6=64s, 7=128s, 8=256s, 9=512s etc.

1 ntp/server

2 Configures Network Time Protocol (NTP) server IP address.

3 Usage

```
4 <ntp xmlns="urn:brocade.com:mgmt:brocade-ntp">
5   <server>
6     <ip>1.1.1.1</ip>
7     <key>1</key>
8   </server>
9 </ntp>
```

10 Parameters

11 *ip*

12 NTP server IPv4 or IPv6 IP address.

13 *key*

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

DRAFT

1 ntp/source-ip

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

3 Usage

```
4 <ntp xmlns="urn:brocade.com:mgmt:brocade-ntp">
5   <source-ip>mm-ip</source-ip>
6   <server>
7     <ip>10.20.192.71</ip>
8     <source-interface-type>loopback</source-interface-type>
9     <source-interface-number>34</source-interface-number>
10  </server>
11 </ntp>
```

12 Parameters

13 *source-ip*

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

15 **chassis-ip**

16 Uses chassis IP as source address.

17 **mm-ip**

18 Uses local MM IP as source address.

DRAFT

1 ntp/trusted-key

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

3 Usage

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

7 Parameters

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

9 List of authentication keys.

DRAFT

1 overlay-gateway

2 Configures overlay gateway instances.

3 Usage

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

7 Parameters

8 *name*
9 Overlay Gateway name.

DRAFT

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

2 Activates the Overlay Gateway instance.

3 Usage

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

8 Parameters

9 *name*

10 Specifies the Overlay Gateway name.

11 *activate*

12 Activates the overlay gateway instance.

DRAFT

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

2 Configures VLAN attachment for this gateway.

3 Usage

```
4 <overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
5   <name>ogl</name>
6   <attach>
7     <vlan>
8       <vid>1</vid>
9       <mac>0011.1122.2233</mac>
10    </vlan>
11  </attach>
12 </overlay-gateway>
```

13 Parameters

- 14 *vid*
15 Specifies the range of VLAN ids to add.
- 16 *mac*
17 Specifies MAC address in HHHH.HHHH.HHHH format.

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

2 Enables per VLAN statistics.

3 Usage

```

4 <overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
5   <name>ogl</name>
6   <enable>
7     <statistics>
8       <stats-direction>both</stats-direction>
9       <vlan-action>add</vlan-action>
10      <vlan-list>1</vlan-list>
11    </statistics>
12  </enable>
13 </overlay-gateway>

```

14 Parameters

15 *stats-direction*

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

17 **both**

18 Both transmitted and received packets.

19 **rx**

20 Received packets.

21 **tx**

22 Transmitted packets.

23 *vlan-action*

24 Specifies the action. Two actions are allowed.

25 **add**

26 Specifies the VLANs to add.

27 **remove**

28 Specifies the VLANs to remove.

29 *vlan-list*

30 Specifies the range of VLAN IDs.

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

2 Configures IPv4 access-group for the Overlay Gateway.

3 Usage

```
4 <overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
5   <name>ogl</name>
6   <access-lists>
7     <ipv4>
8       <in>
9         <ipv4-acl-in-name>acl4</ipv4-acl-in-name>
10        <ipv4-acl-in-dir></ipv4-acl-in-dir>
11      </in>
12    </ipv4>
13  </access-lists>
14 </overlay-gateway>
```

15 Parameters

16 *ipv4-acl-in-name*

17 Specifies the access list name.

18 *ipv4-acl-in-dir*

19 Configures IPv4 access group in ingress direction.

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

2 Configures Loopback interface for the Overlay Gateway

3 Usage

```
4 <overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">  
5   <name>ogl</name>  
6   <ip>  
7     <interface>  
8       <loopback>  
9         <loopback-id>1</loopback-id>  
10      </loopback>  
11    </interface>  
12  </ip>  
13 </overlay-gateway>
```

14 Parameters

15 *loopback-id*
16 Specifies loopback port number.

DRAFT

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

2 Uses Fabric-Virtual-Gateway IP address.

3 Usage

```

4 <overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
5   <name>og1</name>
6   <ip>
7     <interface>
8       <ve>
9         <ve-id>1</ve-id>
10        <fabric-virtual-gateway></fabric-virtual-gateway>
11      </ve>
12    </interface>
13  </ip>
14 </overlay-gateway>

```

15 Parameters

- 16 *ve-id*
- 17 Specifies VE interface number.
- 18 **fabric-virtual-gateway**
- 19 Enables use of Fabric-Virtual-Gateway IP address.

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

2 Configures virtual router

3 Usage

```
4 <overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
5   <name>og1</name>
6   <ip>
7     <interface>
8       <ve>
9         <ve-id>1</ve-id>
10        <vrrp-extended-group>1</vrrp-extended-group>
11      </ve>
12    </interface>
13  </ip>
14 </overlay-gateway>
```

15 Parameters

16 *ve-id*

17 Specifies VE interface number.

18 *vrrp-extended-group*

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

DRAFT

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

2 Configures IPv6 access-group for the Overlay Gateway.

3 Usage

```
4 <overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
5   <name>ogl</name>
6   <access-lists>
7     <ipv6>
8       <in>
9         <ipv6-acl-in-name>acl12</ipv6-acl-in-name>
10        <ipv6-acl-in-dir></ipv6-acl-in-dir>
11      </in>
12    </ipv6>
13  </access-lists>
14 </overlay-gateway>
```

15 Parameters

- 16 *ipv6-acl-in-name*
17 Specifies IPv6 access group name.
- 18 *ipv6-acl-in-dir*
19 Configures IPv6 access group in ingress direction.

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

2 Configures MAC access-group for the Overlay Gateway.

3 Usage

```
4 <overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
5   <name>ogl</name>
6   <access-lists>
7     <mac>
8       <in>
9         <mac-acl-in-name>acl10</mac-acl-in-name>
10        <mac-acl-in-dir></mac-acl-in-dir>
11      </in>
12    </mac>
13  </access-lists>
14 </overlay-gateway>
```

15 Parameters

16 *mac-acl-in-name*

17 Specifies the name of the MAC access list.

18 *mac-acl-in-dir*

19 Configures MAC access-group in ingress direction.

DRAFT

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

2 Configures the VLAN to VNI mappings for the Overlay Gateway.

3 Usage

```
4 <overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
5   <name>gateway2</name>
6   <map>
7     <vlan>
8       <vni>
9         <auto/>
10      </vni>
11    </vlan>
12  </map>
13 </overlay-gateway>
```

14 Parameters

15 **vlan**

16 Specifies the VLAN.

17 **vni**

18 Specifies the VNI.

19 *auto*

20 Specifies automatic mapping.

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

2 Configures SPAN for the tunnels of this gateway.

3 Usage

```

4 <overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
5   <name>name1</name>
6   <monitor>
7     <session>1</session>
8     <direction>both</direction>
9     <remote-endpoint>any</remote-endpoint>
10    <vlan-add-remove>add</vlan-add-remove>
11    <vlan-range>5,14-17</vlan-range>
12  </monitor>
13 </overlay-gateway>

```

14 Parameters

15 *session*

16 Specifies session number.

17 *direction*

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

19 **both**

20 Both transmitted and received packets.

21 **rx**

22 Received packets.

23 **tx**

24 Transmitted packets.

25 *remote-endpoint*

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

27 <A.B.C.D>

28 Specifies IP address of specific tunnel end point.

29 **any**

30 Specifies all tunnel end points.

31 *vlan-add-remove*

32 Adds or removes target VLAN IDs.

33 *vlan-range*

34 Specifies range of VLAN IDs to add or remove.

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

2 Configures SFLOW for the tunnels of this gateway.

3 Usage

```
4 <overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
5   <name>ogl</name>
6   <sflow>
7     <sflow-profile-name>sflow1</sflow-profile-name>
8     <sflow-remote-endpoint>any</sflow-remote-endpoint>
9     <sflow-vlan-action>add</sflow-vlan-action>
10    <sflow-vlan-range>100</sflow-vlan-range>
11  </sflow>
12 </overlay-gateway>
```

13 Parameters

14 *sflow-profile-name*

15 Specifies Sflow profile name.

16 *sflow-remote-endpoint*

17 Specifies tunnel destination end point address. The destination end point address can be set to.
18 <A.B.C.D>

19 Specifies IP address of specific tunnel end point.

20 **any**

21 Specifies all tunnel end points.

22 *sflow-vlan-action*

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

24 **add**

25 Specifies target VLAN IDs to add.

26 **remove**

27 Specifies target VLAN IDs to remove.

28 *sflow-vlan-range*

29 Specifies the range of VLAN IDs to add or remove.

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

2 Configures remote extension site.

3 Usage

```
4 <overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">  
5   <name>ogl</name>  
6   <site>  
7     <name>site1</name>  
8   </site>  
9 </overlay-gateway>
```

10 Parameters

11 *name*
12 Specifies the site name.

DRAFT

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

2 Creates BFD session for the tunnels to the remote site.

3 Usage

```
4 <overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
5   <name>ogl</name>
6   <site>
7     <name>site1</name>
8     <bfd>
9       <params>
10        <interval>
11          <min-tx>110</min-tx>
12          <min-rx>330</min-rx>
13          <multiplier>3</multiplier>
14        </interval>
15      </params>
16    </bfd>
17  </site>
18 </overlay-gateway>
```

19 Parameters

20 *name*

21 Specifies the site name

22 *min-tx*

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

25 *min-rx*

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

28 *multiplier*

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

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

2 Configures Layer2 domains to be extended towards this site.

3 Usage

```
4 <overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
5   <name>gateway2</name>
6   <site>
7     <name>sanjose</name>
8     <extend>
9       <vlan>
10        <add>1-10</add>
11      </vlan>
12    </extend>
13  </site>
14 </overlay-gateway>
```

15 Parameters

16 *name*

17 Specifies site name.

18 **add**

19 Specifies VLAN IDs to add.

20 **remove**

21 Specifies VLAN IDs to remove.

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

2 Configures tunnel destination IP address.

3 Usage

```
4 <overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">
5   <name>gateway2</name>
6   <site>
7     <name>sanjose</name>
8     <tunnel-dst>
9       <address>10.10.10.1</address>
10    </tunnel-dst>
11  </site>
12 </overlay-gateway>
```

13 Parameters

14 *name*

15 Specifies site name.

16 *address*

17 Specifies tunnel destination IP address.

DRAFT

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

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

5 Usage

```
6 <overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">  
7   <name>overlaygateway1</name>  
8   <site>  
9     <name>site1</name>  
10    <mac-learning>  
11      <protocol>bgp</protocol>  
12    </mac-learning>  
13  </site>  
14 </overlay-gateway>
```

15 Parameters

16 *name*
17 Specifies the site name.

18 *protocol*
19 Specifies control plane MAC learning protocol.

20 **bgp**
21 Sets BGP-EVPN based MAC learning

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

2 Disables tunnel to the remote site.

3 Usage

```
4 <overlay-gateway xmlns="urn:brocade.com:mgmt:brocade-tunnels">  
5   <name>gateway2</name>  
6   <site>  
7     <name>sanjose</name>  
8     <shutdown></shutdown>  
9   </site>  
10 </overlay-gateway>
```

11 Parameters

12 *name*

13 Specifies the name of the site.

14 **shutdown**

15 Disables tunnels to the remote site.

DRAFT

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

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

4 Usage

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

9 Parameters

10 *name*
11 Specifies the overlay gateway name

12 *gw-type*
13 Specifies the type of Overlay Gateway. There are two types of Overlay Gateway
14 **hardware-vtep**
15 Specifies NSX Controller/OpenStack integration
16 **layer2-extension**
17 Specifies Layer 2 extension

1 protocol/cfm

2 Configures the CFM protocol.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <cfm xmlns="urn:brocade.com:mgmt:brocade-dotlag">
6     <domain-name>
7       <domain-name>{req_val}</domain-name>
8       <ma-name>
9         <ma-name>{req_val}</ma-name>
10        <cfm-ma-sub-commands>
11          <mep>
12            <mep-id>{req_val}</mep-id>
13          </mep>
14        </cfm-ma-sub-commands>
15      </ma-name>
16    </domain-name>
17  </cfm>
18 </protocol>
```

19 Parameters

20 *domain-name*
21 Specifies the maintenance domain name.

22 *ma-name*
23 Specifies the maintenance association name.

24 *mep-id*
25 Specifies maintenance endpoint ID.

1 protocol/link-oam

2 Configures the Link OAM protocol.

3 Usage

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

DRAFT

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

2 Enables IEEE data centre bridging exchange FCoE Application TLV.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
6     <advertise>
7       <dcbx-fcoe-app-tlv></dcbx-fcoe-app-tlv>
8     </advertise>
9   </lldp>
10 </protocol>
```

11 Parameters

12 **dcbx-fcoe-app-tlv**

13 Enables IEEE data centre bridging exchange FCoE Application TLV.

DRAFT

1 protocol/ldp/advertise/dcbx-fcoe-logical-link-tlv

2 Enables IEEE data centre bridging exchange FCoE logical link TLV.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ldp xmlns="urn:brocade.com:mgmt:brocade-ldp">
6     <advertise>
7       <dcbx-fcoe-logical-link-tlv></dcbx-fcoe-logical-link-tlv>
8     </advertise>
9   </ldp>
10 </protocol>
```

11 Parameters

12 **dcbx-fcoe-logical-link-tlv**

13 Enables IEEE data centre bridging exchange FCoE logical link TLV.

DRAFT

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

2 Enables IEEE data centre bridging exchange iSCSI application TLV.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
6     <advertise>
7       <dcbx-iscsi-app-tlv></dcbx-iscsi-app-tlv>
8     </advertise>
9   </lldp>
10 </protocol>
```

11 Parameters

12 **dcbx-iscsi-app-tlv**

13 Enables IEEE data centre bridging exchange iSCSI application TLV.

DRAFT

1 protocol/lldp/advertise/dcbx-tlv

2 Enables IEEE data centre bridging exchange TLV.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
6     <advertise>
7       <dcbx-tlv></dcbx-tlv>
8     </advertise>
9   </lldp>
10 </protocol>
```

11 Parameters

12 **dcbx-tlv**

13 Enables IEEE data centre bridging exchange TLV.

DRAFT

1 protocol/lldp/advertise/dot1-tlv

2 Enables IEEE 802.1 organizationally specific TLV.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
6     <advertise>
7       <dot1-tlv></dot1-tlv>
8     </advertise>
9   </lldp>
10 </protocol>
```

11 Parameters

12 **dot1-tlv**

13 Enables IEEE 802.1 organizationally specific TLV.

DRAFT

1 protocol/lldp/advertise/dot3-tlv

2 Enables IEEE 802.3 organizationally specific TLV.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
6     <advertise>
7       <dot3-tlv></dot3-tlv>
8     </advertise>
9   </lldp>
10 </protocol>
```

11 Parameters

12 **dot3-tlv**

13 Enables IEEE 802.3 organizationally specific TLV.

DRAFT

1 protocol/lldp/advertise/optional-tlv

2 Enables the optional TLVs.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
6     <advertise>
7       <optional-tlv>
8         <management-address></management-address>
9         <port-description></port-description>
10        <system-capabilities></system-capabilities>
11        <adv-tlv-system-description></adv-tlv-system-description>
12        <adv-tlv-system-name></adv-tlv-system-name>
13      </optional-tlv>
14    </advertise>
15  </lldp>
16 </protocol>
```

17 Parameters

18 **management-address**

19 Enables management address TLV.

20 **port-description**

21 Enables port description TLV.

22 **system-capabilities**

23 Enables system capabilities TLV.

24 *adv-tlv-system-description*

25 Specifies the system description .

26 *adv-tlv-system-name*

27 Specifies the system name .

1 protocol/lldp/description

2 Configures user description for LLDP.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">  
5   <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">  
6     <description>lldpconfig</description>  
7   </lldp>  
8 </protocol>
```

9 Parameters

10 *description*
11 Specifies user description for LLDP.

DRAFT

1 protocol/lldp/disable

2 Disable LLDP configuration.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">  
5   <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">  
6     <disable></disable>  
7   </lldp>  
8 </protocol>
```

9 Parameters

10 **disable**

11 Disables LLDP configuration.

DRAFT

1 protocol/lldp/hello

2 Configures the hello transmit interval.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
6     <hello>35</hello>
7   </lldp>
8 </protocol>
```

9 Parameters

10 *hello*

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

DRAFT

1 protocol/lldp/iscsi-priority

2 Configures the Ethernet priority to advertise for iSCSI.

3 Usage

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

9 Parameters

10 *iscsi-priority*

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

DRAFT

1 protocol/ldp/mode

2 Configures the LLDP mode.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <lldp xmlns="urn:brocade.com:mgmt:brocade-ldp">
6     <mode>rx</mode>
7   </lldp>
8 </protocol>
```

9 Parameters

10 *mode*
11 Specifies the LLDP mode.
12 **rx**
13 LLDP receive only mode.
14 **tx**
15 LLDP transmit only mode.

DRAFT

1 protocol/lldp/multiplier

2 Configures the timeout multiplier.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
6     <multiplier>3</multiplier>
7   </lldp>
8 </protocol>
```

9 Parameters

10 *multiplier*

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

DRAFT

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

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

3 Usage

```

4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
6     <profile>
7       <profile-name>profile1</profile-name>
8       <advertise>
9         <dcbx-tlv></dcbx-tlv>
10      </advertise>
11    </profile>
12  </lldp>
13 </protocol>

```

14 Parameters

15 *profile-name*

16 Specifies the profile name.

17 *advertise*

18 Specifies the advertise TLV configuration.

19 **dcbx-fcoe-app-tlv**

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

23 **dcbx-fcoe-logical-link-tlv**

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

25 **dcbx-iscsi-app-tlv**

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

27 **dcbx-tlv**

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

30 **dot1-tlv**

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

33 **dot3-tlv**

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

36 **optional-tlv**

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

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

2 Sets the interval between LLDP hello messages.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ldp xmlns="urn:brocade.com:mgmt:brocade-ldp">
6     <profile>
7       <profile-name>profile1</profile-name>
8       <hello>100</hello>
9     </profile>
10   </ldp>
11 </protocol>
```

12 Parameters

13 *profile-name*

14 Specifies the profile name.

15 *hello*

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

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

2 Sets the LLDP mode on the switch.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <lldp xmlns="urn:brocade.com:mgmt:brocade-lldp">
6     <profile>
7       <profile-name>profile1</profile-name>
8       <mode>rx</mode>
9     </profile>
10   </lldp>
11 </protocol>
```

12 Parameters

13 *profile-name*

14 Specifies the profile name.

15 *mode*

16 Specifies the LLDP mode on the switch.

17 **tx**

18 Specifies to enable only the transmit mode.

19 **rx**

20 Specifies to enable only the receive mode.

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

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

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ldp xmlns="urn:brocade.com:mgmt:brocade-ldp">
6     <profile>
7       <profile-name>profile1</profile-name>
8       <multiplier>2</multiplier>
9     </profile>
10   </ldp>
11 </protocol>
```

12 Parameters

13 *profile-name*

14 Specifies the profile name

15 *multiplier*

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

DRAFT

1 protocol/lldp/system-description

2 Configures the system description.

3 Usage

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

9 Parameters

10 *system-description*
11 Specifies the system description.

DRAFT

1 protocol/lldp/system-name

2 Configures the system name.

3 Usage

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

9 Parameters

10 *system-name*
11 Specifies the system-name.

DRAFT

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

2 Configures bridge priority commands for multiple spanning tree protocol.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <mstp>
7       <bridge-priority>32768</bridge-priority>
8     </mstp>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *bridge-priority*

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

DRAFT

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

2 Configures Cisco interoperability.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <mstp>
7       <cisco-interoperability>disable</cisco-interoperability>
8     </mstp>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *cisco-interoperability*
13 Enables or disables cisco interoperability.
14 **disable**
15 Disables cisco interoperability.
16 **enable**
17 Enables cisco interoperability.

DRAFT

1 protocol/spanning-tree/mstp/description

2 Configures spanning tree description.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <mstp>
7       <description>mstpsan</description>
8     </mstp>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *description*
13 Specifies spanning tree description.

DRAFT

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

2 Enables timeout for the port to be enabled back.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <mstp>
7       <error-disable-timeout>
8         <enable></enable>
9       </error-disable-timeout>
10    </mstp>
11  </spanning-tree>
12 </protocol>
```

13 Parameters

14 **enable**

15 Enables timeout for the port to be enabled back.

DRAFT

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

2 Configures time interval after which port will be enabled.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <mstp>
7       <error-disable-timeout>
8         <interval>350</interval>
9       </error-disable-timeout>
10    </mstp>
11  </spanning-tree>
12 </protocol>
```

13 Parameters

14 *interval*

15 Specifies time interval after which port will be enabled. The value can range from 10 through
16 1000000 seconds.

DRAFT

1 protocol/spanning-tree/mstp/forward-delay

2 Configures the forward delay time for the spanning tree.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <mstp>
7       <forward-delay>20</forward-delay>
8     </mstp>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *forward-delay*

13 Specifies forward delay time. The delay time can range from 4 through 30 seconds. The default
14 delay time is set to 15 seconds.

DRAFT

1 protocol/spanning-tree/mstp/hello-time

2 Configures the hello time interval for the spanning tree.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <mstp>
7       <hello-time>3</hello-time>
8     </mstp>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *hello-time*

13 Specifies the hello time. The hello time can range from 1 through 20 seconds. The default hello
14 time is set to 2 seconds.

DRAFT

1 protocol/spanning-tree/mstp/instance/priority

2 Configures bridge priority for the common instance.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <mstp>
7       <instance>
8         <id>1</id>
9         <priority>4096</priority>
10      </instance>
11    </mstp>
12  </spanning-tree>
13 </protocol>
```

14 Parameters

15 *id*

16 Specifies MSTP instance Id. The value can range from 1 through 31.

17 *priority*

18 Specifies the bridge priority. The value can range from 0 through 61440.

DRAFT

1 protocol/spanning-tree/mstp/instance/vlan

2 Configures VLAN for MSTP.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <mstp>
7       <instance>
8         <id>1</id>
9         <vlan>1</vlan>
10      </instance>
11    </mstp>
12  </spanning-tree>
13 </protocol>
```

14 Parameters

15 *id*
16 Specifies MSTP instance ID.

17 *vlan*
18 Specifies VLAN.

DRAFT

1 protocol/spanning-tree/mstp/max-age

2 Configures the max age for the spanning tree.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <mstp>
7       <max-age>25</max-age>
8     </mstp>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *max-age*

13 Specifies the maximum time to listen for root bridge in seconds. The value can range from 6
14 through 40 seconds. The default time is set to 20. seconds.

DRAFT

1 protocol/spanning-tree/mstp/max-hops

2 Configures the maximum hops the BPDU will be valid for.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <mstp>
7       <max-hops>25</max-hops>
8     </mstp>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *max-hops*

13 Specifies the maximum hops the BPDU will be valid for. The value can range from 1 through 40.

DRAFT

1 protocol/spanning-tree/mstp/port-channel

2 Controls port channel behavior for spanning tree

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <mstp>
7       <port-channel>
8         <path-cost>standard</path-cost>
9       </port-channel>
10    </mstp>
11  </spanning-tree>
12 </protocol>
```

13 Parameters

14 *path-cost*

15 Sets the path cost behavior.

16 **custom**

17 Custom behavior - pathcost will change according to bandwidth.

18 **standard**

19 Standard behavior - pathcost will not change according to bandwidth.

1 protocol/spanning-tree/mstp/region

2 Sets the MST region.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <mstp>
7       <region>region1</region>
8     </mstp>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *region*
13 Specifies the name of the region.

DRAFT

1 protocol/spanning-tree/mstp/revision

2 Sets the revision number.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <mstp>
7       <revision>1</revision>
8     </mstp>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *revision*

13 Specifies the revision number. The value can range from 0 through 255.

DRAFT

1 protocol/spanning-tree/mstp/shutdown

2 Disables the Multiple Spanning Tree Protocol (MSTP) globally.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <mstp>
7       <shutdown></shutdown>
8     </mstp>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 **shutdown**

13 Shuts down the spanning tree protocol.

DRAFT

1 protocol/spanning-tree/mstp/transmit-holdcount

2 Configures transmit hold count of the bridge.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <mstp>
7       <transmit-holdcount>7</transmit-holdcount>
8     </mstp>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *transmit-holdcount*

13 Specifies the transmit hold count. The value can range from 1 through 10.

DRAFT

1 protocol/spanning-tree/pvst/bridge-priority

2 Configures bridge priority for PVST Spanning-tree.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <pvst>
7       <bridge-priority>32768</bridge-priority>
8     </pvst>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *bridge-priority*

13 Specifies the bridge priority. Valid values range from 0 through 61440 in increments of 4096.

DRAFT

1 protocol/spanning-tree/pvst/description

2 Configures the PVST spanning-tree description.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <pvst>
7       <description>pvstspan</description>
8     </pvst>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *decsription*

13 Specifies the PVST spanning-tree description.

DRAFT

1 protocol/spanning-tree/pvst/error-disable-timeout/enable

2 Enables the timeout mechanism for the port to be enabled back.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <pvst>
7       <error-disable-timeout>
8         <enable></enable>
9       </error-disable-timeout>
10    </pvst>
11  </spanning-tree>
12 </protocol>
```

13 Parameters

14 *enable*

15 Enables timeout for PVST spanning tree.

DRAFT

1 protocol/spanning-tree/pvst/error-disable-timeout/interval

2 Configures interval after which port shall be enabled.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <pvst>
7       <error-disable-timeout>
8         <interval>350</interval>
9       </error-disable-timeout>
10    </pvst>
11  </spanning-tree>
12 </protocol>
```

13 Parameters

14 *interval*

15 Specifies the time for the interface to time out. The interval can range from 10 through 1000000
16 seconds. Ther default interval is 300 seconds.

DRAFT

1 protocol/spanning-tree/pvst/forward-delay

2 Specifies the time an interface spends in each of the listening and learning states.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <pvst>
7       <forward-delay>20</forward-delay>
8     </pvst>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *forward-delay*

13 Specifies the time that an interface spends in the Spanning Tree Protocol (STP) learning and
14 listening states. Valid values range from 4 through 30 seconds. The default value is 15 seconds.

DRAFT

1 protocol/spanning-tree/pvst/hello-time

2 Sets the interval between the hello Bridge Protocol Data Units (BPDUs) sent on an interface.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <pvst>
7       <hello-time>3</hello-time>
8     </pvst>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *hello-time*

13 Specifies the time interval between the hello BPDUs sent on an interface. The value can range
14 from 1 through 10 seconds. The default value is 2 seconds.

DRAFT

1 protocol/spanning-tree/pvst/max-age

2 Sets the interval time in seconds between messages that the PVST spanning tree receives from the
3 interface.

4 Usage

```
5 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">  
6   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">  
7     <pvst>  
8       <max-age>25</max-age>  
9     </pvst>  
10   </spanning-tree>  
11 </protocol>
```

12 Parameters

13 *max-age*
14 Specifies the PVST Spanning Tree Protocol interface maximum age. The value can range from 6
15 through 40. The default value is 20 seconds.

DRAFT

1 protocol/spanning-tree/pvst/port-channel

2 Sets the path-cost behavior.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <pvst>
7       <port-channel>
8         <path-cost>standard</path-cost>
9       </port-channel>
10    </pvst>
11  </spanning-tree>
12 </protocol>
```

13 Parameters

14 *path-cost*

15 Sets the path cost behaviour

16 **custom**

17 Specifies to use the custom behavior, which sets the path-cost changes according to the port-channel's bandwidth.

19 **standard**

20 Specifies to use the standard behavior, which sets that the path-cost does not change according to port-channel's bandwidth.

1 protocol/spanning-tree/pvst/shutdown

2 Disables the Rapid Spanning Tree Protocol (RSTP) globally.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <pvst>
7       <shutdown></shutdown>
8     </pvst>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 **shutdown**

13 Disables the Rapid Spanning Tree Protocol (RSTP) globally.

DRAFT

1 protocol/spanning-tree/pvst/vlan/forward-delay

2 Configures the forward-delay for PVST spanning tree

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <pvst>
7       <vlan>
8         <id>1</id>
9         <forward-delay>20</forward-delay>
10      </vlan>
11    </pvst>
12  </spanning-tree>
13 </protocol>
```

14 Parameters

15 *forward-delay*

16 Specifies the forward delay time in seconds. The value can range from 4 to 30 seconds. The
17 default value is 15 seconds.

DRAFT

1 protocol/spanning-tree/pvst/vlan/hello-time

2 Configures the hello interval for the PVST spanning tree.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <pvst>
7       <vlan>
8         <id>1</id>
9         <hello-time>3</hello-time>
10      </vlan>
11    </pvst>
12  </spanning-tree>
13 </protocol>
```

14 Parameters

15 *id*

16 Specifies the VLAN ID.

17 *hello-time*

18 Specifies the hello interval. The interval can range from 4 to 30 seconds. The default value is 2
19 seconds.

1 protocol/spanning-tree/pvst/vlan/max-age

2 Configures the max-age for the PVST spanning tree.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <pvst>
7       <vlan>
8         <id>1</id>
9         <max-age>25</max-age>
10      </vlan>
11    </pvst>
12  </spanning-tree>
13 </protocol>
```

14 Parameters

15 *id*
16 Specifies the VLAN ID.

17 *max-age*
18 Specifies the max-age for the PVST spanning tree.

1 protocol/spanning-tree/pvst/vlan/priority

2 Configures the bridge priority.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <pvst>
7       <vlan>
8         <id>1</id>
9         <priority>4096</priority>
10      </vlan>
11    </pvst>
12  </spanning-tree>
13 </protocol>
```

14 Parameters

- 15 *id*
16 Specifies the VLAN ID.
- 17 *priority*
18 Specifies the bridge priority in increments of 4096.

DRAFT

1 protocol/spanning-tree/rpvst/bridge-priority

2 Specifies the bridge priority for the common instance.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <rpvst>
7       <bridge-priority>32768</bridge-priority>
8     </rpvst>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *bridge-priority*

13 Specifies the bridge priority. The values can range from 0 through 61440 in increments of 4096.
14 The default value is 32768.

DRAFT

1 protocol/spanning-tree/rpvst/description

2 Configures the RPVST Spanning tree description.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <rpvst>
7       <description>rpvstspan</description>
8     </rpvst>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *decription*

13 Specifies the RPVST Spanning tree description.

DRAFT

1 protocol/spanning-tree/rpvst/error-disable-timeout/enable

2 Enables the timer to bring the interface out of the error-disabled state.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <rpvst>
7       <error-disable-timeout>
8         <enable></enable>
9       </error-disable-timeout>
10    </rpvst>
11  </spanning-tree>
12 </protocol>
```

13 Parameters

14 **enable**

15 Enables the timer to bring the interface out of the error-disabled state.

DRAFT

1 protocol/spanning-tree/rpvst/error-disable-timeout/interval

2 Configures the timeout for errors on an interface.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <rpvst>
7       <error-disable-timeout>
8         <interval>400</interval>
9       </error-disable-timeout>
10    </rpvst>
11  </spanning-tree>
12 </protocol>
```

13 Parameters

14 *interval*

15 Specifies the time for the interface to time out. The value can range from 10 through 1000000
16 seconds. The default value is 300 seconds.

DRAFT

1 protocol/spanning-tree/rpvst/forward-delay

2 Specifies the time an interface spends in each of the listening and learning states.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <rpvst>
7       <forward-delay>20</forward-delay>
8     </rpvst>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *forward-delay*

13 Specifies the time that an interface spends in the RPVST Spanning Tree Protocol (STP) learning
14 and listening states. Valid values range from 4 through 30 seconds. The default value is 15
15 seconds.

DRAFT

1 protocol/spanning-tree/rpvst/hello-time

2 Sets the interval between the hello Bridge Protocol Data Units (BPDUs) sent on an interface.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <rpvst>
7       <hello-time>3</hello-time>
8     </rpvst>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *hello-time*

13 Specifies the time interval between the hello BPDUs sent on an interface. The value can range
14 from 1 through 10 seconds. The default value is 2 seconds.

DRAFT

1 protocol/spanning-tree/rpvst/max-age

2 Sets the interval time in seconds between messages that the spanning tree receives from the interface.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <rpvst>
7       <max-age>35</max-age>
8     </rpvst>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *max-age*

13 Configures the Spanning Tree Protocol interface maximum age. The valid value can range from 6
14 through 40. The default value is 20 seconds.

1 protocol/spanning-tree/rpvst/port-channel

2 Sets the path-cost behavior.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <rpvst>
7       <port-channel>
8         <path-cost>standard</path-cost>
9       </port-channel>
10    </rpvst>
11  </spanning-tree>
12 </protocol>
```

13 Parameters

14 *path-cost*

15 Sets the path cost priority.

16 **custom**

17 Specifies to use the custom behavior, which sets the path-cost changes according to the port-channel's bandwidth.

19 **standard**

20 Specifies to use the standard behavior, which sets that the path-cost does not change according to port-channel's bandwidth.

1 protocol/spanning-tree/rpvst/shutdown

2 Disables the Rapid PVST(RPVST) globally.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <rpvst>
7       <shutdown></shutdown>
8     </rpvst>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 **shutdown**

13 Disables the Rapid PVST(RPVST) globally.

DRAFT

1 protocol/spanning-tree/rpvst/transmit-holdcount

2 Configures the maximum number of Bridge Protocol Data Units (BPDUs) transmitted per second for the
3 R-PVST+.

4 Usage

```
5 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">  
6   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">  
7     <rpvst>  
8       <transmit-holdcount>5</transmit-holdcount>  
9     </rpvst>  
10   </spanning-tree>  
11 </protocol>
```

12 Parameters

13 *transmit-holdcount*

14 Specifies the number of BPDUs than can be sent before pausing for 1 second. The value can
15 range from 1 through 10. The default value is 6 units.

1 protocol/spanning-tree/rpvst/vlan/forward-delay

2 Configures the forward-delay for RPVST spanning tree.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <rpvst>
7       <vlan>
8         <id>1</id>
9         <forward-delay>20</forward-delay>
10      </vlan>
11    </rpvst>
12  </spanning-tree>
13 </protocol>
```

14 Parameters

15 *id*

16 Specifies the VLAN ID.

17 *forward-delay*

18 Specifies the forward delay time in seconds. The value can range from 4 to 30 seconds. The
19 default value is 15 seconds.

1 protocol/spanning-tree/rpvst/vlan/hello-time

2 Configures the hello interval for the RPVST spanning tree.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <rpvst>
7       <vlan>
8         <id>1</id>
9         <hello-time>3</hello-time>
10      </vlan>
11    </rpvst>
12  </spanning-tree>
13 </protocol>
```

14 Parameters

15 *id*

16 Specifies the VLAN ID.

17 *hello-time*

18 Specifies the hello interval. The interval can range from 4 to 30 seconds. The default value is 2
19 seconds.

1 protocol/spanning-tree/rpvst/vlan/max-age

2 Configures the max-age for the RPVST spanning tree.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <rpvst>
7       <vlan>
8         <id>1</id>
9         <max-age>25</max-age>
10      </vlan>
11    </rpvst>
12  </spanning-tree>
13 </protocol>
```

14 Parameters

15 *id*
16 Specifies the VLAN ID.

17 *max-age*
18 Specifies the max-age for the RPVST spanning tree.

1 protocol/spanning-tree/rpvst/vlan/priority

2 Configures the bridge priority.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <rpvst>
7       <vlan>
8         <id>1</id>
9         <priority>4096</priority>
10      </vlan>
11    </rpvst>
12  </spanning-tree>
13 </protocol>
```

14 Parameters

15 *id*

16 Specifies the VLAN ID

17 *priority*

18 Specifies the bridge priority in increments of 4096. The value can range from.

DRAFT

1 protocol/spanning-tree/rstp/bridge-priority

2 Specifies the bridge priority for the common instance.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <rstp>
7       <bridge-priority>32768</bridge-priority>
8     </rstp>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *bridge-priority*

13 Specifies the bridge priority. The values can range from 0 through 61440 in increments of 4096.
14 The default value is 32768.

DRAFT

1 protocol/spanning-tree/rstp/description

2 Configures the Rapid Spanning tree (RSTP) description.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <rstp>
7       <description>rstpspan</description>
8     </rstp>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *description*
13 Specifies the RPVST Spanning tree description.

DRAFT

1 protocol/spanning-tree/rstp/error-disable-timeout/enable

2 Enables the timer to bring the interface out of the error-disabled state.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <rstp>
7       <error-disable-timeout>
8         <enable></enable>
9       </error-disable-timeout>
10    </rstp>
11  </spanning-tree>
12 </protocol>
```

13 Parameters

14 *enable*

15 Enables the timer to bring the interface out of the error-disabled state.

DRAFT

1 protocol/spanning-tree/rstp/error-disable-timeout/interval

2 Configures the timeout for errors on an interface.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <rstp>
7       <error-disable-timeout>
8         <interval>500</interval>
9       </error-disable-timeout>
10    </rstp>
11  </spanning-tree>
12 </protocol>
```

13 Parameters

14 *interval*

15 Specifies the time for the interface to time out. The value can range from 10 through 1000000
16 seconds. The default value is 300 seconds.

DRAFT

1 protocol/spanning-tree/rstp/forward-delay

2 Specifies the time an interface spends in each of the listening and learning states.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <rstp>
7       <forward-delay>30</forward-delay>
8     </rstp>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *forward-delay*

13 Specifies the time that an interface spends in the RPVST Spanning Tree Protocol (STP) learning
14 and listening states. Valid values range from 4 through 30 seconds. The default value is 15
15 seconds.

DRAFT

1 protocol/spanning-tree/rstp/hello-time

2 Sets the interval between the hello Bridge Protocol Data Units (BPDUs) sent on an interface.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <rstp>
7       <hello-time>4</hello-time>
8     </rstp>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *hello-time*

13 Specifies the time interval between the hello BPDUs sent on an interface. The value can range
14 from 1 through 10 seconds. The default value is 2 seconds.

DRAFT

1 protocol/spanning-tree/rstp/max-age

2 Sets the interval time in seconds between messages that the spanning tree receives from the interface.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <rstp>
7       <max-age>40</max-age>
8     </rstp>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *max-age*

13 Specifies the Rapid Spanning Tree Protocol interface maximum age. The valid value can range
14 from 6 through 40. The default value is 20 seconds.

DRAFT

1 protocol/spanning-tree/rstp/port-channel

2 Sets the path-cost behavior.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <rpvst>
7       <port-channel>
8         <path-cost>standard</path-cost>
9       </port-channel>
10    </rpvst>
11  </spanning-tree>
12 </protocol>
```

13 Parameters

14 *path-cost*

15 Sets the path cost priority

16 **custom**

17 Specifies to use the custom behavior, which sets the path-cost changes according to the port-channel's bandwidth .

19 **standard**

20 Specifies to use the standard behavior, which sets that the path-cost does not change according to port-channel's bandwidth.

1 protocol/spanning-tree/rstp/shutdown

2 Disables the Rapid Spanning Tree Protocol (RSTP) globally.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <rstp>
7       <shutdown></shutdown>
8     </rstp>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 **shutdown**

13 Disables the Rapid Spanning Tree Protocol (RSTP) globally.

DRAFT

1 protocol/spanning-tree/rstp/transmit-holdcount

2 Configures the maximum number of Bridge Protocol Data Units (BPDUs) transmitted per second for the
3 RSTP.

4 Usage

```
5 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">  
6   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">  
7     <rpvst>  
8       <transmit-holdcount>5</transmit-holdcount>  
9     </rpvst>  
10   </spanning-tree>  
11 </protocol>
```

12 Parameters

13 *transmit-holdcount*

14 Specifies the number of BPDUs than can be sent before pausing for 1 second. The value can
15 range from 1 through 10. The default value is 6 units.

DRAFT

1 protocol/spanning-tree/stp/bridge-priority

2 Specifies the bridge priority for the common instance.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <stp>
7       <bridge-priority>32768</bridge-priority>
8     </stp>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *bridge-priority*

13 Specifies the bridge priority. The values can range from 0 through 61440 in increments of 4096.
14 The default value is 32768.

DRAFT

1 protocol/spanning-tree/stp/description

2 Configures the STP Spanning tree description.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <stp>
7       <description>stpspan</description>
8     </stp>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *description*
13 Specifies the STP Spanning tree description.

DRAFT

1 protocol/spanning-tree/stp/error-disable-timeout/enable

2 Enables the timer to bring the interface out of the error-disabled state.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <stp>
7       <error-disable-timeout>
8         <enable></enable>
9       </error-disable-timeout>
10    </stp>
11  </spanning-tree>
12 </protocol>
```

13 Parameters

14 **enable**

15 Enables the timer to bring the interface out of the error-disabled state.

DRAFT

1 protocol/spanning-tree/stp/error-disable-timeout/interval

2 Configures the timeout for errors on an interface.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <rstp>
7       <error-disable-timeout>
8         <interval>550</interval>
9       </error-disable-timeout>
10    </rstp>
11  </spanning-tree>
12 </protocol>
```

13 Parameters

14 *interval*

15 Specifies the time for the interface to time out. The value can range from 10 through 1000000
16 seconds. The default value is 300 seconds.

DRAFT

1 protocol/spanning-tree/stp/forward-delay

2 Specifies the time an interface spends in each of the listening and learning states.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <stp>
7       <forward-delay>30</forward-delay>
8     </stp>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *forward-delay*

13 Specifies the time that an interface spends in the RPVST Spanning Tree Protocol (STP) learning
14 and listening states. Valid values range from 4 through 30 seconds. The default value is 15
15 seconds.

DRAFT

1 protocol/spanning-tree/stp/hello-time

2 Sets the interval between the hello Bridge Protocol Data Units (BPDUs) sent on an interface.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <stp>
7       <hello-time>5</hello-time>
8     </stp>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *hello-time*

13 Specifies the time interval between the hello BPDUs sent on an interface. The value can range
14 from 1 through 10 seconds. The default value is 2 seconds.

DRAFT

1 protocol/spanning-tree/stp/max-age

2 Sets the interval time in seconds between messages that the spanning tree receives from the interface.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <stp>
7       <max-age>40</max-age>
8     </stp>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 *max-age*

13 Specifies the Rapid Spanning Tree Protocol interface maximum age. The valid value can range
14 from 6 through 40. The default value is 20 seconds.

DRAFT

1 protocol/spanning-tree/stp/port-channel

2 Sets the path-cost behavior.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <stp>
7       <port-channel>
8         <path-cost>standard</path-cost>
9       </port-channel>
10    </stp>
11  </spanning-tree>
12 </protocol>
```

13 Parameters

14 *path-cost*

15 Sets the path cost priority

16 **custom**

17 Specifies to use the custom behavior, which sets the path-cost changes according to the port-channel's bandwidth.

19 **standard**

20 Specifies to use the standard behavior, which sets that the path-cost does not change according to port-channel's bandwidth.

1 protocol/spanning-tree/stp/shutdown

2 Disables the STP Spanning Tree Protocol globally.

3 Usage

```
4 <protocol xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <spanning-tree xmlns="urn:brocade.com:mgmt:brocade-xstp">
6     <stp>
7       <shutdown></shutdown>
8     </stp>
9   </spanning-tree>
10 </protocol>
```

11 Parameters

12 **shutdown**

13 Disables the STP Spanning Tree Protocol globally.

DRAFT

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

1 ras

2 Collects data for SupportSave.

3 Usage

```
4 <copy xmlns="urn:brocade.com:mgmt:brocade-ras">
5   <support>
6     <scp>
7       <user>{req_val}</user>
8       <host>{req_val}</host>
9       <directory>{req_val}</directory>
10      <password>{req_val}</password>
11      <timeout>{req_val}</timeout>
12    </scp>
13  </support>
```

14 Parameters

15 **support**

16 Specifies support.

17 **scp**

18 Specifies secure copy (SCP).

19 *user*

20 Specifies the username.

21 *host*

22 Specifies the IP address of the host.

23 *directory*

24 Specifies the directory.

25 *password*

26 Specifies the password.

27 *timeout*

28 Specifies the value for timeout.

1 rmon/alarm

2 Configures Remote Monitoring Protocol (RMON) alarm.

3 Usage

```

4 <rmon xmlns="urn:brocade.com:mgmt:brocade-rmon">
5   <alarm-entry>
6     <alarm-index>5</alarm-index>
7     <snmp-oid>1.3.6.1.2.1.16.1.1.1.5.65535</snmp-oid>
8     <alarm-interval>30</alarm-interval>
9     <alarm-sample>absolute</alarm-sample>
10    <alarm-rising-threshold>195</alarm-rising-threshold>
11    <alarm-rising-event-index>25</alarm-rising-event-index>
12    <alarm-falling-threshold>95</alarm-falling-threshold>
13    <alarm-falling-event-index>27</alarm-falling-event-index>
14    <alarm-owner>john_smith</alarm-owner>
15  </alarm-entry>
16 </rmon>

```

17 Parameters

18 *alarm-index*

19 Specifies the alarm index. The value can range from 1 through 65535.

20 *snmp-oid*

21 Specifies sampling object SNMP OID.

22 *alarm-interval*

23 Specifies alarm interval. The interval can range from 1 through 2147483648 seconds.

24 *alarm-sample*

25 Specifies alarm sample type.

26 **absolute**

27 Sample type absolute.

28 **delta**

29 Sample type delta.

30 *alarm-rising-threshold*

31 Specifies alarm rising threshold value. The value can range from 0 through 4294967295.

32 *alarm-rising-event-index*

33 Specifies event index for rising threshold. The value can range from 1 through 65535.

34 *alarm-falling-threshold*

35 Specifies alarm falling threshold value. The value can range from 0 through 4294967295.

36 *alarm-falling-event-index*

37 Specifies event index for falling threshold. The value can range from 1 through 65535.

38 *alarm-owner*

39 Specifies the owner identity.

1 rmon/event

2 Configures Remote Monitoring Protocol (RMON) event.

3 Usage

```
4 <rmon xmlns="urn:brocade.com:mgmt:brocade-rmon">
5   <event-entry>
6     <event-index>23</event-index>
7     <event-description>event1</event-description>
8     <log></log>
9     <event-community>default</event-community>
10    <event-owner>owner1</event-owner>
11  </event-entry>
12 </rmon>
```

13 Parameters

14 *event-index*

15 Specifies event index. The value can range from 1 through 65535.

16 *event-description*

17 Specifies event description.

18 **log**

19 Logs the event.

20 *event-community*

21 Sends traps for the event.

22 *event-owner*

23 Specifies owner name.

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

2 Configures the IS-IS protocol.

3 Usage

```
4 <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <ethernet>
6     <name>{req_val}</name>
7     <ip>
8       <intf-router-isis xmlns="urn:brocade.com:mgmt:brocade-isis">
9         <int-router-isis>
10           <interface-ip-router-isis/>
11         </int-router-isis>
12       </intf-router-isis>
13     </ip>
14   </ethernet>
15 </interface>
```

16 Parameters

17 **ethernet**

18 Specifies the Ethernet interface.

19 *name*

20 Specifies the interface name.

21 **int-router-isis**

22 Specifies the ISIS router interface.

1 router/isis/is-type

2 Changes the IS-IS level globally.

3 Usage

```
4 <routing-system xmlns="urn:brocade.com:mgmt:brocade-common-def">
5   <router>
6     <isis xmlns="urn:brocade.com:mgmt:brocade-isis">
7       <router-isis-cmds-holder>
8         <router-isis-attributes>
9           <is-type/>
10        </router-isis-attributes>
11      </router-isis-cmds-holder>
12    </isis>
13  </router>
14 </routing-system>
```

15 Parameters

16 **router-isis-attributes**

17 Configures the ISIS router attributes.

DRAFT

1 route-map

2 Configures, retrieves, and modifies route-map instance.

3 Usage

```
4 <routing-system xmlns="urn:brocade.com:mgmt:brocade-common-def">
5   <route-map xmlns="urn:brocade.com:mgmt:brocade-ip-policy">
6     <name>{req_val}</name>
7     <action-rm>{req_val}</action-rm>
8     <instance>{req_val}</instance>
9   </route-map>
10 </routing-system>
```

11 Parameters

12 *name*
13 Specifies route-map name.

14 *action-rm*
15 Specifies the action.

16 *instance*
17 Specifies the route-map instance ID.

DRAFT

1 router/mpls

2 Configures the MPLS protocol.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">  
5   <router>  
6     <mpls/>  
7   </router>  
8 </mpls-config>
```

DRAFT

1 router/mpls/ldp

2 Configures the Label Distribution Protocol (LDP).

3 Usage

```

4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <ldp/>
9       </mpls-cmds-holder>
10    </mpls>
11  </router>
12 </mpls-config>

```

13 Parameters

14 *ldp-session-ip*
 15 Specifies the LDP peer ip address.

16 *ldp-targeted-peer-ip*
 17 Specifies the peer IP Address.

18 *load-sharing*
 19 Specifies the number of load-sharing paths.

20 *hello-interval-link*
 21 In seconds (1-32767, default 5).

22 *hello-interval-target*
 23 In seconds (1-32767, default 15).

24 *hello-timeout-link*
 25 In seconds (2-65535, default 15).

26 *hello-timeout-target*
 27 In seconds (2-65535, default 45).

28 *ka-interval*
 29 In seconds (1-65535 default 6).

30 *ka-int-count*
 31 In seconds (1-65535 default 6).

32 *ka-timeout*
 33 In seconds (1-65535).

34 *filter-fec-in*
 35 Apply filtering on inbound FECs.

36 *filter-fec-out*
 37 Apply filtering on inbound FECs.

38 *advertise-fec*

1 In seconds (1-65535).

2 *lsr-id*

3 IP address to be used as LSR id for LDP.

4 *filter-fec-out*

5 Apply filtering on outbound FECs.

6 *rx-label-silence-timer*

7 Specifies the receive label silence time (100-60000 ms). The default is 1000.

8 *key*

9 Enables TCP-MD5 authentication.

10 *rx-label-silence-timer*

11 Specifies the receive label silence time (100-60000 ms). The default value is 1000.

12 *max-neighbor-reconnect-time*

13 Specifies the maximum time to wait for neighbor to reconnect (60-300 sec). The default value is

14 120.

15 *max-neighbor-recovery-time*

16 Specifies the maximum time to wait for neighbor to recover (60-3600 sec). The default value is

17 120.

18 *reconnect-time*

19 Specifies the session reconnect time (60-300 sec). The default value is 120.

20 *recovery-time*

21 Recovery time (60-3600 sec). The default value is 120.

22 *tx-label-silence-timer*

23 Specifies the transmit label silence timer (100-60000 msec).The default value is 1000.

24 *notification-timer*

25 Specifies the notification timer (100-120000 msec). The default value is 60000.

26 *tunnel-metric*

27 Specifies the LDP tunnel metric value (1-65535; default 0).

28 *label-withdrawal-delay*

29 Specifies the label withdrawal delay. The range is from 0 to 300. The default value is 60.

1 router/mpls/rsvp

2 Configures the MPLS RSVP.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <policy>
9           <rsvp-periodic-flooding-time/>
10        </policy>
11      </mpls-cmds-holder>
12    </mpls>
```

13 Parameters

14 **policy**

15 Specifies the MPLS policy.

16 *rsvp-periodic-flooding-tim*

17 Specifies the periodic flooding time.

DRAFT

1 router/mpls/policy

2 Configures an MPLS policy.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <policy/>
9       </mpls-cmds-holder>
10    </mpls>
11  </router>
12 </mpls-config>
```

13 Parameters

14 *policy*

15 Specifies the MPLS policy.

DRAFT

1 router/mpls/policy/transit-session-accounting

2 Enables traffic statistics for transit sessions.

3 Usage

```
4 mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5     <router>
6         <mpls>
7             <mpls-cmds-holder>
8                 <policy>
9                     <transit-session-accounting/>
10                </policy>
11            </mpls-cmds-holder>
12        </mpls>
13    </router>
14 </mpls-config>
```

15 Parameters

16 *policy*

17 Specifies the MPLS policy.

18 *transit-session-accounting*

19 Specifies transit session account.

DRAFT

1 router/mpls/policy/ingress-tunnel-accounting

2 Enables traffic statistics for tunnel interfaces.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <policy>
9           <ingress-tunnel-accounting/>
10        </policy>
11      </mpls-cmds-holder>
12    </mpls>
13  </router>
14 </mpls-config>>
```

15 Parameters

16 *policy*
17 Specifies the MPLS policy.

18 *ingress-tunnel-accounting*
19 Enables traffic statistics for tunnel interfaces

1 router/mpls/policy/qos-ttl-mode

2 Configures the MPLS TTL and QOS propagation model.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <policy>
9           <qos-ttl-mode/>
10        </policy>
11      </mpls-cmds-holder>
12    </mpls>
13  </router>
14 </mpls-config>
15 </filter>
16 </get-config>
17 </rpc>
```

18 Parameters

- 19 *policy*
20 Specifies the MPLS policy.
- 21 *qos-ttl-mode*
22 Configures the MPLS TTL and QOS propagation model.

1 router/mpls/policy/traffic-engineering/isis

2 Defines timer value for soft preemption to happen.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <policy>
9           <traffic-engineering>
10            <isis-set-level/>
11          </traffic-engineering>
12        </policy>
13      </mpls-cmds-holder>
14    </mpls>
15  </router>
16 </mpls-config>
```

17 Parameters

18 *policy*
19 Specifies the MPLS policy.

20 *traffic-engineering*
21 Specifies traffic engineering.

22 *isis-set-level*
23 Sets level for ISIS.

1 router/mpls/policy/soft-preemption/cleanup-timer

2 Defines timer value for soft preemption to happen.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <policy>
9           <soft-preemption>
10            <cleanup-timer/>
11          </soft-preemption>
12        </policy>
13      </mpls-cmds-holder>
14    </mpls>
15  </router>
16 </mpls-config>
```

17 Parameters

18 *policy*
19 Specifies the MPLS policy.

20 *soft-preemption*
21 Specifies the soft preemption.

22 *cleanup-timer*
23 Specifies the cleanup timer.

1 router/mpls/policy/cspf-computation-mode/rsvp-periodic-flooding-time

2 Sets the interval for RSVP TE periodic flooding.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <policy>
9           <rsvp-periodic-flooding-time/>
10          </policy>
11        </mpls-cmds-holder>
12      </mpls>
13    </router>
14  </mpls-config>
```

15 Parameters

16 *policy*

17 Specifies the MPLS policy.

18 *rsvp-periodic-flooding-time*

19 Specifies the RSVP periodic flooding time.

20 *cspf-metric-type*

21 Specifies the metric type.

1 router/mpls/policy/qos-ttl-mode

2 Configures the MPLS TTL and QOS propagation model.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <policy>
9           <qos-ttl-mode/>
10        </policy>
11      </mpls-cmds-holder>
12    </mpls>
13  </router>
14 </mpls-config>
```

15 Parameters

16 *policy*

17 Specifies the MPLS policy.

18 *qos-ttl-mode*

19 Configures the MPLS TTL and QOS propagation model.

DRAFT

1 router/mpls/policy/cspf-computation-mode/rapid-retry

2 Configures the rapid retry option.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <policy>
9           <rapid-retry/>
10        </policy>
11      </mpls-cmds-holder>
12    </mpls>
13  </router>
14 </mpls-config>
```

15 Parameters

16 *policy*
17 Specifies the MPLS policy.

18 *rapid-retry*
19 Specifies rapid retry.

1 router/mpls/policy/cspf-computation-mode/retry-time

2 Configures LSP retry time.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <policy>
9           <retry-time/>
10        </policy>
11      </mpls-cmds-holder>
12    </mpls>
13  </router>
14 </mpls-config>
```

DRAFT

1 router/mpls/policy/cspf-computation-mode/handle-ospf-neighbor-down

2 Configures MPLS to handle OSPF neighbor down event.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <policy>
9           <handle-ospf-neighbor-down/>
10        </policy>
11      </mpls-cmds-holder>
12    </mpls>
13  </router>
14 </mpls-config>
```

15 Parameters

16 *policy*
17 Specifies the MPLS policy.

18 *handle-ospf-neighbor-down*
19 Handles a down OSPF neighbor.

1 router/mpls/policy/cspf-computation-mode/handle-isis-neighbor-down

2 Configures MPLS to handle ISIS neighbor down event.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <policy>
9           <handle-isis-neighbor-down/>
10        </policy>
11      </mpls-cmds-holder>
12    </mpls>
13  </router>
14 </mpls-config>
```

15 Parameters

16 *policy*
17 Specifies the MPLS policy.
18 *handle-isis-neighbor-down*
19 Handles a down ISIS neighbor.

DRAFT

1 router/mpls/policy/cspf-computation-mode/cspf-interface-constraint

2 Uses interface IP address for Constrained Shortest Path First (CSPF) computation.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <policy>
9           <cspf-interface-constraint/>
10          </policy>
11        </mpls-cmds-holder>
12      </mpls>
13    </router>
14  </mpls-config>
```

15 Parameters

16 *policy*
17 Specifies the MPLS policy.

18 *cspf-interface-constraint*
19 Specifies CSPF interface constraint.

1 router/mpls/policy/cspf-computation-mode/add-penalty

2 Adds penalty of all matching Constrained Shortest Path First (CSPF)-groups to TE metric of TE link.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <policy>
9           <cspf-group-computation>
10            <add-penalty/>
11            </cspf-group-computation>
12          </policy>
13        </mpls-cmds-holder>
14      </mpls>
15    </router>
16  </mpls-config>
```

17 Parameters

18 *policy*
19 Specifies the MPLS policy.

20 *cspf-group-computation*
21 Specifies CSPF group computation.

22 *add-penalty*
23 Adds penalty.

1 router/mpls/policy/cspf-computation-mode/metric-type

2 Selects metric type for CSPF computation..

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <policy>
9           <cspf-computation-mode>
10            <cspf-metric-type/>
11          </cspf-computation-mode>
12        </policy>
13      </mpls-cmds-holder>
14    </mpls>
15  </router>
16 </mpls-config>
```

17 Parameters

- 18 *policy*
19 Specifies the MPLS policy.
- 20 *cspf-computation-mode*
21 Specifies the CSPF computation mode.
- 22 *cspf-metric-type*
23 Specifies the metric type.

1 router/mpls/policy/cspf-computation-mode/ignore-overload-bit

2 Ignores overload bit during CSPF computation.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <policy>
9           <cspf-computation-mode>
10            <ignore-overload-bit/>
11          </cspf-computation-mode>
12        </policy>
13      </mpls-cmds-holder>
14    </mpls>
15  </router>
16 </mpls-config>
```

17 Parameters

18 *policy*
19 Specifies the MPLS policy.

20 *cspf-computation-mode*
21 Specifies the CSPF computation mode.

22 *ignore-overload-bit*
23 Ignore the overload bit.

1 router/mpls/policy/backup-retry-time

2 Configures the backup retry time.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <policy>
9           <backup-retry-time/>
10        </policy>
11      </mpls-cmds-holder>
12    </mpls>
13  </router>
14 </mpls-config>
```

15 Parameters

16 *policy*
17 Specifies the MPLS policy.

18 *backup-retry-time*
19 Specifies the backup retry time.

1 router/mpls/cspf-group/(cspf-group-name)/penalty

2 Configures the Constrained Shortest Path First (CSPF) group penalty value.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5     <router>
6         <mpls>
7             <mpls-cmds-holder>
8                 <cspf-group>
9                     <cspf-group-name>{req_val}</cspf-group-name>
10                    <cspf-group-penalty-n>
11                        <cspf-group-penalty/>
12                    </cspf-group-penalty-n>
13                </cspf-group>
14            </mpls-cmds-holder>
15        </mpls>
16    </router>
17 </mpls-config>
```

18 Parameters

19 **cspf-group**

20 Configures a CSPF group.

21 *cspf-group-name*

22 Specifies the CSPF group name.

23 *cspf-group-penalty-n*

24 Specifies the CSPF group penalty name.

25 *cspf-group-penalty*

26 Specifies the CSPF group penalty.

1 router/mpls/lsp-xc-traps/enable

2 Enable the LSP XC up, down logging and traps.

3 Usage

```
4 <rpc message-id="101" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
5   <get-config>
6     <source>
7       <running/>
8     </source>
9     <filter type="subtree">
10       <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
11         <router>
12           <mpls>
13             <mpls-cmds-holder>
14               <lsp-xc-traps>
15                 <lsp-xc-traps-enable/>
16               </lsp-xc-traps>
17             </mpls-cmds-holder>
18           </mpls>
19         </router>
20       </mpls-config>
21     </filter>
22   </get-config>
23 </rpc>
```

1 router/mpls/cspf-group/(cspf-groupname)/penalty

2 Configures the CSPF group penalty value.

3 Usage-DELETE

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <policy>
9           <cspf-group-computation>
10            <add-penalty/>
11          </cspf-group-computation>
12        </policy>
13      </mpls-cmds-holder>
14    </mpls>
15  </router>
16 </mpls-config>
```

17 Parameters

18 **policy**

19 Specifies the policy.

DRAFT

1 router/mpls/lsp-xc-traps/enable

2 Enables the LSP cross connect up, down, logging, and traps.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <lsp-xc-traps>
9           <lsp-xc-traps-enable/>
10          </lsp-xc-traps>
11        </mpls-cmds-holder>
12      </mpls>
13    </router>
14  </mpls-config>
```

15 Parameters

16 **lsp-xc-traps**

17 Specifies LSP cross connect traps.

18 *lsp-xc-traps-enable*

19 Enables LSP cross connect traps.

1 router/mpls/rsvp

2 Configures the MPLS RSVP.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <policy>
9           <rsvp-periodic-flooding-time/>
10        </policy>
11      </mpls-cmds-holder>
12    </mpls>
```

13 Parameters

14 **policy**

15 Specifies the MPLS policy.

16 *rsvp-periodic-flooding-tim*

17 Specifies the periodic flooding time.

DRAFT

1 router/mpls/rsvp/reliable-messaging/rapid-retry-limit

2 Configures the maximum number of retries for an unacknowledged message.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <rsvp>
9           <g-reliable-messaging>
10             <rapid-retry-limit/>
11           </g-reliable-messaging>
12         </rsvp>
13       </mpls-cmds-holder>
14     </mpls>
15   </router>
16 </mpls-config>
```

17 Parameters

18 **rsvp**

19 Specifies the MPLS Resource Reservation Protocol (RSVP).

20 **g-reliable-messaging**

21 Specifies the group reliable messaging.

22 *bundle-message*

23 Specifies the bundle message.

1 router/mpls/rsvp/reliable-messaging/rapid-retrans-interval

2 Configures an interval for an unacknowledged message to be resent.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <rsvp>
9           <g-reliable-messaging>
10            <rapid-retrans-interval/>
11          </g-reliable-messaging>
12        </rsvp>
13      </mpls-cmds-holder>
14    </mpls>
15  </router>
```

16 Parameters

17 **rsvp**

18 Specifies the MPLS Resource Reservation Protocol (RSVP).

19 **g-reliable-messaging**

20 Specifies group reliable messaging.

21 *rapid-retrans-interval*

22 Specifies interval for rapid retransmission.

1 router/mpls/rsvp/reliable-messaging/rapid-retrans-decay

2 Percentage increase in the rapid retransmission interval for each consecutive unacknowledged RSVP
3 message.

4 Usage

```
5 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">  
6   <router>  
7     <mpls>  
8       <mpls-cmds-holder>  
9         <rsvp>  
10          <g-reliable-messaging>  
11            <rapid-retrans-decay/>  
12          </g-reliable-messaging>  
13        </rsvp>  
14      </mpls-cmds-holder>  
15    </mpls>  
16  </router>  
17 </mpls-config>
```

18 Parameters

19 **rsvp**
20 Specifies the MPLS Resource Reservation Protocol (RSVP).
21 **g-reliable-messaging**
22 Specifies group reliable messaging.
23 *rapid-retrans-decay*
24 Specifies rapid retransmission decay.

1 router/mpls/rsvp/refresh-reduction/bundle-message/bundle-send-delay

2 Configure the bundle send delay value.

3 bundle-send-delay

4 Usage

```
5 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
6   <router>
7     <mpls>
8       <mpls-cmds-holder>
9         <rsvp>
10           <g-refresh-reduction>
11             <bundle-message>
12               <bundle-send-delay/>
13             </bundle-message>
14           </g-refresh-reduction>
15         </rsvp>
16       </mpls-cmds-holder>
17     </mpls>
18   </router>
19 </mpls-config>
```

20 Parameters

21 **rsvp**

22 Specifies the MPLS Resource Reservation Protocol (RSVP).

23 **g-refresh-reduction**

24 Specifies the group refresh reduction value.

25 *bundle-message*

26 Specifies the bundle message.

27 *bundle-send-delay*

28 Specifies the bundle send delay.

1 router/mpls/rsvp/refresh-multiple

2 Configures the MPLS RSVP refresh multiple.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <rsvp>
9           <refresh-multiple/>
10        </rsvp>
11      </mpls-cmds-holder>
12    </mpls>
13  </router>
14 </mpls-config>
```

15 Parameters

16 **rsvp**

17 Specifies the MPLS Resource Reservation Protocol (RSVP).

18 *refresh-multiple*

19 Specifies refresh multiple.

1 router/mpls/rsvp/refresh-interval

2 Configures the MPLS RSVP refresh interval.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <rsvp>
9           <refresh-interval/>
10        </rsvp>
11      </mpls-cmds-holder>
12    </mpls>
13  </router>
14 </mpls-config>
```

15 Parameters

16 **rsvp**

17 Specifies the MPLS Resource Reservation Protocol (RSVP).

18 *refresh-interval*

19 Specifies the refresh interval.

DRAFT

1 router/mpls/rsvp/g-rsvp-backup-bw-guarantee

2 Sets up a backup path requesting bandwidth.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <rsvp>
9           <g-rsvp-backup-bw-guarantee/>
10        </rsvp>
11      </mpls-cmds-holder>
12    </mpls>
13  </router>
14 </mpls-config>
```

15 Parameters

16 **rsvp**

17 Specifies the MPLS Resource Reservation Protocol (RSVP).

18 **g-rsvp-backup-bw-guarantee**

19 Specifies bandwidth guarantee for the group RSVP backup.

1 router/mpls/rsvp/global-rsvp-hello-acknowledgements

2 Acknowledges the RSVP hellos on interfaces supporting RSVP hello and not having RSVP sessions.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <rsvp>
9           <global-rsvp-hello-acknowledgements/>
10          </rsvp>
11        </mpls-cmds-holder>
12      </mpls>
13    </router>
14  </mpls-config>
```

15 Parameters

16 **rsvp**

17 Specifies the MPLS Resource Reservation Protocol (RSVP).

18 **global-rsvp-hello-acknowledgements**

19 Specifies global RSVP hello acknowledgements.

1 router/mpls/rsvp/global-rsvp-hello/tolerance

2 Configures the number of unacknowledged RSVP hello requests before timeout.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <rsvp>
9           <global-rsvp-hello>
10            <global-rsvp-hello-tolerance/>
11          </global-rsvp-hello>
12        </rsvp>
13      </mpls-cmds-holder>
14    </mpls>
15  </router>
16 </mpls-config>
```

17 Parameters

18 **rsvp**

19 Specifies the MPLS Resource Reservation Protocol (RSVP).

20 **global-rsvp-hello**

21 Specifies the global RSVP hello.

22 *global-rsvp-hello-tolerance*

23 Specifies the tolerance value for global RSVP hello.

1 router/mpls/rsvp/global-rsvp-hello

2 Configures the interval between two RSVP hello requests.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <rsvp>
9           <global-rsvp-hello>
10            <global-rsvp-hello-interval/>
11          </global-rsvp-hello>
12        </rsvp>
13      </mpls-cmds-holder>
14    </mpls>
15  </router>
16 </mpls-config>
```

17 Parameters

18 **rsvp**

19 Specifies the MPLS Resource Reservation Protocol (RSVP).

20 **global-rsvp-hello**

21 Specifies global RSVP hello

22 *global-rsvp-hello-interval*

23 Specifies the interval for global RSVP hello.

1 router/mpls/rsvp/refresh-reduction/summary-refresh

2 Configures the refresh reduction summary refresh feature.

3 Usage

```
4 <mpls-config xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <router>
6     <mpls>
7       <mpls-cmds-holder>
8         <rsvp>
9           <g-refresh-reduction>
10            <summary-refresh/>
11          </g-refresh-reduction>
12        </rsvp>
13      </mpls-cmds-holder>
14    </mpls>
15  </router>
16 </mpls-config>
```

17 Parameters

18 **rsvp**

19 Specifies the MPLS Resource Reservation Protocol (RSVP).

20 **summary-refresh**

21 Specifies summary refresh.

1 qos-mpls

2 Configures, retrieves, and modifies MPLS Quality of Service (QoS).

3 Usage

```
4 <qos-mpls xmlns="urn:brocade.com:mgmt:brocade-qos-mpls">
5   <map>
6     <exp-traffic-class>
7       <exp-traffic-class-map-name>{req_val}</exp-traffic-class-map-name>
8     </exp-traffic-class>
9   </map>
10 </qos-mpls>
```

11 Parameters

12 **map**

13 Specifies the map.

14 *exp-traffic-class*

15 The EXP traffic class value. Valid values range from 0 through 7.

16 *exp-traffic-class-map-name*

17 The EXP traffic class map name.

DRAFT

1 sflow/agent-address

2 Configures the sFlow agent-ID address..

3 Usage

```
4 <sflow xmlns="urn:brocade.com:mgmt:brocade-sflow">
5   <agent-address>
6     <agent-interface-name/>
7   </agent-address>
8 </sflow>
```

9 Parameters

10 **ipv4**

11 Specifies an agent-address configuration for IPv4 collectors.

12 **ipv6**

13 Specifies an agent-address configuration for IPv6 collectors.

14 **ethernet** *slot/port*

15 Specifies an Ethernet slot and port..

16 **loopback** *loopback-number*

17 Specifies a loopback interface. Valid values range from 1 through 255.

18 **management** *slot*

19 Specifies a management interface.

20 **ve** *ve-interface*

21 Specifies a virtual Ethernet (VE) interface. Valid values range from 1 through 4096.

1 sflow/collector

2 Configures sFlow collector.

3 Usage

```
4 <sflow xmlns="urn:brocade.com:mgmt:brocade-sflow">
5   <collector>
6     <collector-ip-address>1.1.1.1</collector-ip-address>
7     <collector-port-number>50</collector-port-number>
8     <use-vrf>mgmt-vrf</use-vrf>
9   </collector>
10 </sflow>
```

11 Parameters

12 *collector-ip-address*

13 Specifies the IP address of the sFlow collector

14 *collector-port-number*

15 Specifies the port number used by the sFlow collector. The value can range from 1 through
16 65535

17 *use-vrf*

18 Specifies the VRF to use for sending data to the collector

1 sflow/enable

2 Enables sFlow globally.

3 Usage

```
4 <sflow xmlns="urn:brocade.com:mgmt:brocade-sflow">  
5   <enable></enable>  
6 </sflow>
```

7 Parameters

8 **enable**

9 Enable sFlow globally

DRAFT

1 sflow/polling-interval

2 Configures interface counter polling interval.

3 Usage

```
4 <sflow xmlns="urn:brocade.com:mgmt:brocade-sflow">  
5   <polling-interval>25</polling-interval>  
6 </sflow>
```

7 Parameters

8 *polling-interval*

9 Specifies polling interval value. The value can range from 1 through 65535. The default value is 20

DRAFT

1 sflow/sample-rate

2 Configures interface sampling rate.

3 Usage

```
4 <sflow xmlns="urn:brocade.com:mgmt:brocade-sflow">  
5   <sample-rate>32768</sample-rate>  
6 </sflow>
```

7 Parameters

8 *sample-rate*

9 Specifies sampling rate value. The value can range from 2 through 16777215. The default value is
10 32768

DRAFT

1 sflow/source-ip

2 Configures source IP address to use.

3 Usage

```
4 <sflow xmlns="urn:brocade.com:mgmt:brocade-sflow">  
5   <source-ip>chassis-ip</source-ip>  
6 </sflow>
```

7 Parameters

8 *source-ip*
9 Specifies the source IP address to use
10 **chassis-ip**
11 Uses chassis IP as source address
12 **mm-ip**
13 Uses local MM IP as source address

DRAFT

1 sflow-profile

2 Configures sflow profile sampling rate.

3 Usage

```
4 <sflow-profile xmlns="urn:brocade.com:mgmt:brocade-sflow">  
5   <profile-name>sflow1</profile-name>  
6   <profile-sampling-rate>4</profile-sampling-rate>  
7 </sflow-profile>
```

8 Parameters

9 *profile-name*

10 Specifies Sflow profile name

11 *profile-sampling-rate*

12 Specifies Sflow sampling rate. The value can range from 2 through 8388608

DRAFT

1 snmp-server/use-vrf/{vrf-name}

2 Starts or stops SNMP service on the specified VRF.

3 Usage

```
4 <snmp-server xmlns="urn:brocade.com:mgmt:brocade-snmp">  
5   <use-vrf>  
6     <use-vrf-name>vrf-name</use-vrf-name>  
7     <shutdown/>  
8   </use-vrf>  
9 </snmp-server>
```

10 Parameters

11 **use-vrf-name** *vrf-name*

12 Specifies the VRF name on which to enable/disable SNMP service.

13 **shutdown**

14 Initiates shutdown of SNMP service on the selected VRF.

DRAFT

1 system-monitor

2 Configures, modifies, or retrieves FRU threshold and alert setting.

3 Usage

```
4 <system-monitor xmlns="urn:brocade.com:mgmt:brocade-system-monitor">
5   <fan>
6     <alert>
7       <action/>
8     </alert>
9   </fan>
10 </system-monitor>
11 <system-monitor xmlns="urn:brocade.com:mgmt:brocade-system-monitor">
12   <power>
13     <threshold/>
14   </power>
15 </system-monitor>
```

16 Parameters

17 **fan**

18 Specifies the fan.

19 *alert*

20 The fan alert notification.

21 *action*

22 Specifies the action to be taken.

23 **power**

24 Specifies power supply.

25 *threshold*

26 The power supply threshold.

1 system-monitor-mail/fru (email)

2 Configures e-mail address for FRU alerts.

3 Usage

```
4 <system-monitor-mail xmlns="urn:brocade.com:mgmt:brocade-system-monitor">
5   <fru>
6     <email-list>
7       <email>abc@brocade.com</email>
8     </email-list>
9   </fru>
10 </system-monitor-mail>
```

11 Parameters

12 *email*
13 Specifies e-mail address for FRU alerts

DRAFT

1 system-monitor-mail/fru/enable

2 Enables FRU e-mail alerts.

3 Usage

```
4 <system-monitor-mail xmlns="urn:brocade.com:mgmt:brocade-system-monitor">
5   <fru>
6     <enable></enable>
7   </fru>
8 </system-monitor-mail>
```

9 Parameters

10 **enable**
11 Enables FRU e-mail alerts

DRAFT

1 system-monitor-mail/interface (email)

2 Configures e-mail address for interface alerts.

3 Usage

```
4 <system-monitor-mail xmlns="urn:brocade.com:mgmt:brocade-system-monitor">
5   <interface>
6     <email-list>
7       <email>abc@brocade.com</email>
8     </email-list>
9   </interface>
10 </system-monitor-mail>
```

11 Parameters

12 *email*
13 Specifies e-mail address for interface alerts

DRAFT

1 system-monitor-mail/interface/enable

2 Enables interface e-mail alerts.

3 Usage

```
4 <system-monitor-mail xmlns="urn:brocade.com:mgmt:brocade-system-monitor">  
5   <interface>  
6     <enable></enable>  
7   </interface>  
8 </system-monitor-mail>
```

9 Parameters

10 **enable**
11 Enables interface e-mail alerts

DRAFT

1 system-monitor-mail/relay

2 Configures relay IP mail settings.

3 Usage

```
4 <system-monitor-mail xmlns="urn:brocade.com:mgmt:brocade-system-monitor">
5   <relay>
6     <host-ip>1.1.1.1</host-ip>
7     <domain-name>domain1</domain-name>
8   </relay>
9 </system-monitor-mail>
```

10 Parameters

11 *host-ip*
12 Specifies host IP address

13 *domain-name*
14 Specifies domain server name

DRAFT

1 system-monitor-mail/security (email)

2 Configures e-mail address for security alerts.

3 Usage

```
4 <system-monitor-mail xmlns="urn:brocade.com:mgmt:brocade-system-monitor">
5   <security>
6     <email-list>
7       <email>abc@brocade.com</email>
8     </email-list>
9   </security>
10 </system-monitor-mail>
```

11 Parameters

12 *email*

13 Specifies e-mail address for security alerts

1 system-monitor-mail/security/enable

2 Enables security e-mail alerts.

3 Usage

```
4 <system-monitor-mail xmlns="urn:brocade.com:mgmt:brocade-system-monitor">
5   <security>
6     <enable></enable>
7   </security>
8 </system-monitor-mail>
```

9 Parameters

10 **enable**
11 Enables security e-mail alerts

DRAFT

1 system-monitor-mail/sfp (email)

2 Configures e-mail address for SFP alerts.

3 Usage

```
4 <system-monitor-mail xmlns="urn:brocade.com:mgmt:brocade-system-monitor">
5   <sfp>
6     <email-list>
7       <email>abc@brocade.com</email>
8     </email-list>
9   </sfp>
10 </system-monitor-mail>
```

11 Parameters

12 *email*
13 Specifies e-mail address for SFP alerts

DRAFT

1 system-monitor-mail/sfp/enable

2 Enables sfp e-mail alerts.

3 Usage

```
4 <system-monitor-mail xmlns="urn:brocade.com:mgmt:brocade-system-monitor">  
5   <sfp>  
6     <enable></enable>  
7   </sfp>  
8 </system-monitor-mail>
```

9 Parameters

10 **enable**
11 Enables sfp e-mail alerts

DRAFT

1 system-watermark

2 Defines system-related information.

3 Usage

```
4 <system-config xmlns="urn:brocade.com:mgmt:brocade-system-watermark">
5   <interface>
6     <utilization-watermark/>
7   </interface>
```

8 Parameters

9 **interface**

10 Specifies the protocol.

11 **utilization-watermark**

12 Specifies the utilization watermark.

DRAFT

1 topology-group

2 Configures topology VLAN group for L2 protocols.

3 Usage

```
4 <topology-group xmlns="urn:brocade.com:mgmt:brocade-topology-group">
5   <topology-group-id>{req_val}</topology-group-id>
6   <member-vlan>
7     <member-vlan-add/>
8   </member-vlan>
9 </topology-group>>
```

10 Parameters

11 *topology-group-id*
12 Specifies topology group ID.

13 **member-vlan**
14 Configures member VLANs.

15 **master-vlan**
16 Configures master VLANs.

DRAFT

1 vlan/{vlan-name}/mac

2 Configures a MAC access group.

3 Usage

```
4 <interface-vlan xmlns="urn:brocade.com:mgmt:brocade-interface">
5   <vlan>
6     <name>{req_val}</name>
7     <mac xmlns="urn:brocade.com:mgmt:brocade-mac-access-list">
8       <access-group>
9         <mac-access-list>{req_val}</mac-access-list>
10        <mac-direction>{req_val}</mac-direction>
11        <traffic-type/>
12      </access-group>
13    </mac>
14  </vlan>
15 </interface-vlan>
```

16 Parameters

17 **vlan**

18 Specifies vlan.

19 *name*

20 Specifies the VLAN name.

21 **access-group**

22 Specifies the MAC access- group.

23 *mac-access-list*

24 Specifies the mac-access list.

25 *mac-direction*

26 Specifies the MAC direction.

27 *traffic-type*

28 Specifies the traffic type.

1 vlan/classifier/group

2 Configures VLAN classification group commands.

3 Usage

```
4 <vlan xmlns="urn:brocade.com:mgmt:brocade-vlan">
5   <classifier>
6     <group>
7       <groupid>2</groupid>
8       <oper>add</oper>
9       <rule-name>rule</rule-name>
10      <ruleid>2</ruleid>
11    </group>
12  </classifier>
13 </vlan>
```

14 Parameters

15 *groupid*

16 Specifies VLAN classifier group ID. The value can range from 1 through 16

17 *oper*

18 Specifies the operation

19 **add**

20 Add rule

21 **delete**

22 Delete rule

23 *rule-name*

24 Specifies VLAN classifier rule name

25 *ruleid*

26 Specifies VLAN classifier rule ID

1 vlan/classifier/rule/mac

2 Configures VLAN classification rule commands.

3 Usage

```
4 <vlan xmlns="urn:brocade.com:mgmt:brocade-vlan">
5   <classifier>
6     <rule>
7       <ruleid>2</ruleid>
8       <mac>
9         <address>0011.1122.2233</address>
10      </mac>
11    </rule>
12  </classifier>
13 </vlan>
```

14 Parameters

15 *ruleid*

16 Specifies the rule ID. The value can range from 1 through 256

17 *address*

18 Specifies MAC address in HHHH.HHHH.HHHH format

DRAFT

1 vlan/classifier/rule/proto

2 Configures the protocol to use for the VLAN classifier rule.

3 Usage

```

4 <vlan xmlns="urn:brocade.com:mgmt:brocade-vlan">
5   <classifier>
6     <rule>
7       <ruleid>2</ruleid>
8       <proto>
9         <proto-val>arp</proto-val>
10        <encap>ethv2</encap>
11      </proto>
12    </rule>
13  </classifier>
14 </vlan>

```

15 Parameters

16 *ruleid*

17 Specifies the VLAN identification rule. The values can range from 1 through 2556

18 *proto-val*

19 Specifies the protocol to use for the VLAN classifier rule

20 *hex_addr*

21 Specifies an Ethernet hexadecimal value. The value can range from 0x0000 through 0xffff

22 **arp**

23 Specifies to use the Address Resolution Protocol

24 **ip**

25 Specifies to use the Internet Protocol

26 **ipv6**

27 Specifies to use the Internet Protocol version 6

28 *encap*

29 Specifies to encapsulate the Ethernet frames sent for the VLAN classifier rule

30 **ethv2**

31 Specifies to use the Ethernet version 2 encapsulated frames

32 **nosnap11c**

33 Specifies to use the Ethernet version 2 non-SNA frames

34 **snap11c**

35 Specifies to use the Ethernet version 2 with SNA frames

1 vlan/dot1q

2 Configures dot1q parameters.

3 Usage

```
4 <vlan xmlns="urn:brocade.com:mgmt:brocade-vlan">
5   <dot1q>
6     <tag>
7       <native></native>
8     </tag>
9   </dot1q>
10 </vlan>
```

11 Parameters

12 **native**

13 Enables tagged behavior for native-VLANs

DRAFT

1 vrf

2 Configures the virtual rounding and forwarding (VRF).

3 Usage

```
4 <vrf xmlns="urn:brocade.com:mgmt:brocade-vrf">  
5   <vrf-name>{req_val}</vrf-name>  
6 </vrf>
```

7 Parameters

8 *vrf-name*
9 Specifies the VRF name.

DRAFT

1 vrf/{vrf-name}/address-family/ipv4/unicast

2 Configures the IPv4 address family configurations.

3 Usage

```
4 <vrf xmlns="urn:brocade.com:mgmt:brocade-vrf">
5   <vrf-name>{req_val}</vrf-name>
6   <address-family>
7     <ip>
8       <unicast/>
9     </ip>
10  </address-family>
11 </vrf>
```

12 Parameters

- 13 *vrf-name*
14 Specifies the VRF name.
- 15 **address-family**
16 Specifies address family.
- 17 **ip**
18 Specifies the IP address.

1 vrf/{vrf-name}/address-family/ipv4/unicast/max-route

2 Configures IPv4 address family maximum route.

3 Usage

```
4 <vrf xmlns="urn:brocade.com:mgmt:brocade-vrf">
5   <vrf-name>{req_val}</vrf-name>
6   <address-family>
7     <ip>
8       <unicast>
9         <max-route/>
10      </unicast>
11    </ip>
12  </address-family>
13 </vrf>
```

14 Parameters

15 *vrf-name*
16 Specifies the VRF name.

17 **address-family**
18 Specifies address family.

19 **ip**
20 Specifies the IP address.

DRAFT

1 vrf/{vrf-name}/address-family/ipv6/unicast

2 Configures the IPv6 address family configurations.

3 Usage

```
4 <vrf xmlns="urn:brocade.com:mgmt:brocade-vrf">
5   <vrf-name>{req_val}</vrf-name>
6   <address-family>
7     <ipv6>
8       <unicast/>
9     </ipv6>
10  </address-family>
11 </vrf>
```

12 Parameters

13 *vrf-name*
14 Specifies the VRF name.

15 **address-family**
16 Specifies address family.

17 **ipv6**
18 Specifies the IP address.

DRAFT

1 vrf/{vrf-name}/address-family/ipv6/unicast/max-route

2 Configures IPv6 address family maximum route.

3 Usage

```
4 <vrf xmlns="urn:brocade.com:mgmt:brocade-vrf">
5   <vrf-name>{req_val}</vrf-name>
6   <address-family>
7     <ipv6>
8       <unicast>
9         <max-route/>
10      </unicast>
11    </ipv6>
12  </address-family>
13 </vrf>
```

14 Parameters

15 *vrf-name*
16 Specifies the VRF name.

17 **address-family**
18 Specifies address family.

19 **ipv6**
20 Specifies the IP address.

DRAFT

1 vrf/{vrf-name}/ip/router-id

2 Configures the IP route details..

3 Usage

```
4 <vrf xmlns="urn:brocade.com:mgmt:brocade-vrf">
5   <vrf-name>{req_val}</vrf-name>
6   <ip>
7     <vrf-router-id/>
8   </ip>
9 </vrf>
```

10 Parameters

11 *vrf-name*

12 Specifies the VRF name.

13 **vrf-router-id**

14 Specifies the VRF router ID..

DRAFT

1 vxlan-visibility

2 Configures an overlay transit.

3 Usage

```
4 <overlay xmlns="urn:brocade.com:mgmt:brocade-vxlan-visibility">
5   <access-list>
6     <type>
7       <vxlan/>
8     </type>
9   </access-list>
10 </overlay>
```

11 Parameters

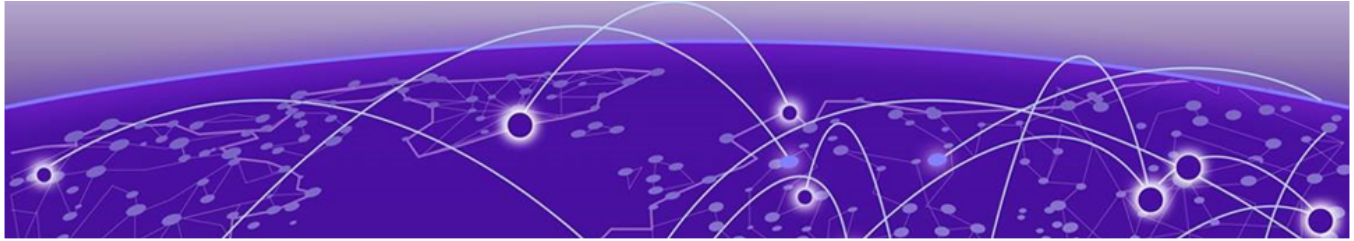
12 **access-list**

13 Specifies the access list.

14 **type**

15 Specifies the VXLAN type: extended or standard.

DRAFT



Remote Procedure Calls (RPCs)

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[bna-config-cmd-status](#) on page 412
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17 bna-config-cmd

Copies configuration data to and from the system.

19 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>

```

31 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).

1 bna-config-cmd-status

2 This RPC displays the status of a previous config-cmd.

3 Usage

```

4 nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="8">
5   <bna-config-cmd xmlns="urn:brocade.com:mgmt:brocade-ras">
6     <src>running-config</src>
7     <dest>startup-config</dest>
8   </bna-config-cmd>
9 </nc:rpc>

10 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
11 xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="8">
12   <session-id xmlns="urn:brocade.com:mgmt:brocade-ras">0</session-id>
13   <status xmlns="urn:brocade.com:mgmt:brocade-ras">in-progress</status>
14 </rpc-reply>

15
16 [2020-01-09 16:39:16] SEND admin@10.20.192.65
17 <nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="8">
18   <bna-config-cmd-status xmlns="urn:brocade.com:mgmt:brocade-ras">
19     <session-id>0</session-id>
20   </bna-config-cmd-status>
21 </nc:rpc>

22
23 [2020-01-09 16:39:17] RECV admin@10.20.192.65
24 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
25 xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="8">
26   <status xmlns="urn:brocade.com:mgmt:brocade-ras">completed</status>
27   <status-string xmlns="urn:brocade.com:mgmt:brocade-ras"></status-string>
28 </rpc-reply>

```

29 Parameters

30 *session-id*
 31 This id is that of a previous config-cmd (inprogress/complete) operation.
 32 *status*
 33 Displays the status of this operation.

34 clear-tm-voq-stat-ing-all-egr-all

35 Usage

```

36 <nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="9">
37   <clear-tm-voq-stat-ing-all-egr-all xmlns="urn:brocade.com:mgmt:brocade-tm-stats"></
38   clear-tm-voq-stat-ing-all-egr-all>
39 </nc:rpc>

40 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
41 xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="9">
42   <ok></ok>
43 </rpc-reply>

```

1 clear-tm-voq-stat-ing-all-egr-ifname

2 Clears per port voq statistics on all devices.

3 Usage

```
4 <nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="9">
5   <clear-tm-voq-stat-ing-all-egr-ifname xmlns="urn:brocade.com:mgmt:brocade-tm-stats"></
6   clear-tm-voq-stat-ing-all-egr-ifname>
7 </nc:rpc>
```

```
8 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
9 xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="9">
10   <rpc-error>
11     <error-type>application</error-type>
12     <error-tag>operation-failed</error-tag>
13     <error-severity>error</error-severity>
14     <nc:error-path xmlns:tm="urn:brocade.com:mgmt:brocade-tm-stats"
15     xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0">
16       /nc:rpc/tm:clear-tm-voq-stat-ing-all-egr-ifname
17     </nc:error-path>
18     <error-message unknown:lang="en"%> Error: INTERFACE IS EITHER NOT PRESENT OR NOT
19     YET ACTIVE</error-message>
20     <error-info>
21       <bad-element>clear-tm-voq-stat-ing-all-egr-ifname</bad-element>
22     </error-info>
23   </rpc-error>
24 </rpc-reply>
```

25 Parameters

26 *clear-tm-voq-ing-all-egress-port-name*
 27 The port name of the cleared voq statistics of the device.

28 clear-tm-voq-stat-slot-id-egr-all

29 Clears all voq statistics for the selected slot.

30 Usage

```
31 <nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="9">
32   <clear-tm-voq-stat-slot-id-egr-all xmlns="urn:brocade.com:mgmt:brocade-tm-stats">
33     <slot-id>1</slot-id>
34   </clear-tm-voq-stat-slot-id-egr-all>
35 </nc:rpc>
```

```
36 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
37 xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="9">
38   <ok></ok>
39 </rpc-reply>
```

40 Parameters

41 *slot-id*

1 The id of the slot whose voq statistics are cleared.

2 clear-tm-voq-slot-id-egress-port-name

3 Clears the per port voq statistics for the selected slot.

4 Usage

```
5 <nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="9">
6   <clear-tm-voq-slot-id-egress-port-name xmlns="urn:brocade.com:mgmt:brocade-tm-stats">
7     <slot-id>1</slot-id>
8     <clear-tm-voq-slot-egress-port-name></clear-tm-voq-slot-egress-port-name>
9   </clear-tm-voq-slot-id-egress-port-name>
10 </nc:rpc>

11 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
12 xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="9">
13   <ok></ok>
14 </rpc-reply>
```

15 Parameters

16 *slot-id*
17 The id of the slot.

1 clear-mpls-ldp-statistics

2 Clears the MPLS LDP control plane statistics.

3 Usage

4

```
<clear-mpls-ldp-statistics xmlns="urn:brocade.com:mgmt:brocade-mpls"/>
```

DRAFT

1 clear-mpls-lsp

2 Resets a tunnel and enables it back.

3 Usage

```
4 <clear-mpls-lsp xmlns="urn:brocade.com:mgmt:brocade-mpls">  
5   <mpls-clear-lsp-name-in>lspto</mpls-clear-lsp-name-in>  
6 </clear-mpls-lsp>
```

7 Parameters

8 *mpls-clear-lsp-name-in*

9 Specifies the LSP name.

DRAFT

1 clear-mpls-rsvp-statistics

2 Clears the MPLS RSVP control plane statistics.

3 Usage

4

```
<clear-mpls-rsvp-statistics xmlns="urn:brocade.com:mgmt:brocade-mpls"/>
```

DRAFT

1 clear-mpls-rsvp-statistics-neighbor-address

2 Clears an RSVP neighbor.

3 Usage

```
4 <clear-mpls-rsvp-statistics-neighbor xmlns="urn:brocade.com:mgmt:brocade-mpls">  
5   <clear-mpls-rsvp-statistics-neighbor-address>29.19.1.19</clear-mpls-rsvp-statistics-  
6   neighbor-address>  
7 </clear-mpls-rsvp-statistics-neighbor>
```

8 Parameters

9 *clear-mpls-rsvp-statistics-neighbor-address*
10 Specifies the RSVP neighbor with the specific IP address.

DRAFT

1 clear-mpls-rsvp-statistics-neighbor-all

2 Clears all RSVP neighbors.

3 Usage

```
4 <clear-mpls-rsvp-statistics-neighbor xmlns="urn:brocade.com:mgmt:brocade-mpls">
5   <clear-mpls-rsvp-statistics-neighbor-all>true</clear-mpls-rsvp-statistics-neighbor-all>
6 </clear-mpls-rsvp-statistics-neighbor>
```

7 Parameters

8 *clear-mpls-rsvp-statistics-neighbor-all*

9 Clears all MPLS RSVP neighbors.

10 firmware-commit

11 This is the firmware commit RPC.

12 Usage

```
13 <nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="3">
14   <firmware-commit xmlns="urn:brocade.com:mgmt:brocade-firmware">
15     </firmware-commit>
16 </nc:rpc>
```

```
17 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
18 xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="3">
19   <result xmlns="urn:brocade.com:mgmt:brocade-firmware">firmwarecommit initiated</result>
20 </rpc-reply>
```

21 firmware-restore

22 Starts firmware restore on the device.

23 Usage

```
24 <nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="3">
25   <firmware-restore xmlns="urn:brocade.com:mgmt:brocade-firmware">
26     </firmware-restore>
27 </nc:rpc>
```

```
28 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
29 xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="3">
30   <result xmlns="urn:brocade.com:mgmt:brocade-firmware">firmwarerestore initiated</
31   result>
32 </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">
```

```

60      <index>8</index>
61      <blade-name>SW/0</blade-name>
62      <message-id>0</message-id>
63      <date-and-time-info>2016-11-29/01:26:36</date-and-time-info>
64      <message>Firmware is swapped.</message>
65    </fwdl-entries>
66    <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
67      <index>9</index>
68      <blade-name>SW/0</blade-name>
69      <message-id>0</message-id>
70      <date-and-time-info>2016-11-29/01:26:36</date-and-time-info>
71      <message>Firmware is downloaded successfully.</message>
72    </fwdl-entries>
73    <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
74      <index>10</index>
75      <blade-name>SW/1</blade-name>
76      <message-id>0</message-id>
77      <date-and-time-info>2016-11-29/01:26:37</date-and-time-info>
78      <message>Firmware is downloaded successfully.</message>
79    </fwdl-entries>
80    <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
81      <index>11</index>
82      <blade-name>SW/1</blade-name>
83      <message-id>0</message-id>
84      <date-and-time-info>2016-11-29/01:34:17</date-and-time-info>
85      <message>The DB/filesystem starts shutting down.</message>
86    </fwdl-entries>
87    <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
88      <index>12</index>
89      <blade-name>SW/0</blade-name>
90      <message-id>0</message-id>
91      <date-and-time-info>2016-11-29/01:34:17</date-and-time-info>
92      <message>The DB/filesystem starts shutting down.</message>
93    </fwdl-entries>
94    <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
95      <index>13</index>
96      <blade-name>SW/1</blade-name>
97      <message-id>0</message-id>
98      <date-and-time-info>2016-11-29/01:34:35</date-and-time-info>
99      <message>The DB/filesystem has been shut down.</message>
100    </fwdl-entries>
101    <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
102      <index>14</index>
103      <blade-name>SW/0</blade-name>
104      <message-id>0</message-id>
105      <date-and-time-info>2016-11-29/01:34:37</date-and-time-info>
106      <message>The DB/filesystem has been shut down.</message>
107    </fwdl-entries>
108    <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
109      <index>15</index>
110      <blade-name>SW/1</blade-name>
111      <message-id>0</message-id>
112      <date-and-time-info>2016-11-29/01:34:38</date-and-time-info>
113      <message>The blade begins to reboot.</message>
114    </fwdl-entries>
115    <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
116      <index>16</index>
117      <blade-name>SW/0</blade-name>
118      <message-id>0</message-id>
119      <date-and-time-info>2016-11-29/01:34:38</date-and-time-info>
120      <message>The blade begins to reboot.</message>
121    </fwdl-entries>
122    <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
123      <index>17</index>

```

```

1      <blade-name>SW/1</blade-name>
2      <message-id>0</message-id>
3      <date-and-time-info>2016-11-29/01:44:23</date-and-time-info>
4      <message>The blade is rebooted.</message>
5  </fwdl-entries>
6  <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
7      <index>18</index>
8      <blade-name>SW/1</blade-name>
9      <message-id>0</message-id>
10     <date-and-time-info>2016-11-29/01:44:23</date-and-time-info>
11     <message>Firmware commit begins.</message>
12 </fwdl-entries>
13 <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
14     <index>19</index>
15     <blade-name>SW/0</blade-name>
16     <message-id>0</message-id>
17     <date-and-time-info>2016-11-29/01:44:23</date-and-time-info>
18     <message>The blade is rebooted.</message>
19 </fwdl-entries>
20 <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
21     <index>20</index>
22     <blade-name>SW/0</blade-name>
23     <message-id>0</message-id>
24     <date-and-time-info>2016-11-29/01:44:23</date-and-time-info>
25     <message>Firmware commit begins.</message>
26 </fwdl-entries>
27 <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
28     <index>21</index>
29     <blade-name>SW/0</blade-name>
30     <message-id>0</message-id>
31     <date-and-time-info>2016-11-29/01:48:42</date-and-time-info>
32     <message>Firmware commit ends.</message>
33 </fwdl-entries>
34 <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
35     <index>22</index>
36     <blade-name>SW/0</blade-name>
37     <message-id>0</message-id>
38     <date-and-time-info>2016-11-29/01:48:42</date-and-time-info>
39     <message>Firmware is downloaded successfully.</message>
40 </fwdl-entries>
41 <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
42     <index>23</index>
43     <blade-name>SW/1</blade-name>
44     <message-id>0</message-id>
45     <date-and-time-info>2016-11-29/01:48:51</date-and-time-info>
46     <message>Firmware commit ends.</message>
47 </fwdl-entries>
48 <fwdl-entries xmlns="urn:brocade.com:mgmt:brocade-firmware">
49     <index>24</index>
50     <blade-name>SW/1</blade-name>
51     <message-id>0</message-id>
52     <date-and-time-info>2016-11-29/01:48:51</date-and-time-info>
53     <message>Firmware is downloaded successfully.</message>
54 </fwdl-entries>
55 </rpc-reply>

```

Parameters

fwdl-state

Specifies the firmware download state.

number-of-entries

- 1 Specifies the number of status entries.
- 2 *index*
- 3 Specifies the sequence number for the message.
- 4 *blade-name*
- 5 Specifies the name of the blade.
- 6 *message-id*
- 7 Specifies the message identifier.
- 8 *date-and-time-info*
- 9 Specifies the date and time of the message. The format is YYYY-MM-DD/HH:MM:SS.SSSS.
- 10 *message*
- 11 Displays the textual description of the status.

DRAFT

1 get-arp

2 Retrieves the ARP cache information.

3 Usage

```
4 <get-arp xmlns="urn:brocade.com:mgmt:brocade-arp"></get-arp>
5
6 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="1">
7   <arp-entry>
8     <ip-address>20.0.0.122</ip-address>
9     <mac-address>0005.3379.407a</mac-address>
10    <interface-type>unknown</interface-type>
11    <interface-name></interface-name>
12    <is-resolved>true</is-resolved>
13    <age>03:16:05</age>
14    <entry-type>dynamic</entry-type>
15  </arp-entry>
16 </rpc-reply>
```

17 Parameters

18 *ip-address*
19 Displays the IP address of the ARP entry.

20 *mac-address*
21 Displays the MAC address of the ARP entry.

22 *interface-type*
23 Displays the interface type.

24 *interface-name*
25 Displays the interface name.

26 *is-resolved*
27 Indicates whether the ARP entry is resolved or not.

28 *age*
29 Displays the age of the ARP entry.

30 *entry-type*
31 Displays the type of the ARP entry.

1 get-contained-in-ID

2 Retrieves enclosure related information on embedded platforms.

3 Usage

```
4 <get-contained-in-ID xmlns="urn:brocade.com:mgmt:brocade-entity"></get-contained-in-ID>
5
6 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="1">
7   <contained-in-ID>Bay 7</contained-in-ID>
8 </rpc-reply>
```

9 Parameters

10 *contained-in-ID*
11 Displays present slot ID of switch.

DRAFT

1 get-interface-detail

2 Returns operational details of all the possible interfaces of the managed entity. Use this RPC to discover
 3 basic characteristics of all the interfaces in the system. Each sublayer below the internetwork layer of a
 4 network interface is considered to be an interface.

5 Usage

```

6 <get-interface-detail></get-interface-detail>
7
8 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
9 xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="67">
10   <interface xmlns="urn:brocade.com:mgmt:brocade-interface-ext">
11     <interface-type>ethernet</interface-type>
12     <interface-name>2/4</interface-name>
13     <port-role>edge</port-role>
14     <port-mode>unknown</port-mode>
15     <if-name>ethernet 2/4</if-name>
16     <if-state>up</if-state>
17     <line-protocol-state>down</line-protocol-state>
18     <line-protocol-state-info> (link protocol down)</line-protocol-state-info>
19     <hardware-type>ethernet</hardware-type>
20     <current-hardware-address>50:eb:1a:17:40:28</current-hardware-address>
21     <logical-hardware-address>50:eb:1a:17:40:28</logical-hardware-address>
22     <ifindex>8791662784</ifindex>
23     <mtu>2500</mtu>
24     <actual-line-speed>nil</actual-line-speed>
25     <configured-line-speed>auto</configured-line-speed>
26     <line-duplex-state>full</line-duplex-state>
27     <flow-control></flow-control>
28     <queuing-strategy>fifo</queuing-strategy>
29     <ifHCInOctets>0</ifHCInOctets>
30     <ifHCInUcastPkts>0</ifHCInUcastPkts>
31     <ifHCInMulticastPkts>0</ifHCInMulticastPkts>
32     <ifHCInBroadcastPkts>0</ifHCInBroadcastPkts>
33     <ifHCInErrors>0</ifHCInErrors>
34     <ifHCOctets>0</ifHCOctets>
35     <ifHCOUcastPkts>0</ifHCOUcastPkts>
36     <ifHCOMulticastPkts>0</ifHCOMulticastPkts>
37     <ifHCOBroadcastPkts>0</ifHCOBroadcastPkts>
38     <ifHCOErrors>0</ifHCOErrors>
39   </interface>
40   <interface xmlns="urn:brocade.com:mgmt:brocade-interface-ext">
41     <interface-type>ethernet</interface-type>
42     <interface-name>2/3</interface-name>
43     <port-role>isl</port-role>
44     <port-mode>unknown</port-mode>
45     <if-name>ethernet 2/3</if-name>
46     <if-state>up</if-state>
47     <line-protocol-state>up</line-protocol-state>
48     <line-protocol-state-info> (connected)</line-protocol-state-info>
49     <hardware-type>ethernet</hardware-type>
50     <current-hardware-address>50:eb:1a:17:3f:f8</current-hardware-address>
51     <logical-hardware-address>50:eb:1a:17:3f:f8</logical-hardware-address>
52     <media-type>sfp</media-type>
53     <wavelength>1310</wavelength>
54     <ifindex>8791269376</ifindex>
55     <mtu>9216</mtu>
56     <actual-line-speed>10Gbps</actual-line-speed>
57     <configured-line-speed>auto</configured-line-speed>
58     <line-duplex-state>full</line-duplex-state>
59     <flow-control></flow-control>

```

```

1      <queuing-strategy>fifo</queuing-strategy>
2      <ifHCInOctets>303455437</ifHCInOctets>
3      <ifHCInUcastPkts>301429</ifHCInUcastPkts>
4      <ifHCInMulticastPkts>79743</ifHCInMulticastPkts>
5      <ifHCInBroadcastPkts>0</ifHCInBroadcastPkts>
6      <ifHCInErrors>0</ifHCInErrors>
7      <ifHCOutOctets>300765428</ifHCOutOctets>
8      <ifHCOutUcastPkts>301347</ifHCOutUcastPkts>
9      <ifHCOutMulticastPkts>56906</ifHCOutMulticastPkts>
10     <ifHCOutBroadcastPkts>0</ifHCOutBroadcastPkts>
11     <ifHCOutErrors>0</ifHCOutErrors>
12 </interface>
13 <interface xmlns="urn:brocade.com:mgmt:brocade-interface-ext">
14     <interface-type>ethernet</interface-type>
15     <interface-name>2/4</interface-name>
16     <port-role>edge</port-role>
17     <port-mode>unknown</port-mode>
18     <if-name>ethernet 2/4</if-name>
19     <if-state>up</if-state>
20     <line-protocol-state>down</line-protocol-state>
21     <line-protocol-state-info> (link protocol down)</line-protocol-state-info>
22     <hardware-type>ethernet</hardware-type>
23     <current-hardware-address>50:eb:1a:17:40:1d</current-hardware-address>
24     <logical-hardware-address>50:eb:1a:17:40:1d</logical-hardware-address>
25     <ifindex>8791572480</ifindex>
26     <mtu>2500</mtu>
27     <actual-line-speed>nil</actual-line-speed>
28     <configured-line-speed>auto</configured-line-speed>
29     <line-duplex-state>full</line-duplex-state>
30     <flow-control></flow-control>
31     <queuing-strategy>fifo</queuing-strategy>
32     <ifHCInOctets>0</ifHCInOctets>
33     <ifHCInUcastPkts>0</ifHCInUcastPkts>
34     <ifHCInMulticastPkts>0</ifHCInMulticastPkts>
35     <ifHCInBroadcastPkts>0</ifHCInBroadcastPkts>
36     <ifHCInErrors>0</ifHCInErrors>
37     <ifHCOutOctets>0</ifHCOutOctets>
38     <ifHCOutUcastPkts>0</ifHCOutUcastPkts>
39     <ifHCOutMulticastPkts>0</ifHCOutMulticastPkts>
40     <ifHCOutBroadcastPkts>0</ifHCOutBroadcastPkts>
41     <ifHCOutErrors>0</ifHCOutErrors>
42 </interface>
43 <interface xmlns="urn:brocade.com:mgmt:brocade-interface-ext">
44     <interface-type>l2vlan</interface-type>
45     <interface-name>1</interface-name>
46     <if-name>Vlan 1</if-name>
47     <ifindex>1207959553</ifindex>
48     <queuing-strategy>fifo</queuing-strategy>
49 </interface>
50 <interface xmlns="urn:brocade.com:mgmt:brocade-interface-ext">
51     <interface-type>l2vlan</interface-type>
52     <interface-name>10</interface-name>
53     <if-name>Vlan 10</if-name>
54     <current-hardware-address>00:27:f8:fd:00:03</current-hardware-address>
55     <logical-hardware-address>00:27:f8:fd:00:03</logical-hardware-address>
56     <ifindex>1207959562</ifindex>
57     <queuing-strategy>fifo</queuing-strategy>
58 </interface>
59 <has-more xmlns="urn:brocade.com:mgmt:brocade-interface-ext">false</has-more>
60 </rpc-reply>

```

Parameters

2	<i>interface-type</i>
3	Specifies the interface type.
4	<i>interface-name</i>
5	Specifies the nterface name.
6	<i>port-role</i>
7	Displays the current role that the particular interface is playing. This is applicable only for
8	physical interfaces.
9	<i>port-mode</i>
10	Displays the operational mode of the particular interface. This is applicable only for physical
11	interfaces or port-channel interfaces.
12	<i>if-name</i>
13	Displays the interface display name as in MIB-II's ifTable. However interface-name and interface-
14	type values of this instance forms fully qualified name for this interface.
15	<i>if-state</i>
16	Displays the current operational state of this interface.
17	<i>line-protocol-state</i>
18	Displays the 'Line protocol' state of the interface.
19	<i>line-protocol-state-info</i>
20	Displays thwe reason for the current line protocol state of the interface.
21	<i>hardware-type</i>
22	Dispalys the hardware type
23	<i>current-hardware-address</i>
24	Displays the address of the interface at its protocol sub-layer.
25	<i>logical-hardware-address</i>
26	Displays the address of the interface at its protocol sub-layer.
27	<i>ifindex</i>
28	Displays a unique value, greater than zero, for each interface.
29	<i>mtu</i>
30	Displays the IP MTU value of the interface.
31	<i>actual-line-speed</i>
32	Displays the actual line speed of this interface.
33	<i>configured-line-speed</i>
34	Displays the administratively configured line speed of the interface.
35	<i>line-duplex-state</i>
36	Displays the 'Line duplex state' of the interface.
37	<i>flow-control</i>
38	Displays the 'Flow control' for the interface.
39	<i>queuing-strategy</i>

1	Displays the 'Queuing strategy' for the interface.
2	<i>ifHCInOctets</i>
3	Displays the total number of octets received on the interface, including framing characters.
4	<i>ifHCInUcastPkts</i>
5	Displays the The number of packets, delivered by this sub-layer to a higher (sub-)layer, which
6	were not addressed to a multicast or broadcast address at this sub-layer.
7	<i>ifHCInMulticastPkts</i>
8	Displays The number of packets, delivered by this sub-layer to a higher (sub-)layer, which were
9	addressed to a multicast address at the sub-layer. For a MAC layer protocol, this includes both
10	Group and Functional addresses.
11	<i>ifHCInBroadcastPkts</i>
12	Displays the The number of packets, delivered by the sub-layer to a higher (sub-)layer, which
13	were addressed to a broadcast address at the sub-layer.
14	<i>ifHCInErrors</i>
15	For packet-oriented interfaces, the number of inbound packets that contained errors preventing
16	them from being deliverable to a higher-layer protocol. For character-oriented or fixed-length
17	interfaces, the number of inbound transmission units that contained errors preventing them from
18	being deliverable to a higher-layer protocol.
19	<i>ifHCOctets</i>
20	Displays the total number of octets transmitted out of the interface, including framing characters
21	<i>ifHCOUcastPkts</i>
22	Displays the total number of packets that higher-level protocols requested be transmitted, and
23	which were not addressed to a multicast or broadcast address at the sub-layer, including those
24	that were discarded or not sent.
25	<i>ifHCOMulticastPkts</i>
26	Dispalys the total number of packets that higher-level protocols requested be transmitted,
27	and which were addressed to a multicast address at this sub-layer, including those that were
28	discarded or not sent. For a MAC layer protocol, this includes both Group and Functional
29	addresses.
30	<i>ifHCOBroadcastPkts</i>
31	Displays the total number of packets that higher-level protocols requested be transmitted,
32	and which were addressed to a broadcast address at this sub-layer, including those that were
33	discarded or not sent.
34	<i>ifHCOErrors</i>
35	For packet-oriented interfaces, the number of outbound packets that could not be transmitted
36	because of errors. For character-oriented or fixed-length interfaces, the number of outbound
37	transmission units that could not be transmitted because of errors.
38	<i>ip-mtu</i>
39	Displays the IP MTU value of this interface.
40	<i>line-protocol-exception-info</i>
41	Displays the 'Exception information' of line protocol.
42	<i>media-type</i>

- 1 Displays the media type.
- 2 *wavelength*
- 3 Displays the wavelength of pluggable media.
- 4 *if-description*
- 5 Displays the textual string containing information about the interface.
- 6 *queuing-strategy*
- 7 Displays the 'Queuing strategy' for this interface.

DRAFT

1 get-interface-switchport

2 Returns switch-port or Layer 2 characteristics of all the interfaces in the managed device.

3 Usage

```
4 <get-interface-switchport></get-interface-switchport>
5
6
7 <rpc-reply message-id="303" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
8   <switchport xmlns="urn:brocade.com:mgmt:brocade-brocade-interface-ext">
9     <interface-name>2/1</interface-name>
10    <interface-type>ethernet</interface-type>
11    <mode>access</mode>
12    <ingress-filter-enabled>true</ingress-filter-enabled>
13    <acceptable-frame-type>admit-all</acceptable-frame-type>
14    <default-vlan>1</default-vlan>
15    <active-vlans>
16      <vlanid>1</vlanid>
17    </active-vlans>
18  </switchport>
19 </rpc-reply>
```

20 Parameters

21 *interface-name*

22 Specifies the interface value.

23 *interface-type*

24 Displays the type of the interface.

25 *mode*

26 Displays the mode of the port-channel.

27 *ingress-filter-enabled*

28 Indicates if the 'Ingress filtering' is enabled for the interface.

29 *acceptable-frame-type*

30 The switch-port ingress Frame admission policy - whether only tagged Frames are allowed or all.

31 *default-vlan*

32 Displays 'default vlan' identifier value for this switch-port.

33 *vlanid*

34 Displays the list of active VLAN identifiers.

1 get-ip-interface

2 Returns brief details of all interfaces, loopback and VE interface details of particular managed entity.

3 Usage

```
4 <get-ip-interface></get-ip-interface>
5
6 <rpc-reply message-id="307" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
7   <interface xmlns="urn:brocade.com:mgmt:brocade-interface">
8     <interface-type>ethernet</interface-type>
9     <interface-name>2/4</interface-name>
10    <if-name>ethernet 2/4</if-name>
11    <if-state>up</if-state>
12    <line-protocol-state>down</line-protocol-state>
13    <ip-address>
14      <ipv4>unassigned</ipv4>
15    </ip-address>
16  </interface>
17 </rpc-reply>
```

18 Parameters

19 *interface-type*
20 Displays the network interface name in a VCS environment in the format: slot/port .

21 *interface-name*
22 Displays the interface value.

23 *if-name*
24 The interface display name as in MIB-II's ifTable. However interface-name and interface-type
25 values of this instance forms fully qualified name for this interface.

26 *if-state*
27 Displays the current operational state of the interface.

28 *line-protocol-state*
29 Displays the 'Line protocol' state of the interface.

30 *ipv4*
31 Displays the IP address in dotted decimal/Mask (A.B.C.D/M).

1 get-last-config-update-time

2 Returns the time stamp of the last configuration change done on the managed device.

3 Usage

```

4
5 <nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="14">
6   <get-last-config-update-time xmlns="urn:brocade.com:mgmt:brocade-vcs"></get-last-
7   config-update-time>
8 </nc:rpc>
9
10 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
11   xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="14">
12   <last-config-update-time xmlns="urn:brocade.com:mgmt:brocade-vcs">1577432165</last-
13   config-update-time>
14 </rpc-reply>

```

15 Parameters

16 *last-config-update-time*

17 Displays the time stamp of the last configuration change.

18 get-last-config-update-time-for-xpaths

19 Returns the time stamp of the last configuration update.

20 Usage

```

21 <nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="7">
22   <get-last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs"></get-
23   last-config-update-time-for-xpaths>
24 </nc:rpc>
25
26 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
27   xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="7">
28   <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
29     <xpath-string></xpath-string>
30     <last-config-update-time>1578483090</last-config-update-time>
31   </last-config-update-time-for-xpaths>
32   <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
33     <xpath-string>/cee-map</xpath-string>
34     <last-config-update-time>1578380033</last-config-update-time>
35   </last-config-update-time-for-xpaths>
36   <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
37     <xpath-string>/fcoe/fcoe-fabric-map</xpath-string>
38     <last-config-update-time>1578380033</last-config-update-time>
39   </last-config-update-time-for-xpaths>
40   <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
41     <xpath-string>/hardware/flexport/flexport_type</xpath-string>
42     <last-config-update-time>1578380033</last-config-update-time>
43   </last-config-update-time-for-xpaths>
44   <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
45     <xpath-string>/interface-vlan</xpath-string>
46     <last-config-update-time>1578380033</last-config-update-time>
47   </last-config-update-time-for-xpaths>
48   <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">

```

```

48     <xpath-string>/interface-vlan/interface/ve</xpath-string>
49     <last-config-update-time>1578380033</last-config-update-time>
50 </last-config-update-time-for-xpaths>
51 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
52     <xpath-string>/interface-vlan/interface/vlan</xpath-string>
53     <last-config-update-time>1578380033</last-config-update-time>
54 </last-config-update-time-for-xpaths>
55 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
56     <xpath-string>/interface/fc-port</xpath-string>
57     <last-config-update-time>1578380033</last-config-update-time>
58 </last-config-update-time-for-xpaths>
59 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
60     <xpath-string>/interface/fortygigabitethernet</xpath-string>
61     <last-config-update-time>1578380033</last-config-update-time>
62 </last-config-update-time-for-xpaths>
63 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
64     <xpath-string>/interface/fortygigabitethernet/channel-group</xpath-string>
65     <last-config-update-time>1578380033</last-config-update-time>
66 </last-config-update-time-for-xpaths>
67 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
68     <xpath-string>/interface/fortygigabitethernet/switchport</xpath-string>
69     <last-config-update-time>1578380033</last-config-update-time>
70 </last-config-update-time-for-xpaths>
71 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
72     <xpath-string>/interface/fortygigabitethernet/vlan</xpath-string>
73     <last-config-update-time>1578380033</last-config-update-time>
74 </last-config-update-time-for-xpaths>
75 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
76     <xpath-string>/interface/gigabitethernet</xpath-string>
77     <last-config-update-time>1578380033</last-config-update-time>
78 </last-config-update-time-for-xpaths>
79 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
80     <xpath-string>/interface/gigabitethernet/channel-group</xpath-string>
81     <last-config-update-time>1578380033</last-config-update-time>
82 </last-config-update-time-for-xpaths>
83 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
84     <xpath-string>/interface/gigabitethernet/switchport</xpath-string>
85     <last-config-update-time>1578380033</last-config-update-time>
86 </last-config-update-time-for-xpaths>
87 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
88     <xpath-string>/interface/gigabitethernet/vlan</xpath-string>
89     <last-config-update-time>1578380033</last-config-update-time>
90 </last-config-update-time-for-xpaths>
91 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
92     <xpath-string>/interface/hundredgigabitethernet</xpath-string>
93     <last-config-update-time>1578380033</last-config-update-time>
94 </last-config-update-time-for-xpaths>
95 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
96     <xpath-string>/interface/hundredgigabitethernet/channel-group</xpath-string>
97     <last-config-update-time>1578380033</last-config-update-time>
98 </last-config-update-time-for-xpaths>
99 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
100    <xpath-string>/interface/hundredgigabitethernet/switchport</xpath-string>
101    <last-config-update-time>1578380033</last-config-update-time>
102 </last-config-update-time-for-xpaths>
103 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
104    <xpath-string>/interface/hundredgigabitethernet/vlan</xpath-string>
105    <last-config-update-time>1578380033</last-config-update-time>
106 </last-config-update-time-for-xpaths>
107 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
108    <xpath-string>/interface/port-channel</xpath-string>
109    <last-config-update-time>1578483090</last-config-update-time>
110 </last-config-update-time-for-xpaths>
111 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">

```

```

1      <xpath-string>/interface/port-channel/switchport</xpath-string>
2      <last-config-update-time>1578380033</last-config-update-time>
3  </last-config-update-time-for-xpaths>
4  <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
5      <xpath-string>/interface/port-channel/vlan</xpath-string>
6      <last-config-update-time>1578380033</last-config-update-time>
7  </last-config-update-time-for-xpaths>
8  <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
9      <xpath-string>/interface/tengigabitethernet</xpath-string>
10     <last-config-update-time>1578380033</last-config-update-time>
11 </last-config-update-time-for-xpaths>
12 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
13     <xpath-string>/interface/tengigabitethernet/channel-group</xpath-string>
14     <last-config-update-time>1578380033</last-config-update-time>
15 </last-config-update-time-for-xpaths>
16 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
17     <xpath-string>/interface/tengigabitethernet/switchport</xpath-string>
18     <last-config-update-time>1578380033</last-config-update-time>
19 </last-config-update-time-for-xpaths>
20 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
21     <xpath-string>/interface/tengigabitethernet/vlan</xpath-string>
22     <last-config-update-time>1578380033</last-config-update-time>
23 </last-config-update-time-for-xpaths>
24 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
25     <xpath-string>/mac-group</xpath-string>
26     <last-config-update-time>1578380033</last-config-update-time>
27 </last-config-update-time-for-xpaths>
28 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
29     <xpath-string>/mac/access-list</xpath-string>
30     <last-config-update-time>1578380033</last-config-update-time>
31 </last-config-update-time-for-xpaths>
32 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
33     <xpath-string>/port-profile</xpath-string>
34     <last-config-update-time>1578380033</last-config-update-time>
35 </last-config-update-time-for-xpaths>
36 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
37     <xpath-string>/port-profile-global/port-profile</xpath-string>
38     <last-config-update-time>1578380033</last-config-update-time>
39 </last-config-update-time-for-xpaths>
40 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
41     <xpath-string>/protocol/spanning-tree</xpath-string>
42     <last-config-update-time>1578380033</last-config-update-time>
43 </last-config-update-time-for-xpaths>
44 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
45     <xpath-string>/rbridge-id/interface/ve</xpath-string>
46     <last-config-update-time>1578380033</last-config-update-time>
47 </last-config-update-time-for-xpaths>
48 <last-config-update-time-for-xpaths xmlns="urn:brocade.com:mgmt:brocade-vcs">
49     <xpath-string>/snmp-server/agtconfig</xpath-string>
50     <last-config-update-time>1578380033</last-config-update-time>
51 </last-config-update-time-for-xpaths>
52 </rpc-reply>

```

Parameters

xpath-strings

Displays the xpath strings.

last-config-update-time

Displays the time of the last.

1 get-lldp-neighbor-detail

2 Returns the details of all the neighboring interfaces of the managed entity.

3 Usage

```

4 <get-lldp-neighbor-detail></get-lldp-neighbor-detail>
5
6
7 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
8 xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="4">
9   <lldp-neighbor-detail xmlns="urn:brocade.com:mgmt:brocade-lldp-ext">
10     <local-interface-name>ethernet 1/3</local-interface-name>
11     <local-interface-ifindex>203448320</local-interface-ifindex>
12     <local-interface-mac>0005.3379.6de0</local-interface-mac>
13     <remote-interface-name>port1</remote-interface-name>
14     <remote-interface-mac>0005.3348.3043</remote-interface-mac>
15     <dead-interval>120</dead-interval>
16     <remaining-life>114</remaining-life>
17     <remote-chassis-id>0005.3348.3043</remote-chassis-id>
18     <lldp-pdu-transmitted>16159</lldp-pdu-transmitted>
19     <lldp-pdu-received>15846</lldp-pdu-received>
20   </lldp-neighbor-detail>
21   <has-more xmlns="urn:brocade.com:mgmt:brocade-lldp-ext">false</has-more>
22 </rpc-reply>

```

23 Parameters

24 *local-interface-name*
 25 Indicates the local interface display name.

26 *local-interface-ifindex*
 27 Indicates the local interface index.

28 *local-interface-mac*
 29 Indicates the local interface MAC address.

30 *remote-interface-name*
 31 Indicates the remote interface display name .

32 *remote-interface-mac*
 33 Indicates the remote interface MAC address.

34 *dead-interval*
 35 Indicates the dead interval.

36 *remaining-life*
 37 Indicates the remaining life period.

38 *remote-chassis-id*
 39 Indicates the remote chassis ID.

40 *lldp-pdu-transmitted*
 41 Number of LLDP PDUs transmitted from the interface.

42 *lldp-pdu-received*

1 Number of LLDP PDUs received by the interface.

DRAFT

1 get-mac-acl-for-intf

2 Returns information about the MAC ACL applied on the specified interfaces.

3 Usage

```
4 <get-mac-acl-for-intf></get-mac-acl-for-intf>
5
6
7 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="2407">
8   <get-mac-acl-for-intf xmlns="urn:brocade.com:mgmt:brocade-mac-access-list">
9     <interface>
10       <interface-type>l2vlan</interface-type>
11       <interface-name>50</interface-name>
12       <ingress-policy>
13         <policy-name>test_02</policy-name>
14       </ingress-policy>
15       <egress-policy>
16         <policy-name>test_01</egress-policy>
17       </egress-policy>
18     </interface>
19   </get-mac-acl-for-intf>
20 </rpc-reply>
```

21 Parameters

22 *interface-type*
23 Displays the interface type.

24 *interface-name*
25 Displays the interface name.

26 *policy-name*
27 Displays the MAC ACL policy name.

1 get-mac-address-table

2 Returns the MAC address table for a given MAC address.

3 Usage

```

4 <get-mac-address-table> <forwarding-interface> <interface-type>ethernet</interface-type>
5 <interface-name>2/4</interface-name> </forwarding-interface> <mac-type>static</mac-type>
6 </get-mac-address-table>
7
8
9 <rpc-reply
10 xmlns=""urn:ietf:params:xml:ns:netconf:base:1.0""xmlns:nc=""urn:ietf:params:xml:ns:netconf
11 :base:1.0"" message-id=""2"">
12   <mac-address-table xmlns=""urn:brocade.com:mgmt:brocade-mac-address-table"">
13     <vlanid>10</vlanid>
14     <mac-address>00:11:11:11:44:44</mac-address>
15     <mac-type>static</mac-type>
16     <mac-state>active</mac-state>
17     <forwarding-interface>
18       <interface-type>ethernet</interface-type>
19       <interface-name>2/4</interface-name>
20     </forwarding-interface>
21   </mac-address-table>
22   <has-more xmlns=""urn:brocade.com:mgmt:brocade-mac-address-table"">false</has-more>
23 </rpc-reply>
24
25 <get-mac-address-table>
26   <last-mac-address-details>
27     <last-mac-address>00:11:11:82:12:92</last-mac-address>
28     <last-vlan-id>10</last-vlan-id>
29     <last-mac-type>static</last-mac-type>
30   </last-mac-address-details>
31   <forwarding-interface-type>ethernet</forwarding-interface-type>
32   <forwarding-interface-name>2/4</forwarding-interface-name>
33   <mac-address-type>static</mac-address-type>
34 </get-mac-address-table>
35
36 <rpc-reply
37 xmlns=""urn:ietf:params:xml:ns:netconf:base:1.0""xmlns:nc=""urn:ietf:params:xml:ns:netconf
38 :base:1.0"" message-id=""2"">
39   <mac-address-table xmlns=""urn:brocade.com:mgmt:brocade-mac-address-table"">
40     <vlanid>10</vlanid>
41     <mac-address>00:11:11:82:12:92</mac-address>
42     <mac-type>static</mac-type>
43     <mac-state>active</mac-state>
44     <forwarding-interface>
45       <interface-type>ethernet</interface-type>
46       <interface-name>2/4</interface-name>
47     </forwarding-interface>
48   </mac-address-table>
49   <has-more xmlns=""urn:brocade.com:mgmt:brocade-mac-address-table"">false</has-more>
50 </rpc-reply>

```

50 Parameters

51 *vlanid*
52 Displays the VLAN ID.
53 *mac-address*

- 1 Displays the MAC address.
- 2 *mac-type*
- 3 Displays the MAC type.
- 4 *mac-state*
- 5 Displays the MAC state.
- 6 *interface-type*
- 7 Displays the interface type.
- 8 *interface-name*
- 9 Displays the interface name.

10 get-maint-mode-status

- 11 This RPC is equivalent to the show system config-status CLI and retrieves the maintenance mode status.

12 Usage

```

13 <nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="9">
14   <get-maint-mode-status xmlns="urn:broadcom.com:mgmt:brocade-system-maintenance"></get-
15   maint-mode-status>
16 </nc:rpc>

17 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
18 xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="9">
19   <config-status xmlns="urn:broadcom.com:mgmt:brocade-system-maintenance">enabled</
20   config-status>
21   <overall-status xmlns="urn:broadcom.com:mgmt:brocade-system-maintenance">complete</
22   overall-status>
23   <num-stages xmlns="urn:broadcom.com:mgmt:brocade-system-maintenance">2</num-stages>
24   <current-stage xmlns="urn:broadcom.com:mgmt:brocade-system-maintenance">2</current-
25   stage>
26   <max-time xmlns="urn:broadcom.com:mgmt:brocade-system-maintenance">100</max-time>
27   <stages xmlns="urn:broadcom.com:mgmt:brocade-system-maintenance">
28     <stage>
29       <stage-num>1</stage-num>
30       <time-taken>0</time-taken>
31       <daemons>
32         <daemon>
33           <daemon-name>bgp</daemon-name>
34           <status>complete</status>
35         </daemon>
36         <daemon>
37           <daemon-name>mct</daemon-name>
38           <status>complete</status>
39         </daemon>
40       </daemons>
41     </stage>
42     <stage>
43       <stage-num>2</stage-num>
44       <time-taken>0</time-taken>
45       <daemons>
46         <daemon>
47           <daemon-name>bgp</daemon-name>
48           <status>complete</status>
49         </daemon>
50         <daemon>

```



```

1         <daemon-name>mct</daemon-name>
2         <status>complete</status>
3     </daemon>
4 </daemons>
5 </stage>
6 </stages>
7 </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.

1 get-media-detail

2 Returns the media properties of all the interfaces of the managed entity.

3 Usage

```

4 <get-media-detail></get-media-detail>
5
6
7 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
8 xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="59">
9   <interface xmlns="urn:brocade.com:mgmt:brocade-interface-ext">
10     <interface-type>ethernet</interface-type>
11     <interface-name>2/5</interface-name>
12     <qsfp>
13       <speed>40Gbps</speed>
14       <connector>lc</connector>
15       <encoding>ieee-802-3ab</encoding>
16       <vendor-name>BROCADE </vendor-name>
17       <vendor-oui>00:05:1e</vendor-oui>
18       <vendor-pn>57-1000263-01 </vendor-pn>
19       <vendor-rev>A </vendor-rev>
20       <distance>long-dist</distance>
21       <media-form-factor>unknown</media-form-factor>
22       <wavelength>26020</wavelength>
23       <serial-no>LDF113390001CBS </serial-no>
24       <date-code>130928 </date-code>
25       <temperature>31</temperature>
26       <voltage>3305.7</voltage>
27       <current>37.364</current>
28       <tx-power>0.0</tx-power>
29       <rx-power>2.7</rx-power>
30     </qsfp>
31   </interface>
32   <interface xmlns="urn:brocade.com:mgmt:brocade-interface-ext">
33     <interface-type>ethernet</interface-type>
34     <interface-name>2/5</interface-name>
35     <sfp>
36       <speed>10Gbps</speed>
37       <connector>lc</connector>
38       <encoding>unknown</encoding>
39       <vendor-name>BROCADE</vendor-name>
40       <vendor-oui>00:05:1e</vendor-oui>
41       <vendor-pn>57-0000076-01</vendor-pn>
42       <vendor-rev>A</vendor-rev>
43       <distance>unknown</distance>
44       <media-form-factor>unknown</media-form-factor>
45       <wavelength>1310</wavelength>
46       <serial-no>ADF21346000071B </serial-no>
47       <date-code>131110</date-code>
48       <temperature>36</temperature>
49       <voltage>3292.0</voltage>
50       <current>38.602</current>
51       <tx-power>700.5</tx-power>
52       <rx-power>741.6</rx-power>
53     </sfp>
54   </interface>
55 </rpc-reply>

```

Parameters

2	<i>interface-type</i>
3	Displays the interface type.
4	<i>interface-name</i>
5	Displays the interface name.
6	<i>speed</i>
7	Specifies the speed.
8	<i>connector</i>
9	Specifies the connector.
10	<i>encoding</i>
11	Displays the type of encoding used to transmit the data on this interface.
12	<i>vendor-name</i>
13	Displays the vendor of the interface.
14	<i>vendor-oui</i>
15	Displays the vendor IEEE company ID.
16	<i>vendor-pn</i>
17	Displays the vendor part number.
18	<i>vendor-rev</i>
19	Displays the vendor revision level.
20	<i>distance</i>
21	Displays the SFP distance.
22	<i>media-form-factor</i>
23	Displays the media form factor.
24	<i>wavelength</i>
25	Displays the wavelength of pluggable media.
26	<i>serial-no</i>
27	Displays the serial number.
28	<i>date-code</i>
29	Displays the vendor's manufacturing date code.
30	<i>temperature</i>
31	Displays the module temperature (degrees C).
32	<i>voltage</i>
33	Indicates the supply voltage (Volts).
34	<i>current</i>
35	Displays the laser diode drive current (milliAmps).
36	<i>tx-power</i>
37	Displays the transmitted optical power (microWatts).
38	<i>rx-power</i>

- 1 Displays the received optical power (microWatts).

DRAFT

1 get-nameserver-detail

2 Retrieves the detailed information of the devices stored in the name server database.

3 Usage

```

4 <get-nameserver-detail xmlns="urn:extreme.com:mgmt:extreme-nameserver"></get-nameserver-
5 detail>
6
7 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="1">
8   <show-nameserver>
9     <nameserver-portid>0d0000</nameserver-portid>
10    <nameserver-portname>20:00:8C:7C:FF:21:C0:00</nameserver-portname>
11    <nameserver-nodename>20:00:8C:7C:FF:21:C0:01</nameserver-nodename>
12    <nameserver-cos>3</nameserver-cos>
13    <nameserver-scr>0</nameserver-scr>
14    <nameserver-fc4s>FCP </nameserver-fc4s>
15    <nameserver-portsymb>[7] "13/0/52"</nameserver-portsymb>
16    <nameserver-nodesymb>NULL</nameserver-nodesymb>
17    <nameserver-fabric-portname>50:02:7F:8C:31:32:30:82</nameserver-fabric-portname>
18    <nameserver-permanent-portname>20:00:8C:7C:FF:21:C0:00</nameserver-permanent-
19 portname>
20    <nameserver-devicetype>Physical Target</nameserver-devicetype>
21    <nameserver-porttype>N</nameserver-porttype>
22    <nameserver-index>130</nameserver-index>
23    <nameserver-sharearea>Yes</nameserver-sharearea>
24    <nameserver-redirect>No</nameserver-redirect>
25    <nameserver-xlatedomain>No</nameserver-xlatedomain>
26    <nameserver-connected-via-ag>No</nameserver-connected-via-ag>
27    <nameserver-ag-base-device>No</nameserver-ag-base-device>
28    <nameserver-real>No</nameserver-real>
29    <nameserver-cascaded>No</nameserver-cascaded>
30   </show-nameserver>
31 </rpc-reply>

```

32 Parameters

33 *nameserver-portid*
34 Displays the list of all Nx_Ports registered in the name server database of this managed device.

35 *nameserver-portname*
36 Displays the Port_Name (WWN) of this Nx_Port.

37 *nameserver-nodename*
38 Displays the Node_Name (WWN) of this Nx_Port.

39 *nameserver-cos*
40 Displays the Fibre Channel Class of service supported by the device.

41 *nameserver-scr*
42 Displays the state change notifications that the device has registered for.

43 *nameserver-fc4s*
44 Displays the Fibre Channel FC4 services supported by the device.

45 *nameserver-portsymb*
46 Displays the user-defined name of this port.

1	<i>nameserver-nodesymb</i>
2	Displays the user-defined name of the node of this port.
3	<i>nameserver-fabric-portname</i>
4	Displays the Fabric port name (WWN) of this port.
5	<i>nameserver-permanent-portname</i>
6	Displays the type and role of the device.
7	<i>nameserver-devicetype</i>
8	Displays the type and role of the device.
9	<i>nameserver-porttype</i>
10	Displays the Fibre Channel port type.
11	<i>nameserver-index</i>
12	Displays the Port index number.
13	<i>nameserver-sharearea</i>
14	Indicates whether or not the port utilizes the Extreme shared area method of fibre channel addressing.
15	
16	<i>nameserver-redirect</i>
17	Indicates whether or not the device is involved in Extreme frame redirection zoning.
18	<i>nameserver-xlatedomain</i>
19	Indicates whether or not the device enters the fabric via a translate domain.
20	<i>nameserver-connected-via-ag</i>
21	Indicates whether or not the device enters the fabric via access gateway.
22	<i>nameserver-ag-base-device</i>
23	Indicates whether or not the device is a base access gateway device.
24	<i>nameserver-real</i>
25	Indicates whether or not the device entered in the fabric via AG is a physical device.
26	<i>nameserver-cascaded</i>
27	Indicates whether or not the device enters the fabric via a cascaded AG.

1 get-netconf-client-capabilities

2 Returns the vendor information for all NETCONF clients.

3 Usage

```
4 <get-netconf-client-capabilities></get-netconf-client-capabilities>
5
6 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
7 xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="57">
8   <session xmlns="urn:extreme.com:mgmt:extreme-netconf-ext">
9     <session-id>30</session-id>
10    <user-name>admin</user-name>
11    <vendor>Extreme</vendor>
12    <product>NOS Netconf Client</product>
13    <version>0.8 beta</version>
14    <identity>sgajaraj</identity>
15    <af-type>IPv4</af-type>
16    <host-ip>172.22.8.111</host-ip>
17    <time>2014-06-04T11:00:35+00:00</time>
18  </session>
19 </rpc-reply>
```

20 Parameters

21 *session-id*
22 Displays the session ID of the NETCONF client session.

23 *user-name*
24 Displays the login name of the user for the NETCONF client session.

25 *vendor*
26 Displays the vendor name of the NETCONF client session.

27 *product*
28 Displays the product name of the NETCONF client session.

29 *version*
30 Displays the product version of the NETCONF client session.

31 *identity*
32 Displays the identity of the NETCONF client session.

33 *af-type*
34 Specifies the address family type.

35 *host-ip*
36 Displays IP address of NETCONF client session.

37 *time*
38 Displays the login time of NETCONF client session.

1 get-port-channel-detail

2 Returns link aggregation control configuration parameters for all the port-channels in the system.

3 Usage

```

4 <get-port-channel-detail></get-port-channel-detail>
5
6 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="1002">
7   <get-port-channel-detail xmlns="urn:brocade.com:mgmt:brocade-lag">
8     <lacp>
9       <aggregator-id>27</aggregator-id>
10      <aggregator-type>standard</aggregator-type>
11      <isvlag>false</isvlag>
12      <aggregator-mode>none</aggregator-mode>
13      <admin-key>0027</admin-key>
14      <oper-key>0027</oper-key>
15      <actor-system-id>00-05-33-6f-18-18</actor-system-id>
16      <partner-system-id>00-05-1e-cd-6e-9f</partner-system-id>
17      <system-priority>32768</system-priority>
18      <partner-oper-priority>32768</partner-oper-priority>
19      <rx-link-count>4</rx-link-count>
20      <tx-link-count>4</tx-link-count>
21      <individual-agg>0</individual-agg>
22      <ready-agg>1</ready-agg>
23      <partner-oper-key>0027</partner-oper-key>
24      <aggr-member>
25        <interface-type>ethernet</interface-type>
26        <interface-name>231/0/22</interface-name>
27        <actor-port>0xE718160201</actor-port>
28        <sync>1</sync>
29      </aggr-member>
30    </lacp>
31    <has-more>true</has-more>
32  </get-port-channel-detail>
33 </rpc-reply>

```

34 Parameters

35 *aggregator-id*
36 Displays the aggregator ID.

37 *aggregator-type*
38 Displays the aggregator type.

39 *isvlag*
40 Specifies if aggregator is VLAG.

41 *aggregator-mode*
42 Displays aggregator mode.

43 *admin-key*
44 Displays the admin key.

45 *oper-key*
46 Displays the operational key.

47 *actor-system-id*

1 Displays the actor system ID.

2 *partner-system-id*

3 Displays the partner system ID.

4 *system-priority*

5 Displays the system priority.

6 *partner-oper-priority*

7 Displays the partner operational priority.

8 *rx-link-count*

9 Displays the RX link counter.

10 *tx-link-count*

11 Displays the TX link counter.

12 *individual-agg*

13 Displays the Individual aggregator.

14 *ready-agg*

15 Displays the Ready aggregator.

16 *partner-oper-key*

17 Displays the Partner Operational key.

18 *interface-type*

19 Displays the interface type .

20 *interface-name*

21 Displays the interface name.

22 *actor-port*

23 Displays the actor port number.

24 *sync*

25 Displays the sync information.

26 **get-portchannel-info-by-intf**

27 This function returns the Link Aggregation Control configuration parameters for a given 'Aggregation

28 Port' in the system.

29 **Usage**

```
30 <nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="1">
31   <get-portchannel-info-by-intf xmlns="urn:brocade.com:mgmt:brocade-lag">
32     <interface-type>ethernet</interface-type>
33     <interface-name>0/13</interface-name>
34   </get-portchannel-info-by-intf>
35 </nc:rpc>
```

```
36 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
37   xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="1">
38   <lag xmlns="urn:brocade.com:mgmt:brocade-lag">
39     <interface-type>ethernet</interface-type>
```

```
1      <interface-name>0/13</interface-name>
2      <actor-port>201433088</actor-port>
3      <system-priority>32768</system-priority>
4      <actor-system-id>d8:84:66:e9:fb:14</actor-system-id>
5      <partner-oper-priority>32768</partner-oper-priority>
6      <partner-system-id>76:8e:f8:05:98:00</partner-system-id>
7      <actor-priority>32768</actor-priority>
8      <admin-key>150</admin-key>
9      <oper-key>150</oper-key>
10     <receive-machine-state>current</receive-machine-state>
11     <periodic-transmission-machine-state>slow-periodic</periodic-transmission-machine-
12 state>
13     <mux-machine-state>collecting-distributing</mux-machine-state>
14     <admin-state>activity aggregation defaulted</admin-state>
15     <oper-state>activity aggregation synchronization collecting distributing</oper-
16 state>
17     <partner-oper-state>activity aggregation synchronization collecting distributing</
18 partner-oper-state>
19     <partner-oper-port>3082</partner-oper-port>
20   </lACP>
21 </rpc-reply>
```

1 get-stp-brief-info

2 Returns Spanning Tree Protocol (STP) information.

3 Usage

```

4 <get-stp-brief-info></get-stp-brief-info>
5
6 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="2025">
7   <get-stp-brief-info xmlns="urn:brocade.com:mgmt:brocade-xstp-ext">
8     <spanning-tree-info>
9       <stp-mode>STP</stp-mode>
10      <stp>
11        <route-bridge>
12          <priority>32768</priority>
13          <bridge-id>22</bridge-id>
14          <hello-time>2</hello-time>
15          <max-age>20</max-age>
16          <forward-delay>15</forward-delay>
17        </route-bridge>
18        <bridge>
19          <priority>32768</priority>
20          <hello-time>2</hello-time>
21          <max-age>20</max-age>
22          <forward-delay>15</forward-delay>
23          <transmit-hold-count>6</transit-hold-count>
24          <migrate-time>3</migrate-time>
25          <port>
26            <interface-type>ethernet</interface-type>
27            <interface-name>2/5</interface-name>
28            <spanningtree-enabled>true</spanningtree-enabled>
29            (output truncated)
30          </port>
31        </spanning-tree-info>
32        <has-more>true</has-more>
33        <last-instance>
34          <instance-id>91</instance-id>
35        </last-instance>
36      </get-stp-brief-info>
37    </rpc-reply>

```

37 Parameters

38 *stp-mode*

39 Displays the type of the Spanning Tree Protocol configured on the switch.

40 *priority*

41 Displays the Bridge priority.

42 *hello-time*

43 Displays the interval between two transmissions of BPDU packets sent by the Root Bridge to tell
44 all other switches that it is indeed the Root Bridge (1 to 10 sec).

45 *max-age*

46 The Max Age may be set to ensure that old information does not endlessly circulate through
47 redundant paths in the network, preventing the effective propagation of new information (6 to
48 40 sec).

49 *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>
```

```

1      <vlan-id>26</vlan-id>
2      <vlan-id>27</vlan-id>
3      <vlan-id>28</vlan-id>
4      <vlan-id>29</vlan-id>
5      <vlan-id>30</vlan-id>
6      <vlan-id>31</vlan-id>
7      <vlan-id>32</vlan-id>
8      <vlan-id>33</vlan-id>
9      <vlan-id>34</vlan-id>
10     <vlan-id>35</vlan-id>
11     <vlan-id>36</vlan-id>
12     <vlan-id>37</vlan-id>
13     <vlan-id>38</vlan-id>
14     <vlan-id>39</vlan-id>
15     <vlan-id>40</vlan-id>
16     <vlan-id>41</vlan-id>
17     <vlan-id>42</vlan-id>
18     <vlan-id>43</vlan-id>
19     <vlan-id>44</vlan-id>
20     <vlan-id>45</vlan-id>
21   </vlans>
22 </cist>
23 <msti xmlns="urn:brocade.com:mgmt:brocade-xstp-ext">
24   <instance-id>2</instance-id>
25   <msti-root-id>8002.f46e.959f.2ef6</msti-root-id>
26   <msti-bridge-id>8002.f46e.959f.2ef6</msti-bridge-id>
27   <msti-bridge-priority>32770</msti-bridge-priority>
28   <vlans>
29     <vlan-id>11</vlan-id>
30   </vlans>
31 </msti>
32 <msti xmlns="urn:brocade.com:mgmt:brocade-xstp-ext">
33   <instance-id>3</instance-id>
34   <msti-root-id>8003.f46e.959f.2ef6</msti-root-id>
35   <msti-bridge-id>8003.f46e.959f.2ef6</msti-bridge-id>
36   <msti-bridge-priority>32771</msti-bridge-priority>
37   <vlans>
38     <vlan-id>12</vlan-id>
39   </vlans>
40 </msti>
41 <has-more xmlns="urn:brocade.com:mgmt:brocade-xstp-ext">false</has-more>
42 </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).

1 get-system-uptime

2 Returns the time since the managed entity was last reinitialized.

3 Usage

```

4 <get-system-uptime></get-system-uptime>
5
6
7 <rpc-reply message-id="307" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
8   <show-system-uptime xmlns="urn:brocade.com:mgmt:brocade-system">
9     <days>0</days>
10    <hours>5</hours>
11    <minutes>53</minutes>
12    <seconds>4</seconds>
13  </show-system-uptime>
14 </rpc-reply>

```

15 Parameters

16 *days*

17 Displays the number of days the managed node is up since its last re-initialization

18 *hours*

19 Displays the number of hours the managed node is up since its last re-initialization

20 *minutes*

21 Displays the number of minutes the managed node is up since its last re-initialization

22 *seconds*

23 Displays the number of seconds the managed node is up since its last re-initialization

24 get-tunnel-info

25 Retrieves summary of one or more tunnels from the switch. Output contains tunnel records sorted in
 26 the ascending order of the tunnel id. This RPC is equivalent of 'show tunnel brief' CLI.

27 Usage

```

28 <nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="8">
29   <get-tunnel-info xmlns="urn:brocade.com:mgmt:brocade-tunnels-ext">
30     </get-tunnel-info>
31   </nc:rpc>
32
33 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
34   xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="8">
35   <tunnel xmlns="urn:brocade.com:mgmt:brocade-tunnels-ext">
36     <id>61441</id>
37     <mode>vxlan</mode>
38     <src-ip>107.107.107.10</src-ip>
39     <dest-ip>107.107.107.2</dest-ip>
40     <vrf>default-vrf</vrf>
41     <config-src>site-config</config-src>
42     <admin-state>up</admin-state>
43     <oper-state>up</oper-state>
44     <nodes>

```

```

1      <node-id>1</node-id>
2    </nodes>
3  </tunnel>
4 </rpc-reply>

```

5 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.

9 Usage

```

10 <nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="8">
11   <get-tunnel-statistics xmlns="urn:brocade.com:mgmt:brocade-tunnels-ext">
12     </get-tunnel-statistics>
13 </nc:rpc>

```

```

14 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
15 xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="8">
16   <tunnel-stat xmlns="urn:brocade.com:mgmt:brocade-tunnels-ext">
17     <id>61441</id>
18     <tx-frames>0</tx-frames>
19     <tx-bytes>0</tx-bytes>
20     <rx-frames>0</rx-frames>
21     <rx-bytes>0</rx-bytes>
22   </tunnel-stat>
23 </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

1 Displays the operational state of the VLAN
2 *interface-type*
3 Displays the interface type
4 *interface-name*
5 Displays the interface name
6 *tag*
7 Displays the state of the interface - untagged, tagged, or converged
8 *classification-type*
9 Displays the type of classification
10 *classification-value*
11 Displays the value of the VLAN classification
12 *last-vlan-id*
13 Displays the last VLAN record that has been fetched

DRAFT

1 mpls-clear-all-ldp-sessions

2 Clears all LDP sessions.

3 Usage

```
4 <clear-mpls-ldp-neighbor xmlns=""urn:brocade.com:mgmt:brocade-mpls"">  
5   <mpls-clear-all-ldp-sessions>true</mpls-clear-all-ldp-sessions>  
6 </clear-mpls-ldp-neighbor>
```

7 Parameters

8 *mpls-clear-all-ldp-sessions*

9 Clears all LDP sessions.

DRAFT

1 mpls-clear-one-ldp-sessions

2 Clears an LDP session.

3 Usage

```
4 <clear-mpls-ldp-neighbor xmlns=""urn:brocade.com:mgmt:brocade-mpls"">  
5   <mpls-clear-one-ldp-sessions>14.14.14.14</mpls-clear-one-ldp-sessions>  
6 </clear-mpls-ldp-neighbor>
```

7 Parameters

8 *mpls-clear-one-ldp-sessions*

9 Clears an LDP session with a specific IP address.

DRAFT

1 mpls-clear-statistics-type

2 Clears the MPLS statistics of a specific type.

3 Usage

```
4 <clear-mpls-statistics xmlns="urn:brocade.com:mgmt:brocade-mpls">  
5   <mpls-clear-statistics-type>3</mpls-clear-statistics-type>  
6   <tunnel-name>t2</tunnel-name>  
7 </clear-mpls-statistics>
```

8 Parameters

9 *mpls-clear-statistics-type*
10 Specifies the MPLS statistics type.
11 *tunnel-name*
12 Specifies the tunnel name.

DRAFT

1 mpls-reopt-lsp

2 Directs the router to consider configuration changes made to an LSP and to optimize the LSP path
3 based on those changes.

4 Usage

```
5 <mpls-reopt-lsp xmlns="urn:brocade.com:mgmt:brocade-mpls">  
6   <mpls-reoptimize-lsp-name-in>reopt1</mpls-reoptimize-lsp-name-in>  
7 </mpls-reopt-lsp>
```

8 Parameters

9 *mpls-reoptimize-lsp-name-in*
10 Specifies the LSP name.

DRAFT

1 reload

2 Reloads the switch.

3 Usage

4

```
<reload xmlns="urn:brocade.com:mgmt:brocade-ha"></reload>
```

DRAFT

1 show snmp-server status

2 Displays the SNMP server status on a VRF.

3 Usage

```

4 <rpc message-id="101" xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
5   <action xmlns="http://tail-f.com/ns/netconf/actions/1.0">
6     <data>
7       <show xmlns="urn:brocade.com:mgmt:brocade-common-def">
8         <snmp-server xmlns="urn:brocade.com:mgmt:brocade-snmp">
9           <status/>
10        </snmp-server>
11      </show>
12    </data>
13  </action>
14 </rpc>]]>]]>
15
16 <?xml version="1.0" encoding="UTF-8"?>
17 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="101">
18   <data>
19     <show xmlns='urn:brocade.com:mgmt:brocade-common-def'>
20       <snmp-server xmlns='urn:brocade.com:mgmt:brocade-snmp'>
21         <status>
22           <server>
23             <vrf>mgmt-vrf</vrf>
24             <status>enabled</status>
25           </server>
26           <server>
27             <vrf>default-vrf</vrf>
28             <status>enabled</status>
29           </server>
30           <server>
31             <vrf>red</vrf>
32             <status>disabled</status>
33           </server>
34         </status>
35       </snmp-server>
36     </show>
37   </data>
38 </rpc-reply>]]>]]>

```

38 Parameters

39 status

40 In the RPC request, fetches the status of the SNMP server on all VRFs.

41 server

42 A container for each of the various VRFs.

43 vrf

44 Name of the VRF for which the status is being displayed.

45 status

46 The SNMP server status for the VRF as named in the *vrf* tag.

1 set-http-application-url

2 Updates the HTTP application URL.

3 Usage

```
4 <set-http-application-url xmlns="urn:brocade.com:mgmt:brocade-http-redirect">
5   <config-http-app-url>
6     <url>www.google.com</url>
7     <op-type>1</op-type>
8   </config-http-app-url>
9 </set-http-application-url>
10
11 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="1">
12   <status-code>0</status-code>
13   <status-string>Success</status-string>
14 </rpc-reply>
```

15 Parameters

16 *status-code*

17 Displays the status code as URL updated successfully - 0, Error not able to update configuration
18 - 1 or Error not able to remove configuration - 2.

19 *status-string*

20 Displays the error in string format.

1 show-clock

2 Returns the date, time, and time zone.

3 Usage

```
4 <show-clock></show-clock>
5
6
7 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
8 xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="7">
9   <clock-time xmlns="urn:brocade.com:mgmt:brocade-clock">
10     <current-time>2014-06-04T11:03:31+00:00</current-time>
11     <timezone>Etc/GMT</timezone>
12   </clock-time>
13 </rpc-reply>
```

14 Parameters

15 *current-time*
16 Displays the switch date and time
17 *timezone*
18 Displays the region/city or region/state/city

DRAFT

1 show-ntp

2 Returns the active NTP server for the Extreme VCS fabric or specified switch.

3 Usage

```
4 <show-ntp></show-ntp>
5
6
7 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
8 xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="12">
9   <node-active-server xmlns="urn:extreme.com:mgmt:extreme-ntp">
10     <LOCL>true</LOCL>
11   </node-active-server>
12 </rpc-reply>
```

13 Parameters

14 *LOCL*

15 Indicates whether the LOCL is true or false

1 show-raslog

2 Returns RASLog entries.

3 Usage

```

4 <show-raslog></show-raslog>
5
6
7 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
8 xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="14">
9   <show-all-raslog xmlns="urn:brocade.com:mgmt:brocade-ras-ext">
10     <number-of-entries>2842</number-of-entries>
11     <raslog-entries>
12       <index>8288</index>
13       <message-id>NSM-1019</message-id>
14       <date-and-time-info>2013/12/07-03:21:17:69</date-and-time-info>
15       <severity>informational</severity>
16       <log-type>dce</log-type>
17       <repeat-count>1</repeat-count>
18       <message> Interface Ve 4093 is administratively up.</message>
19       <message-flag>unknown</message-flag>
20       <switch-or-chassis-name>sw0</switch-or-chassis-name>
21     </raslog-entries>
22     <raslog-entries>
23       <index>13584</index>
24       <message-id>SEC-3022</message-id>
25       <date-and-time-info>2014/06/03-14:03:52:25</date-and-time-info>
26       <severity>informational</severity>
27       <log-type>system</log-type>
28       <repeat-count>1</repeat-count>
29       <message>Event: logout, Status: success, Info: Successful logout by user
30 [admin].</message>
31       <message-flag>unknown</message-flag>
32       <switch-or-chassis-name>sw0</switch-or-chassis-name>
33     </raslog-entries>
34   </show-all-raslog>
35 </rpc-reply>

```

36 Parameters

37 *number-of-entries*

38 Displays the number of recent events to be fetched from the RASLOG entries

39 *index*

40 Displays the sequence number for the message

41 *message-id*

42 Displays the message identifier

43 *date-and-time-info*

44 Displays the date and time of the message. The format is: YYYY-MM-DD/HH:MM:SS.SSSS

45 *severity*

46 Displays the severity of the message. Valid values include: INFO, WARNING, ERROR, and
47 CRITICAL

48 *log-type*

- 1 Specifies if the message is a SYSTEM or DCE log
- 2 *repeat-count*
- 3 Displays the number of times the particular event has occurred
- 4 *message*
- 5 Displays the textual description of the event
- 6 *message-flag*
- 7 Displays the type of the message
- 8 *switch-or-chassis-name*
- 9 Displays the switch name for the generator of the message, or chassis

10 show-support-save-status

11 This RPC provides information on the status of the recent support save request.

12 Usage

```

13 <nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="9">
14   <show-support-save-status xmlns="urn:brocade.com:mgmt:brocade-ras-ext"></show-support-
15   save-status>
16 </nc:rpc>

17 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
18 xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="9">
19   <show-support-save-status xmlns="urn:brocade.com:mgmt:brocade-ras-ext">
20     <status>InProgress</status>
21     <message>The Support Save is in progress and has completed 71%.</message>
22     <percentage-of-completion>1</percentage-of-completion>
23   </show-support-save-status>
24 </rpc-reply>

```

25 show-system-info

26 This RPC shows the system information.

27 Usage

```

28 <nc:rpc xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" nc:message-id="6">
29   <show-system-info xmlns="urn:brocade.com:mgmt:brocade-ras-ext"></show-system-info>
30 </nc:rpc>

31 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
32 xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="6">
33   <show-system-info xmlns="urn:brocade.com:mgmt:brocade-ras-ext">
34     <stack-mac>f4:6e:95:9f:2e:f6</stack-mac>
35   </show-system-info>
36 </rpc-reply>

```

1 show-system-monitor

2 Returns system status information.

3 Usage

```

4 <show-system-monitor></show-system-monitor>
5
6
7 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
8 xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="17">
9   <switch-status xmlns="urn:brocade.com:mgmt:brocade-system-monitor-ext">
10     <switch-name>sw0</switch-name>
11     <switch-ip>10.25.224.18</switch-ip>
12     <switch-state>state-marginal</switch-state>
13     <switch-state-reason>Switch Status is MARGINAL. Contributors: * Power Supply: 1
14 bad. (MARGINAL)</switch-state-reason>
15     <report-time>2017-04-04T11:10:57.11.668484+31:03</report-time>
16     <component-status>
17       <component-name>Power supplies monitor</component-name>
18       <component-state>state-marginal</component-state>
19     </component-status>
20     <component-status>
21       <component-name>Temperatures monitor</component-name>
22       <component-state>state-healthy</component-state>
23     </component-status>
24     <component-status>
25       <component-name>Fans monitor</component-name>
26       <component-state>state-healthy</component-state>
27     </component-status>
28   </switch-status>
29 </rpc-reply>

```

30 Parameters

31 *switch-name*
 32 Displays the name of the switch

33 *switch-ip*
 34 Displays the IP address of the switch

35 *switch-state*
 36 Displays the switch status based on components

37 *switch-state-reason*
 38 Displays the component reason for switch status

39 *report-time*
 40 Displays the switch report time stamp

41 *component-name*
 42 Displays the component name

43 *component-state*
 44 Displays the component status based on thresholds

1 user-session-info

2 Returns user role information.

3 Usage

```
4 <user-session-info></user-session-info>
5
6 <rpc-reply xmlns="urn:ietf:params:xml:ns:netconf:base:1.0"
7 xmlns:nc="urn:ietf:params:xml:ns:netconf:base:1.0" message-id="20">
8   <user-role xmlns="urn:brocade.com:mgmt:brocade-aaa-ext">admin</user-role>
9 </rpc-reply>
```

10 Parameters

11 *user-role*
12 Displays the user role.

DRAFT