Configuration and File Management Feature Guide for the OCX Series

Release
14.1X53

Modified: 2015-06-22

Juniper Networks, Inc.
1133 Innovation Way
Sunnyvale, California 94089
USA
408-745-2000
www.juniper.net

Configuration and File Management Feature Guide for the OCX Series
14.1X53

The information in this document is current as of the date on the title page.

YEAR 2000 NOTICE

Juniper Networks hardware and software products are Year 2000 compliant. Junos OS has no known time-related limitations through the year 2038. However, the NTP application is known to have some difficulty in the year 2036.

END USER LICENSE AGREEMENT

The Juniper Networks product that is the subject of this technical documentation consists of (or is intended for use with) Juniper Networks software. Use of such software is subject to the terms and conditions of the End User License Agreement ("EULA") posted at http://www.juniper.net/support/eula.html. By downloading, installing or using such software, you agree to the terms and conditions of that EULA.

Table of Contents

About the Documentation xi
Documentation and Release Notes xi
Supported Platforms xi
Using the Examples in This Manual xi
Merging a Full Example xii
Merging a Snippet xii
Documentation Conventions xiii
Documentation Feedback xv
Requesting Technical Support xv
Self-Help Online Tools and Resources xv
Opening a Case with JTAC xvi

Part 1 Overview

Chapter 1 Introduction to Configuration Files 3
Configuration File Terms 3
Understanding Configuration Files 4
Forms of the configure Command 4

Chapter 2 Understanding How Configuration Files Are Committed and Stored 7
Junos OS Commit Model for Router or Switch Configuration 7
Understanding How the Junos OS Configuration Is Stored 8

Part 2 Managing Configuration Files

Chapter 3 Using the Default Configuration 13
OCX1100 Default Configuration 13

Chapter 4 Loading, Uploading, Transferring, and Saving Configuration Files 23
Loading a Configuration from a File 23
Examples: Loading a Configuration from a File 26
Loading a Previous Configuration File 28
Saving a Configuration to a File 29
Uploading a Configuration File 30
Using Junos OS to Configure a Router or Switch to Transfer Its Configuration to an Archive Site 31
Configuring the Transfer of the Currently Active Configuration to an Archive Site 31
Configuring the Periodic Transfer of the Active Configuration to an Archive Site 32
Configuring theTransfer of the Currently Active Configuration When a Configuration Is Committed 32

Configuring Archive Sites for the Transfer of Active Configuration Files 32

Chapter 5 Reverting a Configuration or Rolling Back to the Factory Default 35

Rolling Back Junos OS Configuration Changes 35
Returning to the Most Recently Committed Junos OS Configuration 36
Returning to a Previously Committed Junos OS Configuration 37
Returning to a Configuration Prior to the One Most Recently Committed . . . 37
Displaying Previous Configurations 37
Comparing Configuration Changes with a Prior Version 38
Creating and Returning to a Rescue Configuration 40
Saving a Configuration to a File 41
Reverting to the Default Factory Configuration 42

Chapter 6 Using Rescue Configurations 43

Setting or Deleting the Rescue Configuration 43
Creating and Returning to a Rescue Configuration 43
Reverting to the Rescue Configuration 44

Chapter 7 Comparing or Compressing Configuration Files 47

Comparing Configuration Changes with a Prior Version 47
Compressing the Current Configuration File 49

Chapter 8 Troubleshooting 51

Troubleshooting Procedures 51
Loading a Previous Configuration File 51
Reverting to the Default Factory Configuration 52
Reverting to the Rescue Configuration 52
Cleaning Up the System File Storage Space 53

Part 3 Configuration Statements and Operational Commands

Chapter 9 Configuration Statements 57

archival 58
archive-sites (Configuration File) 59
configuration 61
transfer-interval (Configuration) 62
transfer-on-commit 63

Chapter 10 Operational Commands 65

clear log 66
clear system commit 67
file archive 68
file checksum md5 70
file checksum sha1 71
file checksum sha-256 72
file compare 73
file delete 77
file list 78
file rename 80
file show 82
request system configuration rescue delete 84

request system configuration rescue save 85
show system commit 86
show system configuration archival 89
show system configuration rescue 90
show system rollback 92
test configuration 94

List of Figures

Part 2 Managing Configuration Files

Chapter 4 **Loading, Uploading, Transferring, and Saving Configuration Files 23**

Figure 1: Overriding the Current Configuration 26
Figure 2: Using the replace Option 26
Figure 3: Using the merge Option 27
Figure 4: Using a Patch File 27
Figure 5: Using the set Option 28

List of Tables

About the Documentation xi

Table 1: Notice Icons xiii
Table 2: Text and Syntax Conventions xiii

Part 1 Overview

Chapter 1 Introduction to Configuration Files 3

Table 3: Configuration File Terms 3
Table 4: Forms of the configure Command 5

Part 2 Managing Configuration Files

Chapter 4 Loading, Uploading, Transferring, and Saving Configuration Files 23

Table 5: Options for the load Command 30

Part 3 Configuration Statements and Operational Commands

Chapter 10 Operational Commands 65

Table 6: show system commit Output Fields 86

About the Documentation

- Documentation and Release Notes on page xi
- Supported Platforms on page xi
- Using the Examples in This Manual on page xi
- Documentation Conventions on page xiii
- Documentation Feedback on page xv
- Requesting Technical Support on page xv

Documentation and Release Notes

To obtain the most current version of all Juniper Networks® technical documentation, see the product documentation page on the Juniper Networks website at http://www.juniper.net/techpubs/.

If the information in the latest release notes differs from the information in the documentation, follow the product Release Notes.

Juniper Networks Books publishes books by Juniper Networks engineers and subject matter experts. These books go beyond the technical documentation to explore the nuances of network architecture, deployment, and administration. The current list can be viewed at http://www.juniper.net/books.

Supported Platforms

For the features described in this document, the following platforms are supported:

- OCX Series

Using the Examples in This Manual

If you want to use the examples in this manual, you can use the **load merge** or the **load merge relative** command. These commands cause the software to merge the incoming configuration into the current candidate configuration. The example does not become active until you commit the candidate configuration.

If the example configuration contains the top level of the hierarchy (or multiple hierarchies), the example is a *full example*. In this case, use the **load merge** command.

If the example configuration does not start at the top level of the hierarchy, the example is a *snippet*. In this case, use the **load merge relative** command. These procedures are described in the following sections.

Merging a Full Example

To merge a full example, follow these steps:

1. From the HTML or PDF version of the manual, copy a configuration example into a text file, save the file with a name, and copy the file to a directory on your routing platform.

   For example, copy the following configuration to a file and name the file **ex-script.conf**. Copy the **ex-script.conf** file to the **/var/tmp** directory on your routing platform.

   ```
   system {
     scripts {
       commit {
         file ex-script.xsl;
       }
     }
   }
   interfaces {
     fxp0 {
       disable;
       unit 0 {
         family inet {
           address 10.0.0.1/24;
         }
       }
     }
   }
   ```

2. Merge the contents of the file into your routing platform configuration by issuing the **load merge** configuration mode command:

   ```
   [edit]
   user@host# load merge /var/tmp/ex-script.conf
   load complete
   ```

Merging a Snippet

To merge a snippet, follow these steps:

1. From the HTML or PDF version of the manual, copy a configuration snippet into a text file, save the file with a name, and copy the file to a directory on your routing platform.

   For example, copy the following snippet to a file and name the file **ex-script-snippet.conf**. Copy the **ex-script-snippet.conf** file to the **/var/tmp** directory on your routing platform.

   ```
   commit {
     file ex-script-snippet.xsl; }
   ```

2. Move to the hierarchy level that is relevant for this snippet by issuing the following configuration mode command:

```
[edit]
user@host# edit system scripts
[edit system scripts]
```

3. Merge the contents of the file into your routing platform configuration by issuing the **load merge relative** configuration mode command:

```
[edit system scripts]
user@host# load merge relative /var/tmp/ex-script-snippet.conf
load complete
```

For more information about the **load** command, see the *CLI User Guide*.

Documentation Conventions

Table 1 on page xiii defines notice icons used in this guide.

Table 1: Notice Icons

Icon	Meaning	Description
	Informational note	Indicates important features or instructions.
	Caution	Indicates a situation that might result in loss of data or hardware damage.
	Warning	Alerts you to the risk of personal injury or death.
	Laser warning	Alerts you to the risk of personal injury from a laser.
	Tip	Indicates helpful information.
	Best practice	Alerts you to a recommended use or implementation.

Table 2 on page xiii defines the text and syntax conventions used in this guide.

Table 2: Text and Syntax Conventions

Convention	Description	Examples
Bold text like this	Represents text that you type.	To enter configuration mode, type the **configure** command: user@host> **configure**

Table 2: Text and Syntax Conventions *(continued)*

Convention	Description	Examples
`Fixed-width text like this`	Represents output that appears on the terminal screen.	`user@host>` **show chassis alarms** `No alarms currently active`
Italic text like this	• Introduces or emphasizes important new terms. • Identifies guide names. • Identifies RFC and Internet draft titles.	• A policy *term* is a named structure that defines match conditions and actions. • *Junos OS CLI User Guide* • RFC 1997, *BGP Communities Attribute*
Italic text like this	Represents variables (options for which you substitute a value) in commands or configuration statements.	Configure the machine's domain name: [edit] root@# **set system domain-name** *domain-name*
Text like this	Represents names of configuration statements, commands, files, and directories; configuration hierarchy levels; or labels on routing platform components.	• To configure a stub area, include the **stub** statement at the **[edit protocols ospf area area-id]** hierarchy level. • The console port is labeled **CONSOLE**.
< > (angle brackets)	Encloses optional keywords or variables.	**stub <default-metric** ***metric*****>;**
| (pipe symbol)	Indicates a choice between the mutually exclusive keywords or variables on either side of the symbol. The set of choices is often enclosed in parentheses for clarity.	**broadcast | multicast** **(*string1* | *string2* | *string3*)**
# (pound sign)	Indicates a comment specified on the same line as the configuration statement to which it applies.	**rsvp { # Required for dynamic MPLS only**
[ ] (square brackets)	Encloses a variable for which you can substitute one or more values.	**community name members [** ***community-ids*** **]**

Indention and braces ({ })	Identifies a level in the configuration hierarchy.	[edit]
		routing-options {
		  static {
		  route default {
		  nexthop *address*;
		  retain;
		  }
		  }
		}

; (semicolon)	Identifies a leaf statement at a configuration hierarchy level.	
GUI Conventions		
Bold text like this	Represents graphical user interface (GUI) items you click or select.	• In the Logical Interfaces box, select **All Interfaces**. • To cancel the configuration, click **Cancel**.

Table 2: Text and Syntax Conventions *(continued)*

Convention	Description	Examples
> (bold right angle bracket)	Separates levels in a hierarchy of menu selections.	In the configuration editor hierarchy, select **Protocols>Ospf**.

Documentation Feedback

We encourage you to provide feedback, comments, and suggestions so that we can improve the documentation. You can provide feedback by using either of the following methods:

- Online feedback rating system—On any page at the Juniper Networks Technical Documentation site at http://www.juniper.net/techpubs/index.html, simply click the stars to rate the content, and use the pop-up form to provide us with information about your experience. Alternately, you can use the online feedback form at https://www.juniper.net/cgi-bin/docbugreport/.
- E-mail—Send your comments to **techpubs-comments@juniper.net**. Include the document or topic name, URL or page number, and software version (if applicable).

Requesting Technical Support

Technical product support is available through the Juniper Networks Technical Assistance Center (JTAC). If you are a customer with an active J-Care or Partner Support Service support contract, or are covered under warranty, and need post-sales technical support, you can access our tools and resources online or open a case with JTAC.

- JTAC policies—For a complete understanding of our JTAC procedures and policies, review the *JTAC User Guide* located at http://www.juniper.net/us/en/local/pdf/resource-guides/7100059-en.pdf.
- Product warranties—For product warranty information, visit http://www.juniper.net/support/warranty/.
- JTAC hours of operation—The JTAC centers have resources available 24 hours a day, 7 days a week, 365 days a year.

Self-Help Online Tools and Resources

For quick and easy problem resolution, Juniper Networks has designed an online self-service portal called the Customer Support Center (CSC) that provides you with the following features:

- Find CSC offerings: http://www.juniper.net/customers/support/
- Search for known bugs: http://www2.juniper.net/kb/
- Find product documentation: http://www.juniper.net/techpubs/
- Find solutions and answer questions using our Knowledge Base: http://kb.juniper.net/

- Download the latest versions of software and review release notes: http://www.juniper.net/customers/csc/software/
- Search technical bulletins for relevant hardware and software notifications: http://kb.juniper.net/InfoCenter/
- Join and participate in the Juniper Networks Community Forum: http://www.juniper.net/company/communities/
- Open a case online in the CSC Case Management tool: http://www.juniper.net/cm/

To verify service entitlement by product serial number, use our Serial Number Entitlement (SNE) Tool: https://tools.juniper.net/SerialNumberEntitlementSearch/

Opening a Case with JTAC

You can open a case with JTAC on the Web or by telephone.

- Use the Case Management tool in the CSC at http://www.juniper.net/cm/.
- Call 1-888-314-JTAC (1-888-314-5822 toll-free in the USA, Canada, and Mexico).

For international or direct-dial options in countries without toll-free numbers, see http://www.juniper.net/support/requesting-support.html.

PART 1

Overview

- Introduction to Configuration Files on page 3
- Understanding How Configuration Files Are Committed and Stored on page 7

CHAPTER 1

Introduction to Configuration Files

- Configuration File Terms on page 3
- Understanding Configuration Files on page 4
- Forms of the configure Command on page 4

Configuration File Terms

Table 3 on page 3 lists the various configuration file terms and their definitions.

Table 3: Configuration File Terms

Term	Definition
active configuration	Current committed configuration of a switch.
candidate configuration	Working copy of the configuration that allows users to make configurational changes without causing any operational changes until this copy is committed.
configuration group	Group of configuration statements that can be inherited by the rest of the configuration.
commit a configuration	Check configuration for proper syntax, activate and mark as the current configuration file running on the switching platform.
configuration hierarchy	Junos OS configuration consists of a hierarchy of statements. There are two types of statements: container statements, which contain other statements, and leaf statements, which do not contain other statements. All the container and leaf statements together form the configuration hierarchy.
default configuration	Default configuration contains the initial values set for each configuration parameter when a switch is shipped.
rescue configuration	Well-known configuration that recovers a switch from a configuration that denies management access. You set a current committed configuration to be the rescue configuration through the CLI.
roll back a configuration	Return to a previously committed configuration.

Related Documentation

- Loading a Previous Configuration File on page 28
- Reverting to the Rescue Configuration on page 44

- Understanding Configuration Files on page 4

Understanding Configuration Files

A configuration file stores the complete configuration of a switch. The current configuration of a switch is called the active configuration. You can alter this current configuration and you can also return to a previous configuration or to a rescue configuration.

Juniper Networks Junos OS saves the 50 most recently committed configuration files on a switch so that you can return to a previous configuration. The configuration files are named:

- **juniper.conf.gz**—The current active configuration.
- **juniper.conf.1.gz** to **juniper.conf.49.gz**—Rollback configurations.

To make changes to the configuration file, you have to work in configuration mode in the CLI. When making changes to a configuration file, you are viewing and changing the candidate configuration file. The candidate configuration allows you to make configuration changes without causing operational changes to the active configuration or causing potential damage to your current network operations. Once you commit the changes made to the candidate configuration, the system updates the active configuration.

Related Documentation

- Uploading a Configuration File on page 30
- Loading a Previous Configuration File on page 28
- Reverting to the Rescue Configuration on page 44
- Configuration File Terms on page 3

Forms of the configure Command

The Junos OS supports three forms of the **configure** command: **configure**, **configure private**, and **configure exclusive**. These forms control how users edit and commit configurations and can be useful when multiple users configure the software. See Table 4 on page 5.

Table 4: Forms of the configure Command

Command	Edit Access	Commit Access
configure	• No one can lock the configuration. All users can make configuration changes. When you enter configuration mode, the CLI displays the following information: ◦ A list of other users editing the configuration. ◦ Hierarchy levels the users are viewing or editing. ◦ Whether the configuration has been changed, but not committed. ◦ When multiple users enter conflicting configurations, the most recent change to be entered takes precedence.	• No one can lock the configuration. All users can commit all changes to the configuration. • If you and another user make changes and the other user commits changes, your changes are committed as well.
configure exclusive	• One user locks the configuration and makes changes without interference from other users. • Other users can enter and exit configuration mode, but they cannot commit the configuration. • If you enter configuration mode while another user has locked the configuration (with the **configure exclusive** command), the CLI displays the user and the hierarchy level the user is viewing or editing. • If you enter configuration mode while another user has locked the configuration, you can forcibly log out that user with the **request system logout** operational mode command. For details, see the CLI Explorer.	
configure private	• Multiple users can edit the configuration at the same time. • Each user has a private candidate configuration to edit independently of other users. • When multiple users enter conflicting configurations, the first commit operation takes precedence over subsequent commit operations.	• When you commit the configuration, the router verifies that the operational (running) configuration has not been modified by another user before accepting your private candidate configuration as the new operational configuration. • If the configuration has been modified by another user, you can merge the modifications into your private candidate configuration and attempt to commit again.

Related Documentation

- *Committing a Junos OS Configuration*
- *Example: Using the configure Command*
- *Displaying Users Currently Editing the Junos OS Configuration*
- *Using the configure exclusive Command*
- *Updating the configure private Configuration*
- *Displaying set Commands from the Junos OS Configuration*

CHAPTER 2

Understanding How Configuration Files Are Committed and Stored

- Junos OS Commit Model for Router or Switch Configuration on page 7
- Understanding How the Junos OS Configuration Is Stored on page 8

Junos OS Commit Model for Router or Switch Configuration

The router or switch configuration is saved using a commit model—a candidate configuration is modified as desired and then committed to the system. When a configuration is committed, the router or switch checks the configuration for syntax errors, and if no errors are found, the configuration is saved as **juniper.conf.gz** and activated. The formerly active configuration file is saved as the first rollback configuration file (**juniper.conf.1.gz**), and any other rollback configuration files are incremented by 1. For example, **juniper.conf.1.gz** is incremented to **juniper.conf.2.gz**, making it the second rollback configuration file. The router or switch can have a maximum of 49 rollback configurations (numbered 1 through 49) saved on the system.

On the router or switch, the active configuration file and the first three rollback files (**juniper.conf.gz.1, juniper.conf.gz.2, juniper.conf.gz.3**) are located in the **/config** directory. If the file **rescue.conf.gz** is saved on the system, this file should also be saved in the **/config** directory. The factory default files are located in the **/etc/config** directory.

There are two mechanisms used to propagate the configurations between Routing Engines within a router or switch:

- Synchronization—Propagates a configuration from one Routing Engine to a second Routing Engine within the same router or switch chassis.

  

  NOTE: **The QFX3500 switch has only one Routing Engine.**

  To synchronize configurations, use the **commit synchronize** CLI command. If one of the Routing Engines is locked, the synchronization fails. If synchronization fails because of a locked configuration file, you can use the **commit synchronize force** command. This command overrides the lock and synchronizes the configuration files.

- Distribution—Propagates a configuration across the routing plane on a multichassis router or switch. Distribution occurs automatically. There is no user command available

to control the distribution process. If a configuration is locked during a distribution of a configuration, the locked configuration does not receive the distributed configuration file, so the synchronization fails. You need to clear the lock before the configuration and resynchronize the routing planes.

NOTE: When you use the **commit synchronize force** CLI command on a multichassis platform, the forced synchronization of the configuration files does not affect the distribution of the configuration file across the routing plane. If a configuration file is locked on a router or switch remote from the router or switch where the command was issued, the synchronization fails on the remote router or switch. You need to clear the lock and reissue the **synchronization** command.

Related Documentation

- *Configuring Junos OS for the First Time on a Router or Switch with a Single Routing Engine*
- *commit*

Understanding How the Junos OS Configuration Is Stored

When you edit a configuration, you work in a copy of the current configuration to create a candidate configuration. The changes you make to the candidate configuration are visible in the CLI immediately, so if multiple users are editing the configuration at the same time, all users can see all changes.

To have a candidate configuration take effect, you *commit* the changes. At this point, the candidate file is checked for proper syntax, activated, and marked as the current, operational software configuration file. If multiple users are editing the configuration, when you commit the candidate configuration, all changes made by all the users take effect.

In addition to saving the current configuration, the CLI saves the current operational version and the previous 49 versions of committed configurations. The most recently committed configuration is version 0, which is the current operational version and the default configuration that the system returns to if you roll back to a previous configuration. The oldest saved configuration is version 49.

By default, the Junos OS saves the current configuration and three previous versions of the committed configuration on the CompactFlash card. The currently operational Junos OS configuration is stored in the file juniper.conf.gz, and the last three committed configurations are stored in the files juniper.conf.1.gz, juniper.conf.2.gz, and juniper.conf.3.gz. These four files are located in the router or switch's CompactFlash card in the directory /config.

The remaining 46 previous versions of committed configurations, the files **juniper.conf.4** through **juniper.conf.49**, are stored in the directory **/var/db/config** on the hard disk.

Related Documentation

- *Using Junos OS to Specify the Number of Configurations Stored on the CompactFlash Card*

- Returning to the Most Recently Committed Junos OS Configuration on page 36
- Returning to a Previously Committed Junos OS Configuration on page 37
- Loading a Configuration from a File on page 23

PART 2

Managing Configuration Files

- Using the Default Configuration on page 13
- Loading, Uploading, Transferring, and Saving Configuration Files on page 23
- Reverting a Configuration or Rolling Back to the Factory Default on page 35
- Using Rescue Configurations on page 43
- Comparing or Compressing Configuration Files on page 47
- Troubleshooting on page 51

CHAPTER 3

Using the Default Configuration

- OCX1100 Default Configuration on page 13

OCX1100 Default Configuration

Each OCX1100 switch is programmed with a factory default configuration that contains the values set for each configuration parameter when the switch is shipped. The default configuration file sets values for system parameters such as **syslog** and **commit**, configures Ethernet switching on all interfaces, enables IGMP snooping, and enables the LLDP and RSTP protocols.

The following default configuration file is for an OCX1100 switch:

NOTE: Interfaces ge-0/0/1 through ge-0/0/48 are SFP+ port interfaces. Interfaces ge-0/0/49 through ge-0/0/54 are QSFP+ port interfaces.

When you commit changes to the configuration, a new configuration file is created, which becomes the active configuration. You can always revert to the factory default configuration.

```
system {
    commit {
        factory-settings {
            reset-virtual-chassis-configuration;
            reset-chassis-lcd-menu;
        }
    }
    processes {
        app-engine-virtual-machine-management-service {
            traceoptions {
                level notice;
                flag all;
            }
        }
    }
}
    interfaces {
        xe-0/0/1 {
            unit 0 {
```

```
        family inet {
          dhcp {
            vendor-id Juniper-ocx1100-48sx
          }
        }
      }
    }
    xe-0/0/2 {
      unit 0 {
        family inet {
          dhcp {
            vendor-id Juniper-ocx1100-48sx
          }
        }
      }
    }
  xe-0/0/3 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/4 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/5 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/6 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/7 {
    unit 0 {
      family inet {
        dhcp {
```

```
            vendor-id Juniper-ocx1100-48sx
          }
        }
      }
    }
    xe-0/0/8 {
      unit 0 {
        family inet {
          dhcp {
            vendor-id Juniper-ocx1100-48sx
          }
        }
      }
    }
    xe-0/0/9 {
      unit 0 {
        family inet {
          dhcp {
            vendor-id Juniper-ocx1100-48sx
          }
        }
      }
    }
    xe-0/0/10 {
      unit 0 {
        family inet {
          dhcp {
            vendor-id Juniper-ocx1100-48sx
          }
        }
      }
    }
    xe-0/0/11 {
      unit 0 {
        family inet {
          dhcp {
            vendor-id Juniper-ocx1100-48sx
          }
        }
      }
    }
    xe-0/0/12 {
      unit 0 {
        family inet {
          dhcp {
            vendor-id Juniper-ocx1100-48sx
          }
        }
      }
    }
    xe-0/0/13 {
      unit 0 {
        family inet {
          dhcp {
            vendor-id Juniper-ocx1100-48sx
          }
```

```
    }
  }
}
xe-0/0/14 {
  unit 0 {
    family inet {
      dhcp {
        vendor-id Juniper-ocx1100-48sx
      }
    }
  }
}
xe-0/0/15 {
  unit 0 {
    family inet {
      dhcp {
        vendor-id Juniper-ocx1100-48sx
      }
    }
  }
}
xe-0/0/16 {
  unit 0 {
    family inet {
      dhcp {
        vendor-id Juniper-ocx1100-48sx
      }
    }
  }
}
xe-0/0/17 {
  unit 0 {
    family inet {
      dhcp {
        vendor-id Juniper-ocx1100-48sx
      }
    }
  }
}
xe-0/0/18 {
  unit 0 {
    family inet {
      dhcp {
        vendor-id Juniper-ocx1100-48sx
      }
    }
  }
}
xe-0/0/19 {
  unit 0 {
    family inet {
      dhcp {
        vendor-id Juniper-ocx1100-48sx
      }
    }
  }
```

```
}
xe-0/0/20 {
  unit 0 {
    family inet {
      dhcp {
        vendor-id Juniper-ocx1100-48sx
      }
    }
  }
}
xe-0/0/21 {
  unit 0 {
    family inet {
      dhcp {
        vendor-id Juniper-ocx1100-48sx
      }
    }
  }
}
xe-0/0/22 {
  unit 0 {
    family inet {
      dhcp {
        vendor-id Juniper-ocx1100-48sx
      }
    }
  }
}
xe-0/0/23 {
  unit 0 {
    family inet {
      dhcp {
        vendor-id Juniper-ocx1100-48sx
      }
    }
  }
}
xe-0/0/24 {
  unit 0 {
    family inet {
      dhcp {
        vendor-id Juniper-ocx1100-48sx
      }
    }
  }
}
xe-0/0/25 {
  unit 0 {
    family inet {
      dhcp {
        vendor-id Juniper-ocx1100-48sx
      }
    }
  }
}
xe-0/0/26 {
```

```
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/27 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/28 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/29 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/30 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/31 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/32 {
    unit 0 {
      family inet {
```

```
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/33 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/34 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/35 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/36 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/37 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/38 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
```

```
        }
      }
    }
  }
  xe-0/0/39 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/40 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/41 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/42 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/43 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/44 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
```

```
    }
  }
  xe-0/0/45 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/46 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/47 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  xe-0/0/48 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  et-0/0/49 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
  et-0/0/50 {
    unit 0 {
      family inet {
        dhcp {
          vendor-id Juniper-ocx1100-48sx
        }
      }
    }
  }
```

```
    et-0/0/51 {
      unit 0 {
        family inet {
          dhcp {
            vendor-id Juniper-ocx1100-48sx
          }
        }
      }
    }
    et-0/0/52 {
      unit 0 {
        family inet {
          dhcp {
            vendor-id Juniper-ocx1100-48sx
          }
        }
      }
    }
    et-0/0/53 {
      unit 0 {
        family inet {
          dhcp {
            vendor-id Juniper-ocx1100-48sx
          }
        }
      }
    }
    et-0/0/54 {
      unit 0 {
        family inet {
          dhcp {
            vendor-id Juniper-ocx1100-48sx
          }
        }
      }
    }
  }
```

Related Documentation

- *Connecting and Configuring an OCX1100 Switch (CLI Procedure)*

CHAPTER 4

Loading, Uploading, Transferring, and Saving Configuration Files

- Loading a Configuration from a File on page 23
- Examples: Loading a Configuration from a File on page 26
- Loading a Previous Configuration File on page 28
- Saving a Configuration to a File on page 29
- Uploading a Configuration File on page 30
- Using Junos OS to Configure a Router or Switch to Transfer Its Configuration to an Archive Site on page 31

Loading a Configuration from a File

You can create a file, copy the file to the local router, and then load the file into the CLI. After you have loaded the file, you can commit it to activate the configuration on the router, or you can edit the configuration interactively using the CLI and commit it at a later time.

You can also create a configuration while typing at the terminal and then load it. Loading a configuration from the terminal is generally useful when you are cutting existing portions of the configuration and pasting them elsewhere in the configuration.

To load an existing configuration file that is located on the router, use the **load** configuration mode command:

```
[edit]
user@host# load (factory-default | merge | override | patch | replace | set | update)
  filename <relative>
```

For information about specifying the filename, see *Viewing Files and Directories on a Device Running Junos OS*.

To load a configuration from the terminal, use the following version of the **load** configuration mode command. Press Ctrl-d to end input.

```
[edit]
user@host# load (factory-default | merge | override | patch | replace | set | update)
terminal <relative>
```

To replace an entire configuration, specify the **override** option at any level of the hierarchy. A **load override** operation completely replaces the current candidate configuration with the file you are loading. Thus, if you saved a complete configuration, use this option.

An **override** operation discards the current candidate configuration and loads the configuration in ***filename*** or the configuration that you type at the terminal. When you use the **override** option and commit the configuration, all system processes reparse the configuration. For an example, see Figure 1 on page 26.

To replace portions of a configuration, specify the **replace** option. The **load replace** operation looks for **replace:** tags that you added to the loaded file, and replaces the parts of the candidate configuration with whatever is specified after the tag. This is useful when you want more control over exactly what is being changed. For this operation to work, you must include **replace:** tags in the file or configuration you type at the terminal. The software searches for the **replace:** tags, deletes the existing statements of the same name, if any, and replaces them with the incoming configuration. If there is no existing statement of the same name, the **replace** operation adds to the configuration the statements marked with the **replace:** tag. For an example, see Figure 2 on page 26.

If, in an **override** or **merge** operation, you specify a file or type text that contains **replace:** tags, the **replace:** tags are ignored and the **override** or **merge** operation is performed.

If you are performing a **replace** operation and the file you specify or text you type does not contain any **replace:** tags, the **replace** operation is effectively equivalent to a **merge** operation. This might be useful if you are running automated scripts and cannot know in advance whether the scripts need to perform a **replace** or a **merge** operation. The scripts can use the **replace** operation to cover either case.

The **load merge** operation adds the saved file to the existing candidate configuration. This is useful if you are adding new configuration sections. For example, suppose that you are adding a BGP configuration to the **[edit protocols]** hierarchy level, where there was no BGP configuration before, you can use the **load merge** operation to combine the saved file configuration to the existing candidate configuration. If the existing configuration and the incoming configuration contain conflicting statements, the statements in the incoming configuration override those in the existing configuration.

To replace only the configuration that has changed, specify the **update** option at any level of the hierarchy. The **load update** operation compares the candidate configuration and the file you are loading, and only changes the parts of the candidate configuration that are different from the new configuration. You would use this, for example, if there is an existing BGP configuration and the file you are loading changes it in some way.

To change part of the configuration with a patch file, specify the **patch** option. The **load patch** operation loads a file or terminal input that contains configuration changes. First, on a device that already has the configuration changes, you type the **show | compare** command to output the differences between two configurations. Then you can load the differences on another router. The advantage of the **load patch** command is that it saves you from having to copy snippets from different hierarchy levels into a text file prior to loading them into the target device. This might be a useful time saver if you are configuring several devices with the same options. For example, suppose that you configure a routing

policy on Device router1 and you want to replicate the policy configuration on Device router2, router3, and router4, you can use the **load patch** operation.

First, run the **show | compare** command.

```
user@router1# show | compare rollback 3
[edit protocols ospf]
+   export default-static;
-   export static-default
[edit policy-options]
+   policy-statement default-static {
+       from protocol static;
+       then accept;
+   }
```

Copy the output of the **show | compare** command to the clipboard, making sure to include the hierarchy levels. On Device router2, router3, and router4, type **load patch terminal** and paste the output. Press Enter and then press Ctrl-d to end the operation. If the patch input specifies different values for an existing statement, the patch input overrides the existing statement.

To use the **merge**, **replace**, **set**, or **update** option without specifying the full hierarchy level, specify the **relative** option. For example:

```
[edit system]
user@host# show static-host-mapping
bob sysid 987.654.321ab
[edit system]
user@host# load replace terminal relative
[Type ^D at a new line to end input]
replace: static-host-mapping {
   bob sysid 0123.456.789bc;
}
load complete
[edit system]
user@host# show static-host-mapping
bob sysid 0123.456.789bc;
```

To load a configuration that contains the **set** configuration mode command, specify the **set** option. This option executes the configuration instructions line by line as they are stored in a file or from a terminal. The instructions can contain any configuration mode command, such as **set**, **edit**, **exit**, and **top**. For an example, see Figure 5 on page 28.

To copy a configuration file from another network system to the local router, you can use the SSH and Telnet utilities, as described in the CLI Explorer.

NOTE: If you are using Junos OS in a Common Criteria environment, system log messages are created whenever a secret attribute is changed (for example, password changes or changes to the RADIUS shared secret). These changes are logged during the following configuration load operations:

```
load merge
load replace
load override
load update
```

For more information, see the *Secure Configuration Guide for Common Criteria and Junos-FIPS*.

Related Documentation

- Examples: Loading a Configuration from a File on page 26

Examples: Loading a Configuration from a File

Figure 1: Overriding the Current Configuration

Current configuration:

```
interfaces {
 lo0 {
  unit 0 {
   family inet {
    address 127.0.0.1;
   }
  }
 }
 so-3/0/0 {
  unit 0 {
   family inet {
    address 204.69.248.181/28:
   }
  }
 }
}
```

File contents:

```
interfaces {
replace:                    load override
 so-3/0/0 {                 ------------>
  unit 0 {
   family inet {
    address 10.0.0.1/8;
   }
  }
 }
}
```

New contents:

```
interfaces {
 so-3/0/0 {
  unit 0 {
   family inet {
    address 10.0.0.1/8;
   }
  }
 }
}
```

1628

Figure 2: Using the replace Option

Current configuration:

```
interfaces {
 lo0 {
  unit 0 {
   family inet {
    address 127.0.0.1;
   }
  }
 }
 so-3/0/0 {
  unit 0 {
   family inet {
    address 204.69.248.181/28:
   }
  }
 }
}
```

File contents:

```
interfaces {
replace:                    load replace
 so-3/0/0 {                 ------------>
  unit 0 {
   family inet {
    address 10.0.0.1/8;
   }
  }
 }
}
```

New contents:

```
interfaces {
 lo0 {
  unit 0 {
   family inet {
    address 127.0.0.1;
   }
  }
 }
so-3/0/0 {
 unit 0 {
  family inet {
   address 10.0.0.1/8;
   }
  }
 }
}
```

h1629

Figure 3: Using the merge Option

Current configuration:

```
interfaces {
 lo0 {
  unit 0 {
   family inet {
    address 127.0.0.1;
   }
  }
 }
 so-3/0/0 {
  unit 0 {
   family inet {
    address 204.69.248.181/28;
   }
  }
 }
}
```

File contents:

```
interfaces {
replace:
 so-3/0/0 {
  unit 0 {
   family inet {
    address 10.0.0.1/8;
   }
  }
 }
}
```

load merge →

New contents:

```
interfaces {
 lo0 {
  unit 0 {
   family inet {
    address 127.0.0.1;
   }
  }
 }
 so-3/0/0 {
  unit 0 {
   family inet {
    address 10.0.0.1/8;
    address 204.69.248.181/28;
   }
  }
 }
}
```

1705

Figure 4: Using a Patch File

Current configuration:

```
interfaces {
 fxp0 {
  unit 0 {
   family inet {
    address 192.168.6.193/24;
   }
  }
 }
lo0 {
  unit 0 {
   family inet {
    address 127.0.0.1/32;
   }
  }
 }
}
```

File contents:

```
{edit interfaces}
+ so-0/0/0 {
+  unit 0 {
+   family inet {
+    address 10.0.0.1/8;
+   }
+  }
+ }
```

load patch →

New contents:

```
interfaces {
 so-0/0/0 {
  unit 0 {
   family inet {
    address 10.0.0.1/8;
   }
  }
 }
fxp0 {
  unit 0 {
   family inet {
    address 192.168.6.193/24;
   }
  }
 }
lo0 {
 unit 0 {
  family inet {
   address 127.0.0.1/32;
   }
  }
 }
}
```

h1969

Figure 5: Using the set Option

File contents:

```
edit access
set profile p1 client cl ike
edit profile p1 client cl ike
set pre-shared-key ascii-text "abcd"
set allowed-proxy-pair local 1.1.1.1 remote 2.2.2.2
exit
deactivate profile p1
top
edit system
set radius-server 1.1.1.1
```

```
load set
```


New contents:

```
system {
  radius-server {
    1.1.1.1;
  }
}
access {
  inactive: profile p1 {
    client cl {
      ike {
        allowed-proxy-pair local 1.1.1.1/32 remote 2.2.2.2/32;
        pre-shared-key ascii-text "$9$Ydg4ZDjqf5FVw"; ## SECRET-DATA
      }
    }
  }
}
```

g017215

Related Documentation

- Loading a Configuration from a File on page 23

Loading a Previous Configuration File

You can use the **rollback** <***number***> command to return to a previously committed configuration file. A switch saves the last 50 committed configurations, including the rollback number, date, time, and name of the user who issued the **commit** configuration command.

Syntax

rollback <***number***>

Options

- **none**— Return to the most recently saved configuration.
- ***number***—Return to the specified configuration.
  - **Range**: 0 through 49. The most recently saved configuration is number 0, and the oldest saved configuration is number 49.
  - **Default**: 0

To return to a configuration prior to the most recently committed one:

1. Specify the rollback number (here, 1 is entered and the configuration returns to the previously committed configuration 0):

```
[edit]
user@switch# rollback 1
load complete
```

2. Activate the configuration you have loaded:

```
[edit]
user@switch# commit
```

Related Documentation

- Configuration File Terms on page 3

Saving a Configuration to a File

Save the Junos OS configuration to a file so that you can edit it with a text editor of your choice. You can save your current configuration to an ASCII file, which saves the configuration in its current form, including any uncommitted changes. If more than one user is modifying the configuration, all changes made by all users are saved.

To save software configuration changes to an ASCII file, use the **save** configuration mode command:

```
[edit]
user@host# save filename
[edit]
user@host#
```

The contents of the current level of the statement hierarchy (and below) are saved, along with the statement hierarchy containing it. This allows a section of the configuration to be saved, while fully specifying the statement hierarchy.

By default, the configuration is saved to a file in your home directory, which is on the flash drive.

When you issue this command from anywhere in the hierarchy (except the top level), a **replace** tag is automatically included at the beginning of the file. You can use the **replace** tag to control how a configuration is loaded from a file.

```
user@host> file show /var/home/user/myconf
replace:
protocols {
    bgp {
        disable;
        group int {
            type internal;
        }
    }
    isis {
        disable;
        interface all {
            level 1 disable;
        }
```

```
    interface fxp0.0 {
      disable;
    }
  }
  ospf {
    traffic-engineering;
    reference-bandwidth 4g;
    ...
  }
}
```

Uploading a Configuration File

You can create a configuration file on your local system, copy the file to the switch, and then load the file into the CLI. After you have loaded the configuration file, you can commit it to activate the configuration on the switch. You can also edit the configuration interactively using the CLI and commit it at a later time.

To upload a configuration file from your local system:

1. Create the configuration file using a text editor such as Notepad, making sure that the syntax of the configuration file is correct. For more information about testing the syntax of a configuration file, see the *Junos OS System Basics and Services Command Reference* at http://www.juniper.net/techpubs/software/junos/index.html.
2. In the configuration text file, use an option to perform the required action when the file is loaded. Table 5 on page 30 lists and describes some options for the **load** command.

Table 5: Options for the load Command

Options	Description
merge	Combines the current active configuration and the configuration in the filename you specify or the one that you type at the terminal. A **merge** operation is useful when you are adding a new section to an existing configuration. If the active configuration and the incoming configuration contain conflicting statements, the statements in the incoming configuration override those in the active configuration.
override	Discards the current candidate configuration and loads the configuration in the filename you specify or the one that you type at the terminal. When you use the **override** option and commit the configuration, all system processes reparse the configuration. You can use the **override** option at any level of the hierarchy.
replace	Searches for the **replace** tags, deletes the existing statements of the same name, if any, and replaces them with the incoming configuration. If there is no existing statement of the same name, the **replace** operation adds the statements marked with the **replace** tag to the active configuration. NOTE: For this operation to work, you must include **replace** tags in the text file or in the configuration you type at the terminal.

3. Press Ctrl+a to select all the text in the configuration file.
4. Press Ctrl+c to copy the contents of the configuration text file to the Clipboard.

5. Log in to the switch using your username and password.
6. Enter configuration mode:
   user@switch> **configure**

   Entering configuration mode
   [edit]
   user@switch#
7. Load the configuration file:
   [edit]
   user@switch# **load merge terminal**
8. At the cursor, paste the contents of the Clipboard using the mouse and the Paste icon:
   [edit]
   user@switch# **load merge terminal**
   [Type ^D at a new line to end input]
   >Cursor is here. Paste the contents of the clipboard here<
9. Press Enter.
10. Press Ctrl+d to set the end-of-file marker.

To view results of the configuration steps before committing the configuration, type the **show** command at the user prompt.

To commit these changes to the active configuration, type the **commit** command at the user prompt. You can also edit the configuration interactively using the CLI and commit it at a later time.

Related Documentation

- Understanding Configuration Files on page 4

Using Junos OS to Configure a Router or Switch to Transfer Its Configuration to an Archive Site

You can configure a router or switch to transfer its configuration to an archive file periodically. The following tasks describe how to transfer the configuration to an archive site:

1. Configuring the Transfer of the Currently Active Configuration to an Archive Site on page 31
2. Configuring the Periodic Transfer of the Active Configuration to an Archive Site on page 32
3. Configuring theTransfer of the Currently Active Configuration When a Configuration Is Committed on page 32
4. Configuring Archive Sites for the Transfer of Active Configuration Files on page 32

Configuring the Transfer of the Currently Active Configuration to an Archive Site

If you want to back up your device's current configuration to an archive site, you can configure the router or switch to transfer its currently active configuration by FTP or secure copy (SCP) periodically or after each commit.

To configure the router or switch to transfer its currently active configuration to an archive site, include statements at the **[edit system archival configuration]** hierarchy level:

```
[edit system archival configuration]
archive-sites {
   ftp://username<:password>@host-address<:port>/url-path;
   scp://username<:password>@host-address<:port>/url-path;
}
transfer-interval interval;
transfer-on-commit;
```

NOTE: When specifying a URL in a Junos OS statement using an IPv6 host address, you must enclose the entire URL in quotation marks ("") and enclose the IPv6 host address in brackets ([ ]). For example, "ftp://*username*<:*password*>@[*ipv6-host-address*]<:*port*>/*url-path*"

Configuring the Periodic Transfer of the Active Configuration to an Archive Site

To configure the router or switch to periodically transfer its currently active configuration to an archive site, include the **transfer-interval** statement at the **[edit system archival configuration]** hierarchy level:

```
[edit system archival configuration]
transfer-interval interval;
```

The ***interval*** is a period of time ranging from 15 through 2880 minutes.

Configuring theTransfer of the Currently Active Configuration When a Configuration Is Committed

To configure the router or switch to transfer its currently active configuration to an archive site each time you commit a candidate configuration, include the **transfer-on-commit** statement at the **[edit system archival configuration]** hierarchy level:

```
[edit system archival configuration]
transfer-on-commit;
```

NOTE: When specifying a URL in a Junos OS statement using an IPv6 host address, you must enclose the entire URL in quotation marks ("") and enclose the IPv6 host address in brackets ([ ]). For example, "scp://*username*<:*password*>@[*ipv6-host-address*]<:*port*>/*url-path*"

Configuring Archive Sites for the Transfer of Active Configuration Files

When you configure the router or switch to transfer its configuration files, you specify an archive site to which the files are transferred. If you specify more than one archive site, the router or switch attempts to transfer files to the first archive site in the list, moving to the next site only if the transfer fails.

When you use the **archive-sites** statement, you can specify a destination as an FTP URL, or SCP-style remote file specification. The URL type **file://** is also supported.

To configure the archive site, include the **archive-sites** statement at the **[edit system archival configuration]** hierarchy level:

```
[edit system archival configuration]
archive-sites {
   ftp://username@host:<port>url-path password password;
   scp://username@host:<port>url-path password password;
   file://<path>/<filename>;
}
```

NOTE: When specifying a URL in a Junos OS statement using an IPv6 host address, you must enclose the entire URL in quotation marks ("") and enclose the IPv6 host address in brackets ([ ]). For example, "scp://*username*<:*password*>@[*ipv6-host-address*]<:*port*>/*url-path*"

When you specify the archive site, do not add a forward slash (/) to the end of the URL.

The destination filename is saved in the following format, where *n* corresponds to the number of the compressed configuration rollback file that has been archived:

<*router-name*>_juniper.conf.*n*.gz_*YYYYMMDD_HHMMSS*

NOTE: The time included in the destination filename is always in Coordinated Universal Time (UTC) regardless of whether the time on the router is configured as UTC or the local time zone. The default time zone on the router or switch is UTC.

CHAPTER 5

Reverting a Configuration or Rolling Back to the Factory Default

- Rolling Back Junos OS Configuration Changes on page 35
- Returning to the Most Recently Committed Junos OS Configuration on page 36
- Returning to a Previously Committed Junos OS Configuration on page 37
- Reverting to the Default Factory Configuration on page 42

Rolling Back Junos OS Configuration Changes

This topic shows how to use the **rollback** command to return to the most recently committed Junos OS configuration. The **rollback** command is useful if you make configuration changes and then decide not to keep the changes.

The following procedure shows how to configure an SNMP health monitor on a device running Junos OS and then return to the most recently committed configuration that does not include the health monitor. When configured, the SNMP health monitor provides the network management system (NMS) with predefined monitoring for file system usage, CPU usage, and memory usage on the device.

1. Enter configuration mode:

   ```
   user@host> configure
   entering configuration mode
   [edit]
   user@host#
   ```

2. Show the current configuration (if any) for SNMP:

   ```
   [edit]
   user@host# show snmp
   ```

   No **snmp** statements appear because SNMP has not been configured on the device.

3. Configure the health monitor:

   ```
   [edit]
   user@host# set snmp health-monitor
   ```

4. Show the new configuration:

   ```
   [edit]
   user@host# show snmp
   ```

```
health-monitor;
```

The **health-monitor** statement indicates that SNMP health monitoring is configured on the device.

5. Enter the **rollback** configuration mode command to return to the most recently committed configuration:

```
[edit]
user@host# rollback
load complete
```

6. Show the configuration again to make sure your change is no longer present:

```
[edit]
user@host# show snmp
```

No **snmp** configuration statements appear. The health monitor is no longer configured.

7. Enter the **commit** command to activate the configuration to which you rolled back:

```
[edit]
user@host# commit
```

8. Exit configuration mode:

```
[edit]
user@host# exit
Exiting configuration mode
```

You can also use the **rollback** command to return to earlier configurations.

Related Documentation

- Returning to the Most Recently Committed Junos OS Configuration on page 36

Returning to the Most Recently Committed Junos OS Configuration

To return to the most recently committed configuration and load it into configuration mode without activating it, use the **rollback** configuration mode command:

```
[edit]
user@host# rollback
load complete
```

To activate the configuration to which you rolled back, use the **commit** command:

```
[edit]
user@host# rollback
load complete
[edit]
user@host# commit
```

Related Documentation

- Rolling Back Junos OS Configuration Changes on page 35
- Returning to a Previously Committed Junos OS Configuration on page 37
- Understanding How the Junos OS Configuration Is Stored on page 8

Returning to a Previously Committed Junos OS Configuration

This topic explains how you can return to a configuration prior to the most recently committed one, and contains the following sections:

- Returning to a Configuration Prior to the One Most Recently Committed on page 37
- Displaying Previous Configurations on page 37
- Comparing Configuration Changes with a Prior Version on page 38
- Creating and Returning to a Rescue Configuration on page 40
- Saving a Configuration to a File on page 41

Returning to a Configuration Prior to the One Most Recently Committed

To return to a configuration prior to the most recently committed one, include the configuration number, 0 through 49, in the **rollback** command. The most recently saved configuration is number 0 (which is the default configuration to which the system returns), and the oldest saved configuration is number 49.

```
[edit]
user@host# rollback number
load complete
```

Displaying Previous Configurations

To display previous configurations, including the rollback number, date, time, the name of the user who committed changes, and the method of commit, use the **rollback ?** command.

```
[edit]
user@host# rollback ?
Possible completions:
<[Enter]> Execute this command
<number> Numeric argument
0              2005-02-27 12:52:10 PST by abc via cli
1              2005-02-26 14:47:42 PST by def via cli
2              2005-02-14 21:55:45 PST by ghi via cli
3              2005-02-10 16:11:30 PST by jkl via cli
4              2005-02-10 16:02:35 PST by mno via cli
5              2005-03-16 15:10:41 PST by pqr via cli
6              2005-03-16 14:54:21 PST by stu via cli
7              2005-03-16 14:51:38 PST by vwx via cli
8              2005-03-16 14:43:29 PST by yzz via cli
9              2005-03-16 14:15:37 PST by abc via cli
10             2005-03-16 14:13:57 PST by def via cli
11             2005-03-16 12:57:19 PST by root via other
12             2005-03-16 10:45:23 PST by root via other
13             2005-03-16 10:08:13 PST by root via other
14             2005-03-16 01:20:56 PST by root via other
15             2005-03-16 00:40:37 PST by ghi via cli
16             2005-03-16 00:39:29 PST by jkl via cli
17             2005-03-16 00:32:36 PST by mno via cli
18             2005-03-16 00:31:17 PST by pqr via cli
```

```
19          2005-03-15 19:59:00 PST by stu via cli
20          2005-03-15 19:53:39 PST by vwx via cli
21          2005-03-15 18:07:19 PST by yzz via cli
22          2005-03-15 17:59:03 PST by abc via cli
23          2005-03-15 15:05:14 PST by def via cli
24          2005-03-15 15:04:51 PST by ghi via cli
25          2005-03-15 15:03:42 PST by jkl via cli
26          2005-03-15 15:01:52 PST by mno via cli
27          2005-03-15 14:58:34 PST by pqr via cli
28          2005-03-15 13:09:37 PST by root via other
29          2005-03-12 11:01:20 PST by stu via cli
30          2005-03-12 10:57:35 PST by vwx via cli
31          2005-03-11 10:25:07 PST by yzz via cli
32          2005-03-10 23:40:58 PST by abc via cli
33          2005-03-10 23:40:38 PST by def via cli
34          2005-03-10 23:14:27 PST by ghi via cli
35          2005-03-10 23:10:16 PST by jkl via cli
36          2005-03-10 23:01:51 PST by mno via cli
37          2005-03-10 22:49:57 PST by pqr via cli
38          2005-03-10 22:24:07 PST by stu via cli
39          2005-03-10 22:20:14 PST by vwx via cli
40          2005-03-10 22:16:56 PST by yzz via cli
41          2005-03-10 22:16:41 PST by abc via cli
42          2005-03-10 20:44:00 PST by def via cli
43          2005-03-10 20:43:29 PST by ghi via cli
44          2005-03-10 20:39:14 PST by jkl via cli
45          2005-03-10 20:31:30 PST by root via other
46          2005-03-10 18:57:01 PST by mno via cli
47          2005-03-10 18:56:18 PST by pqr via cli
48          2005-03-10 18:47:49 PST by stu via cli
49          2005-03-10 18:47:34 PST by vw via cli
| Pipe through a command
[edit]
```

Comparing Configuration Changes with a Prior Version

In configuration mode only, when you have made changes to the configuration and want to compare the candidate configuration with a prior version, you can use the **compare** command to display the configuration. The **compare** command compares the candidate configuration with either the current committed configuration or a configuration file and displays the differences between the two configurations. To compare configurations, specify the **compare** command after the pipe:

```
[edit]
user@host# show | compare (filename| rollback n)
```

filename is the full path to a configuration file. The file must be in the proper format: a hierarchy of statements.

n is the index into the list of previously committed configurations. The most recently saved configuration is number 0, and the oldest saved configuration is number 49. If you do not specify arguments, the candidate configuration is compared against the active configuration file (**/config/juniper.conf**).

The comparison output uses the following conventions:

- Statements that are only in the candidate configuration are prefixed with a plus sign (+).
- Statements that are only in the comparison file are prefixed with a minus sign (-).
- Statements that are unchanged are prefixed with a single blank space ( ).

The following example shows various changes, then a comparison of the candidate configuration with the active configuration, showing only the changes made at the **[edit protocols bgp]** hierarchy level:

```
[edit]
user@host# edit protocols bgp
[edit protocols bgp]
user@host# show
group my-group {
    type internal;
    hold-time 60;
    advertise-inactive;
    allow 1.1.1.1/32;
}
group fred {
    type external;
    peer-as 33333;
    allow 2.2.2.2/32;
}
group test-peers {
    type external;
    allow 3.3.3.3/32;
}
[edit protocols bgp]
user@host# set group my-group hold-time 90
[edit protocols bgp]
user@host# delete group my-group advertise-inactive
[edit protocols bgp]
user@host# set group fred advertise-inactive
[edit protocols bgp]
user@host# delete group test-peers
[edit protocols bgp]
user@host# show | compare
[edit protocols bgp group my-group]
-hold-time 60;
+hold-time 90;
-advertise-inactive;
[edit protocols bgp group fred]
+advertise-inactive;
[edit protocols bgp]
-group test-peers {
    -type external;
    -allow 3.3.3.3/32;
}
[edit protocols bgp]
user@host# show
group my-group {
    type internal;
    hold-time 90;
```

```
    allow 1.1.1.1/32;
}
group fred {
    type external;
    advertise-inactive;
    peer-as 3333;
    allow 2.2.2.2/32;
}
```

Creating and Returning to a Rescue Configuration

A *rescue configuration* allows you to define a known working configuration or a configuration with a known state that you can roll back to at any time. This alleviates the necessity of having to remember the rollback number with the **rollback** command. You use the rescue configuration when you need to roll back to a known configuration or as a last resort if your router or switch configuration and the backup configuration files become damaged beyond repair.

To save the most recently committed configuration as the rescue configuration so that you can return to it at any time, issue the **request system configuration rescue save** command:

```
user@host> request system configuration rescue save
```

To return to the rescue configuration, use the **rollback rescue** configuration mode command:

```
[edit]
user@host# rollback rescue
load complete
```

NOTE: If the rescue configuration does not exist, or if the rescue configuration is not a complete, viable configuration, then the rollback command fails, an error message appears, and the current configuration remains active.

To activate the rescue configuration that you have loaded, use the **commit** command:

```
[edit]
user@host# rollback rescue
load complete
[edit]
user@host# commit
```

To delete an existing rescue configuration, issue the **request system configuration rescue delete** command:

```
user@host> request system configuration rescue delete
user@host>
```

For more information about the **request system configuration rescue delete** and **request system configuration rescue save** commands, see the CLI Explorer.

Saving a Configuration to a File

Save the Junos OS configuration to a file so that you can edit it with a text editor of your choice. You can save your current configuration to an ASCII file, which saves the configuration in its current form, including any uncommitted changes. If more than one user is modifying the configuration, all changes made by all users are saved.

To save software configuration changes to an ASCII file, use the **save** configuration mode command:

```
[edit]
user@host# save filename
[edit]
user@host#
```

The contents of the current level of the statement hierarchy (and below) are saved, along with the statement hierarchy containing it. This allows a section of the configuration to be saved, while fully specifying the statement hierarchy.

By default, the configuration is saved to a file in your home directory, which is on the flash drive.

When you issue this command from anywhere in the hierarchy (except the top level), a **replace** tag is automatically included at the beginning of the file. You can use the **replace** tag to control how a configuration is loaded from a file.

```
user@host> file show /var/home/user/myconf
replace:
protocols {
    bgp {
        disable;
        group int {
            type internal;
        }
    }
    isis {
        disable;
        interface all {
            level 1 disable;
        }
        interface fxp0.0 {
            disable;
        }
    }
    ospf {
        traffic-engineering;
        reference-bandwidth 4g;
        ...
    }
}
```

Related Documentation

- Returning to the Most Recently Committed Junos OS Configuration on page 36
- Loading a Configuration from a File on page 23

- *Viewing Files and Directories on a Device Running Junos OS*

Reverting to the Default Factory Configuration

If for any reason the current active configuration fails, you can revert to the default factory configuration. The default factory configuration contains the basic configuration settings. This is the first configuration of the switch, and it is loaded when the switch is first installed and powered on.

The **load factory default** command is a standard Junos OS configuration command. This configuration command replaces the current active configuration with the default factory configuration.

To revert the switch to the rescue configuration:

1.
```
[edit]
user@switch# load factory-default
[edit]
user@switch# delete system commit factory-settings
[edit]
user@switch# commit
```

Related Documentation

- Understanding Configuration Files on page 4
- Loading a Previous Configuration File on page 28
- Reverting to the Rescue Configuration on page 44

CHAPTER 6

Using Rescue Configurations

- Setting or Deleting the Rescue Configuration on page 43
- Creating and Returning to a Rescue Configuration on page 43
- Reverting to the Rescue Configuration on page 44

Setting or Deleting the Rescue Configuration

A *rescue configuration* is a user-defined configuration that restores connectivity to the device. You set a current committed configuration to be the rescue configuration through the CLI. If someone inadvertently commits a configuration that denies management access to a device and the console port is not accessible, you can overwrite the invalid configuration and replace it with the rescue configuration. The rescue configuration is a previously committed, valid configuration. We recommend that the rescue configuration include the IP address (accessible from the network) for the management port.

To set the current active configuration as the rescue configuration:

```
user@switch> request system configuration rescue save
```

To delete an existing rescue configuration:

```
user@switch> request system configuration rescue delete
```

Related Documentation

- Reverting to the Default Factory Configuration on page 42
- Loading a Previous Configuration File on page 28
- Configuration File Terms on page 3
- CLI Explorer

Creating and Returning to a Rescue Configuration

A *rescue configuration* allows you to define a known working configuration or a configuration with a known state that you can roll back to at any time. This alleviates the necessity of having to remember the rollback number with the **rollback** command. You use the rescue configuration when you need to roll back to a known configuration or as a last resort if your router or switch configuration and the backup configuration files become damaged beyond repair.

To save the most recently committed configuration as the rescue configuration so that you can return to it at any time, issue the **request system configuration rescue save** command:

```
user@host> request system configuration rescue save
```

To return to the rescue configuration, use the **rollback rescue** configuration mode command:

```
[edit]
user@host# rollback rescue
load complete
```

NOTE: If the rescue configuration does not exist, or if the rescue configuration is not a complete, viable configuration, then the rollback command fails, an error message appears, and the current configuration remains active.

To activate the rescue configuration that you have loaded, use the **commit** command:

```
[edit]
user@host# rollback rescue
load complete
[edit]
user@host# commit
```

To delete an existing rescue configuration, issue the **request system configuration rescue delete** command:

```
user@host> request system configuration rescue delete
user@host>
```

For more information about the **request system configuration rescue delete** and **request system configuration rescue save** commands, see the CLI Explorer.

Related Documentation

- Comparing Configuration Changes with a Prior Version on page 38
- Saving a Configuration to a File on page 29

Reverting to the Rescue Configuration

If someone inadvertently commits a configuration that denies management access to a device and the console port is not accessible, you can overwrite the invalid configuration and replace it with the rescue configuration. The rescue configuration is a previously committed, valid configuration.

To revert the switch to the rescue configuration:

1. Enter the **load override** command.

   ```
   [edit]
   user@switch# load override filename
   ```

2. Commit your changes.

```
[edit]
user@switch# commit filename
```

Related Documentation

- Setting or Deleting the Rescue Configuration on page 43
- Reverting to the Default Factory Configuration on page 42
- Configuration File Terms on page 3

CHAPTER 7

Comparing or Compressing Configuration Files

- Comparing Configuration Changes with a Prior Version on page 47
- Compressing the Current Configuration File on page 49

Comparing Configuration Changes with a Prior Version

In configuration mode only, when you have made changes to the configuration and want to compare the candidate configuration with a prior version, you can use the **compare** command to display the configuration. The **compare** command compares the candidate configuration with either the current committed configuration or a configuration file and displays the differences between the two configurations. To compare configurations, specify the **compare** command after the pipe:

```
[edit]
user@host# show | compare (filename| rollback n)
```

filename is the full path to a configuration file. The file must be in the proper format: a hierarchy of statements.

n is the index into the list of previously committed configurations. The most recently saved configuration is number 0, and the oldest saved configuration is number 49. If you do not specify arguments, the candidate configuration is compared against the active configuration file (**/config/juniper.conf**).

The comparison output uses the following conventions:

- Statements that are only in the candidate configuration are prefixed with a plus sign (+).
- Statements that are only in the comparison file are prefixed with a minus sign (-).
- Statements that are unchanged are prefixed with a single blank space ( ).

The following example shows various changes, then a comparison of the candidate configuration with the active configuration, showing only the changes made at the **[edit protocols bgp]** hierarchy level:

```
[edit]
user@host# edit protocols bgp
```

```
[edit protocols bgp]
user@host# show
group my-group {
   type internal;
   hold-time 60;
   advertise-inactive;
   allow 1.1.1.1/32;
}
group fred {
   type external;
   peer-as 33333;
   allow 2.2.2.2/32;
}
group test-peers {
   type external;
   allow 3.3.3.3/32;
}
[edit protocols bgp]
user@host# set group my-group hold-time 90
[edit protocols bgp]
user@host# delete group my-group advertise-inactive
[edit protocols bgp]
user@host# set group fred advertise-inactive
[edit protocols bgp]
user@host# delete group test-peers
[edit protocols bgp]
user@host# show | compare
[edit protocols bgp group my-group]
-hold-time 60;
+hold-time 90;
-advertise-inactive;
[edit protocols bgp group fred]
+advertise-inactive;
[edit protocols bgp]
-group test-peers {
   -type external;
   -allow 3.3.3.3/32;
}
[edit protocols bgp]
user@host# show
group my-group {
   type internal;
   hold-time 90;
   allow 1.1.1.1/32;
}
group fred {
   type external;
   advertise-inactive;
   peer-as 3333;
   allow 2.2.2.2/32;
}
```

Related Documentation

- Creating and Returning to a Rescue Configuration on page 40

Compressing the Current Configuration File

By default, the current operational configuration file is compressed and is stored in the file **juniper.conf.gz** in the **/config** file system, along with the last three committed versions of the configuration. If you have large networks, the current configuration file might exceed the available space in the **/config** file system. Compressing the current configuration file enables the file to fit in the file system, typically reducing the size of the file by 90 percent. You might want to compress your current operation configuration files when they reach 3 megabytes (MB) in size.

When you compress the current configuration file, the names of the configuration files change. To determine the size of the files in the **/config** file system, issue the **file list /config detail** command.

NOTE: **We recommend that you compress the configuration files (this is the default) to minimize the amount of disk space that they require.**

- If you want to compress the current configuration file, include the **compress-configuration-files** statement at the **[edit system]** hierarchy level:

  ```
  [edit system]
  compress-configuration-files;
  ```

  Commit the current configuration file to include the **compression-configuration-files** statement. Commit the configuration again to compress the current configuration file:

  ```
  [edit system]
  user@host# set compress-configuration-files
  user@host# commit
  commit complete
  user@host# commit
  commit complete
  ```

- If you do not want to compress the current operational configuration file, include the **no-compress-configuration-files** statement at the **[edit system]** hierarchy level:

  ```
  [edit system]
  no-compression-configuration-files;
  ```

  Commit the current configuration file to include the **no-compress-configuration-files** statement. Commit the configuration again to uncompress the current configuration file:

  ```
  [edit system]
  user@host# commit
  commit complete
  user@host# commit
  commit complete
  ```

Related Documentation

- Junos OS Commit Model for Router or Switch Configuration on page 7
- *compress-configuration-files*

CHAPTER 8

Troubleshooting

- Troubleshooting Procedures on page 51

Troubleshooting Procedures

- Loading a Previous Configuration File on page 51
- Reverting to the Default Factory Configuration on page 52
- Reverting to the Rescue Configuration on page 52
- Cleaning Up the System File Storage Space on page 53

Loading a Previous Configuration File

You can use the **rollback** <***number***> command to return to a previously committed configuration file. A switch saves the last 50 committed configurations, including the rollback number, date, time, and name of the user who issued the **commit** configuration command.

Syntax

rollback <***number***>

Options

- **none**— Return to the most recently saved configuration.
- ***number***—Return to the specified configuration.
  - **Range**: 0 through 49. The most recently saved configuration is number 0, and the oldest saved configuration is number 49.
  - **Default**: 0

To return to a configuration prior to the most recently committed one:

1. Specify the rollback number (here, 1 is entered and the configuration returns to the previously committed configuration 0):

   ```
   [edit]
   user@switch# rollback 1
   load complete
   ```

2. Activate the configuration you have loaded:

```
[edit]
user@switch# commit
```

Related Documentation

- Configuration File Terms on page 3

Reverting to the Default Factory Configuration

If for any reason the current active configuration fails, you can revert to the default factory configuration. The default factory configuration contains the basic configuration settings. This is the first configuration of the switch, and it is loaded when the switch is first installed and powered on.

The **load factory default** command is a standard Junos OS configuration command. This configuration command replaces the current active configuration with the default factory configuration.

To revert the switch to the rescue configuration:

1.
```
[edit]
user@switch# load factory-default
[edit]
user@switch# delete system commit factory-settings
[edit]
user@switch# commit
```

Related Documentation

- Understanding Configuration Files on page 4
- Loading a Previous Configuration File on page 28
- Reverting to the Rescue Configuration on page 44

Reverting to the Rescue Configuration

If someone inadvertently commits a configuration that denies management access to a device and the console port is not accessible, you can overwrite the invalid configuration and replace it with the rescue configuration. The rescue configuration is a previously committed, valid configuration.

To revert the switch to the rescue configuration:

1. Enter the **load override** command.

   ```
   [edit]
   user@switch# load override filename
   ```

2. Commit your changes.

   ```
   [edit]
   user@switch# commit filename
   ```

Related Documentation

- Setting or Deleting the Rescue Configuration on page 43
- Reverting to the Default Factory Configuration on page 42

- Configuration File Terms on page 3

Cleaning Up the System File Storage Space

Problem **Description:** The system file storage space on the switch is full. Rebooting the switch does not solve the problem.

The following error message is displayed during a typical operation on the switch after the file storage space is full.

```
user@switch% cli
user@switch> configure
/var: write failed, filesystem is full
```

Solution Clean up the file storage on the switch by deleting system files.

1. Request to delete system files on the switch.

   ```
   user@switch> request system storage cleanup
   ```

   The list of files to be deleted is displayed.

   ```
   List of files to delete:

            Size Date         Name
       11B Jul 26 20:55 /var/jail/tmp/alarmd.ts
      124B Aug  4 18:05 /var/log/default-log-messages.0.gz
     1301B Jul 26 20:42 /var/log/install.0.gz
      387B Jun  3 14:37 /var/log/install.1.gz
     4920B Aug  4 18:05 /var/log/messages.0.gz
     20.0K Jul 26 21:00 /var/log/messages.1.gz
     16.3K Jun 25 13:45 /var/log/messages.2.gz
      804B Aug  4 18:05 /var/log/security.0.gz
     16.8K Aug  3 11:15 /var/log/security.1.gz
      487B Aug  4 18:04 /var/log/wtmp.0.gz
      855B Jul 29 22:54 /var/log/wtmp.1.gz
      920B Jun 30 16:32 /var/log/wtmp.2.gz
       94B Jun  3 14:36 /var/log/wtmp.3.gz
    353.2K Jun  3 14:37 /var/sw/pkg/jloader-qfx-11.2I20110303_1117_dc-builder.tgz

    124.0K Jun  3 14:30 /var/tmp/gres-tp/env.dat
        0B Apr 14 16:20 /var/tmp/gres-tp/lock
        0B Apr 14 17:37 /var/tmp/if-rtsdb/env.lck
     12.0K Jul 26 20:55 /var/tmp/if-rtsdb/env.mem
   2688.0K Jul 26 20:55 /var/tmp/if-rtsdb/shm_usr1.mem
    132.0K Jul 26 20:55 /var/tmp/if-rtsdb/shm_usr2.mem
   2048.0K Jul 26 20:55 /var/tmp/if-rtsdb/trace.mem
      155B Jul 26 20:55 /var/tmp/krt_gencfg_filter.txt
        0B Jul 26 20:55 /var/tmp/rtsdb/if-rtsdb
   1400.6K Aug  3 10:13 /var/tmp/sfid.core.0.gz
   1398.9K Aug  3 17:01 /var/tmp/sfid.core.1.gz
   Delete these files ? [yes,no] (no)
   ```

2. Enter **yes** to delete the files.

3. Reboot the switch.

BEST PRACTICE: We recommend that you regularly request a system file storage cleanup to optimize the performance of the switch.

Related Documentation

- *request system storage cleanup*

PART 3

Configuration Statements and Operational Commands

- Configuration Statements on page 57
- Operational Commands on page 65

CHAPTER 9

Configuration Statements

- archival on page 58
- archive-sites (Configuration File) on page 59
- configuration on page 61
- transfer-interval (Configuration) on page 62
- transfer-on-commit on page 63

archival

Syntax

```
archival {
  configuration {
    archive-sites {
      file://<path>/<filename>;
      ftp://username@host:<port>url-path password password;
      http://username@host:<port>url-path password password;
      pasvftp://username@host:<port>url-path password password;
      scp://username@host:<port>url-path password password;
    }
    transfer-interval interval;
    transfer-on-commit;
  }
}
```

Hierarchy Level [edit system]

Release Information

Statement introduced before Junos OS Release 7.4.
Statement introduced in Junos OS Release 9.0 for EX Series switches.
Statement introduced in Junos OS Release 14.1X53-D20 for OCX Series switches.
Statement introduced in Junos OS Release 11.1 for the QFX Series.

Description Configure copying of the currently active configuration to an archive site. An archive site can be a file, or an FTP, HTTP, or SCP location.

Options The remaining statements are explained separately.

NOTE: The **[edit system archival]** hierarchy is not available on QFabric systems.

Required Privilege Level

admin—To view this statement in the configuration.
admin-control—To add this statement to the configuration.

Related Documentation

- Using Junos OS to Configure a Router or Switch to Transfer Its Configuration to an Archive Site on page 31

archive-sites (Configuration File)

Syntax

```
archive-sites {
  file://<path>/<filename>;
  ftp://username@host:<port>url-path password password;
  http://username@host:<port>url-path password password;
  pasvftp://username@host:<port>url-path password password;
  scp://username@host:<port>url-path password password;
}
```

Hierarchy Level [edit system archival configuration]

Release Information Statement introduced before Junos OS Release 7.4.
Statement introduced in Junos OS Release 9.0 for EX Series switches.
Statement introduced in Junos OS Release 14.1X53-D20 for OCX Series switches.
Statement introduced in Junos OS Release 11.1 for the QFX Series.

Description Specify where to transfer the current configuration files. When specifying a URL in a Junos OS statement using an IPv6 host address, you must enclose the entire URL in quotation marks (" ") and enclose the IPv6 host address in brackets ([ ]). For example, **"scp://*username*<:*password*>@[*ipv6-host-address*]<:*port*>/*url-path*"**

If you specify more than one archive site, the router or switch attempts to transfer the configuration files to the first archive site in the list, moving to the next only if the transfer fails.

The destination filename is saved in the following format, where *n* corresponds to the number of the compressed configuration rollback file that has been archived:

router-name_juniper.conf.***n***.gz_*YYYYMMDD_HHMMSS*.

NOTE: The time included in the destination filename is always in Coordinated Universal Time (UTC) regardless of whether the time on the router or switch is configured as UTC or the local time zone. The default time zone on the router or switch is UTC.

NOTE: The **[edit system archival]** hierarchy is not available on QFabric systems.

Options The prefix used in the configuration statement determines the form of transfer:

file:// —transfer on a path to a named file

ftp:// —transfer using active FTP server

http://—transfer using HTTP server

pasvftp:// —transfer to a device that only accepts passive FTP services

scp:// —transfer to a known host using background SCP file transfers

Required Privilege Level

system—To view this statement in the configuration.
system-control—To add this statement to the configuration.

Related Documentation

- Configuring Archive Sites for the Transfer of Active Configuration Files on page 32
- Junos OS Commit Model for Router or Switch Configuration on page 7
- **configuration on page 61**
- **transfer-on-commit on page 63**

configuration

Syntax

```
configuration {
  transfer-interval interval;
  transfer-on-commit;
  archive-sites {
    file://<path>/<filename>;
    ftp://username@host:<port>url-path password password;
    http://username@host:<port>url-path password password;
    pasvftp://username@host:<port>url-path password password;
    scp://username@host:<port>url-path password password;
  }
}
```

Hierarchy Level [edit system archival]

Release Information Statement introduced before Junos OS Release 7.4.
Statement introduced in Junos OS Release 9.0 for EX Series switches.
Statement introduced in Junos OS Release 14.1X53-D20 for OCX Series switches.
Statement introduced in Junos OS Release 11.1 for the QFX Series.

Description Configure the router or switch to periodically transfer its currently active configuration (or after each commit).

NOTE: The **[edit system archival]** hierarchy is not available on QFabric systems.

Options The remaining statements are explained separately.

Required Privilege Level system—To view this statement in the configuration.
system-control—To add this statement to the configuration.

Related Documentation

- Using Junos OS to Configure a Router or Switch to Transfer Its Configuration to an Archive Site on page 31
- *archive*
- archive-sites on page 59
- transfer-interval on page 62
- transfer-on-commit on page 63

transfer-interval (Configuration)

Syntax transfer-interval *interval*;

Hierarchy Level [edit system archival configuration]

Release Information Statement introduced before Junos OS Release 7.4.
Statement introduced in Junos OS Release 9.0 for EX Series switches.
Statement introduced in Junos OS Release 14.1X53-D20 for OCX Series switches.
Statement introduced in Junos OS Release 11.1 for the QFX Series.

Description Configure the router or switch to periodically transfer its currently active configuration to an archive site.

Options ***interval***—Interval at which to transfer the current configuration to an archive site.

Range: 15 through 2880 minutes

NOTE: The **[edit system archival]** hierarchy is not available on QFabric systems.

Required Privilege Level system—To view this statement in the configuration.
system-control—To add this statement to the configuration.

Related Documentation

- Configuring the Periodic Transfer of the Active Configuration to an Archive Site on page 32
- *archive*
- configuration on page 61
- transfer-on-commit on page 63

transfer-on-commit

Syntax transfer-on-commit;

Hierarchy Level [edit system archival configuration]

Release Information Statement introduced before Junos OS Release 7.4.
Statement introduced in Junos OS Release 9.0 for EX Series switches.
Statement introduced in Junos OS Release 14.1X53-D20 for OCX Series switches.
Statement introduced in Junos OS Release 11.1 for the QFX Series.

Description Configure the router or switch to transfer its currently active configuration to an archive site each time you commit a candidate configuration.

NOTE: When specifying a URL in a Junos OS statement using an IPv6 host address, you must enclose the entire URL in quotation marks (" ") and enclose the IPv6 host address in brackets ([ ]). For example, "ftp://*username*<:*password*>@[*ipv6-host-address*]<:*port*>/*url-path*" .

NOTE: The **[edit system archival]** hierarchy is not available on QFabric systems.

Required Privilege Level system—To view this statement in the configuration.
system-control—To add this statement to the configuration.

Related Documentation

- Configuring theTransfer of the Currently Active Configuration When a Configuration Is Committed on page 32
- *archive*
- configuration on page 61
- transfer-interval on page 62

CHAPTER 10

Operational Commands

- clear log
- clear system commit
- file archive
- file checksum md5
- file checksum sha1
- file checksum sha-256
- file compare
- file delete
- file list
- file rename
- file show
- request system configuration rescue delete
- request system configuration rescue save
- show system commit
- show system configuration archival
- show system configuration rescue
- show system rollback
- test configuration

clear log

Syntax clear log *filename*
<all>

Release Information Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
Command introduced in Junos OS Release 11.1 for the QFX Series.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

Description Remove contents of a log file.

Options ***filename***—Name of the specific log file to delete.

all—(Optional) Delete the specified log file and all archived versions of it.

Required Privilege Level clear

Related Documentation
- *show log*

List of Sample Output clear log on page 66

Output Fields See file list for an explanation of output fields.

Sample Output

clear log

The following sample commands list log file information, clear the contents of a log file, and then display the updated log file information:

```
user@host> file list lcc0-re0:/var/log/sampled detail
lcc0-re0:
--------------------------------------------------------------------------
-rw-r-----  1 root  wheel      26450 Jun 23 18:47 /var/log/sampled
total 1

user@host> clear log lcc0-re0:sampled
lcc0-re0:
--------------------------------------------------------------------------

user@host> file list lcc0-re0:/var/log/sampled detail
lcc0-re0:
--------------------------------------------------------------------------
-rw-r-----  1 root  wheel         57 Sep 15 03:44 /var/log/sampled
total 1
```

clear system commit

Syntax clear system commit

Release Information Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
Command introduced in Junos OS Release 11.1 for the QFX Series.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

Description Clear any pending commit operation.

Options This command has no options.

Required Privilege Level maintenance (or the actual user who scheduled the commit)

Related Documentation
- show system commit on page 86

List of Sample Output
clear system commit on page 67
clear system commit (None Pending) on page 67
clear system commit (User Does Not Have Required Privilege Level) on page 67

Output Fields When you enter this command, you are provided feedback on the status of your request.

Sample Output

clear system commit

```
user@host> clear system commit
Pending commit cleared.
```

clear system commit (None Pending)

```
user@host> clear system commit
No commit scheduled.
```

clear system commit (User Does Not Have Required Privilege Level)

```
user@host> clear system commit
error: Permission denied
```

file archive

Syntax file archive destination *destination* source *source* <compress>

Release Information Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
Command introduced in Junos OS Release 11.1 for the QFX Series.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

Description Archive, and optionally compress, one or multiple local system files as a single file, locally or at a remote location.

Options

destination *destination*—Destination of the archived file or files. Specify the destination as a URL or filename. The Junos OS adds one of the following suffixes if the destination filename does not already have it:

- For archived files—The suffix **.tar**
- For archived and compressed files—The suffix **.tgz**

source *source*—Source of the original file or files. Specify the source as a URL or filename.

compress—(Optional) Compress the archived file with the GNU zip (gzip) compression utility. The compressed files have the suffix **.tgz**.

Required Privilege Level maintenance

Related Documentation

- *Format for Specifying Filenames and URLs in Junos OS CLI Commands*

List of Sample Output

file archive (Multiple Files) on page 68
file archive (Single File) on page 68
file archive (with Compression) on page 69

Output Fields When you enter this command, you are provided feedback on the status of your request.

Sample Output

file archive (Multiple Files)

The following sample command archives all message files in the local directory **/var/log/messages** as the single file **messages-archive.tar**.

```
user@host> file archive source /var/log/messages* destination /var/log/messages-archive.tar
/usr/bin/tar: Removing leading / from absolute path names in the archive.

user@host>
```

file archive (Single File)

The following sample command archives one message file in the local directory **/var/log/messages** as the single file **messages-archive.tar**.

```
user@host> file archive source /var/log/messages destination /var/log/messages-archive.tar
/usr/bin/tar: Removing leading / from absolute path names in the archive.
user@host
```

file archive (with Compression)

The following sample command archives and compresses all message files in the local directory **/var/log/messages** as the single file **messages-archive.tgz**.

```
user@host> file archive compress source /var/log/messages* destination
/var/log/messages-archive.tgz
/usr/bin/tar: Removing leading / from absolute path names in the archive.
```

file checksum md5

Syntax file checksum md5 <*pathname*> *filename*

Release Information Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
Command introduced in Junos OS Release 11.1 for the QFX Series.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

Description Calculate the Message Digest 5 (MD5) checksum of a file.

Options ***pathname***—(Optional) Path to a filename.

filename—Name of a local file for which to calculate the MD5 checksum.

Required Privilege Level maintenance

Related Documentation

- *Configuring Checksum Hashes for a Commit Script* in the *Junos OS Configuration and Operations Automation Guide*
- *Configuring Checksum Hashes for an Event Script* in the *Junos OS Configuration and Operations Automation Guide*
- *Configuring Checksum Hashes for an Op Script* in the *Junos OS Configuration and Operations Automation Guide*
- *Executing an Op Script from a Remote Site* in the *Junos OS Configuration and Operations Automation Guide*
- file checksum sha-256 on page 72
- file checksum sha1 on page 71
- *op*

List of Sample Output file checksum md5 on page 70

Output Fields When you enter this command, you are provided feedback on the status of your request.

Sample Output

file checksum md5

```
user@host> file checksum md5 jbundle-5.3R2.4-export-signed.tgz
MD5 (jbundle-5.3R2.4-export-signed.tgz) = 2a3b69e43f9bd4893729cc16f505a0f5
```


file checksum sha1

Syntax file checksum sha1 <*pathname*> *filename*

Release Information Command introduced in Junos OS Release 9.5.
Command introduced in Junos OS Release 9.5 for EX Series switches.
Command introduced in Junos OS Release 11.1 for the QFX Series.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

Description Calculate the Secure Hash Algorithm (SHA-1) checksum of a file.

Options ***pathname***—(Optional) Path to a filename.

filename—Name of a local file for which to calculate the SHA-1 checksum.

Required Privilege Level maintenance

Related Documentation

- *Configuring Checksum Hashes for a Commit Script* in the *Junos OS Configuration and Operations Automation Guide*
- *Configuring Checksum Hashes for an Event Script* in the *Junos OS Configuration and Operations Automation Guide*
- *Configuring Checksum Hashes for an Op Script* in the *Junos OS Configuration and Operations Automation Guide*
- *Executing an Op Script from a Remote Site* in the *Junos OS Configuration and Operations Automation Guide*
- file checksum md5 on page 70
- file checksum sha-256 on page 72
- *op*

List of Sample Output file checksum sha1 on page 71

Output Fields When you enter this command, you are provided feedback on the status of your request.

Sample Output

file checksum sha1

```
user@host> file checksum sha1 /var/db/scripts/opscript.slax

SHA1 (/var/db/scripts/commitscript.slax) = ba9e47120c7ce55cff29afd73eacd370e162c676
```

file checksum sha-256

Syntax file checksum sha-256 <*pathname*> *filename*

Release Information
Command introduced in Junos OS Release 9.5.
Command introduced in Junos OS Release 9.5 for EX Series switches.
Command introduced in Junos OS Release 11.1 for the QFX Series.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

Description Calculate the Secure Hash Algorithm 2 family (SHA-256) checksum of a file.

Options ***pathname***—(Optional) Path to a filename.

filename—Name of a local file for which to calculate the SHA-256 checksum.

Required Privilege Level
maintenance
view
view-configuration

Related Documentation

- *Configuring Checksum Hashes for a Commit Script* in the *Junos OS Configuration and Operations Automation Guide*
- *Configuring Checksum Hashes for an Event Script* in the *Junos OS Configuration and Operations Automation Guide*
- *Configuring Checksum Hashes for an Op Script* in the *Junos OS Configuration and Operations Automation Guide*
- *Executing an Op Script from a Remote Site* in the *Junos OS Configuration and Operations Automation Guide*
- file checksum md5 on page 70
- file checksum sha1 on page 71
- *op*

List of Sample Output file checksum sha-256 on page 72

Output Fields When you enter this command, you are provided feedback on the status of your request.

Sample Output

file checksum sha-256

```
user@host> file checksum sha-256 /var/db/scripts/commitscript.slax

SHA256 (/var/db/scripts/commitscript.slax) =
94c2b061fb55399e15babd2529453815601a602b5c98e5c12ed929c9d343dd71
```

file compare

Syntax

file compare (files *filename filename*)
<context | unified>
<ignore-white-space>

Release Information

Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
Command introduced in Junos OS Release 11.1 for the QFX Series.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

Description

Compare two local files and describe the differences between them in default, context, or unified output styles:

- **Default**—In the first line of output, **c** means lines were changed between the two files, **d** means lines were deleted between the two files, and **a** means lines were added between the two files. The numbers preceding this alphabetical marker represent the first file, and the lines after the alphabetical marker represent the second file. A left angle bracket (**<**) in front of output lines refers to the first file. A right angle bracket (**>**) in front of output lines refers to the second file.
- **Context**—The display is divided into two parts. The first part is the first file; the second part is the second file. Output lines preceded by an exclamation point (**!**) have changed. Additions are marked with a plus sign (**+**), and deletions are marked with a minus sign (**-**).
- **Unified**—The display is preceded by the line number from the first and the second file (*xx*,*xxx*,*x*). Before the line number, additions to the file are marked with a plus sign (**+**), and deletions to the file are marked with a minus sign (**-**). The body of the output contains the affected lines. Changes are viewed as additions plus deletions.

Options

files *filename*—Names of two local files to compare.

context—(Optional) Display output in context format.

ignore-white-space—(Optional) Ignore changes in the amount of white space.

unified—(Optional) Display output in unified format.

Required Privilege Level

none

Related Documentation

- *Format for Specifying Filenames and URLs in Junos OS CLI Commands*
- *Viewing Core Files from Junos OS Processes*

List of Sample Output

file compare files on page 75
file compare files context on page 75
file compare files unified on page 75
file compare files unified ignore-white-space on page 75

Output Fields When you enter this command, you are provided feedback on the status of your request.

Sample Output

file compare files

```
user@host> file compare files /tmp/one /tmp/two
100c100
<             full-name "File 1";
---
>             full-name "File 2";
102c102
<             class foo; # 'foo' is not defined
---
>             class super-user;
```

file compare files context

```
user@host> file compare files /tmp/one /tmp/two context
*** /tmp/one    Wed Dec  3 17:12:50 2003
--- /tmp/two    Wed Dec  3 09:13:14 2003
***************
*** 97,104 ****
                }
            }
            user bill {
!               full-name "Bill Smith";
!               class foo; # 'foo' is not defined
                authentication {
                    encrypted-password SECRET;
                }
--- 97,105 ----
                }
            }
            user bill {
!               full-name "Bill Smith";
!               uid 1089;
!               class super-user;
                authentication {
                    encrypted-password SECRET;
                }
```

file compare files unified

```
user@host> file compare files /tmp/one /tmp/two unified
--- /tmp/one    Wed Dec  3 17:12:50 2003
+++ /tmp/two    Wed Dec  3 09:13:14 2003
@@ -97,8 +97,9 @@
                }
            }
            user bill {
-               full-name "Bill Smith";
-               class foo; # 'foo' is not defined
+               full-name "Bill Smith";
+               uid 1089;
+               class super-user;
                authentication {
                    encrypted-passwordSECRET;
                }
```

file compare files unified ignore-white-space

```
user@host> file compare files /tmp/one /tmp/two unified ignore-white-space
```

```
--- /tmp/one    Wed Dec  3 09:13:10 2003
+++ /tmp/two    Wed Dec  3 09:13:14 2003
@@ -99,7 +99,7 @@
         user bill {
             full-name "Bill Smith";
             uid 1089;
-            class foo; # 'foo' is not defined
+            class super-user;
             authentication {
                  encrypted-password <SECRET>; # SECRET-DATA
             }
```

file delete

Syntax file delete *filename*
<purge>

Release Information Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
Command introduced in Junos OS Release 11.1 for the QFX Series.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

Description Delete a file on the local router or switch.

Options ***filename***—Name of the file to delete. For a routing matrix, include chassis information in the filename if the file to be deleted is not local to the Routing Engine from which the command is issued.

purge—(Optional) Overwrite regular files before deleting them.

Required Privilege Level maintenance

List of Sample Output file delete on page 77
file delete (Routing Matrix) on page 77

Output Fields When you enter this command, you are provided feedback on the status of your request.

Sample Output

file delete

```
user@host> file list /var/tmp
dcd.core
rpd.core
snmpd.core

user@host> file delete /var/tmp/snmpd.core
user@host> file list /var/tmp
dcd.core
rpd.core
```

file delete (Routing Matrix)

```
user@host> file list lcc0-re0:/var/tmp
dcd.core
rpd.core
snmpd.core

user@host> file delete lcc0-re0:/var/tmp/snmpd.core
user@host> file list /var/tmp
dcd.core
rpd.core
```

file list

Syntax
file list
<detail | recursive>
<*filename*>

Release Information
Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
Command introduced in Junos OS Release 11.1 for the QFX Series.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

Description
Display a list of files on the local router or switch.

Options
none—Display a list of all files for the current directory.

detail | recursive—(Optional) Display detailed output or descend recursively through the directory hierarchy, respectively.

filename—(Optional) Display a list of files. For a routing matrix, the filename must include the chassis information.

Additional Information
The default directory is the home directory of the user logged in to the router or switch. To view available directories, enter a space and then a backslash (/) after the **file list** command. To view files within a specific directory, include a backslash followed by the directory and, optionally, subdirectory name after the **file list** command.

Required Privilege Level
maintenance

List of Sample Output
file list on page 78
file list (Routing Matrix) on page 78

Output Fields
When you enter this command, you are provided feedback on the status of your request.

Sample Output

file list

```
user@host> file list /var/tmp
dcd.core
rpd.core
snmpd.core
```

file list (Routing Matrix)

```
user@host> file list lcc0-re0:var/tmp
lcc0-re0:
--------------------------------------------------------------------------
/var/tmp/:
.gdbinit
.pccardd
Test/
chassisd*
chassisd.nathan*
```

```
check_time*
cores/
diagTestPrep*
diagtest*
diagtest.regress*
do_switchovers*
dump_test*
err.manoj.log
esw_clearstats*
esw_counter*
esw_debug*
esw_debug_ge*
esw_filt_test*
esw_filter_tnp_addr*
esw_getstats*
esw_phy*
esw_stats*
```

file rename

Syntax file rename *source destination*

Release Information Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
Command introduced in Junos OS Release 11.1 for the QFX Series.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

Description Rename a file on the local router or switch.

Options ***destination***—New name for the file.

source—Original name of the file. For a routing matrix, the filename must include the chassis information.

Required Privilege Level maintenance

List of Sample Output file rename on page 80
file rename (Routing Matrix) on page 80

Output Fields When you enter this command, you are provided feedback on the status of your request.

Sample Output

file rename

The following example lists the files in **/var/tmp**, renames one of the files, and then displays the list of files again to reveal the newly named file.

```
user@host> file list /var/tmp
dcd.core
rpd.core
snmpd.core

user@host> file rename /var/tmp/dcd.core /var/tmp/dcd.core.990413
user@host> file list /var/tmp
dcd.core.990413
rpd.core
snmpd.core
```

file rename (Routing Matrix)

The following example lists the files in **/var/tmp**, renames one of the files, and then displays the list of files again to reveal the newly named file.

```
user@host> file list lcc0-re1:/var/tmp
lcc0-re1:
--------------------------------------------------------------------------

/var/tmp:
.pccardd
sartre.conf
snmpd
syslogd.core-tarball.0.tgz
```



```
user@host> file rename lcc0-re0:/var/tmp/snmpd /var/tmp/snmpd.rr
user@host> file list lcc0-re1:/var/tmp
lcc0-re1:
--------------------------------------------------------------------------

/var/tmp:
.pccardd
sartre.conf
snmpd.rr
syslogd.core-tarball.0.tgz
```

file show

Syntax file show *filename*
<encoding (base64 | raw)>

Release Information Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
Command introduced in Junos OS Release 11.1 for the QFX Series.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

Description Display the contents of a file.

Options ***filename***—Name of a file. For a routing matrix, the filename must include the chassis information.

encoding (base64 | raw)—(Optional) Encode file contents with base64 encoding or show raw text.

Required Privilege Level maintenance

List of Sample Output file show on page 82
file show (Routing Matrix) on page 82

Output Fields When you enter this command, you are provided feedback on the status of your request.

Sample Output

file show

```
user@host> file show /var/log/messages
Apr 13 21:00:08 romney /kernel: so-1/1/2: loopback suspected; going to standby.
Apr 13 21:00:40 romney /kernel: so-1/1/2: loopback suspected; going to standby.
Apr 13 21:02:48 romney last message repeated 4 times
Apr 13 21:07:04 romney last message repeated 8 times
Apr 13 21:07:13 romney /kernel: so-1/1/0: Clearing SONET alarm(s) RDI-P
Apr 13 21:07:29 romney /kernel: so-1/1/0: Asserting SONET alarm(s) RDI-P
...
```

file show (Routing Matrix)

```
user@host> file show lcc0-re0:/var/tmp/.gdbinit
lcc0-re0:
--------------------------------------------------------------------------
######################################################################
# Settings
######################################################################

set print pretty

######################################################################
# Basic stuff
######################################################################

define msgbuf
        printf "%s", msgbufp->msg_ptr
```



```
end
# hex dump of a block of memory
# usage: dump address length
define dump
   p $arg0, $arg1
   set $ch = $arg0
   set $j = 0
   set $n = $arg1
   while ($j < $n)
        #printf "%x %x ",&$ch[$j],$ch[$j]
        printf "%x ",$ch[$j]
        set $j = $j + 1
        if (!($j % 16))
                printf "\n"
        end
   end
end
```

request system configuration rescue delete

Syntax request system configuration rescue delete

Release Information Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
Command introduced in Junos OS Release 11.1 for the QFX Series.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

Description Delete an existing rescue configuration.

NOTE: The **[edit system configuration]** hierarchy is not available on QFabric systems.

Options This command has no options.

Required Privilege Level maintenance

Related Documentation

- request system configuration rescue save on page 85
- *request system software rollback*
- show system commit on page 86

List of Sample Output request system configuration rescue delete on page 84

Output Fields This command produces no output.

Sample Output

request system configuration rescue delete

```
user@host> request system configuration rescue delete
```

request system configuration rescue save

Syntax request system configuration rescue save

Release Information Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
Command introduced in Junos OS Release 11.1 for the QFX Series.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

Description Save the most recently committed configuration as the rescue configuration so that you can return to it at any time by using the **rollback** command.

NOTE: The **[edit system configuration]** hierarchy is not available on QFabric systems.

Options This command has no options.

Required Privilege Level maintenance

Related Documentation
- *request system software delete*
- *request system software rollback*
- show system commit on page 86

List of Sample Output request system configuration rescue save on page 85

Output Fields This command produces no output.

Sample Output

request system configuration rescue save

```
user@host> request system configuration rescue save
```

show system commit

Syntax
show system commit
<revision>
<server>

Release Information
Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
Command introduced in Junos OS Release 11.1 for the QFX Series.
Option **server** introduced in Junos OS Release 12.1 for the PTX Series router.
Option **revision** introduced in Junos OS Release 14.1.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

Description
Display the system commit history and any pending commit operation.

Options
none—Display the last 50 commit operations listed, most recent to first.

revision—(Optional) Display the revision number of the active configuration of the Routing Engine(s).

server— (Optional) Display commit server status.

NOTE: By default, the status of the commit server is “Not running”. The commit server starts running only when a commit job is added to the batch.

Required Privilege Level
view

Related Documentation
- clear system commit on page 67
- *show system commit revision*

List of Sample Output
show system commit on page 88
show system commit (At a Particular Time) on page 88
show system commit (At the Next Reboot) on page 88
show system commit (Rollback Pending) on page 88
show system commit (QFX Series) on page 88

Output Fields
Table 6 on page 86 describes the output fields for the **show system commit** command. Output fields are listed in the approximate order in which they appear.

Table 6: show system commit Output Fields

Field Name	Field Description	Level of Output
<number>	Displays the last 50 commit operations listed, most recent to first. The identifier *<number>* designates a configuration created for recovery using the **request system configuration rescue save** command.	**none**

Table 6: show system commit Output Fields *(continued)*

Field Name	Field Description	Level of Output
<time-stamp>	Date and time of the commit operation.	**none**
<root>/<username>	User who executed the commit operation.	**none**
<method>	Method used to execute the commit operation: • **CLI**—CLI interactive user performed the commit operation. • **Junos XML protocol**—Junos XML protocol client performed the commit operation. • **synchronize**—The **commit synchronize** command was performed on the other Routing Engine. • **snmp**—An SNMP **set** request caused the commit operation. • **button**—A button on the router or switch was pressed to commit a rescue configuration for recovery. • **autoinstall**—A configuration obtained through autoinstallation was committed. • **other**—When there is no login name associated with the session, the values for user and client default to root and other. For example, during a reboot after package installation, mgd commits the configuration as a system commit, and there is no login associated with the commit.	**none**

Sample Output

show system commit

```
user@host> show system commit
0   2003-07-28 19:14:04 PDT by root via other
1   2003-07-25 22:01:36 PDT by regress via cli
2   2003-07-25 22:01:32 PDT by regress via cli
3   2003-07-25 21:30:13 PDT by root via button
4   2003-07-25 13:46:48 PDT by regress via cli
5   2003-07-25 05:33:21 PDT by root via autoinstall
...
rescue  2002-05-10 15:32:03 PDT by root via other
```

show system commit (At a Particular Time)

```
user@host> show system commit
commit requested by root via cli at Tue May  7 15:59:00 2002
```

show system commit (At the Next Reboot)

```
user@host> show system commit
commit requested by root via cli at reboot
```

show system commit (Rollback Pending)

```
user@host> show system commit
0 2005-01-05 15:00:37 PST by root via cli commit confirmed, rollback in 3mins
```

show system commit (QFX Series)

```
user@switch> show system commit
0   2011-11-25 19:17:49 PST by root via cli
```

show system configuration archival

Syntax show system configuration archival

Release Information Introduced in Junos OS Release 7.6.
Command introduced in Junos OS Release 9.0 for EX Series switches.
Command introduced in Junos OS Release 11.1 for the QFX Series.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

Description Display directory and number of files queued for archival transfer.

NOTE: The **[edit system configuration]** hierarchy is not available on QFabric systems.

Options This command has no options.

Required Privilege Level maintenance

List of Sample Output show system configuration archival on page 89

Sample Output

show system configuration archival

```
user@host> show system configuration archival

/var/transfer/config/:
total 8
```

show system configuration rescue

Syntax show system configuration rescue

Release Information
Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
Command introduced in Junos OS Release 11.1 for the QFX Series.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

Description Display a rescue configuration, if one exists.

NOTE: The **[edit system configuration]** hierarchy is not available on QFabric systems.

Options This command has no options.

Required Privilege Level maintenance

Related Documentation
- show system configuration archival on page 89

List of Sample Output show system configuration rescue on page 90

Sample Output

show system configuration rescue

```
user@switch> show system configuration rescue
version "7.3"; groups {
    global {
        system {
            host-name router1;
            domain-name customer.net;
            domain-search [ customer.net ];
            backup-router 192.168.124.254;
            name-server {
                172.17.28.11;
                172.17.28.101;
                172.17.28.100;
                172.17.28.10;
            }
            login {
                user regress {
                    uid 928;
                    class ;
                    shell csh;
                    authentication {
                        encrypted-password "$1$kPU..$w.4FGRAGanJ8U4Yq6sbj7."; ##
 SECRET-DATA
                    }
                }
            }
```

```
            services {
                ftp;
                rlogin;
                rsh;
                telnet;
            }
        }
    }
....
```

show system rollback

Syntax show system rollback *number*
<compare *number*>

Release Information Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
Command introduced in Junos OS Release 14.1X53-D20 for OCX Series switches.
Command introduced in Junos OS Release 11.1 for the QFX Series.

Description Display the contents of a previously committed configuration, or the differences between two previously committed configurations.

NOTE: The show system rollback command is a purely operational mode command and cannot be issued with run from the configuration mode.

Options ***number***—Number of a configuration to view. The output displays the configuration. The range of values is 0 through 49.

compare *number* —(Optional) Number of another previously committed (rollback) configuration to compare to rollback ***number***. The output displays the differences between the two configurations. The range of values is 0 through 49.

Required Privilege Level view

List of Sample Output show system rollback compare on page 92

Sample Output

show system rollback compare

```
user@host> show system rollback 3 compare 1
[edit]
+  interfaces {
+      ge-1/1/1 {
+          unit 0 {
+              family inet {
+                  filter {
+                      input mf_plp;
+                  }
+                  address 14.1.1.1/30;
+              }
+          }
+      }
+      ge-1/2/1 {
+          unit 0 {
+              family inet {
+                  filter {
+                      input mf_plp;
+                  }
+                  address 13.1.1.1/30;
```

```
+                 }
+             }
+         }
+         ge-1/3/0 {
+             unit 0 {
+                 family inet {
+                     filter {
+                         input mf_plp;
+                     }
+                     address 12.1.1.1/30;
+                 }
+             }
+         }
+}
```

test configuration

Syntax test configuration *filename*

Release Information Command introduced before Junos OS Release 7.4.
Command introduced in Junos OS Release 9.0 for EX Series switches.
Command introduced in Junos OS Release 11.1 for the QFX Series.
Command introduced in Junos OS Release 14.1X53-D20 for the OCX Series.

Description Verify that the syntax of a configuration file is correct. If the configuration contains any syntax or commit check errors, a message is displayed to indicate the line number and column number in which the error was found. This command only accepts text files.

Options ***filename***—Name of the configuration file.

syntax-only—Check the syntax of a partial configuration file, without checking for commit errors. This option introduced in Junos OS Release 12.1.

Required Privilege Level view

List of Sample Output test configuration on page 94

Output Fields When you enter this command, you are provided feedback on the status of your request.

Sample Output

test configuration

```
user@host> test configuration terminal
[Type ^D to end input]
system {
host-name bluesky;
paris-23;
login;
}
terminal:3:(8) syntax error: paris
  [edit system]
    'paris-23;'
      syntax error
terminal:4:(11) statement must contain additional statements: ;
  [edit system login]
    'login ;'
      statement must contain additional statements
configuration syntax failed
```