Junosphere

Guide for Bank Administrators

Release
3.0

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Documentation and Release Notes

For disclosure information on Junosphere Connector, refer to the files located at http://www.juniper.net/support/products/junosphereconnector.

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.

Documentation Conventions

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

Table 1: Notice Icons

Icon	Meaning	Description
	Informational note	Indicates important features or instructions.

Table 2 on page x 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**
`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 important new terms. • Identifies book names. • Identifies RFC and Internet draft titles.	• A policy *term* is a named structure that defines match conditions and actions. • *Junos OS System Basics Configuration 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; interface names; 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)	Enclose 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)	Enclose a variable for which you can substitute one or more values.	**community name members [** ***community-ids*** **]**

Indention and braces ({ })	Identify 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.	

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Documentation Feedback

We encourage you to provide feedback, comments, and suggestions so that we can improve the documentation. You can send your comments to **techpubs-comments@juniper.net**, or fill out the documentation feedback form at https://www.juniper.net/cgi-bin/docbugreport/ . If you are using e-mail, be sure to include the following information with your comments:

- Document or topic name
- URL or page number
- Software release 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 JNASC 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: https://www.juniper.net/alerts/

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- 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 .

To open a case with JTAC for Junosphere, you must provide the bank serial number. To find the serial number, double-click the bank icon in Junosphere.

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PART 1

Overview

- Getting Started for Bank Administrators on page 3

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CHAPTER 1

Getting Started for Bank Administrators

- Junosphere for Bank Administrators Overview on page 3
- Understanding Junosphere on page 3
- Junosphere User Interface Overview on page 5
- Junosphere Interface Icons on page 10
- Understanding Banks on page 12
- Understanding the Role of the Bank Administrator on page 13
- Using the Login Page on page 15
- How to Change Your Password for Bank Administrators on page 15

Junosphere for Bank Administrators Overview

Junosphere has two types of users: bank administrators and users. This guide is targeted towards those individuals who act as bank administrators in their companies. See the *Junosphere Guide for Users* for user procedures. Bank administrators use the procedures in both guides. Users have access to Junosphere topologies and the virtualization environment. Bank administrators are users with additional privileges of adding more users, assigning users to sandboxes, and dividing capacity among users.

Related Documentation

- Understanding Junosphere on page 3
- Understanding the Role of the Bank Administrator on page 13

Understanding Junosphere

Junosphere is a cloud-based, virtualization environment where multiple virtual machines representing network devices can be connected and configured to create network topologies. To use the cloud, you create or upload a topology file that defines devices, interfaces, and their interconnections. You also can upload standard configuration files for each network device and use the resulting virtual network exactly like a physical network.

Junosphere has two types of users: bank administrators and users. Users have access to Junosphere topologies and the virtualization environment. Bank administrators are users with additional privileges of adding more users, assigning users to resources, and dividing capacity among users.

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Junosphere stores the virtual machine units capacity (the number of virtual machine units times the number of days) to use the network in banks and sandboxes. Think of a bank as a container of sandboxes. The capacity held by banks is divided into sandboxes, or work areas, where specified users can reserve time to use the cloud.

Junosphere holds one or more topology file sets in libraries for users of a bank, a sandbox, or all users. A topology file set is made up of a topology file and a collection of configuration files, one for each device described in the topology file.

Junosphere enables customers, partners, developers, and educational institutions to easily experiment, model, and educate by leveraging the flexibility, cost efficiency, and simplicity of a cloud-based delivery model.

Junosphere can be purchased in two different ways, depending on specific user needs: pay-per-use and an annual plan. The pay-per-use plan allows the customer to prepay for a limited amount of capacity, which is spent every time a topology is run. Once that capacity is used up, it can be replenished with another purchase.

You can purchase the following two types of Junosphere capacity:

- Junosphere Lab—Enables you to create and run exact replicas of physical networks within the virtual environment. Users can model, test, and experiment with new features, topologies, or services with no risk and with dramatically reduced costs.
- Junosphere Classroom—Enables you to cost-effectively educate students, employees, or partners on the principles and operation of Junos OS, routing protocols, and networking, without the expense of building, maintaining, or operating a physical lab.

NOTE: **Junosphere is best viewed with Mozilla Firefox 19.0 or greater and Internet Explorer 9.0.**

NOTE: **Currently, annual plans cannot be purchased via the Learning Portal. Work with your Junosphere sales representative to place an order for an annual plan.**

Annual plan capacity facilitates OPEX planning by providing Junosphere capacity for an entire year. Operators have maximum control of capacity pools assigned to diverse teams and projects. The bank administrator can customize the minimum guaranteed capacity for each sandbox to ensure baseline availability, and also the maximum utilization of virtual machine (VM) units in each sandbox to prevent unauthorized abuse of consumption.

The flexible capacity allocation system maximizes the usage of available VM units by shifting capacity from inactive sandboxes to those which experience temporary spikes of demand. These allocation algorithms ensure best usage of the capacity pool at every moment.

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Additionally, all the annual plan SKUs provide a la carte overflow capacity. The 50 and 100 annual plan SKUs also include unlimited connector capacity.

In the annual plan, overflow capacity is supplemental regular capacity that enables a customer to go beyond the daily limit of the annual plan for a fixed amount of time. For example, the 100 VM unit annual plan has 2000 VM units of overflow capacity. This enables you to run a topology of 200 VM units (100 VM units included in the annual plan and 100 VM units from the overflow capacity) for 20 days, 150 VM units for 40 days, 110 VM units for 200 days, and so on. It is expended on the same pay-per-use basis as other regular Lab and Classroom (non-annual plan) capacity.

Related Documentation

- Junosphere User Interface Overview on page 5
- Junosphere Interface Icons on page 10

Junosphere User Interface Overview

The Junosphere user interface has several parts: a banner across the top, which contains icons for online help, settings, and logging out; a navigation tree on the left side from which you can select different tasks; a main display window in the center, which takes up the majority of the screen; and a taskbar across the bottom of the main display, which contains tabs for any windows that are currently open. If you click the **Help** icon in the top banner of the screen, online help appears on the right side of the screen. The bottom of the screen also contains links for information about Junosphere.

To view a video overview of the Junosphere user interface, as well as information on how to order Junosphere capacity, visit the Junosphere Toolbox.

- Welcome Screen on page 5
- Banner on page 5
- Navigation Tree on page 6
- Main Display Window on page 6

Welcome Screen

When you log in to Junosphere, the first screen you see is called the Welcome screen. It provides access to user manuals and feature documentation, links to contact customer service, and also links to documentation for the different virtual network elements that are currently available in Junosphere.

If this is the first time that you have logged in, an End-User License Agreement (EULA) appears (which you must accept in order to proceed), followed by a **Required Settings** dialog box that lists the required settings and recommended downloads.

Banner

The banner is located at the top of the main display and contains several icon buttons for global actions.

The following table describes the global action icons that appear in the banner.

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Table 3: Banner Icons

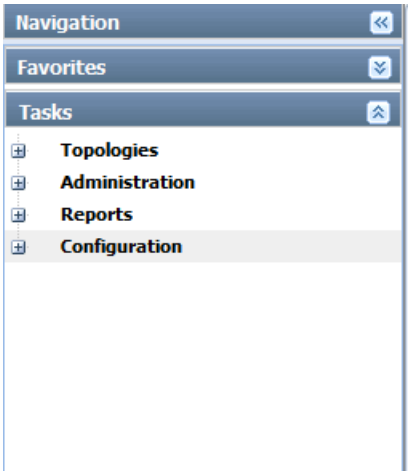
Icon	Action	Definition
	Global Help icon	Enables you to display Junosphere help.
	Settings icon	Enables you to change your password.
	Logout icon	To log out, click the icon in the upper right corner of the Junosphere interface.

Navigation Tree

The navigation tree, located on the left side of the main display, enables you to navigate to different tasks in Junosphere.

You can collapse the navigation tree by clicking on the double left arrows that appear in the Navigation header, and you can re-expand it using the double right arrows. You can also collapse and expand each task group in the navigation tree by using the double arrows that appear in each task group header.

Figure 1: Navigation Tree



NOTE: **The tasks that are displayed in the navigation tree will look different depending on the type of Junosphere user.**

The navigation tree contains two different sections. The first section is called **Favorites** and contains frequently used tasks. The second section is called **Tasks** and contains a full list of tasks that you have access to in Junosphere.

Main Display Window

When you select a task from the navigation tree, the window related to that task appears in the main display window. Some tasks have multiple sections that appear in the main

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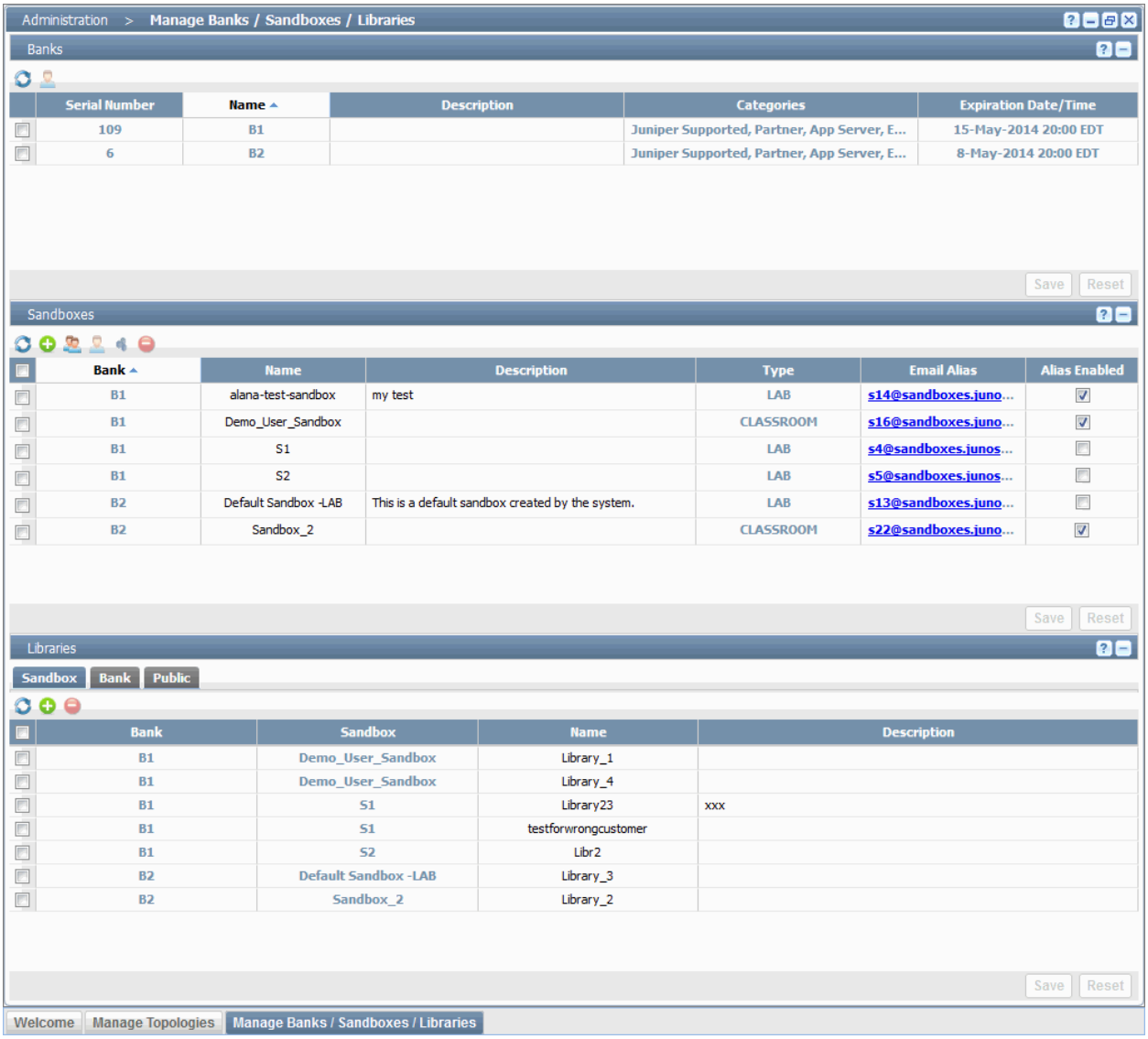
window. Each section within the main display window can be minimized and maximized using the plus **(+)** and minus **(-)** icons located in the top right corner of the section.

Figure 2: Main Display Window



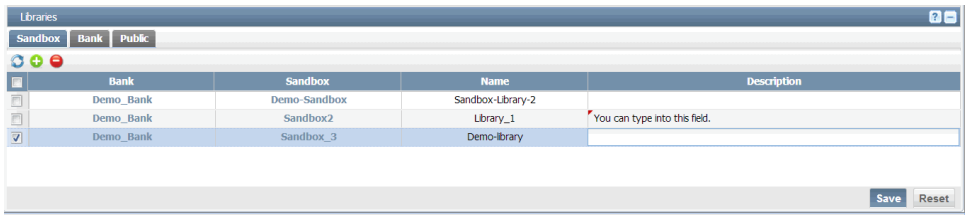
Junosphere automatically logs you out after 30 minutes of being idle. If you are working in the topology wizard, you might lose work if you have not saved your changes. To avoid this issue, save your topology frequently.

NOTE: **Junosphere saves work in the topology wizard after every five changes made while creating the topology.**

Editing Tables in Junosphere

In Junosphere, any table that contains text in black font is editable. To edit information in Junosphere tables, type directly into the field and click anywhere outside the edited field. A red flag appears in the upper left corner of the field, indicating that a change was made. After you have edited the fields in a table, click the **Save** button at the bottom right corner of the table. You cannot edit any fields that contain bold, blue font.

Figure 3: Editing a Junosphere Table



NOTE: In the **Reports** section of Junosphere, all font appears in black. However, you cannot edit any information that appears in reports.

You can edit multiple fields in a table before clicking the **Save** button.

Sorting Tables in Junosphere

Every column in a Junosphere table can be sorted alphabetically, hidden from the table, and its contents can be filtered. To sort a column:

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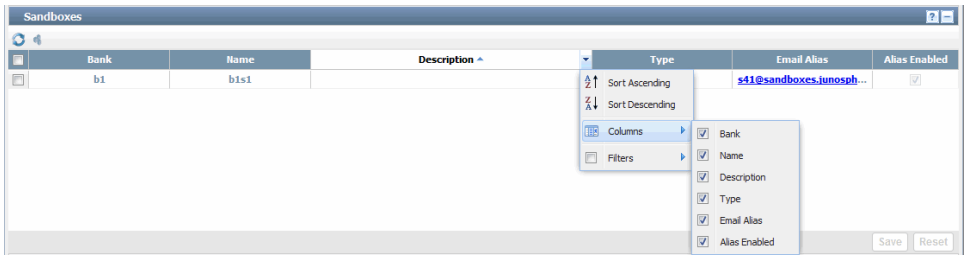
1. Click the drop-down arrow on the right side of the column title that appears when you hover your mouse over the title.

   A drop-down menu appears.

   - To sort a table alphabetically, click either **Sort Ascending** or **Sort Descending** from the drop-down list.
   - To hide a column, go to **Columns** and deselect the column from the list that you want to hide.
   - To filter the column, go to **Filters** and type a term in the search box.

Figure 4: Sorting a Table



Taskbar

The taskbar is located at the bottom of the main display. The taskbar lists all of the windows that you currently have open in Junosphere. You can click on the tabs in the taskbar to open the window you want to use. To close a tab in the taskbar, right-click on the tab and select **Close**.

Context-Sensitive Help

In each section of the main display window there is a question mark**(?)** icon located in the top right corner. This icon provides a brief overview of the section and specifies which tasks you can perform in the section.

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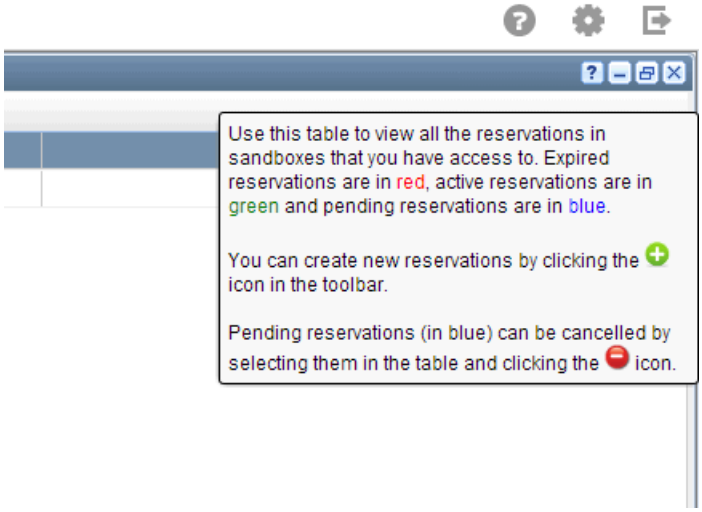
Figure 5: Context-Sensitive Help



Related Documentation

- Understanding Junosphere on page 3
- Junosphere Interface Icons on page 10

Junosphere Interface Icons

Table 4 on page 10 lists and describes the icons of the Junosphere interface.

Table 4: Junosphere Icons

Icon	Description
Add icon	Enables you to add an element.
Delete icon	Enables you to delete an element.
Upload topology icon	Enables you to upload a topology to a selected library.
Download topology icon	Enables you to download a topology to your local machine.
User icon	Enables you to add users to sandboxes, remove users from sandboxes, and change the permissions of users in a sandbox. It is also used to manage the administrators of a bank.
Users icon	Enables you to add one or more users to one or more sandboxes.

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Table 4: Junosphere Icons *(continued)*

Icon	Description
Edit topology icon	Enables you to edit a topology to which you have access.
Copy topology icon	Enables you to copy a topology to which you have access.
Refresh icon	Enables you to update the data in the current window.
Export icon	Enables you to export the information in the table in .csv format. Appears in the Manage Topologies, Manage Reservations, and Manage Capacity tabs.
Sandbox Capacity icon	Enables you to view the regular and annual capacity of a sandbox.
Plus icon	Enables you to expand an element.
Minus icon	Enables you to close an element.
Minimize Window icon	Enables you to minimize an active window.
Restore Window Icon	Restores a window to its original size.
Maximize Window icon	Enables you to maximize an active window.
Close icon	Enables you to close a window or page.
Help icon	Enables you to display global Junosphere help.
Context-sensitive help icon	Enables you to display context-sensitive help about the current screen or dialog box.
Settings icon	Enables you to change your password.
Logout icon	To log out, click the icon in the upper right corner of the Junosphere interface.

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Related Documentation

- Understanding Junosphere on page 3
- Junosphere User Interface Overview on page 5

Understanding Banks

A bank is a repository of virtual machine capacity that you have purchased from Juniper. Capacity is acquired either as a fixed number of VM units for a full year (annual plan) or as an as-needed, reservation-based plan (regular capacity). Virtual machine capacity is measured in VM units, where one VM unit means the capacity to use one basic VM for one day (24 hours). A bank can have one or more users as administrators of the bank. To use the features of Junosphere, you work within a sandbox, which is a work area for holding capacity. It contains libraries of topology files and can have users associated with it (see Figure 6 on page 13). A bank contains one or more sandboxes. A sandbox is a work area that holds capacity, the users assigned to that sandbox, and libraries of topology files, as shown in Figure 6 on page 13. The bank administrator assigns the capacity purchased for the bank to the sandboxes.

The bank administrator assigns users to the sandboxes. Every bank has a Customer Support Serial Number that you need if you contact Juniper Networks for any Junosphere-related support. This number can be found in the **Bank** section of the **Administration > Manage Banks/Sandboxes/Libraries** window in the **Serial Number** column.

The expiration date of each bank is displayed in the **Bank** section of the **Administration > Manage Banks / Sandboxes / Libraries** window in the **Expiration Date/Time** column.

A sandbox is a work area holding capacity and the users assigned to use topology files that are stored in libraries in the sandboxes, as shown in Figure 6 on page 13. Each sandbox can be operated independently to emulate different networks.

The bank administrator assigns the capacity purchased for the bank to the sandboxes and assigns users to the sandboxes and gives them permissions.

The libraries hold one or more topology file sets that create virtual networks. A topology file set is made up of a topology file, one optional configuration file for each Junos OS device described in the topology file, and optional information files that contain diagrams or generic instructions for using the topologies (these files can be PDFs, PPTs, TXTs, or any other file type).

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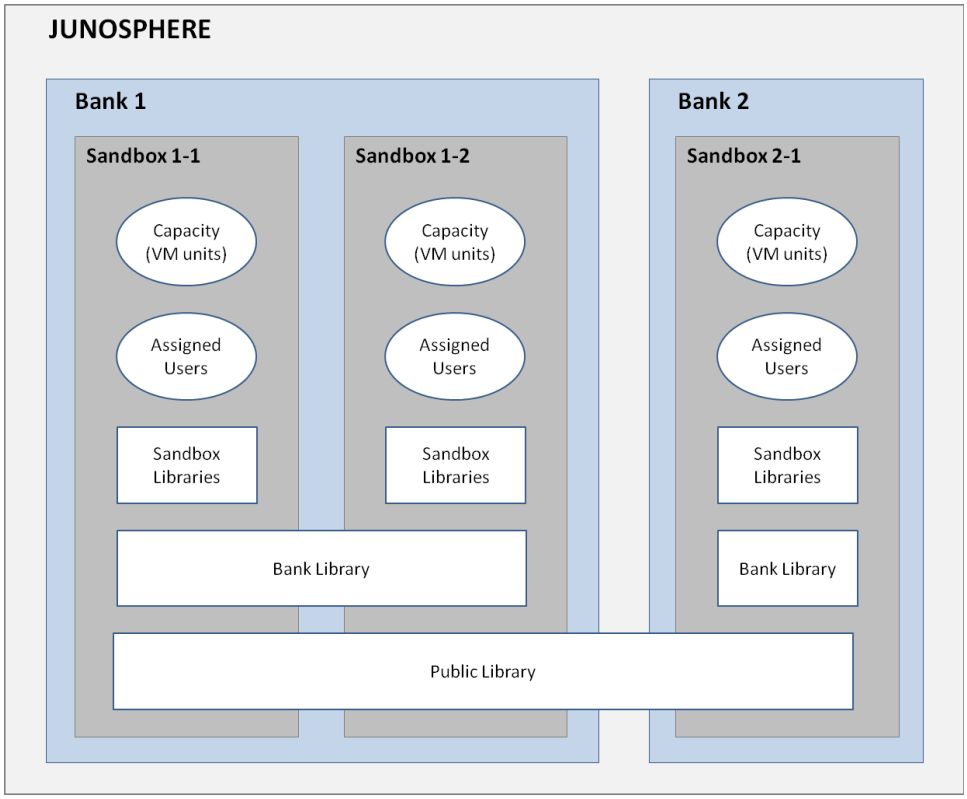
Figure 6: Components of a Bank



You have access only to the banks that have been created for you. When bank administrators purchase Junosphere capacity, they specify the bank name. As a bank administrator, you can assign other users to the role of a bank administrator. For more information on how to create a new bank administrator, see "Creating a Bank Administrator" on page 23.

Related Documentation

- Understanding Junosphere on page 3
- Understanding the Role of the Bank Administrator on page 13
- Using the Login Page on page 15
- How to Change Your Password for Bank Administrators on page 15
- Assigning Regular Capacity to a Sandbox on page 33
- Assigning Users to a Sandbox on page 25
- Managing Reservations on page 36
- *Junosphere Guide for Users*

Understanding the Role of the Bank Administrator

The role of the bank administrator is to:

- Control your company's use of Junosphere.

  You can divide banks into sandboxes, assign capacity (virtual machine units and connectors) to sandboxes, assign users to sandboxes, and assign permissions to users in a sandbox.
- Create users and update user information, such as e-mail addresses and names.
- Create additional bank administrators.
- Change or reset a user's password.
- Control user access with permissions.
- Alert your user community.

  You can send users information about available topologies and capacities, as well as any specific items of note to your users.
- Create messages or announcements for each sandbox.
- Inherit all the rights of a user.

  By default, you receive all user permissions.
- Add bank libraries to share with sandboxes.
- Add topologies to bank libraries to share with sandboxes.
- Remove the following:
  - Sandboxes
  - Users assigned to a sandbox
  - Capacity in a sandbox
  - Topologies in a bank or sandbox library
  - Bank administrators
  - Permissions from any user
  - Users assigned to a customer

There can be more than one bank administrator per bank. The default bank administrator is the customer contact listed in the Junosphere order. This default bank administrator can create additional bank administrators. For information on how to create a new bank administrator, see "Creating a Bank Administrator" on page 23.

Related Documentation

- Understanding Banks on page 12
- Assigning Regular Capacity to a Sandbox on page 33
- Assigning Permissions on page 28
- Assigning Users to a Sandbox on page 25
- Creating a Bank Administrator on page 23

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Using the Login Page

The first bank administrator receives initial login information from the **Junosphere-no-reply** alias after registering an account with Juniper Networks. The first bank administrator can create additional bank administrators, all of whom have the same rights and privileges.

The login page contains links to reset your password, buy capacity for Junosphere, and a link to learn more about Junosphere that contains an overview video for bank administrators. You can view the Junosphere for Bank Administrators video here: Junosphere Toolbox.

To use the login page:

1. Log in to the user interface. See"Understanding Junosphere" on page 3 or the *Junosphere Release Notes* for supported browsers.
2. Read and accept the End User License Agreement (EULA) the first time you log in to Junosphere.
3. If this is the first time that you have logged in, the Required Settings dialog box appears, listing the required settings and recommended downloads. Click **OK** after you have reviewed the required settings and list of recommended downloads.
4. Click **OK**.

   The **Welcome** page appears.
5. Select a task from the navigation tree to start using Junosphere.

Related Documentation

- Understanding Junosphere on page 3
- How to Change Your Password for Bank Administrators on page 15
- Understanding Banks on page 12
- Assigning Regular Capacity to a Sandbox on page 33
- Assigning Permissions on page 28
- Assigning Users to a Sandbox on page 25

How to Change Your Password for Bank Administrators

As a Junosphere bank administrator, you can reset and change both your password and your users' passwords. The following sections explain the ways in which a bank administrator can change passwords in Junosphere:

- Changing Your Password on page 16
- Resetting Your Password on page 16
- Changing a User Password on page 16

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Changing Your Password

To change your password when you are logged in to Junosphere:

1. Click the **Settings** icon in the upper right corner of the screen.

   The **Change Password** dialog box appears.

2. Enter your old password and the new password (twice).
3. Click **Change**.

NOTE: Clicking **Change** logs you out of the current session. Any other sessions you have running will continue to run.

Resetting Your Password

If you forgot your password, you can reset your password on the Junosphere log in page.

To reset your password:

1. On the login page, click the **Forgot your password? Click to Reset** link.
2. Enter your username and click **Reset Password**.

   A message appears, telling you that the password has been reset and an e-mail notification has been sent to your address with the new password.

NOTE: When a password is changed, Junosphere sends an e-mail to the user whose username was provided when resetting the password. This e-mail might go to the spam or junk e-mail folders or it might go to a quarantine server.

Spam/junk e-mail folder—Outlook users can fix this problem by going to their spam or junk e-mail folder, selecting the e-mail, selecting **Actions** → **Junk E-mail** → **Add Sender to Safe Senders List**. This automatically adds junosphereadmin-noreply@juniper.net to the Safe Senders tab of the Junk E-mail Options dialog box. Your Outlook Administrator might have an alternative way of preventing these e-mails from going to your spam or junk e-mail folder. Users of other e-mail applications should work with their e-mail administrators to fix this issue.

Quarantine server—If the Junosphere e-mails are being quarantined, work with your IT department to make sure that the e-mails are routed to your e-mail application.

Changing a User Password

To change a user password:

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1. From the navigation tree, select **Administration > Manage Users**.
2. In the table, click the **Password** field of the user name whose password you want to change.
3. Enter the new password.

   A red flag appears in the upper left corner of the field, indicating that a change has been made.
4. Click **Save** to confirm the changes.

Related Documentation

- Junosphere User Interface Overview on page 5
- Using the Login Page on page 15
- Understanding Junosphere on page 3
- Junosphere Interface Icons on page 10

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PART 2

Assigning Resources

- Assigning Resources to Users, Banks, and Sandboxes on page 21
- Viewing Reports and VM Images on page 41

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CHAPTER 2

Assigning Resources to Users, Banks, and Sandboxes

- Managing Users on page 21
- Creating a Bank Administrator on page 23
- Creating a Sandbox on page 24
- Deleting a Sandbox on page 25
- Assigning Users to a Sandbox on page 25
- Assigning One or More Users to One or More Sandboxes on page 26
- Assigning Permissions on page 28
- Sending Users Their Information on page 29
- Removing Users from a Sandbox on page 29
- Creating and Deleting a Bank Library on page 30
- Buying Capacity on page 31
- Managing Capacity on page 33
- Managing Reservations on page 36
- Managing Active Topologies on page 39

Managing Users

As a Junosphere bank administrator, you have additional privileges above those of a regular user. You can create, delete, and modify user information by navigating to **Administration > Manage Users** in the navigation tree.

- Creating a User on page 21
- Deleting a User on page 22
- Editing User Information on page 23

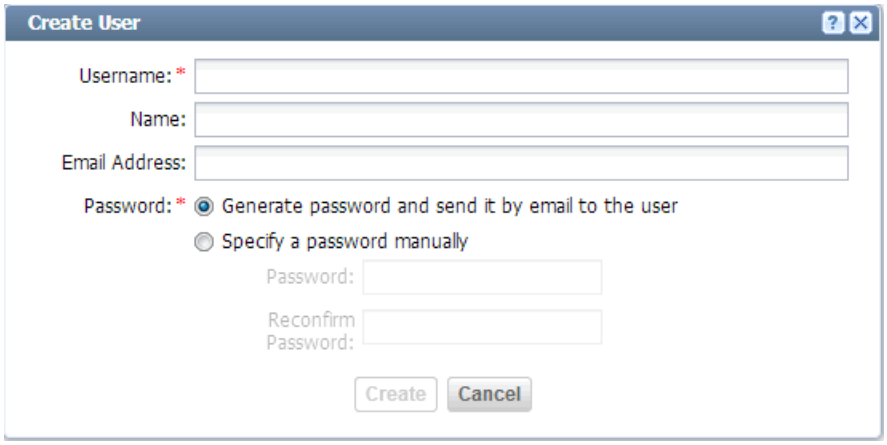
Creating a User

When you create a new user, it is strongly recommended that you use an e-mail address as the username. This facilitates system communication with the user.

To create a user:

1. From the navigation tree, select **Administration** > **Manage Users**.
2. In the **Manage Users** window, click the green plus sign **(+)** in the upper left corner. The **Create User** dialog box appears.

Figure 7: Creating a User Dialog Box



3. In the **Create User** dialog box, create a username, password, and add an e-mail address. You can optionally add a name for the user.

   You can have the system generate a password, or you can choose a password.

   NOTE: A username must begin and end with an alphanumeric character. A username can also contain the following symbols:

   - @
   - .
   - _
   - -

4. Click **Create**.

   Repeat steps 2 and 3 for each user you want to add.

Deleting a User

To delete a user:

1. In the **Manage Users** window, click the check box next to the username you want to delete.
2. Click the red minus sign **(-)** located in the upper left corner.
3. The **Delete User** dialog box will ask you to confirm that you want to delete the user. Click **Yes** to confirm.

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NOTE: **If you click Yes to confirm that you want to delete a user, Junosphere will permanently delete the user.**

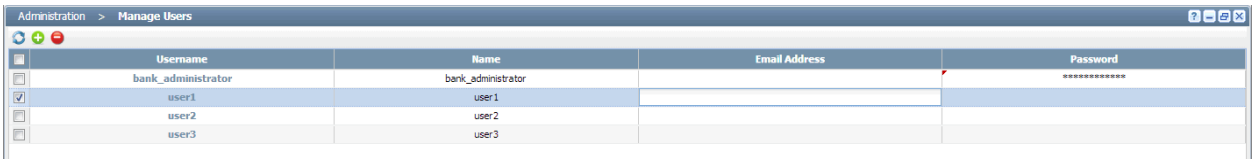
Deleting a user also deletes the user from banks and sandboxes. You cannot delete a user if the user is the only bank administrator for a bank.

Editing User Information

You can edit user information when you are in the **Manage Users** window. The **Name**, **E-mail Address**, and **Password** fields can all be edited directly in the table. To edit user information:

1. Click on the field of the table that you want to edit.

Figure 8: Managing Users Window



NOTE: **You cannot edit fields that appear in bold, blue font.**

2. Type your changes. A red flag appears in the upper left corner of the field, indicating that a change was made.
3. Click the **Save** button located at the bottom right corner of the table.

You can also change a user's password while in the **Manage Users** window. For information on how to change a user password, see "Changing a User Password" on page 16.

Creating a Bank Administrator

As a bank administrator, you can create additional bank administrators. You have the ability to make any regular user into a bank administrator for any bank in which you have access. You can choose to assign more than one bank administrator to a bank.

To create a bank administrator:

1. From the navigation tree, select **Adminstration > Manage Banks/Sandboxes/Libraries**.
2. In the **Banks** section, select a bank from the table and click the **View/Manage Bank Adminstrators** icon that appears at the top left corner of the table.
3. Select a user from the **Available** box and click the right arrow key to add the user to the **Selected** box.

NOTE: You can use the left arrow key to remove a bank administrator from a bank.

4. Click **Save**.

Related Documentation

- Understanding the Role of the Bank Administrator on page 13
- Understanding Banks on page 12

Creating a Sandbox

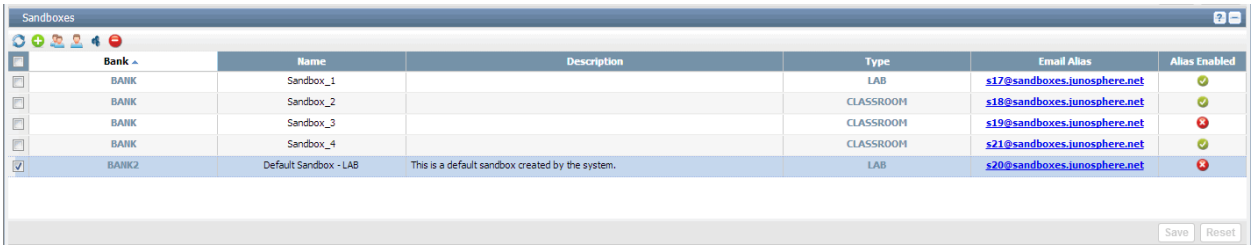
A sandbox is a work area within a bank that contains capacity (virtual machine units), as well as the users assigned to that sandbox. Each sandbox contains one or more libraries, which is where you store and access topology file sets.

A sandbox is also a collection of users who work together on a topology. A single user can be part of any number of sandboxes in any number of banks and can have different privileges in each sandbox. Multiple topologies can be started by the same user in different sandboxes. The only restrictions are that a user can join only one topology at a time and only one topology can be active at a time in a sandbox. As a bank administrator, you can create a sandbox, add capacity to a sandbox, and assign users to a sandbox. You can also assign permissions to users of the sandboxes. To learn more about permissions, go to "Assigning Permissions" on page 28.

To create a sandbox:

1. From the navigation tree, select **Administration > Manage Banks / Sandboxes / Libraries.**
2. In the **Sandboxes** section, click the plus sign **(+)** in the upper left corner. The **Create Sandbox** dialog box appears.

Figure 9: Sandboxes Section



3. In the **Create Sandbox** dialog box, select a bank, enter a name for the sandbox, and select the type (classroom, developer, or lab). You can optionally add a description for the sandbox.
4. Click **Create**.

Related Documentation

- Creating a User on page 21
- Assigning Users to a Sandbox on page 25

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- Assigning One or More Users to One or More Sandboxes on page 26
- Deleting a Sandbox on page 25

Deleting a Sandbox

Only the bank administrator can delete sandboxes. You cannot delete a sandbox with an active topology. Unused capacity is returned to the bank.

NOTE: **Deleting the sandbox also deletes all the libraries within the sandbox and the topologies within those libraries.**

To delete a sandbox:

1. From the Navigation tree, select **Administration > Manage Banks/Sandboxes/Libraries.**
2. In the **Sandboxes** section, click the check box next to the sandbox that you want to delete.
3. Click the minus sign **(-)** located in the upper left corner of the section.
4. Verify that you want to delete the sandbox.

Related Documentation

- Assigning Regular Capacity to a Sandbox on page 33
- Deleting Users from a Sandbox on page 29
- Creating a Sandbox on page 24

Assigning Users to a Sandbox

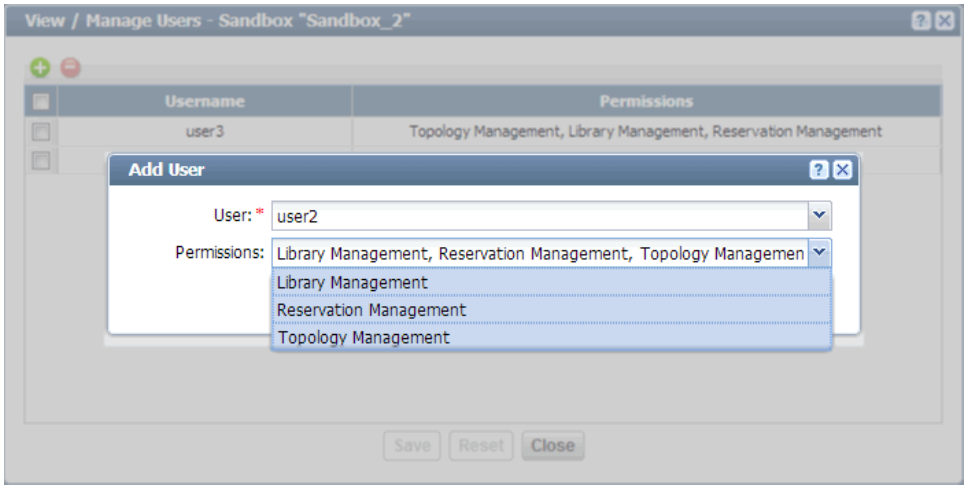
You use sandboxes to divide a bank's capacity and assign users to use that capacity.

To assign users to a sandbox:

1. From the navigation tree, select **Administration > Manage Banks / Sandboxes / Libraries.**
2. In the **Sandboxes** section, click the check box next to the sandbox you want to use.
3. Click the **View/ Manage Users** icon located in the upper left corner. The **View/Manage** users dialog box appears.
4. Click on the plus sign **(+)** in the upper left corner of the dialog box and assign users to the sandbox.

   If no users are shown, go to "Creating a User" on page 21 to add them.

Figure 10: Adding Users to a Sandbox



5. Assign each user zero or more permissions for this sandbox. The permissions are as follows:
   - Topology Management (start/stop topologies)
   - Library Management (create/delete sandbox libraries and upload topologies to them)
   - Reservation Management (reserve time and capacity)

   For more information about permissions, see "Assigning Permissions" on page 28.
6. Click the **Add** button to add the user to your sandbox.

Related Documentation

- Creating a User on page 21
- Understanding Banks on page 12
- Assigning Regular Capacity to a Sandbox on page 33
- Deleting Users from a Sandbox on page 29
- Assigning Permissions on page 28
- Managing Reservations on page 36

Assigning One or More Users to One or More Sandboxes

Junosphere enables you to assign one or more users to one or more sandboxes at the same time:

1. Select **Administration > Manage Banks/Sandboxes/Libraries** and navigate to the **Sandboxes** section.
2. Click the **Assign one or more users to one or more sandboxes** icon. The **Assign Users to Sandboxes** dialog box appears.
3. Select a bank from the drop-down menu (if not already selected).

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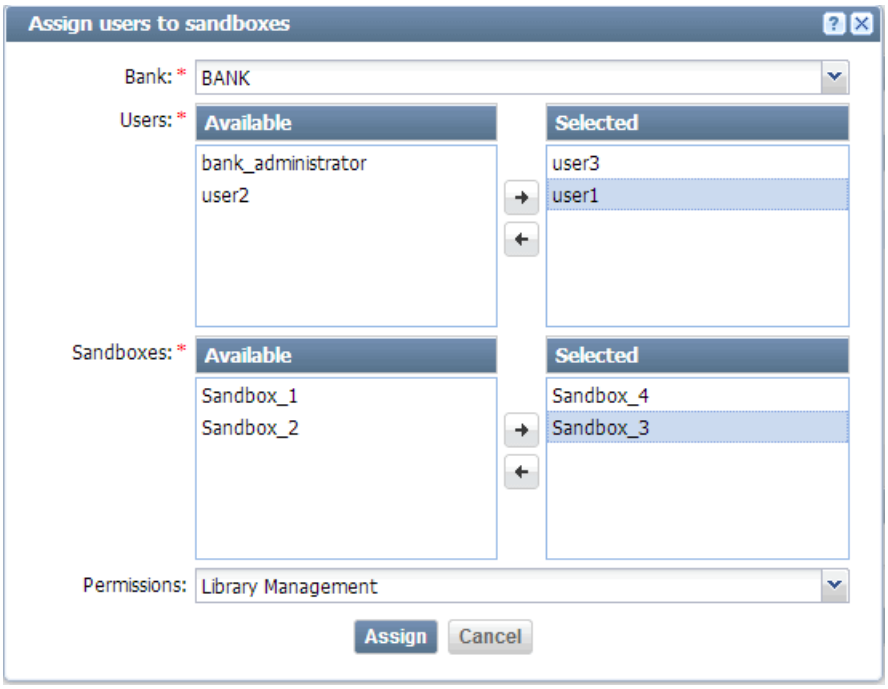
4. Select the user(s) that you want to add to the sandbox(es). Use the right arrow key to move the users you want from the **Available** box to the **Selected** box on the right.

   If you want to remove a user from the **Selected** box, select the user and click the left arrow key.

5. Figure 11: Assigning Users to Sandboxes



7. Select the sandbox(es) for the user(s). Use the right arrow key to move the sandbox you want from the **Available** box to the **Selected** box on the right.

   If you want to remove a sandbox from the **Selected** box, select the sandbox and click the left arrow key.

8. Select each permission that you want to assign the user(s) of the sandbox(es).

9. Click **Assign**.

Related Documentation

- Creating a User on page 21
- Understanding Banks on page 12
- Assigning Regular Capacity to a Sandbox on page 33
- Deleting Users from a Sandbox on page 29
- Assigning Permissions on page 28
- Managing Reservations on page 36

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Assigning Permissions

As a bank administrator, you assign or delete the following user permissions within the context of a sandbox:

- Topology Management (start or stop topologies)

  You might want to restrict the users who can start and stop a topology.

  NOTE: **There can only be one active topology at a time in a sandbox.**

  You might want one individual to control this function.

  In a classroom situation, you might want only the instructor to have start or stop permissions for topologies. Students can then join an active topology.

  NOTE: **All users of a sandbox can join an active topology. Multiple users using an active topology do not consume more capacity than one user since they are all sharing.**

- Library Management (create and delete sandbox libraries)

  Provides the ability to create, update, and delete a library within the sandbox for topology organization.

  Only users with Library Management permissions can create, edit, and delete topologies within a library. This includes editing metadata about the topology (such as the topology description, or whether the topology is downloadable or saveable) or editing the topology itself. You can create a topology through either the Topology Wizard or you can upload a topology if you have the Library Management permission. All users, however, can download topologies (provided the topology is marked downloadable by the creator of the topology).

- Reservation Management (reserve time and capacity)

  Allows users to reserve a time period to use a specified number of virtual machine units (capacity). A sandbox must have a reservation in order to activate a topology. Since Junosphere is a cloud resource of virtual devices, by reserving your time, you know that those resources are ready and waiting for you. Once your reservation starts, your sandbox capacity is decreased.

To add, change, or remove a user's permissions in a sandbox:

1. Select **Administration > Manage Banks / Sandboxes / Libraries.**
2. Select a sandbox from the **Sandboxes** section by clicking the check box next to the sandbox in which you want to change user permissions.
3. Click the **View/Manage Users in the selected sandbox** icon.
4. Click the **Permissions** field for the user whose permissions you want to change.

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5. Change permissions as needed in the drop down menu.
6. Click **Save**.

Related Documentation

- Understanding Banks on page 12
- Assigning Regular Capacity to a Sandbox on page 33
- Assigning Users to a Sandbox on page 25
- Managing Reservations on page 36
- Creating and Deleting a Bank Library on page 30

Sending Users Their Information

Junosphere facilitates communications between users and administrators through the real-time messaging tool. The bank and each sandbox contain a group e-mail alias that can be used to communicate special maintenance actions, availability of new topologies, requests for capacity, and other bank or sandbox activities. This e-mail alias appears in **Administration > Manage Banks/Sandboxes/Libraries** in the **Sandboxes** section. You can enable or disable the alias by clicking in the **Alias Enabled** field. To enable an alias, click the check box in the **Alias Enabled** column for the sandbox alias that you want to enable. To disable an alias, deselect the check box.

Once users have been created, send e-mails to your users telling them that they can use Junosphere. Share their username and password information, as well as any specific topologies or task instructions you have for your use case.

NOTE: **Make sure that all users have the correct e-mail address in their user profiles. Otherwise, they will not receive e-mail messages that are sent by bank administrators or other users in the bank and sandbox.**

Related Documentation

- Understanding Banks on page 12
- Assigning Regular Capacity to a Sandbox on page 33
- Assigning Permissions on page 28
- Assigning Users to a Sandbox on page 25
- Managing Reservations on page 36
- Creating and Deleting a Bank Library on page 30

Removing Users from a Sandbox

To delete a user from a sandbox:

1. Select **Administration> Manage Banks/Sandboxes/Libraries.**
2. In the **Sandboxes** section, click the check box next to the sandbox that you want to delete users from.
3. Click the **View/Manage Users**icon to display a list of users.
4. Click a check box to select the username that you want to delete, then click the minus sign **(-)** located in the upper left corner of the dialog box.
5. Verify that you want to delete the user.

Related Documentation

- Creating a User on page 21
- Understanding Banks on page 12
- Assigning Regular Capacity to a Sandbox on page 33
- Assigning Users to a Sandbox on page 25
- Assigning Permissions on page 28
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Creating and Deleting a Bank Library

The purpose of a bank library is to create a common set of topologies that users can access regardless of the sandbox that they are in. Users can then choose to start a topology from a bank library in a sandbox that they have access to. Bank administrators can pre-populate a bank library with topologies for their users. You cannot start a topology in a bank library. You can only save a topology to a bank library.

To create a bank library:

1. Select **Administration > Manage Banks / Sandboxes / Libraries**.
2. In the **Libraries** section, select the **Bank** tab.
3. Click the plus sign (**+**) in the upper left corner to create a new bank library.
4. In the **Create a Bank Library** dialog box, select a bank, enter the name and a description of the new bank library.
5. Click **Create** to create the bank library.

To delete a bank library:

1. Select **Administration > Manage Banks / Sandboxes / Libraries**.
2. In the **Libraries** section, select the **Bank** tab.
3. Click the check box next to the bank library that you want to delete.
4. Click the minus sign(**-**) in the upper left corner to delete the library.
5. Confirm the deletion.

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NOTE: **If you delete a library, all topologies in that library will also be deleted.**

Related Documentation

- Understanding Banks on page 12
- Assigning Regular Capacity to a Sandbox on page 33
- Assigning Permissions on page 28
- Assigning Users to a Sandbox on page 25
- Managing Reservations on page 36

Buying Capacity

There are two ways to replenish your capacity: online using a credit card and by contacting your Juniper Networks representative.

To buy capacity online:

1. Click the go to the Learning Portal.

   A page appears that lists the types of regular pay-per-use capacity that you can buy on this credit card portal:

   - Classroom—Enables you to create virtual networking labs that provide students with full hands-on access to Juniper's state-of-the-art commercial networking technology, without the expense of building or maintaining your own physical lab.
   - Lab—Provides a virtual environment where you can create and run elements and networks running the Junos operating system (Junos OS). You can use these networks to design your network; test new features, protocols or topologies; train new employees; and many more tasks.

2. Click the link for the type of capacity you want to buy.

   The page for that capacity appears, listing the purchase information for that type of capacity.

3. Click the **Purchase** button.

Table 5 on page 31 lists the full set of Junosphere SKUs that can be purchased (not all of these SKUs can be purchased on the credit card portal).

Table 5: Junosphere SKUs

SKU	Description
JUS-ANNUAL-PASS-10	10 VM unit annual plan. Includes 10 VM units at any time and 200VM units of overflow capacity. No connectors.
JUS-ANNUAL-PASS-50	50 VM unit annual plan. Includes 50 VM units at any time and 1000VM units of overflow capacity. Unlimited connectors.

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Table 5: Junosphere SKUs *(continued)*

SKU	Description
JUS-ANNUAL-PASS-100	100 VM unit annual plan. Includes 100 VM units at any time and 2000VM units of overflow capacity. Unlimited connectors.
JUS-CONNECT-1	Connect and transfer data at the rate of 1 Mbs to the virtual network topology for one day.
JUS-CONNECT-30	Connect and transfer data at the rate of 1 Mbs to the virtual network topology for 30 days.
JUS-LAB-10VM-1	10 LAB VM units. Includes images and tools.
JUS-LAB-10VM-30	300 LAB VM units. Includes images and tools.
JUS-CLASS-10VM-1	10 Classroom VM units. Includes images and tools.
JUS-CLASS-10VM-30	300 Classroom VM units. Includes images and tools.

NOTE: Virtual machine capacity expires one year after the date of purchase. Thirty (30) days before the expiration date, Junosphere sends an e-mail to the bank administrator with a reminder of the expiration date and providing instructions and a link for reordering capacity. This e-mail may go to the spam or junk e-mail folders or it may go to a quarantine server.

Spam or junk e-mail folder—Outlook users can fix this problem by going to their spam or junk e-mail folder, selecting the e-mail, selecting **Actions** → **Junk E-mail** → **Add Sender to Safe Senders List**. This automatically adds junosphereadmin-noreply@juniper.net to the Safe Senders tab of the Junk E-mail Options dialog box. Your Outlook Administrator may have an alternative way of preventing these e-mails from going to your spam or junk e-mail folder. Users of other e-mail applications should work with their e-mail administrators to fix this issue.

Quarantine server—If the Junosphere e-mails are being quarantined, work with your IT department to make sure that the e-mails are routed to your e-mail application.

NOTE: Every time you add capacity to a bank, the expiry date of the bank changes to one year from the date and time of the latest assignment of capacity to the bank.

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Managing Capacity

When you purchase time in Junosphere, you purchase virtual machine unit capacity (the number of virtual machine units times the number of units) for a bank. Capacity is tied to the type of stock-keeping unit (SKU) and the Junosphere product that you order. The capacity can be for a fixed number of VM units (regular pay-per-use capacity) or for a year of a number of VM units (annual plan capacity) As a bank administrator, you assign capacity from a bank to a sandbox.

You can also purchase capacity to use Junosphere Connector for a number of days. The 50 and 100 VM unit annual plans include the unlimited use of a Junosphere Connector for a full year. Junosphere Connector enables the Junosphere virtual network to connect to a physical network.

In the annual plan, overflow capacity is supplemental regular capacity that allows a customer to go beyond the daily limit of the annual plan for a fixed amount of time. For example, the 100 VM unit annual plan has 2000 VM units of overflow capacity. This allows you to run a topology of 200 VM units (100 VM units included in the Annual Plan and 100 VM units from the overflow capacity) for 20 days, 150 VM units for 40 days, 110 VM units for 200 days and so on. It is expended on the same pay-per-use basis as other regular Lab and Class (non-annual plan) capacity.

- Assigning Regular Capacity to a Sandbox on page 33
- Removing Regular Capacity from a Sandbox on page 34
- Allocating Annual Plan Capacity on page 34
- Viewing Capacity in a Sandbox on page 35

Assigning Regular Capacity to a Sandbox

To assign regular (non-annual plan) capacity to sandboxes:

1. From the navigation tree, select **Administration > Manage Capacity**.
2. In the **Bank** section, select the **Regular** tab (if not already selected) and click the check box next to the bank where your sandbox is located.

   NOTE: When you reserve capacity, it is decremented from the Available Capacity only one hour before the reservation, in case you want to cancel the reservation prior to that.

   NOTE: Virtual machine capacity expires one year after the date of purchase. Thirty (30) days before the expiration date, Junosphere sends an e-mail to the bank administrator with a reminder of the expiration date and with instructions and a link for reordering capacity.

3. Click the **Assign Capacity to Sandbox** icon in the upper left corner.

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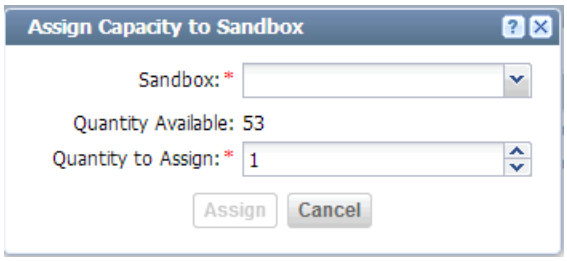
4. In the **Assign Capacity to Sandbox** dialog box, select a sandbox from the drop down menu.



5. Enter the number of units to assign in the **Quantity to assign** field.
6. Click **Assign**.

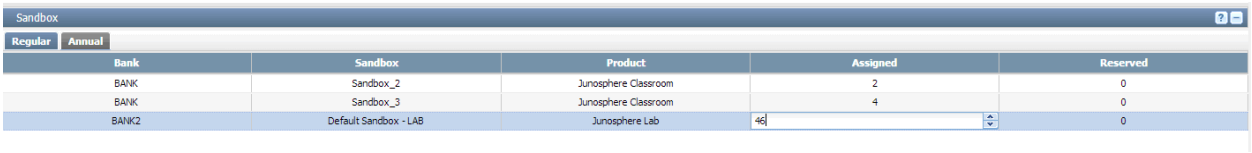
   The amount is decremented from the Quantity Available. This amount is now allocated to the chosen sandbox. The **Regular** tab in the **Sandbox** section shows the new allocation in the **Assigned** column.

Removing Regular Capacity from a Sandbox

To remove regular (non-annual plan) capacity from a sandbox:

1. Select **Administration > Manage Capacity** from the navigation tree.
2. In the **Sandbox** section, go to the **Regular** tab. In the **Assigned** column, click the field of the sandbox from which you want to remove capacity.
3. You can use the down arrow that appears on the right side of the selected field to decrement capacity.

NOTE: **You will see a red flag appear in the top left corner of any field that you modify, indicating that a change was made. The flag disappears when you click the Save button.**



4. Click the **Save** button located at the bottom right corner of the table.

The capacity is returned to the bank. Active capacity cannot be deleted from a sandbox. If specific capacity is in use in a future (pending) reservation, to delete this assigned capacity you must first go to the **Manage Reservations** window and cancel the reservation. See "Managing Reservations" on page 36 for information on how to delete a reservation.

Allocating Annual Plan Capacity

To allocate annual plan capacity to a sandbox:

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1. Select **Administration > Manage Capacity** from the navigation tree.
2. In the **Sandbox** section, navigate to the **Annual** tab.
3. In the table, there are columns for **Minimum** and **Maximum** capacity. Click on the **Minimum** or **Maximum** capacity field of the sandbox for which you want to allocate capacity.
4. Enter the minimum (guaranteed VM units) and maximum (allowed VM units) values for that sandbox by typing the number of VM units or by using the arrows that appear on the right side of the field.

   By default, all sandboxes are assigned a minimum of 0 and a maximum of total purchased annual plan capacity. This default setting does not set aside any annual plan VM units to any sandbox, but allows every sandbox to access the full available annual plan capacity.

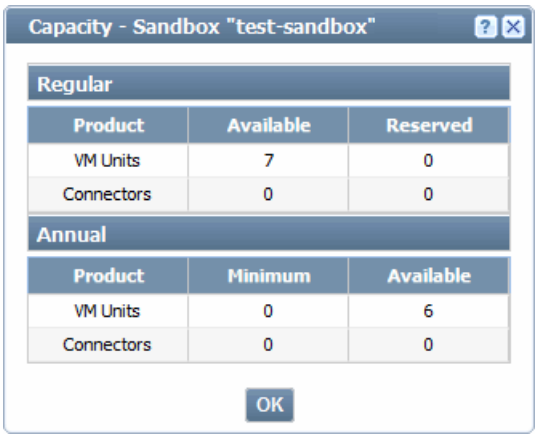
   NOTE: **You will see a red flag appear in the top left corner of any field that you modify, indicating that a change was made. The flag will disappear once you click the Save button.**

5. Click the**Save** button in the lower right corner of the table.

Viewing Capacity in a Sandbox

If you are in the **Administration>Manage Banks/Sandboxes/Libraries** window of Junosphere, you can quickly view the capacity of a sandbox without having to go to the **Administration>Manage Capacity** window.

1. From the navigation tree, select **Administration>Manage Banks/Sandboxes/Libraries**.
2. Select a sandbox from the table.
3. Click the **View Sandbox Capacity** icon in the upper left corner of the **Sandboxes** section. A window appears with the sandbox capacity information.



Related Documentation

- Buying Capacity on page 31
- Understanding Banks on page 12

Managing Reservations

To use regular capacity, you must have reserved time in the Junosphere cloud for a sandbox before you can start a topology. Only a bank administrator or a user with Reservation Management permission can reserve time. Also, the bank administrator must assign capacity (virtual machine units) to the sandbox. Once capacity is assigned, you can plan your reservation by knowing how many virtual machines you will use, the start date, and the number of days you will use the virtual machines.

The formula to define the capacity required for your reservation is: **Number of VM units x Number of days**.

To manage reservations, go to **Topologies > Manage Reservations**. In the Manage Reservations window, you can view the assigned capacity (virtual machine units) and the reservations for using the cloud.

- Reservations in blue are pending (future) reservations.
- Reservations in red are expired reservations.
- Reservations in green are currently active.

To create a reservation to run a topology:

1. From the navigation tree, select **Topologies > Manage Reservations**.
2. Click the plus sign **(+)** in the upper left corner of the window. The **Create Reservations** dialog box appears.

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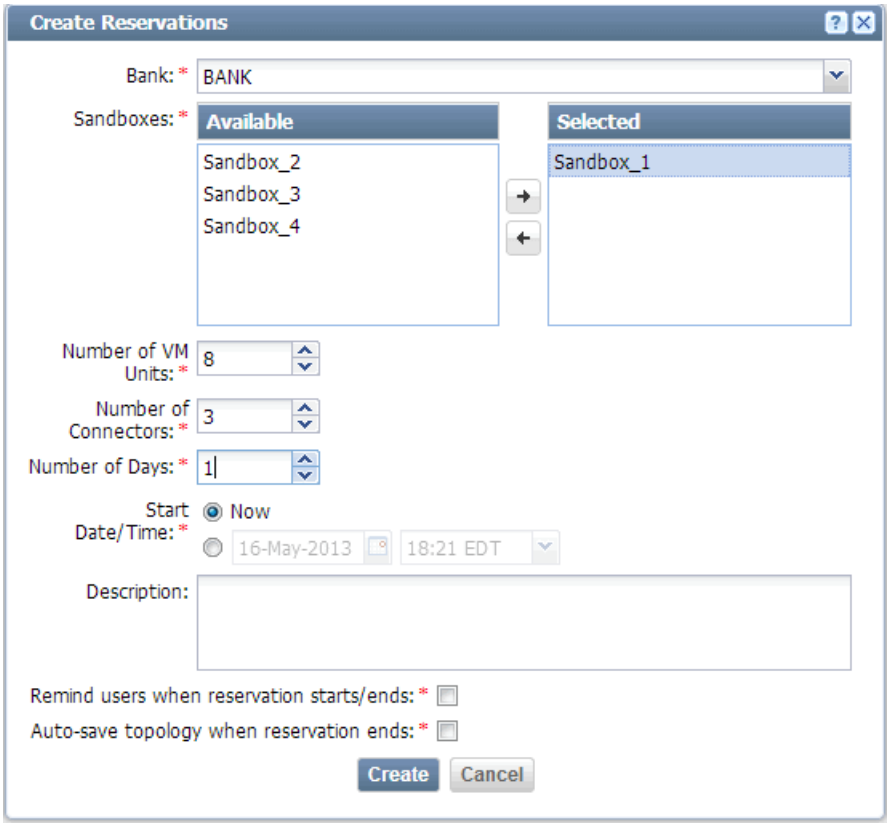
Figure 12: Adding a Reservation



3. Select a bank from the **Bank** drop-down menu.
4. Select the sandbox(es) in which you want the reservation created. Use the right arrow key to move the sandboxes you want from the Available list box into the Selected list box on the right.

   You can use the left arrow key to remove the sandboxes you do not want.
5. Use the up and down arrow keys to enter the number of virtual machine units (VM units), the number of connectors, and the number of days for the reservation.

   NOTE: **If you do not need to connect your Junosphere topology to a physical network, enter zero for the number of connectors.**
6. Select the start date and time. Select **Now** or use the date and time drop-down menus to select a date and time in the future. The time zone that appears in the menu is the time zone set in the operation system of your host.
7. (Optional) Enter a description of the reservation.

   NOTE: **You can create a reservation that has 0 VM units, but it must have one or more connectors.**

8. If desired, click or unclick the **Remind users when reservation starts/ends** check box.

NOTE: If you leave this check box checked (default) and the reservation start time is at least 24 hours away, you will receive an e-mail 24 hours before the reservation is scheduled to start.

You will also receive a reminder e-mail two hours before the reservation is scheduled to expire.

9. Click or unclick the **Auto-save topology when reservation ends** check box.
10. Click **Create** to make the reservation.

NOTE: When you reserve virtual machines, include the number of CentOS images and third-party applications that will be virtual machines. A maximum of 25 simultaneous users can join a topology via secure access.

To cancel a reservation, select the reservation you want to cancel and click the red minus sign.

NOTE: You can cancel a reservation up to one hour before the start time without penalty. Within an hour of start time, you cannot cancel the reservation, even though you might see a dialog box with the option to cancel.

At the end of your reservation time slot, Junosphere shuts down the active topology and frees up virtual machine resources.

See the *Junosphere Guide for Users* for more information about reservations.

NOTE: Annual plan capacity does not require a reservation. As long as the capacity exists, a topology can be started from either the Topology Wizard or from a library. No reservation is created.

To delete a future (pending) reservation:

1. From the navigation tree, select **Topologies > Manage Reservations**.
2. Select the future reservation that you wish to delete and click the minus sign **(-)** located at the top left corner of the window.
3. In the dialog box, confirm that you want to cancel the selected reservation.

Related Documentation

- Creating a User on page 21
- Understanding Banks on page 12
- Assigning Regular Capacity to a Sandbox on page 33

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- Assigning Permissions on page 28
- Assigning Users to a Sandbox on page 25

Managing Active Topologies

You can manage active topologies by going to **Administration>Manage Active Topologies** in the navigation tree. This window allows you to export a list of active topologies as a **.csv** file (see "Generating Reports" on page 41). You can also stop an active topology by selecting it from the list and clicking the minus sign **(-)** located at the top left of the window. If you started a topology and do not see it in the **Manage Active Topologies** window, click the **Refresh button** located at the top left of the screen.

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CHAPTER 3

Viewing Reports and VM Images

- Generating Reports on page 41
- Viewing Activity Logs on page 43
- Viewing User Associations on page 44
- Viewing VM Images on page 44

Generating Reports

Junosphere enables you to export data in tables to a .csv file that can be displayed in a spreadsheet. There are seven places where you can export data. Each location has an **Export** icon in the upper left corner of each section that enables you to download the information to a .csv file.

NOTE: **You cannot edit any of the fields in the report tables.**

These seven places are:

1. The Reservations report. From the navigation tree, select **Administration > Manage Reservations**. The displayed table includes reservation data.
2. The Capacity report. From the navigation tree, select **Administration > Manage Capacity**. The displayed table includes capacity data (regular and annual plan) for the bank and all its sandboxes.
3. The User Associations report. From the navigation tree, select **Reports > View User Associations**. The displayed table includes information about users, including username, bank, sandbox, and permissions.
4. The Topology report. From the navigation tree, select **Administration > Manage Topologies**. The displayed table includes information about topologies, including bank, sandbox, library, topology name, VMs, VM units, and size.
5. The Active Topologies report. From the navigation tree, select **Administration > Manage Active Topologies**. The displayed table includes information about topologies, including customer, bank, sandbox, library, topology name, type, and state.

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6. The Bank Activity Logs report. From the navigation tree, select **Reports > View Activity Logs.**
7. The Sandbox Activity Logs report. From the navigation tree, select **Reports > View Activity Logs.**

Related Documentation

- Viewing Activity Logs on page 43
- Viewing User Associations on page 44

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Viewing Activity Logs

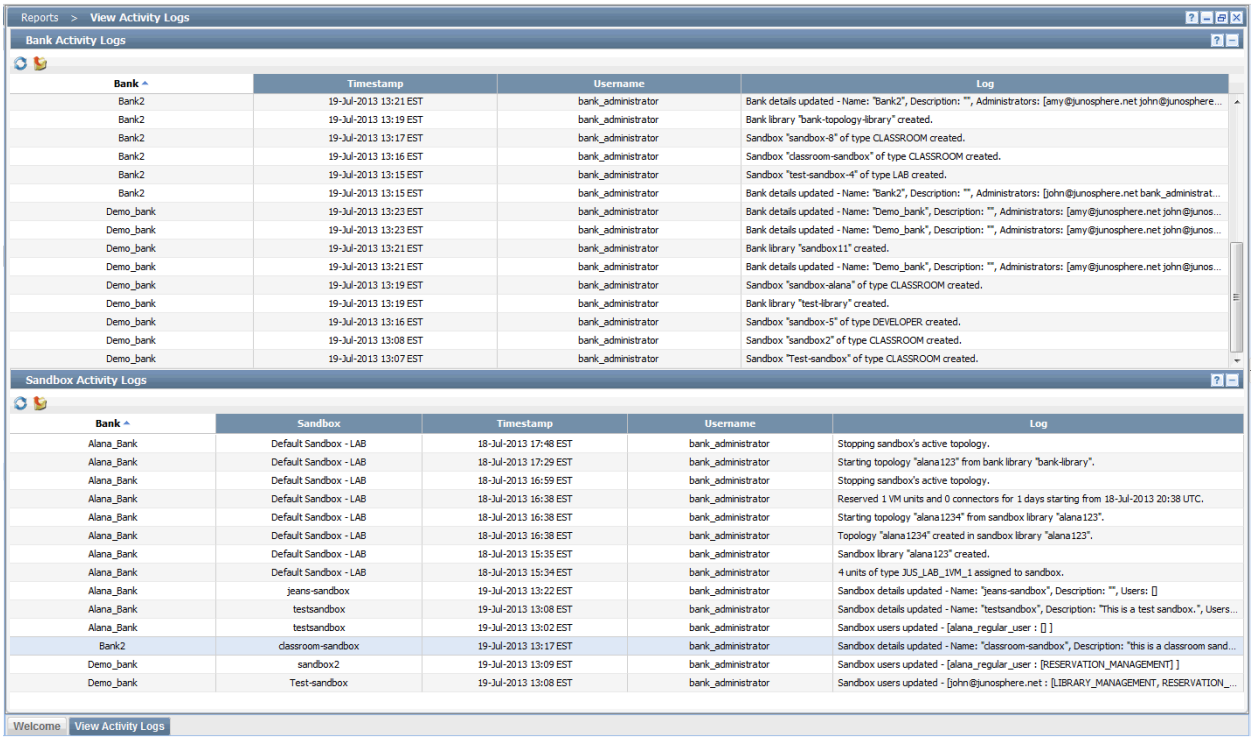
To view activity logs for banks and sandboxes, select **Reports> View Activity Logs**. There are two sections:

- Bank Activity Logs
- Sandbox Activity Logs

Messages are displayed when you make changes to sandboxes and banks in Junosphere. For example, messages are displayed when you assign capacity to a sandbox, make a reservation, or start a topology.

You can customize the display by clicking the down arrow in any of the columns. The drop-down menus enable you to filter the data by sorting in ascending or descending order, by selecting the columns to be displayed, by date, or by entering customized criteria to filter the information.

Figure 13: Activity Log



Reports > View Activity Logs

Bank Activity Logs

Bank	Timestamp	Username	Log
Bank2	19-Jul-2013 13:21 EST	bank_administrator	Bank details updated - Name: "Bank2", Description: "", Administrators: [amy@junosphere.net john@junosphere...
Bank2	19-Jul-2013 13:19 EST	bank_administrator	Bank library "bank-topology-library" created.
Bank2	19-Jul-2013 13:17 EST	bank_administrator	Sandbox "sandbox-8" of type CLASSROOM created.
Bank2	19-Jul-2013 13:16 EST	bank_administrator	Sandbox "classroom-sandbox" of type CLASSROOM created.
Bank2	19-Jul-2013 13:15 EST	bank_administrator	Sandbox "test-sandbox-4" of type LAB created.
Bank2	19-Jul-2013 13:15 EST	bank_administrator	Bank details updated - Name: "Bank2", Description: "", Administrators: [john@junosphere.net bank_administrat...
Demo_bank	19-Jul-2013 13:23 EST	bank_administrator	Bank details updated - Name: "Demo_bank", Description: "", Administrators: [amy@junosphere.net john@junos...
Demo_bank	19-Jul-2013 13:23 EST	bank_administrator	Bank details updated - Name: "Demo_bank", Description: "", Administrators: [amy@junosphere.net john@junos...
Demo_bank	19-Jul-2013 13:21 EST	bank_administrator	Bank library "sandbox11" created.
Demo_bank	19-Jul-2013 13:21 EST	bank_administrator	Bank details updated - Name: "Demo_bank", Description: "", Administrators: [amy@junosphere.net john@junos...
Demo_bank	19-Jul-2013 13:19 EST	bank_administrator	Sandbox "sandbox-alana" of type CLASSROOM created.
Demo_bank	19-Jul-2013 13:19 EST	bank_administrator	Bank library "test-library" created.
Demo_bank	19-Jul-2013 13:16 EST	bank_administrator	Sandbox "sandbox-5" of type DEVELOPER created.
Demo_bank	19-Jul-2013 13:08 EST	bank_administrator	Sandbox "sandbox2" of type CLASSROOM created.
Demo_bank	19-Jul-2013 13:07 EST	bank_administrator	Sandbox "Test-sandbox" of type CLASSROOM created.

Sandbox Activity Logs

Bank	Sandbox	Timestamp	Username	Log
Alana_Bank	Default Sandbox - LAB	18-Jul-2013 17:48 EST	bank_administrator	Stopping sandbox's active topology.
Alana_Bank	Default Sandbox - LAB	18-Jul-2013 17:29 EST	bank_administrator	Starting topology "alana123" from bank library "bank-library".
Alana_Bank	Default Sandbox - LAB	18-Jul-2013 16:59 EST	bank_administrator	Stopping sandbox's active topology.
Alana_Bank	Default Sandbox - LAB	18-Jul-2013 16:38 EST	bank_administrator	Reserved 1 VM units and 0 connectors for 1 days starting from 18-Jul-2013 20:38 UTC.
Alana_Bank	Default Sandbox - LAB	18-Jul-2013 16:38 EST	bank_administrator	Starting topology "alana1234" from sandbox library "alana123".
Alana_Bank	Default Sandbox - LAB	18-Jul-2013 16:38 EST	bank_administrator	Topology "alana1234" created in sandbox library "alana123".
Alana_Bank	Default Sandbox - LAB	18-Jul-2013 15:35 EST	bank_administrator	Sandbox library "alana123" created.
Alana_Bank	Default Sandbox - LAB	18-Jul-2013 15:34 EST	bank_administrator	4 units of type JUS_LAB_1VM_1 assigned to sandbox.
Alana_Bank	jeans-sandbox	19-Jul-2013 13:22 EST	bank_administrator	Sandbox details updated - Name: "jeans-sandbox", Description: "", Users: []
Alana_Bank	testsandbox	19-Jul-2013 13:08 EST	bank_administrator	Sandbox details updated - Name: "testsandbox", Description: "This is a test sandbox.", Users...
Alana_Bank	testsandbox	19-Jul-2013 13:02 EST	bank_administrator	Sandbox users updated - [alana_regular_user : []]
Bank2	classroom-sandbox	19-Jul-2013 13:17 EST	bank_administrator	Sandbox details updated - Name: "classroom-sandbox", Description: "this is a classroom sand...
Demo_bank	sandbox2	19-Jul-2013 13:09 EST	bank_administrator	Sandbox users updated - [alana_regular_user : [RESERVATION_MANAGEMENT]]
Demo_bank	Test-sandbox	19-Jul-2013 13:08 EST	bank_administrator	Sandbox users updated - [john@junosphere.net : [LIBRARY_MANAGEMENT, RESERVATION_...

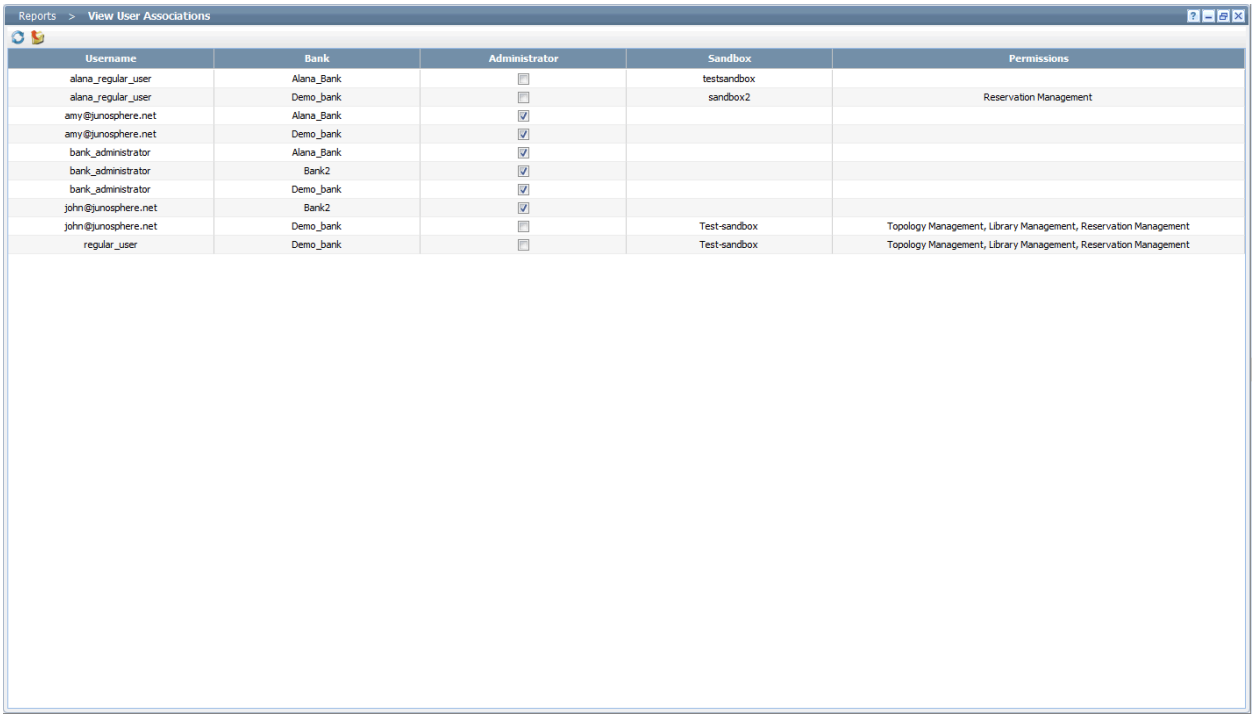
Welcome | View Activity Logs

Related Documentation

- Generating Reports on page 41
- Viewing User Associations on page 44

Viewing User Associations

To view user associations, select **Reports> View User Associations**. The **View User Associations** window provides a list of all the users that you have access to as a bank administrator. It lists each user and the banks and sandboxes to which they belong. If a user is a bank administrator, there is a check box next to the user's name in the **Administrator** column. There is also a column for permissions, where you can view permissions for each regular user.



Username	Bank	Administrator	Sandbox	Permissions
alana_regular_user	Alana_Bank	☐	testsandbox	
alana_regular_user	Demo_bank	☐	sandbox2	Reservation Management
amy@junosphere.net	Alana_Bank	☑		
amy@junosphere.net	Demo_bank	☑		
bank_administrator	Alana_Bank	☑		
bank_administrator	Bank2	☑		
bank_administrator	Demo_bank	☑		
john@junosphere.net	Bank2	☑		
john@junosphere.net	Demo_bank	☐	Test-sandbox	Topology Management, Library Management, Reservation Management
regular_user	Demo_bank	☐	Test-sandbox	Topology Management, Library Management, Reservation Management

Related Documentation

- Generating Reports on page 41
- Viewing Activity Logs on page 43

Viewing VM Images

To view the VM images table, select **Configuration > View VM Images.** The VM Images table enables you to view the images that have been assigned by a Junosphere administrator to your bank. This table includes:

- The category
- The name of the image
- The number of VM units
- A description

The following figure shows the VM Images table.

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Figure 14: View VM Images Window

Configuration > View VM Images

Category	Name	VM Units	Description
App Server	CENTOS64_5_4	1	64-bit CentOS version 5.3 standard distribution
App Server	CENTOS_5_3	1	32-bit CentOS version 5.3 standard distribution
App Server	PUPPET_MASTER_LATEST	1	A 64-bit Experimental CentOS with Puppet Master version 2.7 installed. Only works with VMX.
Juniper - Experimental	VCE_LATEST	1	An experimental Content Encore Web Caching Server
Juniper - Experimental	VMX_LATEST	2	Experimental Vitrual MX based on Junos 12.3 with 10 interfaces
Juniper - Experimental	VPTX_EXP	2	Experimental Version of PTX
Juniper - Experimental	VPTX_LATEST	2	Latest experimental VPTX version.
Juniper - Experimental	VSRX_EXP	1	Virtual SRX based on Junos version 12.1
Juniper - Experimental	VSRX_LATEST_EXP	1	Experimental Junos OS release 12_3 for VSRX.
Juniper - Experimental	VWLC_LATEST	1	Experimental virtual instance of Wireless LAN Controller. Only the CLI is functional.
Juniper - Supported	BGP_SERVICE	3	Latest qualified BGP Service image. This is a special configuration of VJX that is used for BGP Service, based on the latest Junos OS Release..
Juniper - Supported	SPACE_12_1R1_8	1	Junos Space Release 12.1 Release 1.8
Juniper - Supported	SPACE_12_2R1_3_APPS	1	Junos Space 12.2 Release 1.3 pre-installed with Ethernet Design, Security Design, and Network Activate.
Juniper - Supported	SPACE_LATEST	1	Junos Space 12.3 Patch 2.8
Juniper - Supported	VJX1000_10_3R2_0	1	Junos OS release 10_3R2_0 for VJX1000
Juniper - Supported	VJX1000_10_3R2_1	1	Junos OS release 10_3R2_1 for VJX1000
Juniper - Supported	VJX1000_10_3R2_2	1	Junos OS release 10_3R2_2 for VJX1000
Juniper - Supported	VJX1000_10_3R2_3	1	Junos OS release 10_3R2_3 for VJX1000
Juniper - Supported	VJX1000_11_4	1	Junos OS release 11_4 for VJX1000
Juniper - Supported	VJX1000_12_1	1	Junos OS release 12_1 for VJX1000
Juniper - Supported	VJX1000_12_3	1	Junos OS release 12_3 for VJX1000
Juniper - Supported	VJX1000_LATEST	1	32-bit Virtual J-Router based on Junos version 12.3 with 1 virtual CPU and 2 GB of RAM
Juniper - Supported	VJX_LATEST	1	Junos OS release 12_3 for VJX1000
Juniper - Supported	VSRX_LATEST	1	Junos OS release 12_3 for VSRX
Partner	CaridenMATE_LATEST	1	Cariden Mate version 4.5.1
Partner	MU_STUDIO_LATEST	1	MU Studio version 6.1
Partner	MU_TESTENGINE_LATEST	1	MU Test Engine version 6.1
Partner	REX_LATEST	1	Packet Design version 9.4
Partner	SPIRENT_LATEST	1	Virtual Spirent Test Center version 3.90.
Partner	WANDL_LATEST	1	WANDL version 6.0.2

Click the down arrow in the **Category** column to customize the display.

NOTE: You cannot edit or delete a macro.

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PART 3

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