



Junosphere

Guide for Bank Administrators

Release

2.7



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Junosphere Guide for Bank Administrators
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About the Documentation

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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
<i>Italic text like this</i>	<ul style="list-style-type: none"> Introduces important new terms. Identifies book names. Identifies RFC and Internet draft titles. 	<ul style="list-style-type: none"> A policy <i>term</i> is a named structure that defines match conditions and actions. <i>Junos OS System Basics Configuration Guide</i> RFC 1997, <i>BGP Communities Attribute</i>
<i>Italic text like this</i>	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 <i>domain-name</i>
Text like this	Represents names of configuration statements, commands, files, and directories; interface names; configuration hierarchy levels; or labels on routing platform components.	<ul style="list-style-type: none"> 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 <i>metric</i> >;
(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 (<i>string1</i> <i>string2</i> <i>string3</i>)
# (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 [<i>community-ids</i>]
Indentation and braces ({ })	Identify a level in the configuration hierarchy.	[edit] routing-options { static { route default { nexthop <i>address</i> ; retain; } } }
;(semicolon)	Identifies a leaf statement at a configuration hierarchy level.	

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/>

- 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.

PART 1

Overview

- [Getting Started for Bank Administrators on page 3](#)

CHAPTER 1

Getting Started for Bank Administrators

- [Understanding Junosphere on page 3](#)
- [Understanding Banks on page 4](#)
- [Understanding the Role of the Bank Administrator on page 6](#)
- [Using the Login Page on page 7](#)
- [Changing Your Password on page 7](#)

Understanding Junosphere

Junosphere is a virtualization environment where multiple virtual machines representing network devices can be connected and configured to create network topologies. To use the virtual networking environment in the cloud, you simply create a topology using a graphical tool (available in Junosphere) that defines devices, interfaces, and their interconnections. You can also upload standard configuration files for each network device. You can use the resulting virtual network exactly like a physical network.

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 resources, and dividing capacity among users.

Junosphere stores capacity (virtual machine units and connectors) for using the virtualized networking environment. 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 or a sandbox. Juniper has also created some sample topology file sets that are stored in public libraries that are accessible to all users. A topology file set is made up of a topology file and a collection of optional 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 service can be purchased in two different ways, depending on specific user needs: pay-per-use and an annual plan. The pay-per-use service 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. This service is offered in three products designed to satisfy specific user needs:

- 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.
- Junosphere Developer—A cloud-based means for developers to test their applications against Junos OS nodes and Junos Space. Junosphere Developer prevents the need to provide free or heavily subsidized test gear to developers, thus speeding the test cycle and reducing barriers to development on Junos OS platforms.



NOTE: Junosphere is best viewed with Mozilla Firefox 4.0 and Internet Explorer 8.0. Later versions of Firefox are also known to work.

Annual plan 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 VM Units in each sandbox to prevent unauthorized abuse of consumption.

The flexible capacity allocation system maximizes the usage of available VM Units 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 providing excellent granularity management.

In addition, all the Annual Passes provide "pay-per-use" overflow capacity. The 50 and 100 VM unit Annual Passes also include unlimited connector capacity.

**Related
Documentation**

- [Understanding the Role of the Bank Administrator on page 6](#)
- [Using the Login Page on page 7](#)
- [Changing Your Password on page 7](#)
- [Adding Users to a Customer on page 13](#)
- [Understanding Banks on page 4](#)

Understanding Banks

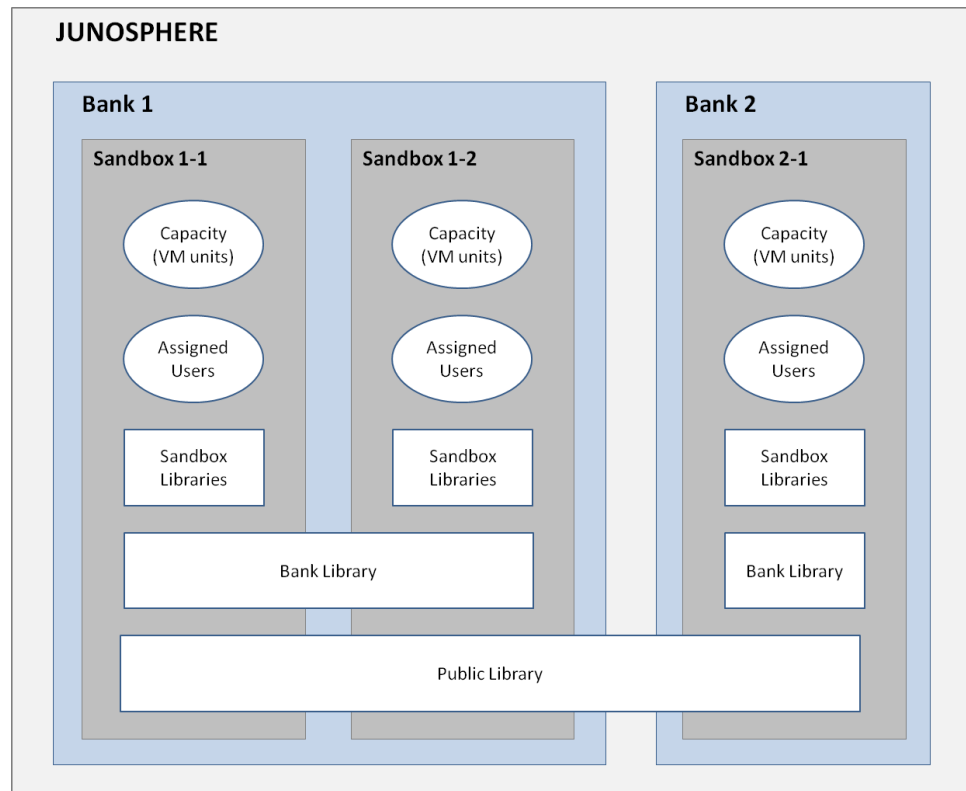
A bank contains all the purchased capacity that you can use. The expiration date of each bank is displayed on the bank's Details tab.

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 1 on page 5](#). 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).

Figure 1: 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.

Related Documentation

- [Understanding Junosphere on page 3](#)
- [Understanding the Role of the Bank Administrator on page 6](#)
- [Using the Login Page on page 7](#)
- [Changing Your Password on page 7](#)
- [Using the Capacity on page 15](#)
- [Assigning Users to a Sandbox on page 19](#)

- [Scheduling a Time Slot on page 22](#)
- *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 add users, divide banks into sandboxes, assign capacity (virtual machine units and connectors) to sandboxes, assign users to sandboxes, and assign permissions to users per sandbox.

- 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 topology 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 permissions for additional bank administrators.

Related Documentation

- [Understanding Junosphere on page 3](#)
- [Understanding Banks on page 4](#)
- [Using the Login Page on page 7](#)
- [Changing Your Password on page 7](#)

- [Using the Capacity on page 15](#)
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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.

When a user is created in Junosphere, if the BA chose to have Junosphere generate a random password, then Junosphere sends an e-mail to the user with their credentials and the link to the Junosphere login page.

To use the Login page:

1. Log in to the user interface. See the *Junosphere Release Notes* for supported browsers.
2. Accept the End User License Agreement (EULA) the first time you log in to Junosphere.

The Junosphere Welcome page appears, showing the showing the four top-level icons in the navigation ribbon on top: Banks, Customers & Users, Administration, and Topology Wizard..

Related Documentation

- [Understanding Junosphere on page 3](#)
- [Changing Your Password on page 7](#)
- [Understanding Banks on page 4](#)
- [Using the Capacity on page 15](#)
- [Assigning Permissions on page 21](#)
- [Assigning Users to a Sandbox on page 19](#)

Changing Your Password

You can change, reset, or recover your password.

To change your password:

1. Click the profile icon for User Preference in the upper right corner of the screen.
The Change Local Password screen appears.
2. Type your old password and the new password (twice).
3. Click **Change**.



NOTE: Clicking **Change** logs you out of the current session. If you have other sessions running, each session is disabled until you log in again with the new password.

To reset your password:

1. On the login page, click the **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.

3. Click **OK**.



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.

To recover your password:

- **User**—Request a reset from your bank administrator (to find your bank administrator, click on the bank name to display the **Details** page and look under the **Administrators** entry in the list).
- **Bank administrator**—To recover the password:
 1. Click the **Customers and Users** icon.
 2. Click the user's name.
 3. Enter the new password and confirm it.
 4. Click **Save Changes**.

- Related Documentation**
- [Understanding Junosphere on page 3](#)
 - [Understanding Banks on page 4](#)
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PART 2

Assigning Resources

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CHAPTER 2

Assigning Resources to Customers, Banks, and Sandboxes

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Adding Users to a Customer

To add users:

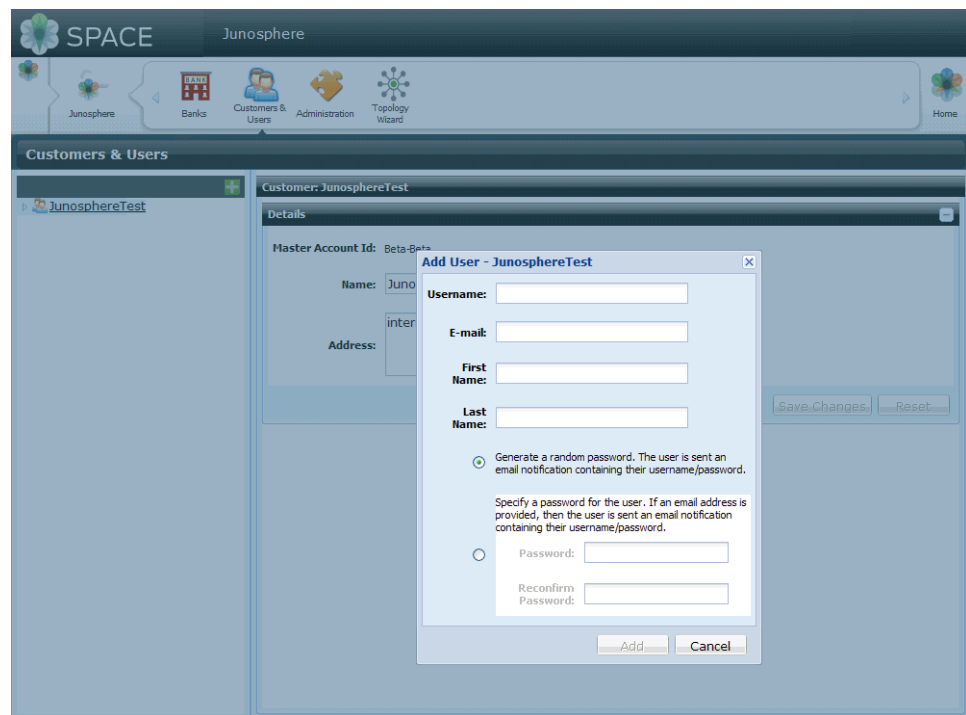
1. Click the **Customers and Users** icon.
2. Right-click the customer name.

The customer name is typically the name of your company. You will see only one customer name here.

3. Select **Add User**.

The Add User window appears ([Figure 2 on page 14](#)).

Figure 2: Adding a User



4. Enter the user information and click **Create**.

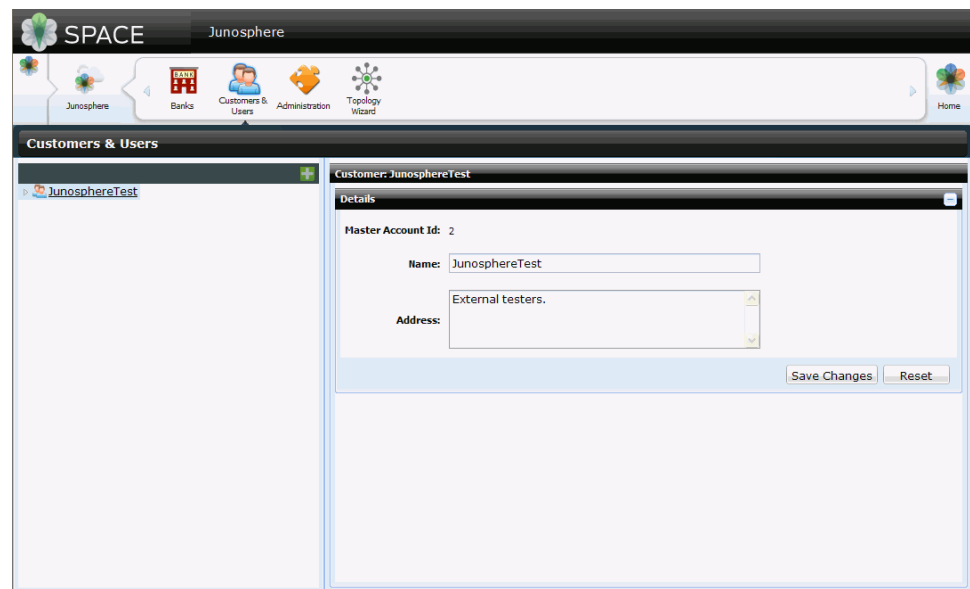


NOTE: When you create a new user, it is strongly recommended that you use an e-mail address as the username. This facilitates system communication with the user.

5. To see the details for a customer:
 - a. Click the **Customer and Users** icon.
 - b. Click the customer name.

The Customer Details page appears, showing the **Name** and **Address** fields, as shown in [Figure 3 on page 15](#).

Figure 3: Customer Details



To delete a user from a customer:

1. Click the **Customer and Users** icon.
2. Click the arrow next to a customer name to expand the list of users associated with that customer.
3. Right-click a user and select **Delete User**.

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

Related Documentation

- [Understanding Junosphere on page 3](#)
- [Understanding Banks on page 4](#)
- [Using the Capacity on page 15](#)
- [Assigning Permissions on page 21](#)
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Using the Capacity

When you purchase time on 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.

To allocate regular capacity to sandboxes:

1. Click on the bank you want to access.
2. Click **+** on the **Capacity** accordion tab to assign VM units or connectors for this bank to sandboxes, as shown in [Figure 4 on page 16](#).
3. In the top Capacity table, right-click a table entry for regular (non-annual plan) capacity with nonzero unassigned capacity and select a sandbox to assign a number of virtual machine units and days of connector use.



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.

4. Enter the number of units to assign in the **Quantity to assign** field in pop-up dialog box.
5. Click **Assign**. The amount is decremented from the Unassigned Capacity. This amount is now allocated to the chosen sandbox. The Regular Capacity tab of the lower Sandbox Capacity table shows that allocation.

Figure 4: Assigning Capacity

The screenshot displays the Junosphere management interface. On the left, a sidebar lists 'Banks & Sandboxes' with 'test2' selected. The main panel shows the 'Capacity' tab for 'Bank: test2'. A table lists capacity products: 'Junosphere Classroom' (300 total, 250 unassigned) and 'Junosphere Annual Plan' (100 total). A right-click context menu is open over the 'Junosphere Classroom' row, showing an 'Add capacity to' dialog with two options: 'Default Sandbox - CLASSROOM' and 'Default Sandbox - LAB'. Below this, the 'Sandbox Capacity' section is visible, featuring a table with columns: 'Sandbox', 'Minimum Capacity', 'Maximum Capacity', and 'Expiration Date/Time'. The table shows two entries: 'Default Sandbox - CLASSROOM' and 'Default Sandbox - LAB', both with a minimum capacity of 0 and a maximum capacity of 100, expiring on 15-Jan-2014 19:00 EST. The 'Default Sandbox - LAB' entry is currently selected.

To allocate annual plan capacity to a sandbox:

1. Click on the bank you want to access.
2. Click **+** on the Capacity accordion tab.
3. Navigate to the Annual Capacity tab of the lower Sandbox Capacity table.
4. Right-click on a sandbox.
5. Select **Edit** from the pop-up menu.
6. Enter the minimum (guaranteed VM units) and maximum (allowed VM units) values for that sandbox. 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.
7. Click **Save**.

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

1. Select a bank.
2. Click **+** on the **Capacity** accordion tab.
3. In the Sandbox Capacity section, click the **Regular Capacity** tab.
4. Right-click a sandbox and select **Remove capacity**.
5. Enter the capacity that you want to remove in the dialog box.
6. Click **Remove**.

The capacity is returned to the bank. Active capacity cannot be deleted from a sandbox. If specific capacity is in use in a future reservation, to delete this assigned capacity you must first go to the sandbox and cancel the reservation.

**Related
Documentation**

- [Adding Users to a Customer on page 13](#)
- [Understanding Banks on page 4](#)
- [Assigning Permissions on page 21](#)
- [Assigning Users to a Sandbox on page 19](#)
- [Buying Capacity on page 17](#)

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 **Click to Buy Now** link on the login page or 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.



NOTE: Currently, capacity for Developers is not available via the learning portal. Work with your Junosphere sales representative to place an order.

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 3 on page 18](#) 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 3: Junosphere SKUs

SKU	Description
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-DEV-10VM-1	10 Developer VM units. Includes images and tools. Memory up to 30 GB per day.
JUS-DEV-10VM-30	300 Developer VM units. Includes images and tools. Memory up to 30 GB per day.
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-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.
JUS-ANNUAL-PASS-100	100 VM unit annual plan. Includes 100 VM units at any time and 2000VM units of overflow capacity. Unlimited connectors.

Table 3: Junosphere SKUs (continued)

SKU	Description
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.

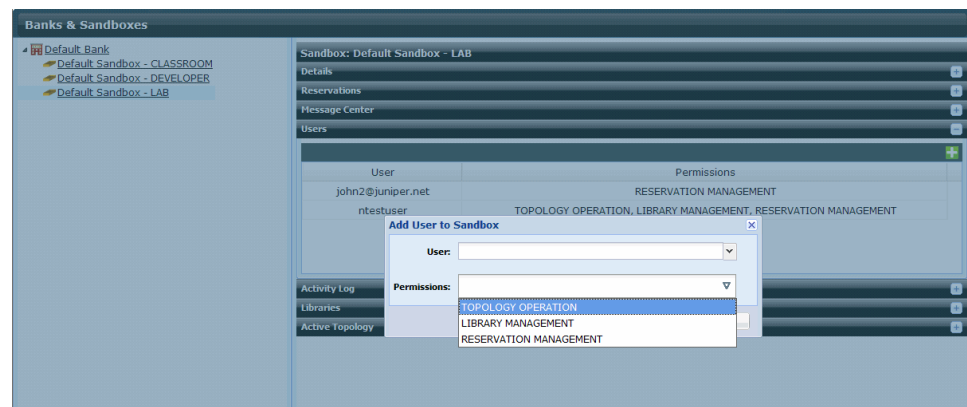
Assigning Users to a Sandbox

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

To assign users to a sandbox:

1. Click the arrow next to a bank to display the sandboxes in that bank.
2. Add more sandboxes:
 - a. Right-click a bank. The **Add Sandbox** window appears.
 - b. Enter a name and description.
3. Add users to a sandbox and assign permissions, as shown in [Figure 5 on page 20](#). You can add users to more than one sandbox.

Figure 5: Add User to a Sandbox



- Click the + sign on the **Users** tab to display a list of users.
- Click the green + sign to add a user. The **Add User to Sandbox** window appears.
- Click the **User** field and select a username from the drop-down menu.
- Click the arrow on the permissions field to assign the permissions of Topology Management (start or stop topologies), Library Management (create and delete sandbox libraries), and Reservation Management (reserve time and capacity).
- Select each permission that you want to assign to the user for this sandbox.
- Click **Add** to apply the permission to the user.



NOTE: When you add a user to a sandbox, the user must log out and then log back in to see the sandbox.

Only the bank administrator can delete sandboxes. You cannot delete a sandbox with an active topology. Unused capacity is returned to the bank. Deleting a sandbox also deletes any messages about it in the Message Center.



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

To delete a sandbox:

- Right-click on a sandbox name.
- Select the **Delete Sandbox** option from the pop-up menu.
- Verify that you want to delete the sandbox.

Related Documentation

- [Adding Users to a Customer on page 13](#)
- [Understanding Banks on page 4](#)

- [Using the Capacity on page 15](#)
- [Deleting Users from a Sandbox on page 21](#)
- [Assigning Permissions on page 21](#)
- [Scheduling a Time Slot on page 22](#)
- [Using the Scheduler Report](#)

Deleting Users from a Sandbox

To delete a user from a sandbox:

1. Click the arrow next to a bank to display the sandboxes in that bank.
2. Select a sandbox.
3. Click the + sign on the **Users** tab to display a list of users.
4. Right-click on a username and select **Remove**.

Related Documentation

- [Adding Users to a Customer on page 13](#)
- [Understanding Banks on page 4](#)
- [Using the Capacity on page 15](#)
- [Assigning Users to a Sandbox on page 19](#)
- [Assigning Permissions on page 21](#)
- [Scheduling a Time Slot on page 22](#)
- [Using the Scheduler Report](#)

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 privileges. 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)

This privilege enables you add new libraries to the sandbox and delete them. It also controls who can manage the topologies within the sandbox library, i.e., only users with this permission can upload topologies, edit topologies, and delete topologies within a sandbox library.

- Reservation Management (reserve time and capacity—regular capacity only)

You must have reserved time in the cloud before you can start a topology in a sandbox. Only a bank administrator or a user with Reservation Management permission can reserve time. You might want to restrict Reservation Management to certain individuals to assign the time slot to sandboxes.

To change or delete a user's permission in a sandbox:

1. Select a sandbox.
2. Click **Users**.
3. Right-click a user and select **Edit Permissions**.
4. Change permissions as needed.

Related Documentation

- [Understanding Banks on page 4](#)
- [Using the Capacity on page 15](#)
- [Assigning Users to a Sandbox on page 19](#)
- [Scheduling a Time Slot on page 22](#)
- [Creating and Deleting a Bank Library on page 25](#)

Scheduling a Time Slot

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 schedule a time slot when you want to run a topology in the sandbox:

1. Click a sandbox to display the **Details** window.
2. Click the **Reservations** accordion tab.
3. Click the add icon to display the **Add Reservations** dialog box. By default, **Now** is selected for the start date/time and **I need the reservation at this time** is selected.
4. Add the number of virtual machine units (VM units), a start date, and the number of days for the reservation.
5. If necessary, click the option button next to the **Show me available time slots** section and enter the number of days to display.
6. Click **Reserve**.

The time displayed is shown as local time based on your browser time clock, starting at 12:01 AM. The virtual machine time will be decremented from your sandbox capacity. You have up to one hour ahead of the time slot to cancel your reservation without penalty. If you cancel your reservation, then all virtual machine units are returned to the sandbox.

If the desired time is not available, Junosphere can provide you suggested open reservation times.



NOTE: You cannot make a reservation in any sandbox in a bank where the end date and time or the reservation goes past the expiration date of the bank.

A bank administrator can review a report of your Pending, Active, and Expired reservations by selecting Administration > Reports > Scheduler from the top menu.

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.

Related Documentation

- [Adding Users to a Customer on page 13](#)
- [Understanding Banks on page 4](#)
- [Using the Capacity on page 15](#)
- [Assigning Permissions on page 21](#)
- [Assigning Users to a Sandbox on page 19](#)
- [Using the Scheduler Report](#)

Using the Message Center Tab

The Message Center tab displays operational messages for users of this sandbox. A bank administrator can open the sandbox, select the Message Center, and post a message.

Related Documentation

- [Adding Users to a Customer on page 13](#)
- [Understanding Banks on page 4](#)
- [Using the Capacity on page 15](#)
- [Deleting Users from a Sandbox on page 21](#)
- [Assigning Permissions on page 21](#)
- [Scheduling a Time Slot on page 22](#)
- [Using the Scheduler Report](#)

Generating Reports

Junosphere enables you to export data in tables to a .csv file that can be displayed in a spreadsheet. There are six places where you can export data. Each location has an **Export** button at the bottom of each tab that enables you to download the information to a .csv file.

These six places are:

1. The Scheduler report. From the top menu, select **Administration > Reports > Scheduler**. Four tabs are displayed: All, Active, Pending, and Expired. Each tab displays reservation data in a table.
2. The Capacity report. From the top menu, select **Administration > Reports > Capacity**. The displayed table displays capacity data (regular and annual plan) for the bank and all its sandboxes.
3. The Users report. From the top menu, select **Administration > Reports > Users**. The displayed table includes information about users, including username, bank, sandbox, and permissions.
4. The Topology report. From the top menu, select **Administration > Reports > Topologies**. The displayed table includes information about topologies, including bank, sandbox, library, topology name, VMs, VM units, and size.
5. The Activity Log accordion tab of a bank.
6. The Activity Log accordion tab of a sandbox.

Related Documentation

- [Using the Scheduler Report](#)

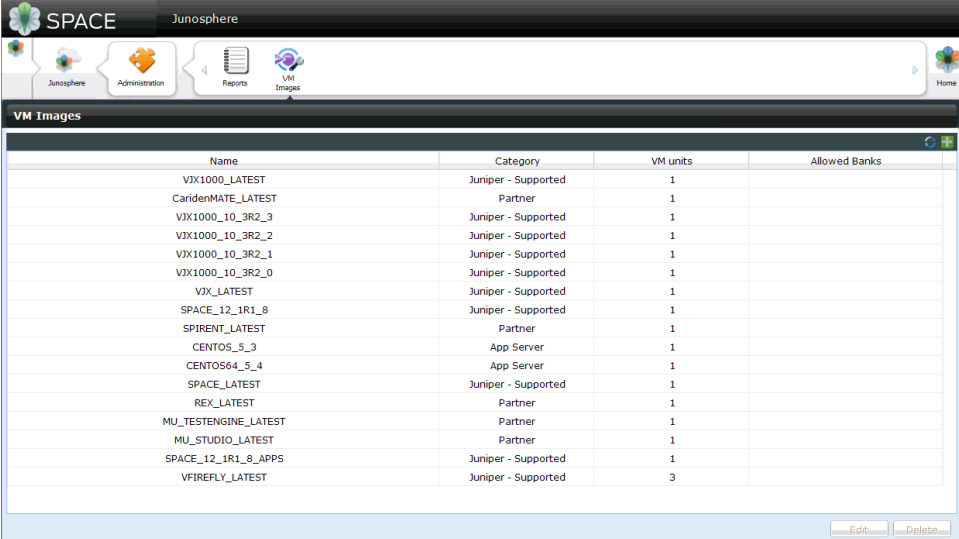
Using the VM Images Table

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 name of the image
- The category
- The number of VM units for each macro
- The banks that have access to the image. If this column is empty, then it means that your banks (if more than one) have access to this image.

Figure 6 on page 25 shows the VM Images table.

Figure 6: VM Images Table



Name	Category	VM units	Allowed Banks
VIX1000_LATEST	Juniper - Supported	1	
CaridenMATE_LATEST	Partner	1	
VIX1000_10_3R2_3	Juniper - Supported	1	
VIX1000_10_3R2_2	Juniper - Supported	1	
VIX1000_10_3R2_1	Juniper - Supported	1	
VIX1000_10_3R2_0	Juniper - Supported	1	
VIX_LATEST	Juniper - Supported	1	
SPACE_12_1R1_8	Juniper - Supported	1	
SPiRENT_LATEST	Partner	1	
CENTOS_5_3	App Server	1	
CENTOS64_5_4	App Server	1	
SPACE_LATEST	Juniper - Supported	1	
REX_LATEST	Partner	1	
MU_TESTENGINE_LATEST	Partner	1	
MU_STUDIO_LATEST	Partner	1	
SPACE_12_1R1_8_APPS	Juniper - Supported	1	
VFIREFLY_LATEST	Juniper - Supported	3	



NOTE: You cannot edit or delete a macro.

Creating and Deleting a Bank Library

Bank administrators can pre-populate the library with topologies for their users. You might want to allow your users to see a common set of topologies regardless of the sandbox they are in.

Bank administrators can also use the Topology Wizard to visually design a topology and save it in a bank library.

To create a bank library:

1. Select the **Bank Libraries** accordion tab.
2. Click the green + sign on the right of the Sandbox tab to create a new library.
3. In the Add Bank Library pop-up window, enter the name and a description of the new bank library.
4. Click **Add** to create the bank library.

To upload a topology to the bank library:

1. Click the + sign on a library name to display the library contents.
2. Click the green + sign under **Description** to upload .zip (or .tgz) topology file sets into the library.



NOTE: If the file is not formatted as .zip or .tgz (a file compressed as tar and gzip), it cannot be uploaded.

To delete a bank library:

1. Click the **Bank Libraries** accordion tab to display the bank libraries.
2. Click the + sign on the library that you want to delete. A minus sign (-) in a red circle appears on the right of the accordion tab.
3. Click the - sign in a red circle to delete the library.
4. Confirm the deletion.



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

Related Documentation

- [Understanding Banks on page 4](#)
- [Using the Capacity on page 15](#)
- [Assigning Permissions on page 21](#)
- [Assigning Users to a Sandbox on page 19](#)
- [Scheduling a Time Slot on page 22](#)

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 on the Details tab of both the bank and the sandbox.

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 4](#)
- [Using the Capacity on page 15](#)
- [Assigning Permissions on page 21](#)
- [Assigning Users to a Sandbox on page 19](#)
- [Scheduling a Time Slot on page 22](#)
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PART 3

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