

PHOENIXNAP CLIENT PORTAL

USER MANUAL

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INTRODUCTION

In this User Manual, you will find the instructions on how to utilize the screens in the Client Portal and detailed information on the use of the Client Portal to create and administer your Virtual Machines and Bare Metal Servers.

To make navigation easier, the table of contents is set up to mimic the tab and menu order that you see inside of the Client Portal. You can hold the **ctrl** key and click any topic in the table of contents above to jump to the desired topic.

This guide assumes you are familiar with the basic concepts of managed hosting services.

CLIENT PORTAL OVERVIEW

The Client Portal has been designed for the utmost ease of use. We have brought cloud and bare metal features into one central portal, giving you more access and control over your infrastructure. It offers all the necessary administrative tools for Clients.

This section of the Client Portal discusses the basics of accessing and navigating the main features of the Client Portal.

ACCESSING THE CLIENT PORTAL

You can access the Client Portal at https://admin.phoenixnap.com/wap-pncpadmin-shell/login.

You will be contacted via email when your account is created, but before you can **log in**, you have to contact Support for your username and initial password. This information is not sent via email due to security concerns. You should have this information available when you sign in to the Client Portal.

To log in to the Client Portal:

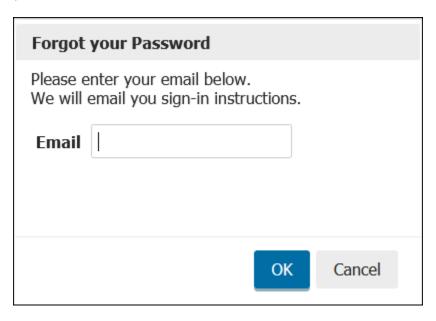
- 1. Browse to https://admin.phoenixnap.com/wap-pncpadmin-shell/login.
- 2. Enter your **Username** and **Password** in the appropriate fields.
- 3. Click Sign In.

After signing in, you are immediately taken to the Dashboard page.

NOTE: We recommend to allow pop-ups while accessing and using the Client Portal.

If you forgot your password, follow these steps:

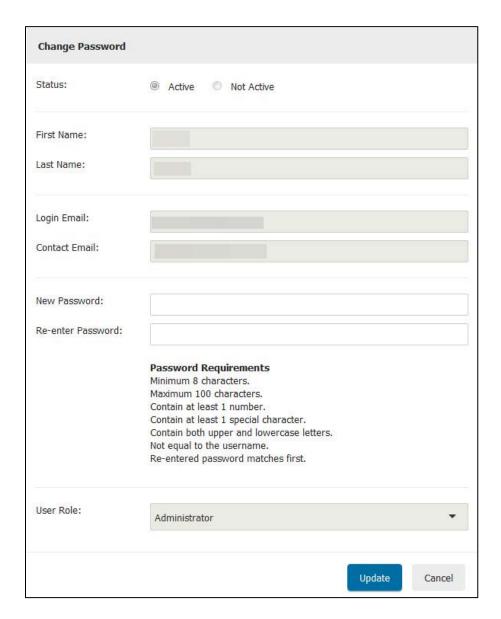
- 1. Browse to https://admin.phoenixnap.com/wap-pncpadmin-shell/login.
- 2. Click "Forgot your password?" below the Sign In button.
- 3. Enter your email and click OK.



4. The system sends sign-in instructions to your email address.

Resetting your password:

- 1. **Sign in** to the Client Portal.
- 2. Open the **My Account** mega menu.
- 3. Click the **User Profiles**.
- 4. Locate **the User** requiring a password reset.
- 5. Click the **Actions** link under the **Manage** heading.
- 6. Click Reset Password.
- 7. **Type in the new password** in the New Password field and confirm it by re-typing it in the Reenter Password field.



8. Click **Update** to commit the changes.

If you are **an existing customer signing in to the new portal for the first time,** use this procedure to migrate credentials and associated common metadata:

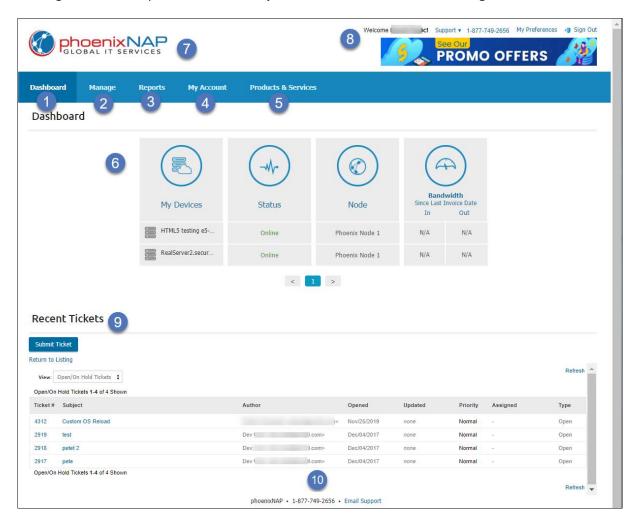
- 1. Browse to https://admin.phoenixnap.com/wap-pncpadmin-shell/login.
- 2. Select 'Click here to Migrate your Credentials before logging in.



- 3. Click the type of account you have and enter your **Username** and **Password** in the appropriate fields.
- 4. Click **Submit**.

CLIENT PORTAL HOME PAGE

The image below is a representation of the **phoenixNAP Client Portal Home Page**.



Each numbered area has a different purpose:

- 1. **Dashboard**. The **Dashboard** serves as the landing page and provides you with a quick overview of what's going on with your account. It gives you a quick visual summary of your account, showing your devices, their status, where they're located, and how much bandwidth they have used since your last invoice.
- 2. **Manage**. The **Manage** mega menu provides all the necessary tools which help you manage your bare metal and cloud services.
- 3. **Reports**. The Reports mega menu provides detailed reports to allow you to view a summary of actions, usage, and allocations in an easily searchable format. The following reports are available:
 - Action Log. The Action Log displays a list of actions performed by users, such as
 creating VMs or adding a new user. The list is customizable by date-range and can be
 filtered using a variety of options.
 - **Allocation Report.** The Allocation Report displays the allocated hardware as well as the percent of your allocations currently in use.
 - Billing Report. The Billing Report provides you with a summary of your bill; How many
 consumable items (VCPUs, Operating Systems, Backups, IP addresses, and other
 items you are billed for using) you used during the billing cycle, and itemizes the costs
 for those consumables.
 - **Usage Report.** The Usage Report displays what is currently in use by each VM, including RAM, VCPUs, OS, Backup, and the number of IPs.
- 4. **My Account**. Provides information on the administrative tools used to maintain your account, any accounts under you, and user profiles.
- 5. **Products & Services**. An overview of **phoenixNAP** and its global IT solutions.
- 6. **Dashboard Information Area.** For more information, see <u>Dashboard</u>.
- 7. **phoenixNAP Logo**. By clicking the **phoenixNAP** logo, you can go back to the Client Portal Home Page.
- 8. **Header Area.** In the header area, you will find information and options like:
 - User Name
 - Support. By clicking Support a drop-down menu with the following options will
 open:
 - Submit a Ticket. A new window will appear. Provide the necessary information concerning your issue and click Submit.
 - All Tickets. Opens a new screen, where you can browse through your old Tickets or submit a new one.
 - Live Chat. Chat with Cloud Support members regarding any concerns you may have.
 - Email Support. Report any technical issues you may encounter, and tech support will fix it as soon as possible.
 - My Preferences. My Preferences offers you a choice between two User Interfaces:
 - System Administrator

- o Graphical User
- **Sign Out**. If you wish to sign out of the Client Portal, click **Sign Out** located at the upper-right corner of the screen.
- 9. **Recent Tickets**. In the Recent Tickets area, you may view the status of your recently submitted tickets or submit new ones by clicking the **Submit Ticket** icon. Filter your **view** by clicking the View drop-down menu and choosing between:
 - Open/On Hold Tickets
 - Closed Tickets
 - All Tickets

NOTE: Click **Return to Listing** to be redirected to the Support Tickets screen.

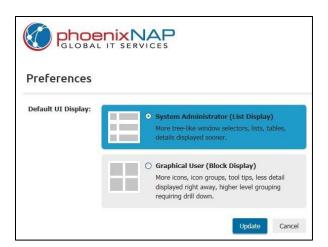
10. **Footer Area**. The footer, or extreme bottom, of the Client Portal screen, provides you with a link to the company home page, the phone number to call for support, the email address for help, and an additional link for bug reporting.

MY PREFERENCES

The **My Preferences** screen allows you to select a default view for all screens you encounter in the Client Portal. You will be given a choice between two User Interface types:

- **System Administrator**. Also known as **List Display**, this UI offers more tree-like window selectors, lists, tables, and details are displayed sooner.
- **Graphical User**. Also known as **Block Display**, this UI offers more icons and grouping, in addition to tooltips.

Set your preference by clicking your desired option, and then click **Update**.



You can choose a view type when you are on individual screens using the **Display** icons.



SUPPORT OPTIONS

By clicking **Support** on the Client Portal home page, a drop-down menu with several options will appear.

Choose from:

- **Submit a Ticket**. A new window will appear. Provide the necessary information concerning your issue and click **Submit**.
- All Tickets. Opens a new screen, where you can browse through your old Tickets or submit a new one
- Live Chat. Chat with Support team members regarding any concerns you may have.
- **Email Support**. Send an email to Cloud Support and report any technical issues you may encounter, and tech support will fix it as soon as possible.

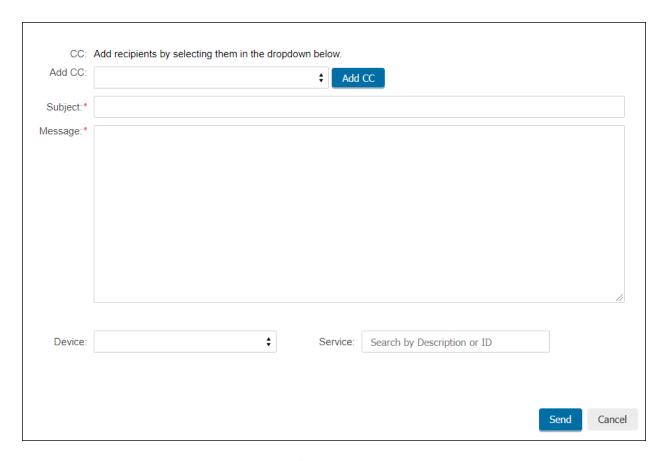
Regarding any concerns, call Support at 1 855 330 1509 or Sales at 1 877 588 5918.

SUBMIT A SUPPORT REQUEST

There are several ways you can submit a Support Request:

- Method #1. Click the Submit Ticket icon on the Dashboard (landing page).
- Method #2. Open the Support drop-down menu and choose Submit a Ticket.
- Method #3. Alternatively, open the My Account mega menu, click Support Tickets under the My Account section, and select the Submit Ticket button.

No matter what method you choose, a pop-up window opens:



- 1. Fill in the **Subject** and **Message** fields. Make sure to include as much detail as possible, including the **exact text of any error messages** received. **Add CC** field is optional.
- 2. Choose the problematic **Device** from the drop-down menu.
- 3. **Select the service** by typing in the service ID or description. Suggested-devices list appears when you click the field.
- 4. Click **Send** when ready.

DASHBOARD

The Dashboard is the landing page that gives you a quick overview of what is going on with your account. It gives you a quick visual summary of your account, showing your devices, their status, where they're located, and how much bandwidth they have used since your last invoice.

NO DEVICES

If you don't have any devices yet, you will receive the "You Have No Devices Yet" notice with an option to Create a Virtual Machine or Create a Bare Metal Server. Click one of these two icons to create the desired device.

The Dashboard screen displays summary data divided into categories for your convenience. Each category is displayed within a box on the screen with labels and contents, as described in the following sections.



My Devices: lists your devices, their name, and type (Bare Metal Servers, VMs, Firewalls). Click a device name to open a new page where you can manage and modify that device.

Status: states the current status of your devices (**Online** or **Offline**).

Node: names the node to which a specific device is assigned to. This shows you the location of the device.

Bandwidth Since Last Invoice Date: the Bandwidth section contains data on bandwidth used, expressed in Kilobytes (kB), Megabytes (MB), and Gigabytes (GB), since the last invoice date.

MANAGE

The **Manage** mega menu provides all the necessary administrative tools which help you maintain your account. This section includes:

- Combined Functions
- Bare Metal
- Public Cloud
- Virtual Private Data Center
- Additional Cloud Services

COMBINED FUNCTIONS

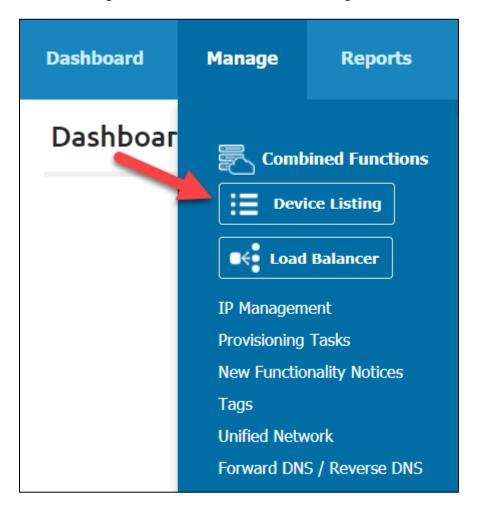
In the Combined Functions section of the Manage mega menu, you will find all the tools necessary to manage your physical and virtual assets.

DEVICE LISTING

On the Device Listing screen, you can manage your devices and check their status and configuration. Here you will find your VMs, Bare Metal Servers, and Dedicated Firewalls.

To access Device Listing:

- 1. Sign in to the Client Portal.
- 2. Open the Manage mega menu.
- 3. Click **Device Listing** under the Combined Functions heading.



Filter

You may filter out your devices by:

- **Node**. Choose one of your nodes to view the devices assigned to it.
- **View**. Filter out the specific type of device you wish to view.

• **Search**. Enter the name of one of your devices in the **Search Bar** to further filter out results. There is no need for a "submit" or "go" button, the search begins when you type your first character.



Display

You can change the view by clicking the Display icon.



Choose between:

- 1. List Display. Displays the details and includes:
 - Device Name.
 - **Type**. The device type is indicated by the **Icon** next to Device Name.
 - Status. Shows whether the device is Online or Offline.
 - **Node**. Shows to which node the device is assigned to.
 - **IP**. This describes the IP Address usage. Hover over to get a list of **Private IPs** and those **Originating from Public Pools**, if any.
 - Bandwidth In.
 - Bandwidth Out.
 - Tags. Shows any existing tags associated with the device.
- 2. **Block Display**. Fewer details are displayed right away, and include:
 - Device Name.
 - **Type**. Indicated by the **Icon** next to Device Name.
 - Status. Shows whether the device is Online or Offline

In **Block Display View**, click a blank space within a device card to display its Status Bar in the right corner of the screen.

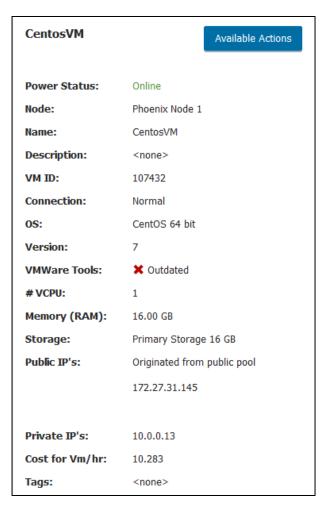
- Power Status. Shows whether the device is Online or Offline.
- **Node**. Shows to which node the device is assigned to.
- Name. Device name.
- Description. Shows device description, if any.
- **VM ID**. The unique ID number assigned to the VM by the system.
- Connection.
- **OS**. The OS installed on VM.
- Version of OS.
- VMWare Tools. This only displays if your VMWare Tools are out of date.
 View the Updating VMWare Tools topic for more information.
- # VCPU. Number of Virtual Central Processing Units (VCPUs) installed in the Virtual Machine.
- Memory (RAM). How many Gigabytes (GB) of RAM memory is assigned to the device.
- Storage. Primary and Secondary storage expressed in Gigabytes (GB).
- Public IP's. VM's Public IP Addresses.
- Private IP's. VM's Private IP Addresses.
- Cost for VM/hr.
- Tags. Tags are used to sort your VMs into manageable categories and containers.

Available Actions

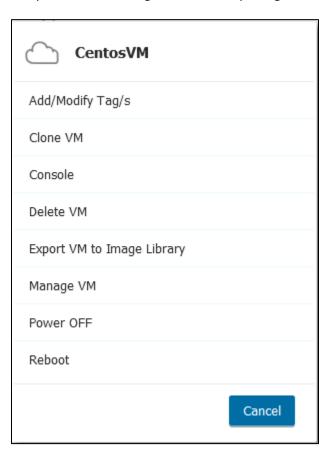
Right-click or select a device and click the **Available Actions** icon to open the Available Actions drop-down menu. If you select multiple devices, use the **Available Group Actions** button to perform an action on multiple devices at once.

Depending on the type of device, various functions can be performed:

- Add/Modify Tag(s). Create new or search existing tags.
- Clone VM. The Clone function creates an exact copy of an existing Virtual Machine.



- Console. The easiest way to access your VM is through the console link provided in the VM Listing.
- **Delete VM**. To permanently and irretrievably delete a configured Virtual Machine, use this link.
- **Export VM to Image Library**. This allows you to create an image of an existing VM, enabling you to quickly create VMs from images with your specific software already installed.
- Manage VM. If you need to make changes to an existing VM, first power off the VM (if it isn't already), then visit this link.
- Power Off a Device. If you are no longer using a VM or Bare Metal Server, but wish to retain
 the Device and all of its data and settings for future use, you will use the Power Off function.
 This reduces the cost for that device when you do not need it, but reserves it for quick
 implementation when you do. You will still be charged for the device at a reduced rate while
 it is powered off.
- **Power On a Device**. When you are ready to begin using a powered-off device again, you may perform virtually the same steps to power it back on.
- Reboot. There are many differing opinions about why, when, and how you should reboot any Server or Virtual Machine. Some companies have a schedule and reboot Windows servers monthly. Some only reboot when critical patches are released, others reboot when a kernel update is necessary or when installing new software packages.



Regardless of all the differing opinions, servers and VMs occasionally need to be rebooted. It is probably a good idea for you to have a strategy for rebooting your VMs. Take into consideration your up-time needs, your end-user's needs, and your business needs when developing that strategy.

Actions specific for Dedicated Firewalls and/or Bare Metal Servers:

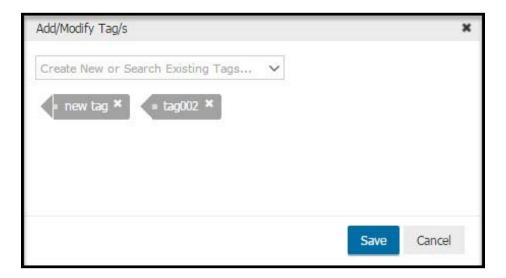
- Assign to. You can assign a Bare Metal Server to a specific user.
- Manage Bare Metal/Dedicated Firewall. This will take you to the Manage My Device screen, where you can modify the BMS.
- **OS Reload**. For Custom OS Reloads, you will need to submit a ticket and provide any additional details needed to our Support team.

You can access many of these functions by right-clicking a device in **Device Listing**. There may also be buttons or links, such as the **Available Actions** button, that will take you to some of these functions from the Device Listing screen as well.

ADD OR MODIFY TAG(S)

- To add an existing tag, choose one from the drop-down menu.
- To add a new tag, enter a tag name in the field, and click the Plus icon.

Add as many tags as you need, and press **Save** when you are finished.



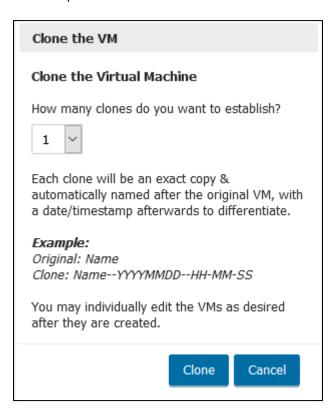
CLONE VM

The Clone function creates an **exact copy** of an existing VM.

NOTE: If you clone a VM that has public IP addresses, the resulting copy of that VM will have **NO** public IP addresses assigned to it. Use the Manage a VM tool to add public IP addresses to the cloned VMs.

To make a clone of a VM:

- 1. Sign in to the Client Portal.
- 2. Open the Manage mega menu.
- 3. Click **Device Listing** under the Combined Functions heading.
- 4. Identify the VM you want to make a clone of. Right-click that VM and select **Clone VM** from the menu.
- 5. Select the number of clones you want to create from the drop-down menu.
- 6. Click **Clone** to start the process.



- 7. Enter the **VM Username** and **Password** in the appropriate fields.
- 8. Click OK.

You can monitor the progress of the setup on the **Provisioning Tasks** screen.

CONSOLE

Use the **Console** button to access your device to perform administrative tasks, install software, and perform other functions. The tool is especially useful if your server appears unresponsive.

You must have pop-ups allowed for the admin domain to access the Console.

To access the Console:

- 1. **Sign in** to the Client Portal.
- 2. Open the Manage mega menu.
- 3. Click **Device Listing** under the Combined Functions heading.
- 4. Right-click a device.
- 5. In the drop-down menu, click **Console**. The Console loads in a new window.

Should you choose, you may also log in to your Virtual Machine via SSH or RDP for Windows machines. Use the Public IP assigned to your Device to access the server in this fashion.

NOTE: If you intend to use **RDP** or **SSH** to access your Device, you will need to configure your Firewall to allow access to Ports 22 (SSH) or 3389 (RDP).

DELETE A VM

You may delete any VM at any time, provided the VM has been powered off.

Deleting a VM is permanent!

You will not be able to retrieve the VM or its data after the deletion.

To delete a Virtual Machine:

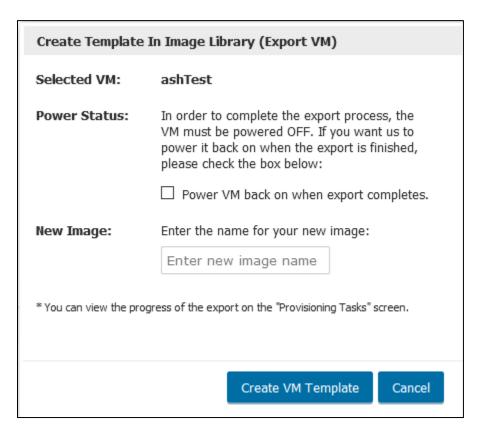
- 1. **Sign in** to the Client Portal.
- 2. Open the **Manage** mega menu.
- 3. Click **Device Listing** under the Combined Functions heading.
- 4. Locate the VM you wish to delete in the listing. Use a filter if necessary.
- 5. Right-click the VM you wish to delete and select **Delete VM**.
- 6. Click the **Yes, Delete VM** button to confirm the deletion.

EXPORT VM TO IMAGE LIBRARY

The Client Portal allow you to make images of VMs. An image is a copy of a VM that includes all the customized software you have installed. Images are useful if you want to be able to quickly deploy several identical VMs that are already pre-installed with all your customized settings.

To export a VM as an image:

- 1. Open the **Device Listing** screen from the Manage mega menu.
 - 2. Power Off the VM you want to make an image of.
 - 3. Right-click the VM and select **Export VM to Image Library** from the menu.
 - 4. Select the **Power VM back on when export completes** checkbox if you want the VM to turn back on when you're done imaging the VM.
 - 5. Enter a name for the image in the **New Image Name** field.
 - 6. Click Create VM Template.
 - 7. Click **OK**.



You can view the progress of the export on the **Provisioning Tasks** screen or in the **Image Library** itself.

MANAGE VM

To make changes to an existing VM, use the Manage VM feature.

- 1. Sign in to the Client Portal.
- 2. Open the **Manage** mega menu.
- 3. Click **Device Listing** in the Combined Functions section.
- 4. Locate the VM you wish to modify in the listing. Use View filter if necessary.
- 5. Right-click the VM you wish to modify and click **Manage VM** in the menu.
- 6. Make changes to any options needing changes:

- **Power Status**. Turns the VM on or off.
- **Description (optional)**. Enter a description for your VM in the text box. This can help you identify the VM. If you have or plan on having multiple VMs, we recommend you add a description.
- **Node.** The location your VM is assigned to.
- Name of VM. This is how the VM will appear in the VM Listing. No spaces and/or special characters are allowed in the VM name.
- Tags (optional). If you wish to assign an already existing tag to the new VM, choose that tag name from the drop-down menu. If you wish to create a new tag to assign to the VM, enter the tag name, and click the plus sign.
- **OS & Version.** The installed system and version. Cannot be changed. VMWare Tool info is shown here as well.
- **#VCPUs**. Select how many Virtual Central Processing Units to assign to the Virtual Machine. You may either move the slider to select or enter a number in the box given to the right. You may choose either 1, 2, 4, or 8 VCPUs when modifying a VM.
- Memory (RAM). Select how many Gigabytes of RAM to install in the VM. Move the slider to select or enter a number in the box given to the right.
- Storage. A Primary Storage and Secondary Storage icon is displayed. Click Edit on the Primary Storage icon if you wish to change it from the default and type in a different size. Click Add on the Secondary Storage icon to add another storage device for a total of up to 10 storage devices.

NOTE: You cannot decrease the amount of storage assigned to a VM, but you can increase the amount.

- Network Management Setting. Click View Settings Details to view the network details window.
- IP Address. Manually map your public and private IPs.
- 7. Click **Save & Update** to confirm your modifications.

The top border of the Manage VM screen includes other options. Click the **Available Actions** link, and from the drop-down menu, you can choose:

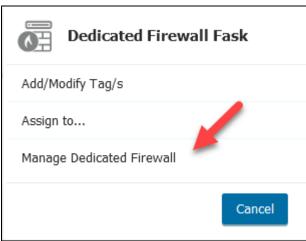
- Clone VM. The Clone VM feature is used to make an exact copy of a VM.
- **Console**. The easiest way to access your VM is through the console link provided in the VM Listing.
- **Delete VM**. This option will be used when you no longer need to use a VM and no longer need access to the data stored on the VM.
- **Export VM to Image Library**. This allows you to create an image of an existing VM, enabling you to quickly create VMs from images with your specific software already installed.

- **Power Off.** If you are no longer using a VM but wish to retain the device and all its data and settings for future use, use the Power Off function. This reduces the cost for that device when you do not need it but reserves it for quick implementation when you do. You will still be charged for the VM at a reduced rate while it is powered off.
- **Power On.** When you are ready to begin using a powered off VM or Bare Metal Server again, you may perform the same steps as you did when you powered it off.
- Reboot VM. Use this option to reboot the Virtual Machine. You can only reboot powered on VMs.

MANAGE BARE METAL / DEDICATED FIREWALL

If you need to make changes to an existing Bare Metal Server or Dedicated Firewall, you may use the Manage Bare Metal/Dedicated Firewall feature.

- 1. Sign in to the Client Portal.
- 2. Open the Manage mega menu.
- 3. Click **Device Listing** in the Combined Functions section.
- 4. Locate the Device you wish to modify in the listing.
- 5. Right-click the Bare Metal Server or Dedicated Firewall you wish to modify and click **Manage Bare Metal / Dedicated Firewall** in the menu.



- 6. Make changes to any options needing changes:
 - Device Name
 - Description (optional)

Service Plan

To take a more in-depth look into your service plan, click **Show Details**.

Bandwidth Usage

From the drop-down menu, choose a time period:

- Hour
- Day
- Week
- Month
- Last Month
- Year
- Last Year
- Custom

Login Information

- Login URL
- Root Password
- User Account
- User Account Password

The top border of the Manage My Device screen includes other options. Click the **Available Actions** link, and from the drop-down menu, you can choose:

- Add/Modify Tag(s). Create new or search existing tags.
- Assign to. Assign to a specific customer.

POWER OFF/ON

If you are no longer using a VM or Bare Metal Server but wish to retain the device and all its data and settings for future use, use the **Power Off** function. This action reduces the cost for that device when you do not need it but reserves it for quick implementation when you do. You will still be charged for the VM at a reduced rate while it is powered off.

Alternatively, when you are ready to begin using a powered off VM or Bare Metal Server again, you may perform the same steps to power it back on.

To power on/off a device:

- 1. **Sign in** to the Client Portal.
- 2. Open the **Manage** mega menu.
- 3. Click **Device Listing** under the Combined Functions heading.
- 4. Locate the **Device** you wish to power off in the listing.
- 5. Right-click the Device you wish to power off and click **Power Off** or **Power On** in the menu, depending on the current state of the Device.
- 6. Verify you want to power off/on the Device by clicking **Power Off/On** in the confirmation screen.

NOTE: This action can be performed by clicking the Available Actions icon as well.

REBOOT A DEVICE

Servers and VMs occasionally need to be rebooted, and it is probably a good idea for you to have a strategy for rebooting your VMs. Take into consideration your up-time and your business needs when developing that strategy.

To reboot a device:

- 1. **Sign in** to the Client Portal.
- 2. Open the Manage mega menu.
- 3. Click **Device Listing** under the Combined Functions heading.
- 4. Locate the device you wish to reboot.
- 5. Right-click the device and click **Reboot** in the menu.
- 6. Verify by clicking **Reboot**.



UPDATING VMWARE TOOLS

It is necessary to keep VMWare Tools updated, but we are not able to automatically apply these updates for you. When an update is required, the VMWare Tools status on the VM Details screen will display as Outdated.



Updating VMWare Tools is simple:

- 1. On the **Device Listing** screen, right-click a VM.
- 2. From the drop-down menu, choose Manage VM.
- 3. Locate the VMWare Tools Missing or Outdated warning.



- 4. Click the **Missing or Outdated** link.
- 5. On the VMWare Tools screen, click **Update**.

Monitor the progress of the update on the Provisioning Tasks screen.

Once the update is completed, the VMWare Tools status will display the following status:



LOAD BALANCER POOLS

A Load Balancer evenly distributes requests across Web servers commonly referred to as a "Server Farm" or a "Server Pool." When an HTTP request comes in, the Load Balancer looks at the load on each server before determining which server to send the request to. This ensures the availability of the server and protects against denial-of-service attacks.

NOTE: Load balanced bandwidth incurs an additional cost.

Methods of Load Balancing

The Load Balancer currently uses the **Round Robin** and **Least Connections** methods of load balancing.

- Round Robin mode passes each new connection request to the next server in line, eventually
 distributing connections evenly across an array of machines.
- **Least Connections** passes a new connection to the pool member or node that has the least number of active connections.

To access the Load Balancer screen:

- 1. Sign in to the Client Portal.
- 2. Open the **Manage** mega menu.
- 3. Click Load Balancer under the Combined Functions section.
- 4. Select one of your existing nodes to manage Pools.

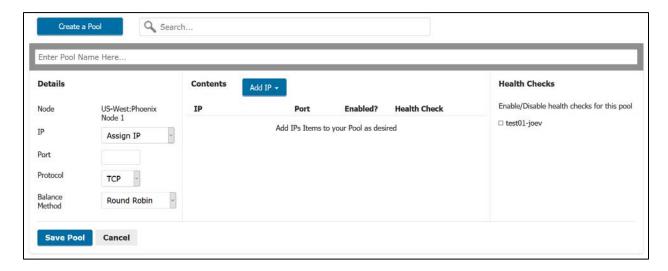
Use the Search field to filter your Load Balancer Pools.

Create Pool

- 1. Under the Pools tab, click the **Create a Pool** icon.
- 2. Enter a **Pool Name**. Pool Name MUST start with a letter, followed by a letter, number, period, hyphen, or underscore.
- 3. Enter a **Port Number** in the appropriate field. Here is a <u>list of commonly used port numbers</u>.
- 4. Choose a **Protocol** type from the drop-down menu:
 - TCP. A network protocol used by many Internet applications, particularly Web pages.
 - **SCTP**. A network protocol that is a hybrid of sorts, performing functions in ways similar to TCP and UDP.
 - UDP. A network protocol that bypasses the traditional error checking of protocols based on the assumption that the service will be completed within the application doing the communicating. UD is commonly used for VoIP, streaming media, and for online games.

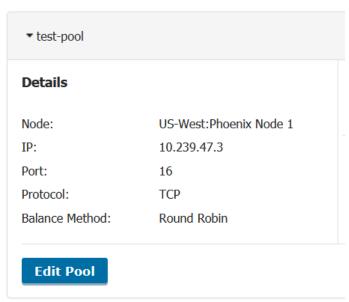
- 5. Choose a **Balance Method**. From the drop-down menu, choose **Round Robin** or **Least Connections**.
- 6. Click the **Add IP** icon. You may add:
 - Private IPs of your bare metal servers or VMs by clicking Bare Metal Server or VM.
 - External IPs (not a VM). External IPs do not reside in your Cloud organization.

 Add as many IPs as necessary. You can delete an IP by clicking the trash can icon.
- 7. Optionally, enable **Health Checks** for this pool.
- 8. Click Save Pool.



Edit Pool

- 1. Select a Pool name to open its details.
- 2. Click the Edit Pool link to make modifications.



3. When you are finished making modifications, click **Save Pool**.

Delete Pool

If you wish to delete a load balancer pool:

1. Click the **Delete Pool** link in the row of the pool you wish to delete.



2. Confirm your choice by clicking **Delete this Pool**.

Health Checks

To manage your health checks:

- 1. **Sign in** to the Client Portal.
- 2. Open the **Manage** mega menu.
- 3. Click Load Balancer under the Combined Functions section.
- 4. Click the Manage Health Checks tab.

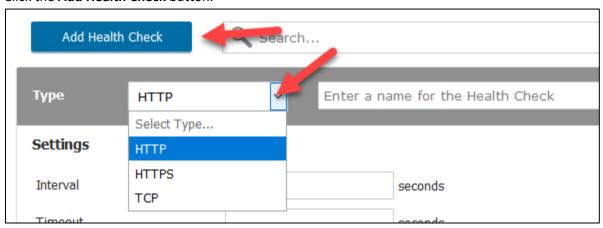
MANAGE HEALTH CHECKS

Health Checks ensure that the Load Balancer distributes new requests only to servers that are operating and ready to receive them. Once a server exceeds the allowed number of health check failures, it is no longer considered eligible to receive new traffic requests. A health check can return values **Healthy** or **Unhealthy**.

Create a Health Check

To create a new Health Check:

- 1. On the Load Balancer Pools page, click the **Manage Health Checks** tab.
- 2. Select a Node.
- 3. Click the Add Health Check button.



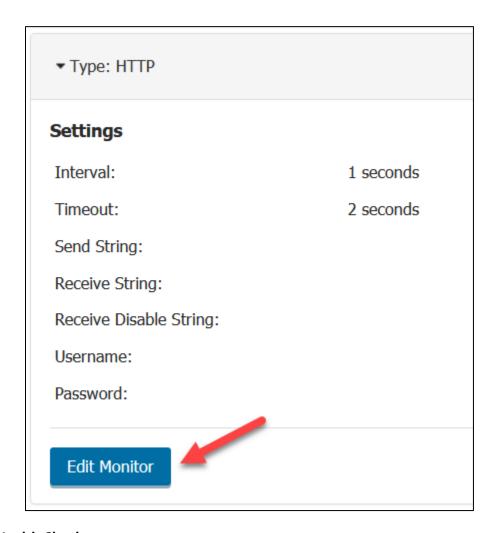
- 4. From a drop-down menu, choose **Type** of Health Check:
 - HTTP. Required for HTTP and network load balancing.

- HTTPS. Recommended for backend services that require HTTPS.
- TCP.
- 5. Type in **Monitor Name** in the Field next to the Type drop-down menu. Monitor Name may not exceed 100 characters and must start with a letter followed by a letter, number, period, hyphen, or underscore.
- 6. Depending on the Type of Health Check, fill out all or some of the following fields:
 - Interval. An approximate interval, expressed in seconds, between health checks of an individual instance. Default value: 5 seconds.
 - **Up Interval (Default Value: Disabled)**. If Enabled, specifies the frequency in seconds at which the system issues the monitor check when the resource is up.
 - Time Until Up (Default Value: Zero Seconds).
 - **Timeout**. The amount of time, expressed in seconds, during which no response means a failed health check. Default value: 16 seconds.
 - Send String. Specifies the text string that the monitor sends to the target object.
 - o Default value for HTTPS : GET $/\r$.
 - No default value for TCP.
 - Receive String (No Default Value). Specifies the regular expression representing the
 text string that the monitor looks for in the returned resource. The most common
 receive expressions contain a text string that is included in an HTML file on your site.
 - Receive Disable String (No Default Value).
 - Cipher List. Specifies the list of ciphers for this monitor. Default list:
 SHA:+3DES:+kEDH.
 - **Username**. Specify the username if the monitored target requires authentication.
 - **Password**. Specify the password if the monitored target requires authentication.
 - **Compatibility (Default Value: Enabled)**. When enabled, specifies that the SSL options setting (in OpenSSL) is set to ALL.
- 7. Click **Save** to finish the creation process.

Edit a Health Check

To edit a Health Check:

- 1. On the Load Balancer Pools page, click the **Manage Health Checks** tab.
- 2. Select a node to view the health checks associated with it.
- 3. Select the Health Check you wish to modify and click it to open the details bar.
- 4. Click Edit Monitor.
- 5. Make the necessary modifications and click **Save**.



Delete a Health Check

To delete a Health Check:

- 1. Select a node to view a list of health checks associated with it.
- 2. Click the **Delete Check** link in the row of the monitor you wish to delete.
- 3. In the confirmation window, click Delete to confirm your choice.

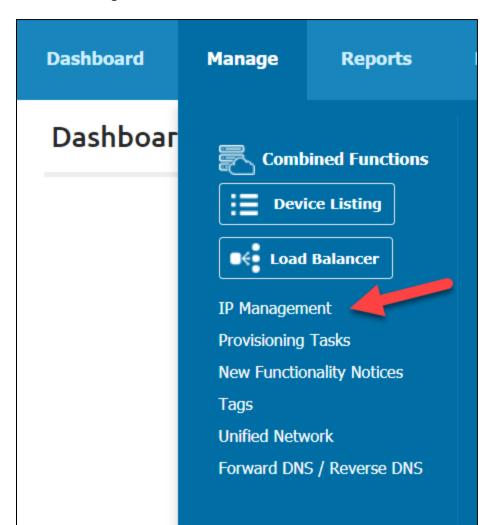
IP MANAGEMENT

The IP Management screen can be used to view or locate:

- Existing IP Addresses assigned to your Load Balancers and VMs.
- Reserve new IP Addresses without assigning them to a Load Balancer or VM.
- Release IP Addresses from Load Balancers and VMs.
- View your IP Address use data.

To access the screen:

- 1. Sign in to the Client Portal.
- 2. Open the Manage mega menu.



3. Click the **IP Management** link in the Combined Functions section.

Filter

Use the built-in filter to find an IP. You can filter the results by:

- **Node**. Filter by the **Node** to which an IP has been assigned to.
- View. Filter by the type of **Device** to which an IP has been assigned to.
 - o Cloud
 - Bare Metal Servers
 - Dedicated Firewalls

Search

Use the Search field to enter terms to search for within your IP Address collection. If you have filtered the results already, this search only searches within the filter results. There is no need for a "submit" or "go" button, the search begins when you type your first character.

List

The list of IP addresses contains five data columns:

- IP
- Location. Data center location.
- Cost. Device's service plan.
- Name. The name of the device to which an IP has been assigned to
- Available Actions. By clicking the Actions button in a drop-down menu, you will see the available actions.

ASSIGN IP

You can ONLY assign an IP to VMs that are **Powered Off**, and you may ONLY assign IP Addresses with a status of **Reserved**.

To assign an IP:

- 1. Click **Actions** in the Reserved IPs row that you wish to assign.
- 2. Click Assign IP.



- 3. Choose a powered-off VM to which the IP address will be assigned to.
- 4. Click Assign IP.

RELEASE IP

You may ONLY release IP Addresses with a status of **Reserved**. If for any reason you no longer need a reserved IP Address:

- 1. Click **Actions** in the Reserved IPs row that you wish to release.
- 2. Click Release IP.
- 3. Click **Yes** to confirm your actions.

VIEW/MODIFY IP

This action is available ONLY for Non-Reserved IPs. To view or modify an IP:

- Click Actions in the Non-Reserved IP's row that you wish to view/modify.
- Click View/Modify IP.



The **IP Mapping** window opens. Here you may view/modify:

- o Public Pool
- My Reserved Pool
- o **Public IPs**. Filter your view by typing an IP in the Filter field.
- **Drag/Drop IPs between Pools**. You can add IPs from the **Public Pool** or **My Reserved Pool** section to the Public IPs. First, click **Add Public IP** and then drag the **New IP** icon (with the blue hash marks in the lower right corner) to the *Drag/Drop any IP here* area.
- In the **Private IPs** column, click **Edit** and type the Private IP Address you wish the public IPs to map to.

NOTE: You cannot add a Reserved IP to your Public Pool while modifying your VM, and vice versa. Use the IP Management Screen to add/remove IPs to/from the Reserved Pool.



- You can additionally select several IPs to bring over from the public pool. Selecting the number in the drop-down menu and click **Add**.
- You may also type in a reserved IP in the Type Reserved IP field, and add it by clicking Move.
- Create a new mapping by clicking the **Add New Mapping** button.

Always click **Save** to save your changes.

Any changes to the mappings are submitted to the queue and can be viewed on the **Provisioning Tasks** screen.

IP Mapping

IP Mapping influence firewall and load balancing rules that have been set up.

- Firewall rules will automatically begin tracking new Private IPs for the destination VM in any previously set up rules for the VM.
- Load Balancers allow you to select a VM or a Public IP for load balancing needs.

ADD/RESERVE NEW IP

To create a new IP Address and reserve it for your organization:

- 1. Click the Add/Reserve New IP icon in the upper-left corner of the screen.
- 2. Choose a device for which you are adding or reserving a new IP:



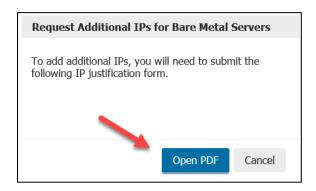
- **Cloud**. Choose a node and view the pricing for a reserved IP. Click **Add IP** to agree and create a public IP address.
- Bare Metal Servers. To add an IP, you need to submit an IP justification form. Provide
 the necessary information and submit the form by email to
 ipmanagement@phoenixnap.com. You may request additional IP space only if you
 are using at least 80% of the current IPs.
- Dedicated Firewall. To add an IP, you need to submit an <u>IP justification form</u>. Provide
 the necessary information and submit the form by email to
 <u>ipmanagement@phoenixnap.com</u>. You may request additional IP space only if you
 are using at least 80% of the current IPs.

REQUEST ADDITIONAL IPS

This is the process of acquiring additional IPs for your Bare Metal Servers or Dedicated Firewalls.

To request an IP:

- 1. Click Actions in the row of a Reserved Bare Metal IP.
- 2. Click Request Additional IPs.
- 3. Click **Open PDF**. This is the **IP justification form**.



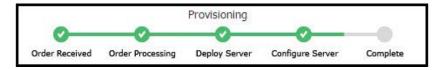
4. Fill in the blank fields and submit the form by email to ipmanagement@phoenixnap.com (preferred method). If you prefer to fax the form in, use 480 449 8801. This method may delay the processing of your request.

NOTE: You may request additional IP Space only if you are currently using at least 80% of the current IPs.

PROVISIONING TASKS

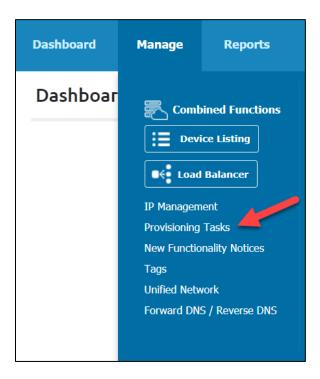
The Provisioning Tasks screen allows you to see the status of in-progress processes. A Process can be any function initiated in the admin, such as rebooting or renaming a VM, to creating a VM from scratch or deploying a Bare Metal Server.

This screen shows items that take more than a few seconds to complete. A status bar will show you the current status of your actions, as in the image below.



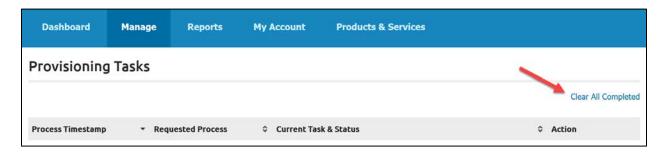
To access the screen:

- 1. **Sign in** to the Client Portal.
- 2. Open the Manage mega menu.
- 3. Click **Provisioning Tasks** under the Combined Functions heading.



If you see the message "No data available in table", then you have no processes in progress.

If you wish to clear completed processes from the list, click the **Clear All Completed** link at the top-right section of the screen.



The following columns are available in this report:

- **Process Timestamp**. The time the process was initiated.
- Requested Process. The process currently being worked on.
- **Current Task & Status**. The task that is currently being carried out. This may or may not be the same as the Requested Process. For example, if the Requested Process is Deploy New Server, the Current Task could be Order Processing, Deploy Server, Configure Server, or any other task that applies. A status bar will indicate the status of the process.
- **Action**. If an action can be taken on a process in the list, it will be listed in this column. Examples include Stop Process, Try Again, and Clear from List.

If you have multiple processes in progress, you can sort them by using the **Up** and **Down** arrows at the top of the columns.

NEW FUNCTIONALITY NOTICES

New node functionality items available for your use will be displayed on the **New Functionality Notices** screen. The Help link provides more information.

To reach the New Functionality Notices screen:

- 1. Sign in to the Client Portal.
- 2. Open the **Manage** mega menu.
- 3. Click **New Functionality Notices** under the Combined Functions section.

Be sure to check for new notices regularly.

Available Actions

Under the Action column, you will find available actions for a specific notice.

- Manage. This link offers options in configuring the new functionality (may differ for each functionality).
- **Remove Notice**. Remove the row from appearing in the table.
- **Help**. Provides more information on the notice.

TAGS

Tags are used to sort your devices into manageable categories and containers. They have no effect on how your devices run or how they are billed, they simply make it easier to filter and manage your devices.

To reach this tool:

- 1. **Sign in** to the Client Portal.
- 2. Open the Manage mega menu.
- 3. Click **Tags** in the Combined Functions section.

On the **Tags** screen, you can browse through existing tags. Click a tag to see the list of devices assigned to that tag.

Available Actions

Add a new tag by clicking this icon and entering a tag name in the field. When finished, click the **Plus** sign to create a tag.

You may **Delete** or **Rename** a tag by clicking the **Preference** icon next to an existing tag's name.



UNIFIED NETWORK

The phoenixNAP Unified Network enables you to achieve connectivity between your dedicated servers or Colocation environment and your PNAP virtual assets.

To unify your back-end network, you need to submit a ticket. Include your **Account Name** with the request.

To reach the Unified Network screen:

- 1. Sign in to the Client Portal.
- 2. Open the **Manage** mega menu.
- 3. Click **Unified Network** under the Combined Functions heading.
- 4. Click **Submit Ticket** to proceed.



FORWARD / REVERSE DOMAIN NAME SYSTEM (DNS)

What is the difference?

When supplied with a domain name (for example, google.com), a forward DNS lookup will return the IP address for the provided domain. When you access Google, a DNS server looks in its forward lookup zone for the site's IP address(es). Then, the server returns them to you. This type of record is called an A record and is the most common one. A forward DNS lookup can contain other records, such as MX, C-Name, etc.

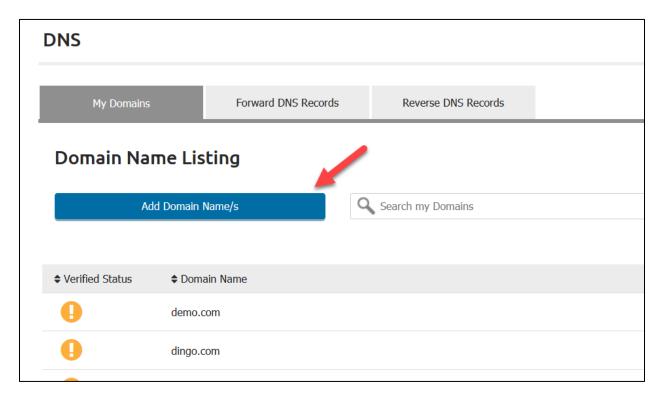
A reverse DNS lookup is used to find the domain name for a supplied IP address. You normally supply the IP address backward and append .in-addr.arpa (more info at http://en.wikipedia.org/wiki/.arpa). This feature is useful to anyone, but it is especially practical for those running an outgoing mail server.

A good tool for finding rDNS or normal DNS records is dig.

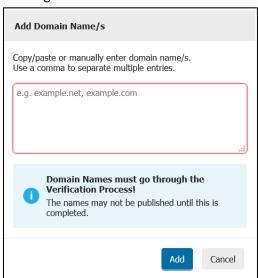
How to reach the DNS screen?

- 1. **Sign in** to the Client Portal.
- 2. Open the **Manage** mega menu.
- 3. Click **Forward DNS / Reverse DNS** under the Combined Functions heading.

How to add a domain name?



- 1. Open the Forward DNS Records or Reverse DNS Records screen.
- 2. Click Add Domain Name/s.
- 3. **Copy/paste** or manually enter domain name/s (use a comma to separate multiple entries).
- 4. Click **Add** when you finish adding domain names. Identical domain entries will be ignored.

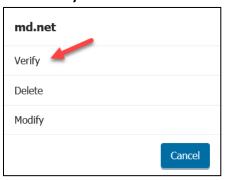


NOTE: **All Domain Name Ownership must be verified**! The names may not be published until this is completed. Find more information on this topic in the **Domain Verification** section of the help guide.

List

The Domain Name Listing offers the following information:

- 1. **Verified Status**. This will show you if the domain has been verified or not.
 - 1. **Not Verified**. The Verification process has not begun yet. Please begin the verification process by choosing **Actions** > **Verify**.



A verification email will be sent to the domain owner. Alternatively, complete the process via DNS String. Update your TXT record with the string provided. Once complete, click the **Actions > Verify** link to complete the process. Click **Yes, I updated my Registrar**.

- 2. Warning. This occurs after a domain has been verified for ownership, and the system starts checking for NS entries at their registrar. If this fails, a warning status will appear. Update your NS entries to point to phoenixNAP's name servers. Once completed, click the Actions > Resolve link to complete the NS related entry process. Click Yes, I updated my Registrar.
- 3. **Verified**. The Verification process has been completed successfully, and the NS records at your registrar have been updated to point to our name serves.
- 2. Domain Name.
- 3. Added On. Date of adding the domain.
- 4. **Manage**. Click the **Actions** icon to open the menu with the following options:
 - Modify. ONLY non-verified domain names can be modified. You can modify a domain name as desired. After modifying the name, click **Update** to confirm your changes. Be aware that modified domain names must go through the entire verification process.
 - Resolve. Update your NS entries to point to phoenixNAP's name servers. Once completed, click the Actions > Resolve link to complete the NS related entry process. Click Yes, I updated my Registrar.
 - **Delete**. Deletes a domain name as well as any forward DNS / reverse DNS records associated with it.
 - **Verify**. You can reset the verification process ONLY if domain ownership has not been verified yet.

Verified Status, Domain Name, and **Added On** columns are sortable.

Mappings

- 1. Forward DNS Mappings
- 2. Reverse DNS Mappings

Warning! Please be aware that DNS can be a confusing and complicated system. If you get something wrong, you might experience problems such as bouncing emails sent to your domain, or even cause your domain's website to malfunction. We recommend you use the DNS manager with caution, and ONLY if you understand basic concepts in the DNS management.

DOMAIN VERIFICATION

Any time you add a new domain name, you must verify it. An email will be sent to the domain admin to verify ownership. Identical domain names will not be added!

You will receive a verification notice for your domains:

1. **Not Verified**. The Verification process has not begun yet. Please begin the verification process by choosing **Actions** > **Verify**.



A verification email will be sent to the domain owner. Alternatively, complete the process via DNS String. Update your TXT record with the string provided. Once complete, click the **Actions > Verify** link to complete the process. Click **Yes, I updated my Registrar**.

- 2. Warning. This occurs after a domain has been verified for ownership, and the system starts checking for NS entries at their registrar. If this fails, a warning status will appear. Update your NS entries to point to phoenixNAP's name servers. Once completed, click the Actions > Resolve link to complete the NS related entry process. Click Yes, I updated my Registrar.
- 3. **Verified**. The Verification process has been completed successfully, and the NS records at your registrar have been updated to point to our name serves.

Domain Verification is a two-step procedure:

- 1. Verify domain ownership, either via Email or via DNS String. Begin the verification process by selecting **Actions** > **Verify**.
- 2. Configure your Name Server (NS) Records to point to our phoenixNAP servers.
 - ns1.phoenixnap.com
 - ns2.phoenixnap.com

Verifying Ownership via Email

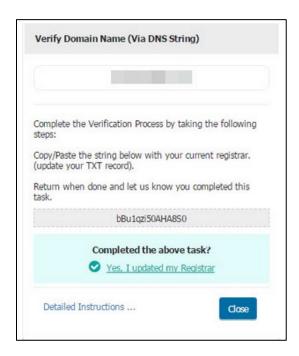
An email will be sent to you with a link to verify the domain. Simply click the link and follow the instructions.

If you didn't get the email, click the *Resend the Email* link on the Verify Domain Name (via Email) window, or opt for the Alternative Method (via DNS String).

Verifying Ownership via DNS String

If you didn't receive an email:

- 1. Select **Actions** > **Verify** again.
- 2. Select Alternative Method.
- 3. Click **Generate Verification String**. You must verify the domain by entering a unique string as a TXT record with your registrar. You must use the string that we provide.
- 4. **Copy** the string.
- 5. Go to your domain name's registered registrar.
- 6. Enter the string as a TXT record.
- Once you have updated your registrar, return to the phoenixNAP Client Portal, and select
 Actions > Verify again. This time, select the Yes, I updated my Registrar link that indicates
 you completed this task.



Updating Your NS Records

Once domain ownership is verified, either via email or string, you must continue to the **next step** and **update your NS records** at your registrar to point to the NS servers that are presented to you.

NOTE: This alternative option is always available to use if you prefer, even if an email was sent to you. If there is an error in the verification process, you will be notified.

- 1. Go to your domain name's registered registrar.
- 2. Create two NS records:
 - ns1.phoenixnap.com
 - ns2.phoenixnap.com
- 3. Once you have updated your registrar, return to the phoenixNAP Client Portal and select Actions > Verify again. Select the *Yes, I updated my Registrar* link that indicates you completed this task.

You should receive a confirmation message stating that the NS Record has been verified. You can publish your domain.

NOTE: Keep in mind that it can take up to 24h for the DNS manager to process domain verification.

If you are experiencing any difficulties, please contact Support, which is at your disposal 24/7.

FORWARD DNS MAPPINGS

- 1. Sign in to the Client Portal.
- 2. Open the **Manage** mega menu.
- 3. Click Forward DNS / Reverse DNS under the Combined Functions heading.
- 4. Click the Forward DNS Records tab.

Forward DNS Records List

By default the Forward DNS Records list will show all records. Use the **Search field** to narrow down the result. Know that **Verified Status**, **Domain**, and **Record Type** columns are sortable.

Available Actions

There are three (3) available actions:

- 1. **Add Forward DNS**. Click **Add Forward DNS**, located above the list to add a new forward DNS record. A popup menu will open:
 - Select a domain from your domain list.
 - Select DNS Record Type. For further information about DNS Record types, follow this link.
 - Enter DNS Record Details:
 - o Name. You manually enter a name you want.
 - Record type-specific options. Different types of DNS Records will provide various record-specific options. See the Supported Forward DNS Record Types and Their Respective Record Values section below.
 - o **DNS Time to Live Value**. Enter a value in the appropriate field and select a time unit from the drop-down menu.

Under the Manage column, you will find two links:

- 1. Actions.
 - Delete. Deleting a DNS record will delete all associated Forward DNS records.
 - Modify. Click this link to modify an existing Forward DNS record.
- 2. **More Details**. Open the **More Details** link in order to get a list of all the external details that are not listed in the table.

SUPPORTED FORWARD DNS RECORD TYPES AND THEIR RESPECTIVE RECORD VALUES

You can add eight (8) different types of DNS records:

1. **A/AAA Address (Host) Record**. These records specify the IP address (IPv4 or IPv6) for a given host and point to that IP address. Useful if you have subdomains residing on various systems.

- Name. A record name is composed of a series of parts called labels delimited with dots '.'. Each label can contain up to 63 characters. The entire record name must not exceed 253 <u>ASCII character length</u>.
- IP Address (v4/v6) or Add IP. Enter an IP address of the FQDN. A valid IP address consists of a four-octet 32-bit address. Use a comma to separate multiple entries. If you choose the Add IP option, specify Node, Device, and IP.
- Select Pointer (PTR) Record Creation.
 - 1. **Create PTR Records**. PTR Records are created if there are no existing records associated with the IP Addresses added.
 - 2. **Always Create PTR Records**. PTR Records are created regardless of existing records associated with the IP Addresses added.
 - 3. Do Not Create PTR Records.
- **TTL**. The DNS Time to Live must be greater than 0 and must not exceed 2,147,483,647 seconds.

Example Domain:	domain.com	
Sample Format:	IN A 69.9.64.11	
Where:	1. IN indicates Internet	
	2. A indicates record type	
	3. 69.9.64.11 indicates the IP address of domain.com	

- 2. CNAME (Canonical Name Record). Use to make domains and subdomains an alias of another domain. It ties a host name to an A record. With a CNAME record, instead of making several A records, you can create one record and point them to one A record. The advantage of this approach is that when you need to change an IP address, all you need to do is change the A record's IP address.
 - Name. A record name is composed of a series of parts called labels delimited with dots '.'. Each label can contain up to 63 characters (a-z, A-Z, 0-9, and hyphens '-'). Labels may not start or end with a hyphen. The entire record name must not exceed 253 ASCII character length.
 - Alias. Enter a domain to be tied to an A record.
 - **TTL**. The DNS Time to Live must be greater than 0 and must not exceed 2,147,483,647 seconds.

Example Domain:	mail.something.com	
Sample Format:	IN CNAME mail.something.net	
Where:	1. IN indicates Internet	
	2. CNAME indicates record type	

- 3. **MX (Mail Exchanger Record)**. Use to specify which mail servers should emails be routed to. The MX DNS record needs a priority value as a part of its entry it sets the priority of a target host.
 - Name. The Record Name must be composed of a series of parts called labels delimited with dots '.'. Each label can contain up to 63 characters. The entire record name must not exceed 253 ASCII character length.
 - Mail Exchange Server. Enter the mail server name.
 - **Priority**. Enter a numerical value between 0 and 65535, indicating the priority level assigned to a server. Lower value means that a server is more preferred.
 - TTL. The DNS Time to Live must be greater than 0 and must not exceed 2,147,483,647 seconds.

Example Domain:	thisdomain.com	
Sample Format:	thisdomain.com. 14400 IN MX 0 thisdomain.com.	
	1. This record shows that all mail @thisdomain.com should be routed to the mail server at thisdomain.com.	
	2. The number zero (0) indicates the priority level.	
	3. Make sure that there is a dot at the end of the domain name in the MX record. If there is no dot, emails are routed to <i>thisdomain.com.thisdomain.com</i> .	

- 4. **TXT (Text Record)**. Use to insert any text-based information that can be called upon when necessary. Usually, TXT is used to verify domain ownership and to implement SPF.
 - Name. The entire record name must not exceed 253 ASCII character length.
 - **Text**. A text-string which is to be passed in to the TXT record. Enter up to 4,000 characters. Apostrophes and dollar symbols "\$" are not allowed.
 - **TTL**. The DNS Time to Live must be greater than 0 and must not exceed 2,147,483,647 seconds.

Example Domain:	example.com	
Sample Format:	example.com. TXT @ "Random text"	
Where:	1. TXT indicates record type	
	2. @ indicates record name. (In this case, it is blank, which is indicated by @.)	
	3. "Random text" indicates the arbitrary text entered in the record.	

5. **LOC (Location Record)**. Use the LOC record to specify geographical location information of a domain.

- Name. A Record Name must be composed of a series of parts called labels delimited with dots '.'. Each label can contain up to 63 Characters. The entire record name must not exceed 253 ASCII character length.
- Geographic Location Text. Specify a geographical location.
- TTL. The DNS Time to Live must be greater than 0 and must not exceed 2,147,483,647 seconds.

Example Domain:	mydomain.com	
Sample Format:	mydomain.com. LOC 52 14 05 N 00 08 50 E 10m	
Where:	1. LOC indicates record type	
	2. 52 14 05 N 00 08 50 E 10m indicates the geographical location.	

- 6. NS (Name Server Record). Use to specify an authoritative name server for a given host.
 - Name. The Record Name must be composed of a series of parts called labels delimited with dots '.'. Each label can contain up to 63 characters. The entire record name must not exceed 253 <u>ASCII character length</u>.
 - Name Server. The Name Server is composed of a series of parts called labels delimited with dots '.'. Each label can contain up to 63 characters. The entire value must not exceed 253 ASCII character length. Empty spacing and asterisks "*" are not allowed.
 - **TTL**. The DNS Time to Live must be greater than 0 and must not exceed 2,147,483,647 seconds.

Example Domain:	example.com	
Sample Format:	example.com. IN NS ns1.phoenixnap.com.	
Where:	1. IN indicates Internet	
	2. NS indicates record type	
	3. ns1.phoenixnap.com. is the authoritative server for the domain example.com	

- 7. **SPF (Sender Policy Framework Record)**. The SPF record values specify which servers are allowed to use your domain name to send emails legitimately. This serves as an email-validation record system designed to detect email spoofing.
 - Name. A Record Name must be composed of a series of parts called labels delimited with dots '.'. Each label can contain up to 63 characters. The entire record name must not exceed 253 ASCII character length.
 - Rule. Enter up to 4,000 characters. Apostrophes (") are not allowed (e.g., v=spf1 -all).

• **TTL**. The DNS Time to Live must be greater than 0 and must not exceed 2,147,483,647 seconds.

Example Domain:	example.com	
#1 Sample Format:	mydomain.com. TXT "v=spf1 -all"	
Clarification:	This is the simplest possible SPF record. It means the domain <i>example.com</i> never sends mail. This makes sense to have if a domain never sends emails.	
#2 Sample Format:	TXT "v=spf1 mx -all"	
Clarification:	Designate MX servers, as they do send mail.	
#3 Sample Format:	mydomain.com. TXT "v=spf1 mx ptr -all"	
Clarification:	This designates all the hosts whose PTR hostname matches example.com	

- 8. **SRV** (Service Locator Record). Use this to provide information on available services. For example, given a known domain name, you can define the port and hostname for a given service.
 - Name. A Record Name must be composed of a series of parts called labels delimited with dots '.'. Each label can contain up to 63 characters. The entire record name must not exceed 253 ASCII character length.
 - Host Name. The system which receives the service. This Host Name is composed of a series of parts called labels delimited with dots '.'. Each label can contain up to 63 Characters. '*' and empty spacing between characters are forbidden. The entire value must not exceed 253 ASCII character length.
 - **Priority**. A numerical value between 0 and 65535, indicating the priority level assigned to the host. Lower values give higher priority (zero (0) gives the highest priority).
 - Weight. A numerical value between 0 and 1410065407 used as a load balancing mechanism.
 - **Port**. Enter a numerical value between 0 and 65535. This is the actual port number of the service in the offer.
 - TTL. The DNS Time to Live must be greater than 0 and must not exceed 2,147,483,647 seconds.

Example Domain:	somedomain.com	
Sample Format:	_serviceproto.name. TTL class SRV priority weight port target.	
Where:	1. "service" is the symbolic name of the desired service	
	2. "proto" is the transport protocol of the desired service. This is usually TCP or HTTP.	
	3. "name" is the domain for which this service is valid. (Ending with a dot.)	

4."TTL" is time to live
5. "class" is always IN
6. "priority" indicates the priority level of the target host. Lower value equals greater importance.
7. "weight" is used when more than one service has the same priority. A higher value gives greater importance.
8. "port" is the port number of the service in question.
9. "target" is the name of the host that provides this service. Does not have to be in the same zone (domain).

DNS record value specifies where you want to point your record, or in some cases, what you want to do with it. These values vary in type, depending on the DNS record type.

Same as Zone

Uncheck 'Same as Zone' if name differs from My Domain. If same as zone, "@" will indicate record name.

Time to Live Value (TTL)

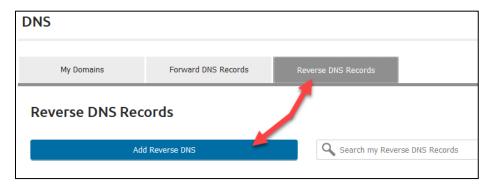
For the TTL, enter a numerical value of how long a DNS record will be cached before it needs to be refreshed. The default value for TTL is 3600 seconds, but you can enter any value greater than zero (0) and specify it in seconds, minutes, hours, or days. Any changes you make to the value of a DNS record occurs in the specified time to live period. (e.g., If you make a change to a DNS record and the TTL is set to 600 seconds, it will take that time until the new information takes effect.)

REVERSE DNS MAPPINGS

Reverse DNS is a technique in which an IP address is resolved into a domain name.

To reach the Reverse DNS Mappings screen:

- 1. **Sign in** to the Client Portal.
- 2. Open the **Manage** mega menu.
- 3. Click Forward DNS / Reverse DNS under the Combined Functions heading.
- 4. Click the Reverse DNS Records tab.



Reverse DNS Records List

By default, the Reverse DNS Records list will show all records. Use the **Search field** to narrow down the result. The **Verified Status**, **Domain**, and **IP Address** columns are sortable.

Record Type

A **PTR** record is used to perform reverse DNS lookups. A PTR record, or pointer record, maps an IPv4/v6 address to the canonical name for that host. Setting up a PTR record for a hostname in the in-addr.arpa domain that corresponds to an IP address implements reverse DNS lookup for that address.

For example, www.random-site.com has the IP address 122.0.3.16, but a PTR record maps 16.3.0.122.in-addr.arpa. It is always advisable to have a proper reverse DNS record (PTR) set up for your servers, especially when you are running a mail / smtp server.

Creating PTR Records

Whenever you add an A/AAAA Address (Host) Forward DNS Record, you can create PTR Records.

- 1. Select a domain.
- 2. Choose an A/AAAA Address (Host) record.
- 3. **Enter or add IP addresses**. Use a comma to separate multiple entries.
- 4. Select Pointer (PTR) Record Creation.
 - Create PTR Records. (ONLY if there are no PTR records associated with to the IP address(es) added.)
 - Always Create PTR Records. PTR Records are created regardless of existing records associated with the IP addresses added.
 - Do not Create PTR Records. PTR records will not be created, and you will not have rDNS mappings associated with the IP address(es) added.

When you decide to create PTR records, they will be made available on the Reverse DNS page.

Available Actions

The phoenixNAP Client Portal enables you to modify or delete an existing rDNS record.

To modify a rDNS record:

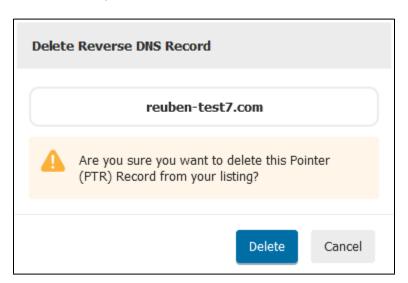
- 1. Open the **Forward DNS / Reverse DNS** screen.
- 2. Click Reverse DNS Records.

- 3. Click **Actions > Modify** under the Manage column. Pay attention to the main three (3) pieces of information:
 - DNS Record Type. This displays "PTR Pointer Record."
 - IP Address (v4/v6). The IP address(es) associated with the A/AAAA record.
 - A/AAAA Address (Host) Record. This displays the A/AAAA Address (Host) Record to
 which the IP address(es) maps to. Open the menu to select another A/AAAA Address
 (Host) Record.

NOTE: Please be aware that you can select only those A/AAAA Address (Host) Records that share the same IP Address.

To delete an rDNS record:

- 1. Open the **Forward DNS / Reverse DNS** screen.
- 2. Click Reverse DNS Records.
- 3. Click **Actions > Delete** in the row of the PTR record you want to delete.
- 4. Click **Delete** to confirm your choice.



BARE METAL

In the **Bare Metal** section of the **Manage** mega menu, you will find all the tools necessary to deploy Bare Metal Servers and put up Dedicated Firewalls.

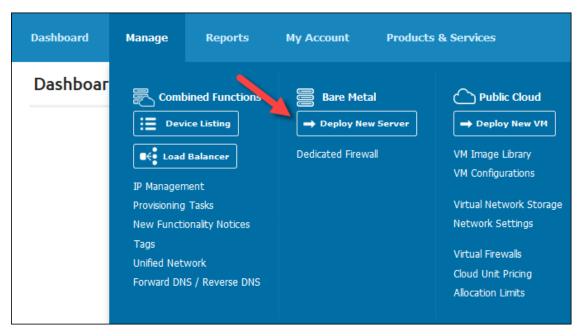
DEPLOY NEW SERVER

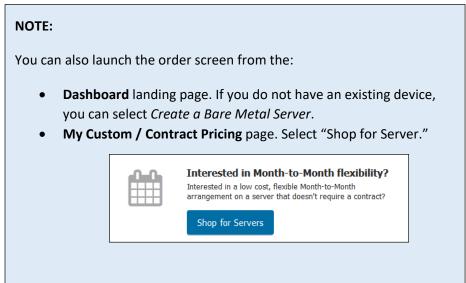
On the Deploy New Server screen, you can purchase bare metal servers. Our order form allows you to view the pricing and order multiple products from the same category at the same time.

NOTE: The prices on the form are **per month**. A contract is not required. However, if you want a contracted price, you may be eligible for a **discount** depending on the quantity and the contract length.

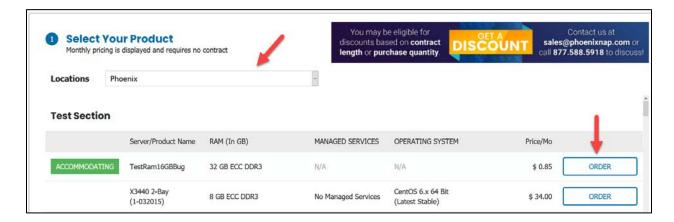
To order a Bare Metal server:

- 1. Log in to the Client Portal.
- 2. Navigate to the Manage mega menu.
- 3. Select **Deploy New Server** to load the order form screen.

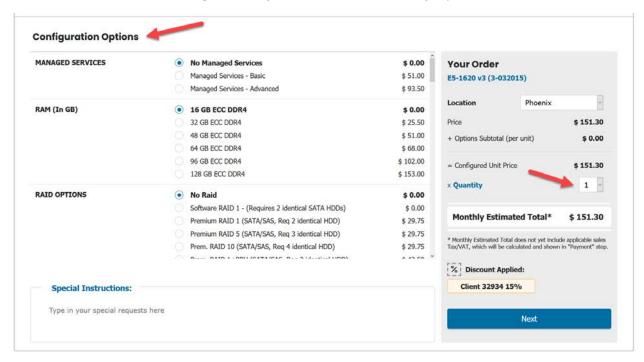




- **4.** Select a data center **location** from the drop-down menu. The available products load in the section below.
- **5.** Choose a **product** you want to purchase and select **ORDER**. Currently, you can order one type of product at the same time.

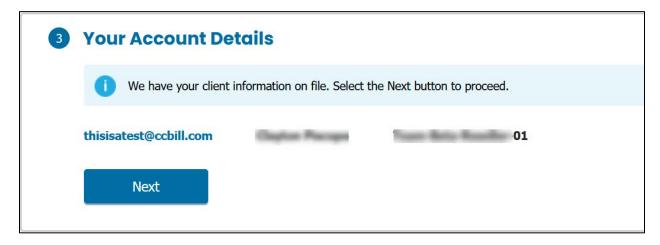


6. Select the desired Configuration Options choose the Quantity (up to 100).

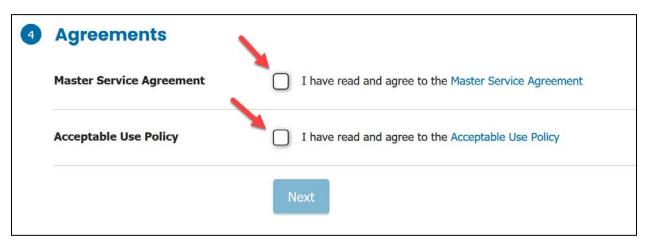


Add special instructions or requests if you have any. Select **Next** when you are ready. The displayed monthly estimated total price is **without Tax/VAT** at this point.

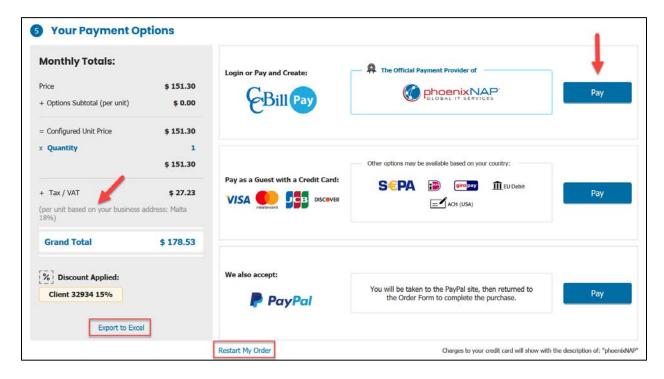
7. Review the details and select **Next** at the Account Details screen. The form pulls the information you entered when you created the Client Portal account.



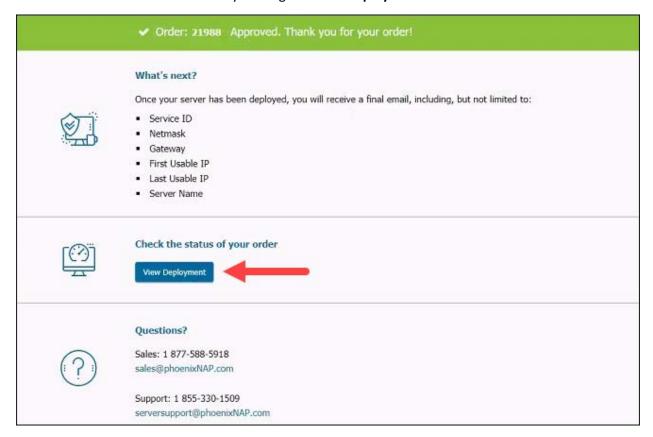
8. Read the **Master Service Agreement** and **Acceptable Use Policy**. Tick the checkboxes when you have read and agree with the terms and select **Next** to proceed. You need to tick **both** boxes to continue to the Payment Options section.



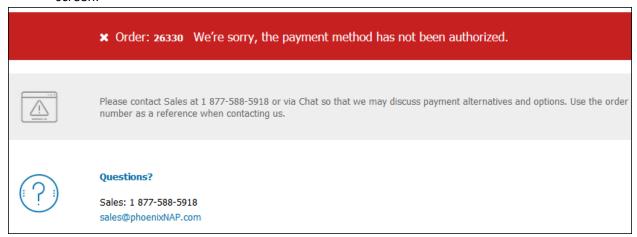
- **9.** Choose a Payment Method and select **Pay** after you **review the order information**. The Grand Total includes Tax/VAT based on your business location. Fill in the payment information to place your order.
 - Optionally, you can select Export to Excel to save the order details in a Microsoft Excel file.
 - At this point, you cannot edit the order details. Select Restart My Order if you want to reset the form and start from the beginning.



10. Once the order is processed, you will be redirected to the Client Portal confirmation page. You can check the order status by clicking the **View Deployment** button.



If your payment cannot be processed for any reason, you will be redirected to the following screen:



For any questions about your order, please contact <u>Sales</u>.

Dedicated Firewalls

The purchase method for dedicated firewalls is completely the same. On the Deploy New Server screen, choose a dedicated firewall and build your order.

DEDICATED FIREWALLS

The Dedicated Firewall screen allows you to manage your dedicated firewall devices.

To reach the Dedicated Firewall page:

- 1. Sign in to the Client Portal.
- 2. Open the Manage mega menu.
- 3. Click **Dedicated Firewall** under the Bare Metal heading.

The page loads the Device Listing screen with the Dedicated Firewall checkbox preselected.

Display

You can change the view by clicking the Display icon.

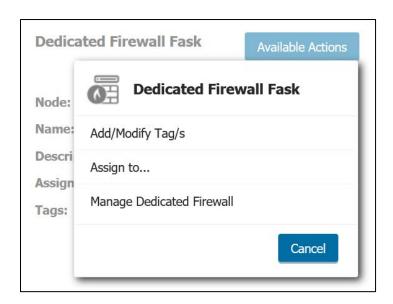


Filter

You may filter out your dedicated firewall devices by **Node**. Choose one of your nodes to view the dedicated firewall devices assigned to it.

Available Actions

To access many of these functions, right -click a device. Alternatively, there may be buttons or links, such as the **Available Actions** button, that will take you to some of these functions from the Device Listing screen as well.



- Add/Modify Tag(s). Create new or search existing tags.
- Assign to. You can assign a BM firewall to a specific customer if you have this option.
- Manage Dedicated Firewall. This will take you to the Manage My Device screen, where you can see more in-depth information about the dedicated firewall:
 - Device Name. You can change Device Name by clicking Edit. Enter a new name in the field and click Save.
 - Description. Change the description by clicking Edit. Enter a description in the field and click Save.
 - o **Location**. The node to which the dedicated firewall is assigned to.
 - Assigned IP Addresses
 - o Login Information
 - Service Plan
 - Tags
 - o **Bandwidth Usage**. Choose a time period (Hour, Day, Week, Month, Last Month, Year, Last Year, or create a Custom time period) and click **Update**.

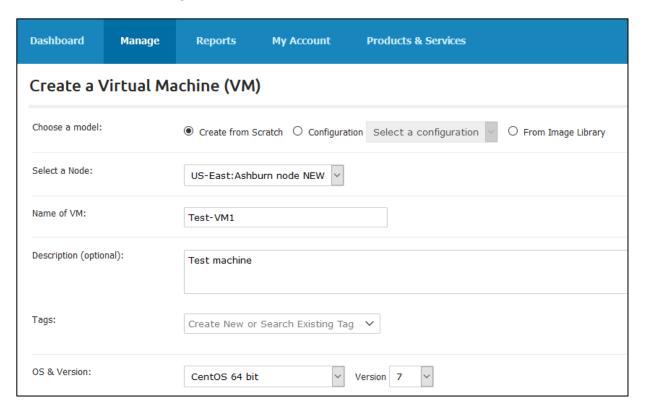
PUBLIC CLOUD

The Public Cloud navigation area provides you with functionality that allows you to set up, monitor, and maintain your virtual assets.

DEPLOY NEW VIRTUAL MACHINE (VM)

To create a Virtual Machine:

- 1. Sign in to the Client Portal.
- 2. Open the **Manage** mega menu.
- Click Deploy New VM under the Public Cloud section. The Create a Virtual Machine (VM) page loads.
- 4. Make any necessary changes:
 - **Choose a Model**. Create from scratch, use an existing configuration, or import an image from the Image Library.
 - Select a Node. Node to which the VM will be assigned to.
 - Name of VM. No spacing, no special characters ("-" and ".") are allowed.
 - **Description** (optional). Enter a description for your VM in the text box, if desired. This can help you identify the VM and the components. If you have or plan on making a great deal of VMs, we recommend you add a description.
 - Tags (optional). If you wish to assign an already existing tag to the new VM, choose that tag name from the drop-down menu. If you wish to create a new tag to assign to the VM, enter a tag name and click the plus sign.
 - **OS & Version**. Choose the OS and its version to be installed on the VM. This **cannot** be changed later.



Minimum System Requirements

It is your responsibility to know the Minimum Requirements for the Operating System you intend to use. At this time the hardware sliders are not sensitive to the operating system that you choose and will allow you to configure VMs that are below or far beyond the minimum and/or maximum requirements for the Operating System and/or the software you intend to run on the VM. Optionally, visit these third party sites for information on minimum system requirements

- Make this many VMs. From the drop-down menu, choose anywhere between one
 and five. If you create more than one VM, the VM name will be followed by a
 timestamp.
- VM Administrator Username and Password. The VM username and password you
 enter is not recoverable once the VM is established. You need the credentials to
 modify the VM in the future. We recommend you store the credentials safely for
 future reference.
- # VCPUs. Select how many Virtual Central Processing Units (VCPUs) to assign to the Virtual Machine. You may either move the slider or enter a number in the box. The slider/box will not let you select an amount that exceeds the allocations assigned to you.
- Memory (RAM). Select how many gigabytes of RAM to add to the VM. Either move
 the slider to select or enter a number in the box on the right side. The slider/box will
 not let you select an amount that exceeds the allocations assigned to you.
- Storage. Primary Storage and Secondary Storage icon is displayed. Click Edit on the Primary Storage icon if you wish to change it from the default and type in a different size. Click Add on the Secondary Storage icon to add another storage device for a total of up to 10 storage devices.
- Network Management Setting. Displays the current network management status for the VM and allows you to view the details. Network management settings can be updated in the Network Settings area.
- Private IP Addresses. You will automatically be assigned a private IP address.
- **Public IP Addresses**. Use the drop-down menus to indicate your preference for having the VM externally accessible, and how many public IPs you wish to use.

Additional Public IP Addresses

To obtain additional Public IP Addresses or to add a previously leased IP that you saved for later use:

1. Click View/Add Public IPs, then select one of the following:



- **Get new IPs assigned**. Select this option if you do not have an existing leased IP but wish to lease an IP and assign it to the VM.
- Use the IPs selected below. Select this option and then choose an
- Power Status. Click it to change the status. Toggle Yes if you wish to have the VM operational immediately upon creation.
- Optionally, enable the 'Create VM' Notification Email option.
- You can save the VM settings for future use as a configuration by clicking the Save these settings... checkbox and entering a configuration title in the field.
- Click the "My account agrees to add this Virtual Machine to my account and will be billed..." checkbox.

Click Create Virtual Machine/s to deploy a new VM.



In the pop-up window, click **Continue: Create the VM** to confirm your choice.

You can monitor the progress on the **Provisioning Tasks** screen.

VM IMAGE LIBRARY

The Image Library screen provides a listing of your existing images and allows you to perform imagerelated tasks:



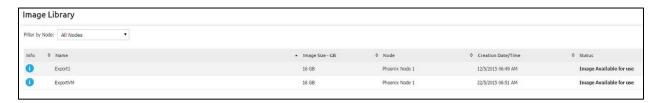
- **Upload Image**. Upload a new file from an external source into the image library.
- Create VM From Image. Use an existing VM Image to create a new VM.
- Copy Image to Another Node. Allows you to copy an image and place it in a different node.
- **Download Image**. Download and transfer an existing image to an external source.
- **Delete Image**. Delete an existing image from the image library.

Images are created from the **Deploy New VM** screen.

To access the Image Library:

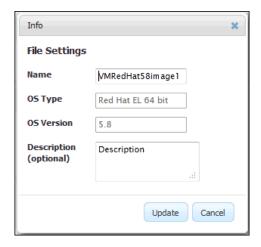
- Sign in to the Client Portal.
- Open the **Manage** mega menu.
- Click **VM Image Library** under the Public Cloud section.

When populated, the Image Library looks like this:



The above-mentioned tasks are initiated by clicking one of the buttons at the bottom of the screen, but the list itself provides the following functions:

- **Filter by Node**. Select a node from the drop-down menu to view the images that reside on a particular node.
- **Sort**. Click the up/down arrows at the top right of the column to sort by that column; click once for alphabetical, twice for the reverse-alphabetical order.
- **Info**. Click the blue question mark icon in the **Info** column to see and edit details about an image:

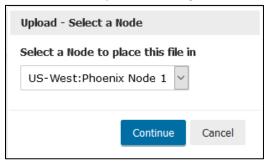


Click **Update** when to save your changes.

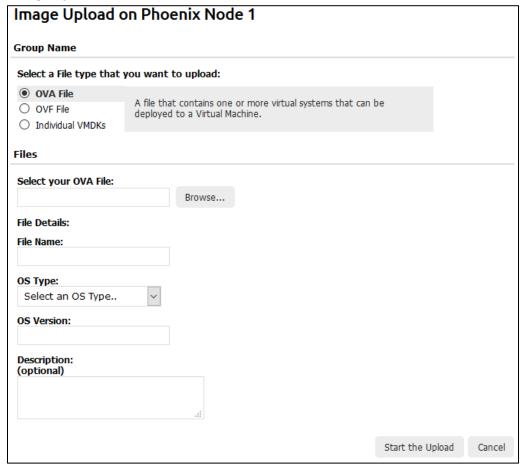
UPLOAD IMAGE

To upload an image:

- 1. Sign in to the Client Portal.
- 2. Open the Manage mega menu.
- 3. Click VM Image Library under the Public Cloud section.
- 4. Click the **Upload Image** icon.
- 5. Select a **Node** to place this image in and click **Continue.**



6. The **Image Upload** screen loads:



- 7. Select the **file type** you want to upload.
- 8. Click **Browse** and choose the file you want to upload from your machine.

- 9. Fill in the fields and choose an OS from the drop-down menu.
- 10. Click **Start the Upload**.

CREATE VM FROM IMAGE

Use an existing VM image to create a new VM.

To do so:

- 1. **Sign in** to the Client Portal.
- 2. Open the Manage mega menu.
- 3. Click VM Image Library under the Public Cloud section.
- 4. Click an image to highlight it and click **Create VM from Image**.
- 5. On the Create a Virtual Machine (VM) screen, make any changes necessary to the virtual hardware and settings for the VM.
- 6. Make sure to select the "My account agrees to add this Virtual Machine to my account and will be billed...", then click **Create Virtual Machine/s**.

NOTE: The Node, OS & Version, and Storage are not editable. All other settings can be adjusted.

COPY IMAGE TO ANOTHER NODE

- 1. Sign in to the Client Portal.
- 2. Open the **Manage** mega menu.
- 3. Click VM Image Library under the Public Cloud section.
- 4. Click to select the image you wish to copy.
- 5. Click Copy Image to another node.
- 6. From a drop-down menu, choose the node to paste the image to.
- 7. Click Complete Copy Process.

DOWNLOAD IMAGE

To download an Image:

- 1. Sign in to the Client Portal.
- 2. Open the **Manage** mega menu.
- 3. Click VM Image Library under the Public Cloud section.
- 4. Select a VM image you wish to download by clicking it.
- 5. On the VM Image Library screen, click the **Download Image** icon.

DELETE IMAGE

To delete an Image:

- 1. Sign in to the Client Portal.
- Open the Manage mega menu.

- 3. Click VM Image Library under the Public Cloud section.
- 4. Select a VM image you wish to delete by clicking it.
- 5. On the VM image Library screen click the **Delete Image** icon.
- 6. Confirm your actions by clicking Yes, Delete, or discard this attempt by clicking Cancel.

Check for progress on the **Provisioning Tasks** screen.

VM CONFIGURATIONS

A VM Configuration is data about a VM setup that you have saved for future use. Configurations make it easy to create VMs on the fly with the same configurations as other VMs in your organization.

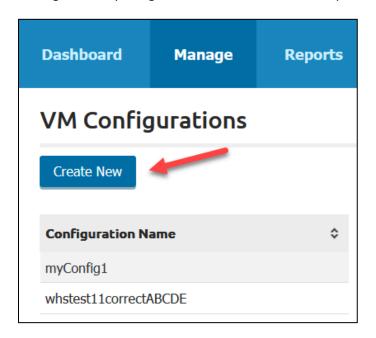
NOTE: There is no charge for stored configurations. A configuration simply stores the settings for a VM,

To access the VM Configurations List:

- 1. Sign in to the Client Portal.
- 2. Open the Manage mega menu.
- Choose VM Configurations under the Public Cloud heading.
 You are provided with a list of configurations you have previously saved, if any. You can also create configurations during the Deploy a New VM process.
- 4. Click the name of a **Configuration** in the list to view details about it.

The following functions can be performed from this screen:

- Edit Configuration by clicking the **Edit** icon at the right side of the screen.
- Delete Configuration by clicking the **Delete** icon at right side of the screen.
- Create New Configuration by using the **Create New** icon at the top-left side of the screen.



EDIT VM CONFIGURATIONS

You may make changes to the saved configurations from the edit screen.

- 1. Sign in to the Client Portal.
- 2. Open the **Manage** mega menu.
- 3. Click **VM Configurations** in the Public Cloud section.
- 4. Click the name of a Configuration you wish to modify.
- 5. Click the **Edit** icon.
- 6. Make changes to any of the following fields:
 - Name. No spaces and/or special characters are allowed in the configuration name.
 - Power Status. Use the slider to choose On if you wish VM to be powered on immediately, or Off if you are creating the VM for later use and do not need it to be powered on right away.
 - **OS & Version**. Select the operating system you want to have installed on the VM in the first drop-down menu, then select which version of that operating system to install. Available operating systems are:
 - o CentOS 64 bit
 - o CentOS cPanel Sofaculous 64 bit
 - Microsoft Windows Server 2008
 - o Microsoft Windows Server 2008 Plesk
 - o Microsoft Windows Server 2012
 - o Red Hat EL 64 bit
 - o Ubuntu 64 bit

Minimum System Requirements

It is your responsibility to know the Minimum Requirements for the Operating System you intend to use. At this time, the hardware sliders are not sensitive to the operating system that you choose and will allow you to configure VMs that are below or far beyond the minimum and/or maximum requirements for the Operating System and/or the software you intend to run on the VM. Optionally, visit these third party sites for information on minimum system requirements for operating systems.

- VCPUs. Select how many Virtual Central Processing Units (VCPUs) to install in the Virtual Machine. You may either move the slider to select or enter a number in the. The slider/box does not let you select an amount that exceeds the allocations assigned to you. You may choose either 1, 2, 4, or 8 VCPUs when creating a configuration.
- Memory (RAM). Select how many Gigabytes of RAM to install in the VM. You may either
 move the slider to select or enter a number in the box. The slider/box does not let you
 select an amount that exceeds the allocations assigned to you.
- **Storage**. Select the amount of storage you wish to have installed in the VM. Click **Edit** and enter the amount of GB in the Storage Size field.

- Private and Public IP Addresses. You will automatically be assigned a private IP address.
 You need to manage your IPs when creating a VM.
 - **Note**: Every VM must have a Private IP address. This lets the VM communicate with other VMs, as well as the public Internet (requires a Public IP address). You may not have more than one Private IP address per VM.
- Tags. Create new or use existing tags.
- **Description**. Enter a description for your VM in the text box, if desired. This can help you identify VMs and components.

Click **Update** to confirm the modifications you made.

DELETE VM CONFIGURATIONS

To delete a configuration:

- 1. **Sign in** to the Client Portal.
- 2. Open the **Manage** mega menu.
- 3. Click **VM Configurations** in the Public Cloud section.
- 4. Click the name of a configuration you wish to delete.
- 5. Click the **Delete** icon at the top-right side of the screen.
- 6. Click **OK** to confirm the action.

CREATE NEW VM CONFIGURATION

Configurations can be created in two ways. From the Create a VM screen, you can save a VM as a Configuration as you are creating the initial VM. If you only want to create the Configuration but not to create a VM at this time, you can use the method described on this page.

- 1. Sign in to the Client Portal.
- 2. Open the Manage mega menu.
- 3. Click **VM Configurations** in the Public Cloud section.
- 4. Click the **Create New** icon at the top-left of the screen.

Select the settings you want to assign each of the following for the configuration:

- Name. No spaces and/or special characters are allowed in the configuration name.
- **Node**. Select one of the existing nodes.
- Power Status. Use the slider to choose On if you wish VM to be powered on immediately,
 or Off if you are creating the VM for later use and do not need it to be powered on right away.
- OS & Version. Select the operating system you want to have installed on the VM in the first
 drop-down menu, then select which version of that operating system to install. Available
 operating systemsare:
 - CentOS 64 bit
 - CentOS cPanel Sofaculous 64 bit
 - Microsoft Windows Server 2008

- Microsoft Windows Server 2008 Plesk
- Microsoft Windows Server 2012
- Red Hat EL 64 bit
- Ubuntu 64 bit

Minimum System Requirements

It is your responsibility to know the Minimum Requirements for the Operating System you intend to use. At this time, the hardware sliders are not sensitive to the operating system that you choose and will allow you to configure VMs that are below or far beyond the minimum and/or maximum requirements for the Operating System and/or the software you intend to run on the VM. Optionally, visit these third party sites for information on minimum system requirements for operating systems.

- VCPUs. Select how many Virtual Central Processing Units (VCPUs) to install in the Virtual Machine. You may either move the slider to select or enter a number in the. The slider/box does not let you select an amount that exceeds the allocations assigned to you. You may choose either 1, 2, 4, or 8 VCPUs when creating a configuration.
- **Memory (RAM)**. Select how many Gigabytes of RAM to install in the VM. You may either move the slider to select or enter a number in the box. The slider/box does not let you select an amount that exceeds the allocations assigned to you.
- **Storage**. Select the amount of storage you wish to have installed in the VM. Click **Edit** and enter the amount of GB in the Storage Size field.
- **Private and Public IP Addresses**. You will automatically be assigned a private IP address. You need to manage your IPs when creating a VM.
 - **Note**: Every VM must have a Private IP address. This lets the VM communicate with other VMs, as well as the public Internet (requires a Public IP address). You may not have more than one Private IP address per VM.
- Tags. Create new or use existing tags.
- **Description**. Enter a description for your VM in the text box, if desired. This can help you identify VMs and components.

Click Save to create a new VM.

VIRTUAL NETWORK STORAGE

Virtual Network Storage provides a virtual drive that you can access from your VMs or private computers, either using NFS or iSCSI. This offers optimum storage you can access anytime from anywhere. VNS is ideal for storing shared documents, backups, and many other applications.

To access the Virtual Network Storage screen:

- 1. **Sign in** to the Client Portal.
- 2. Open the **Manage** mega menu.
- 3. Select Virtual Network Storage under the Public Cloud section.

Filter

To **Filter by Node** open the drop-down menu. Choose a specific node to view only those Virtual Network Storage devices that are assigned to that node.

View

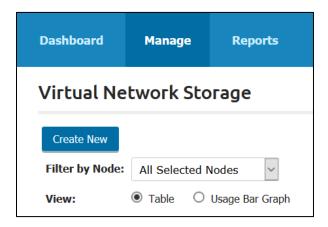
You may choose between:

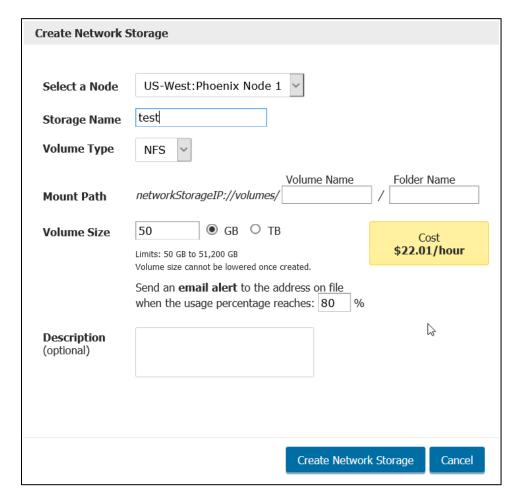
- 1. Table
- 2. Usage Bar Graph

Create New Virtual Network Storage

To create a New Network Storage:

1. Click the **Create New** button.





- 2. Select a Node.
- 3. Enter a **Storage Name**.
- 4. Choose **Volume Type** from the drop-down menu.
 - NFS. An NFS server exports one or more of its file systems, known as shares. NFS
 clients can mount these shares on their own file system. You can perform file actions
 on this mounted remote file system as if the file system were local.
 - iSCSI.
- 5. **Mount Path**. Available only if you choose the NFS volume type. Must start with a letter. No special characters are allowed, and there's a minimum of 3 characters.
- 6. **Enter Alias Name**. Available only if you choose iSCSI volume type. The initiator alias is required, or the provisioning process will not be complete. No special characters allowed.
- 7. Enter Volume Size. Limits are set between 50 and 51,200 Gigabytes (GB).

The **Cost** icon will be highlighted next to Volume Size. It will give you an accurate estimate of how much you will be charged for the configured Virtual Network Storage.



8. **Email Alert**. Enter a usage percentage in the field (not smaller than 1%) that, when reached, triggers an email alert.

- 9. Enter **Description** (optional).
- 10. When you have filled out all the required fields, click **Create Network Storage**, or click **Cancel** if you wish to discard the configuration.

Monitor the progress on the **Provisioning Tasks** screen.

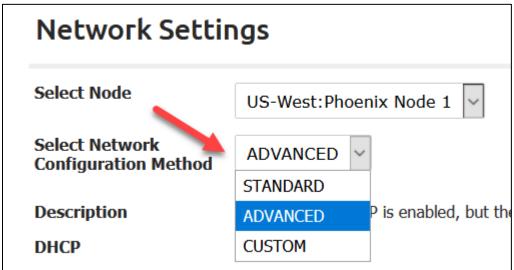
NOTE: Due to the nature of storage arrays, network storage can be increased at any time, however it **CANNOT be decreased**. To decrease the amount of storage, a new (smaller) storage array needs to be created and your data migrated.

NETWORK SETTINGS

Network Settings options in the Client Portal give you options for managing your VM networks. Networks are set up by node and are automatically assigned to the standard method whenever a new node becomes accessible.

To reach the Network Settings screen:

- 1. **Sign in** to the Client Portal.
- 2. From the Manage mega menu, click the Network Settings link under the Public Cloud section.
- 3. Select a **Node** from the drop-down menu to indicate which node will be edited.
- 4. Select a network configuration method.

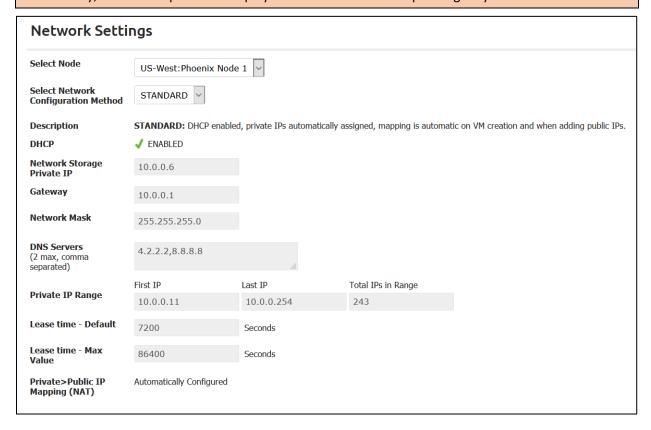


• **Standard**. DHCP is enabled, and private IPs are automatically assigned. Mapping is automatic upon VM creation and when adding public IPs.

The Standard configuration may not be edited and is provided for review of settings.

- Advanced. DHCP is enabled, but clients select their own private IP range.
- Custom. DHCP is disabled, and clients must manually assign Private IPs to VMs and create private/public mappings.

NOTE: Some of the following options will change depending on which option you selected above. If an option is mentioned here but does not display on the screen, please move on to the next option. Additionally, the **DHCP** option will display **Enabled** or **Disabled** depending on your selection.



- 5. Enter your Network Storage Private IP.
- 6. Enter your **Gateway**.
- 7. Enter your **Network Mask**.
- 8. Enter your **DNS Servers**, separated by commas with no spaces.
- 9. Enter your Private IP Range.
- 10. Enter your Lease Time Default.
- 11. Enter your **Lease Time Max Value**.
- 12. If you have made changes, select **Update** to save your changes. To discard the changes, select **Cancel**.

Warning!

Switching from Advanced or Custom to Standard will require you to first delete all the VMs. Please do not convert to Advanced or Custom Network Management unless you are certain this setting is needed in your organization.

VIRTUAL FIREWALL

A firewall protects VMs from unauthorized traffic and allows permissible traffic to the VM based upon the defined rules.

Each organization has one firewall. That firewall can be configured to allow and disallow traffic on any virtual machine in the organization.

To access the firewall options:

- 1. Sign in to the Client Portal.
- 2. Open the **Manage** mega menu.
- 3. Click Virtual Firewalls under the Public Cloud section.

Working with Firewall Rules

This screen serves as a list of all your firewall rules and will be necessary when ordering and troubleshooting your firewall rules.

To begin, select an available node from the Select a Node drop-down menu.

Any time you add a new firewall rule, it appears in this list in the order it was created. You'll notice, however, that a Priority column exists on the far left of the list. You need to tell the system in which order to process the firewall rules.

To do this, click **Actions** in the row of the rule you wish to move, then click **Move Up** or **Move Down** at the bottom left side of the list.

Once you've done that, you need to click the **Apply Changes** link at the top of the Firewall Rules List to save your changes.

Facts about Firewall Rules

These general rules apply to the firewall:

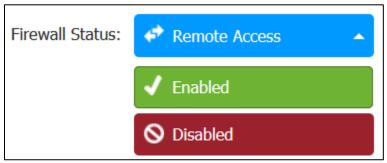
- There is no limit to how many rules you can have.
- If the firewall is off, **ALL** traffic will be allowed access to your VMs.
- Only Active rules are looked at by the firewall. Rules set to Not Active will be ignored.
- When the firewall is off, Active rules are ignored as well.
- **Denies** always have priority over **Allows**. If you have two rules that are identical except for the allow/deny, then deny will be given preference, and traffic will be denied.
- The system has a built-in **DENY ALL** rule that is processed last but does not show up in the list. Once you enable the firewall, you must create "allow" rules to allow traffic to reach your VMs.
- The system has a built-in **load balancer** rule that appears as an icon at the top-right of the Firewall Rules List. This rule is necessary to ensure your load balancer works as expected no matter how many firewall rules exist.

Firewall Functions

Any changes you make on any of the following screens require you to click **Apply Changes** when you return to the Firewall screen after completing the task. Failure to do this will result in the loss of any changes you made.

The following firewall configuration icons display at the top of the screen:

- Add Rule. Use this link to add a new rule to the firewall.
- Select a Node.
- **Firewall Status**. This link displays differently according to the current state of the firewall. Available settings are:



Use **Remote Access** to block all traffic to all VMs except via ports 22 and 3389, and the Console.

The following actions are available by right-clicking a rule in the list:

- **Delete**. Use to delete a rule.
- Modify. Use to make changes to existing rules.
- Move Up/Move Down. Use to move the rule up or down in the list of firewall rules.

ADD RULE

A firewall needs a set of rules to do its job. Each direction tells the firewall what traffic to allow or deny and to which VM to apply that rule. Rules instruct to which ports the traffic goes and what protocols to allow.

When setting up rules, you need to know IP addresses and port numbers for allowing and denying traffic. The IP addresses for your VMs (destinations) are in the drop-down menu.

Here is the list of common port numbers:

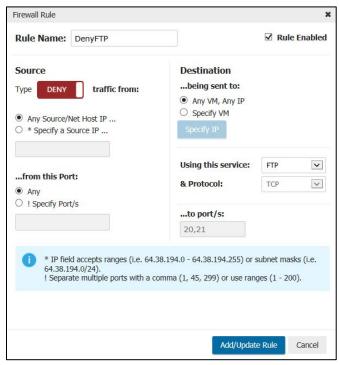
Service Selected	Protocol Allowed	Destination Port
Custom	TCP, UDP	Manual
DNS	TCP, UDP	53
FTP	TCP	20,21
FTPS	TCP	989, 990
HTTP	TCP	80

HTTPS	TCP	443
IMAP	TCP	143
IMAPS	TCP	993
LDAP	TCP	389
MS SQL	TCP	1433, 1434
MySQL	TCP	3306
POP3	TCP	110
POP3S	TCP	995
RDP	TCP	3389
SMTP	TCP	25
SMTPS	TCP	465
SSH	TCP	22

NOTE: No more than 15 ports may be added to any firewall rule's destination or source list.

To add a new rule:

- 1. **Sign in** to the Client Portal.
- 2. Open the Manage mega menu.
- 3. Click the Virtual Firewalls link under the Public Cloud heading.
- 4. Click Add Rule.



- 5. Enter a name for the rule in the **Rule Name** field. Be as descriptive as possible, this list can become extensive.
- 6. If you wish the rule to be active immediately, click to select the **Rule Enabled** checkbox on the right side.

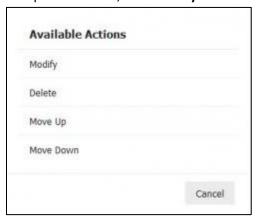
Inactive rules are ignored by the firewall.

- 7. Select a rule **Type** by clicking the slider:
 - **ALLOW**. Select this option if you are creating a rule to allow traffic from outside sources to one of your VMs.
 - **DENY**. Select this option if you are creating a rule to block traffic from outside sources to one of your VMs.
- 8. Select a **Source/Net Host** from the radio buttons:
 - Any Source/Net Host IP. Select this option if you want the rule to apply to any source/net host.
 - Specify a Source IP. Use this option to specify the source. Then, enter the source IP in the text field. Enter an IP Address in the x.x.x.x format, a range of IP addresses formatted without space (x.x.x.1-x.x.x.5), or you can enter a subnet mask formatted x.x.x.x/v.
- 9. Select an option in the next set of radio buttons labeled ...from this Port:
 - Any. Select this option if you want the rule to apply to any source port.
 - **Specify Port/s**. Enter a valid port number from 1 to 65535. Use this option to specify the source, then enter the port number in the provided field. Multiple ports are allowed but make sure to separate port numbers with a comma.
- 10. Select a **Destination** from the **...being sent to** radio button set:
 - Any VM, ANY IP.
 - **Specify VM**. Select this option and click **Specify IP**. Select a Node, a VM, and an IP address from the pop-up wizard. Click **OK** when complete.
- 11. Select a **Service** from the **Using this service** drop-down menu (more information about these services in the **Port Numbers** topic).
- 12. Select a **Protocol** (more information about these protocols in the **Port Numbers** topic).
- 13. Select a **Destination Port** from the drop-down menu:
 - Any. Select this option if you want the rule to apply to any destination port on the VM.
 - **Specify**. Use this option to specify the port, and then enter a port number in the text field. Multiple ports are allowed but make sure to separate port numbers with a comma.
- 14. Enter a port number in the field labeled ...to port/s (more information about these protocols in the Port Numbers topic).
- 15. Click Add/Update Rule.
- 16. Commit the changes immediately by clicking **Apply All Changes**, or you can continue making changes by clicking **Make More Rule Changes**.
- 17. Adjust the priority of your new rule as necessary using **Move Up** and **Move Down** in the **Actions** pop-up menu. Alternatively, you can right-click a rule to open the Available Actions pop-up menu.
- 18. Click **Apply Changes** at the top of the firewall rules list to save the new rules.

MODIFY RULE

To modify an existing rule:

- 1. Sign in to the Client Portal.
- 2. Open the **Manage** mega menu.
- 3. Click the Virtual Firewalls link under the Public Cloud heading.
- 4. Click **Action** in the row of the rule you wish to modify.
- 5. From the available actions drop-down menu, click **Modify**.



- 6. Make the necessary changes and click **Add/Update Rule**. All the settings configured during rule creation can be modified from this screen.
- 7. Click **Apply All Changes** to confirm the modifications.
- 8. Click **Apply Changes** at the top of the firewall rules list to commit the changes.

DELETE RULE

To permanently delete a firewall rule:

- 1. Sign in to the Client Portal.
- 2. Open the **Manage** mega menu.
- 3. Click the Virtual Firewalls link under the Public Cloud heading.
- 4. Click to select the rule you want to modify, then click **Delete Rule**.
- 5. Click **Delete Rule** again to confirm the deletion.
- 6. Click **Commit Changes** on the firewall screen to save the new rules.

ENABLE OR DISABLE THE FIREWALL

Enable

The firewall is disabled on your account by default.

"Deny All" Rule

The Firewall contains a built-in DENY ALL rule, therefore enabling the firewall will deny all access to your VMs immediately if you have not already created rules to allow traffic to your VMs. Because of this, you may want to add and enable rules before enabling the firewall.

To turn the **firewall on**:

- 1. Sign in to the Client Portal.
- 2. Open the **Manage** mega menu.
- 3. Click the Virtual Firewall link under the Public Cloud heading.
- 4. Open the Firewall Status drop-down menu and click **Enabled**.
- 5. Click **Enable Firewall** to confirm your choice.
- 6. Click **Apply Changes** at the top of the Firewall Rules list to commit your changes.
- 7. You will receive a confirmation message.

Disable

NOTE: Disabling the Firewall will **allow ALL traffic** access to your VMs.

To turn the **firewall off**:

- 1. **Sign in** to the Client Portal.
- 2. Open the **Manage** mega menu.
- 3. Click the Virtual Firewall link under the Public Cloud heading.
- 4. Open the Firewall Status drop-down menu and click **Disabled**.
- 5. Click **Disable Firewall** to confirm your choice.
- 6. Click **Apply Changes** at the top of the Firewall Rules list to commit your changes.
- 7. You will receive a confirmation message.

REMOTE ACCESS

Placing a firewall in a **Remote Access Only** state prevents all traffic except access to port 22 (SSH) and port 3389 (RDP). Access from the Console is still enabled.

To place the firewall in Remote Access Only mode:

- 1. Sign in to the Client Portal.
- 2. Open the **Manage** mega menu.
- 3. Click Virtual Firewalls under the Public Cloud heading.
- 4. Open the Firewall Status drop-down menu and choose **Remote Access**.



- 5. Click **Confirm** to confirm your choice to put the firewall in the Remote Access mode.
- 6. Click **Apply Changes** at the top of the Firewall Rules list to commit the changes.

To turn off remote access, simply Enable or Disable the firewall.

Remote Access

Remote Access can be enabled by the system without any interaction from any user if a VM is made publicly accessible and your firewall is turned off. Users with admin rights can set the firewall back to off after the change has been made.

CLOUD UNIT PRICING

To reach the Cloud Unit Pricing Screen:

- 1. **Sign in** to Client Portal.
- 2. Open the Manage mega menu.
- 3. Select Cloud Unit Pricing.

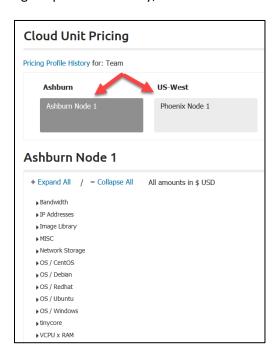
Here you will find a detailed report of pricing per unit.

Click the **Pricing Profile History** link to view various Pricing Profiles for your account.

How to Check Cloud Unit Pricing?

To check Cloud Unit Pricing:

- Choose a node on the Cloud Unit Pricing screen by clicking a node icon. A pricing list for all cloud units will open.
- To check the pricing of every unit in the offer, click Expand All.
- To inspect the pricing of specific units only, click the desired categories from the list.



All amounts are expressed in US dollars (USD).

ALLOCATION LIMITS

The Cloud Allocation Limits screen shows you the limits of your physical resources.

To reach this page:

- 1. Sign in to the Client Portal.
- 2. Open the Manage mega menu.
- 3. Click Allocation Limits under the Public Cloud heading.

The usage is graphically represented with three status bars:

- 1. **#VCPUs**. The total number of virtual CPU cores that may be used by VMs. Usage is represented graphically but also expressed in numbers.
- 2. Memory (RAM). The total amount of RAM memory that may be used by VMs.
- 3. **VM Storage**. The total amount of storage room (expressed in gigabytes) that may be used by VMs.



NOTE: Network Storage of the node is declared, but without a usage bar.

VIRTUAL PRIVATE DATA CENTER

PhoenixNAP VPDC is a VMware® vCloud based service with rapid deployment capabilities. Customers can check their VPDC capabilities using the Client Portal.

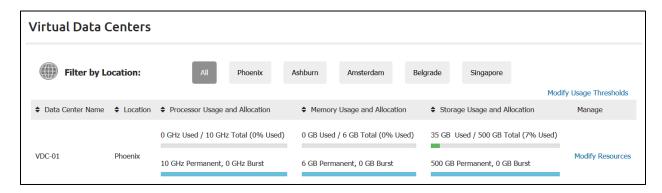
VPDC Page

To reach the VPDC page:

- 1. Sign in to the Client Portal.
- 2. Open the Manage mega menu.
- 3. Click Virtual Data Centers under the Virtual Private Data Center heading.

Use the Filter by Location feature to select one of the available locations:

- 1. All
- 2. Phoenix, AZ
- 3. Ashburn, VA
- 4. Amsterdam, NE
- 5. Belgrade, Serbia
- 6. Singapore



You will be notified if you don't have a Virtual Data Center established at a particular location.



VPDC Listing

The VPDC listing will display the following information:

- Data Center Name.
- Location.

Processor

- Used/Total. The top bar displays used processor resources and the total amount of your processor resources at a given data center.
- Permanent/Burst. The bottom bar displays the amount of your permanent processor resources as opposed to the total amount of your burst processor resources.

Memory.

- Used/Total. The top bar displays used memory resources and the total amount of your memory resource at a given data center.
- Permanent/Burst. The bottom bar displays the amount of your permanent memory resources as opposed to the total amount of your memory resources.

Storage.

- Used/Total. The top bar displays used storage resources and the total amount of your storage resource at a given data center.
- o **Permanent/Burst.** The bottom bar displays the amount of your permanent storage resources as opposed to the total amount of your storage resources.

Modify Resource Usage Thresholds

The usage of your VPDC resources is illustrated with a progress bar. The top bars display the Used vs. Total amount of a resource, while the bottom bars display your Permanent vs. Burst resources. The usage bar is green by default until usage reaches a certain threshold:

- At 80% used quota, the progress bar changes orange (Warning threshold).
- At 95% used quota, the progress bar changes red (Critical threshold).

To set up different thresholds:

- 1. Click the **Modify Usage Thresholds** link in the upper-right corner of the page.
- 2. Select a virtual data center from the drop-down menu or select to create a *Custom Threshold Profile* that will be applied to all your VPDCs.
- 3. Modify threshold values as desired.
- 4. Click **Update** to confirm the changes you made.



To reset the thresholds, click the **Reset thresholds to system default values** link at the bottom of the popup window.

Modify Resources

- 1. Click the **Modify Resources** link under the *Manage* column.
- 2. Use the arrow items to increase or decrease a resource.
- 3. Click **Update** to confirm the changes.

Note: Permanent resource allocation is associated with a contractual obligation. You may not be able to decrease these resources below a certain value.

ADDITIONAL CLOUD SERVICES

CLOUD BACKUP FOR VEEAM

To reach the Cloud Backup for Veeam:

- 1. Sign in to the Client Portal.
- 2. Open the Manage mega menu.
- 3. Click Cloud Backup for Veeam under the Additional Cloud Services heading.

No Backup Repository?

If you have no backup services powered by Veeam yet or would like to establish another repository, please contact Support by dialing 1.855.330.1509

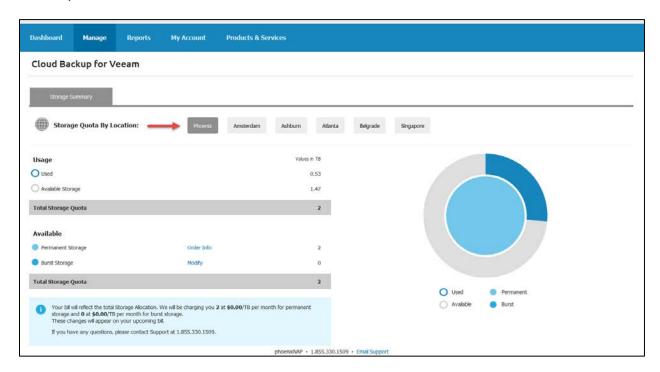
To learn how to **add phoenixNAP** as a service provider within the **Veeam Backup and Replication console** click <u>here</u>.

The Cloud Backup for the Veeam page show you the **Storage Summary** tab with the usage information.

Three (3) locations support Veeam Cloud Connect Backup at the moment:

- Phoenix, Arizona
- Amsterdam, Netherlands
- Ashburn, Virginia
- Atlanta, Georgia
- Singapore, Southeast Asia

Select the location where you have a repository established, and you will be presented with the storage summary for that location.



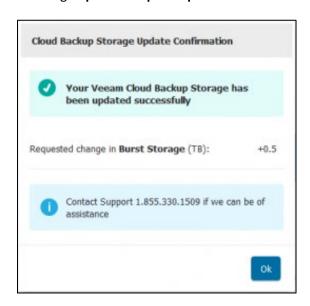
Modifying Storage Allocation

To increase or decrease your backup storage:

- 1. Select a location.
- 2. Click **Modify** located next to **Burst Storage** to increase your storage quota. To increase Permanent Storage, you need to contact your seller. Click **Order Info** for more information.

- 3. **Enter a value** in the numeric field or use the spinner next to the field to increase storage. Click **Reset** if you want to set the number to the original value. The pie chart on the right reflects the changes as you make them.
- 4. Click **Update Storage** to confirm the changes you made.

Note that increasing Burst Storage up to 10TB per request occurs automatically.



When increasing your storage quota more than 10TB at a time, you will receive a notification via email when your new storage space is put into effect.

Permanent and Burst Storage

- **Permanent storage** is what you contractually request (10 TB/month minimum). It is always at your disposal, and it cannot be modified as swiftly as Burst storage. (Permanent storage is associated with a contractual obligation.)
- **Burst storage** can be added swiftly and removed on demand, and it is more expensive. However, burst storage can be acquired monthly, making it the best solution when you need more backup storage as quickly as possible.

OBJECT STORAGE

PhoenixNAP's Object Storage Service has been fully integrated with PNCP.

To open the Object Storage Service console:

- 1. Click Manage.
- 2. Select the **Object Storage** link under the *Combined Functions* heading.

Object Storage Service Login link: https://objectstorage.phoenixnap.com/console/login.htm

To find out more about our latest offering, Object Storage Service, follow these links:

- Object Storage Service FAQ
- Object Storage Service

REPORTS

Reports allow you to view a summary of actions, usage, and allocations in an easily searchable format. The following reports are available to you in the Client Portal:

- Action Log. The action log displays a list of actions users perform, such as creating VMs or adding a new user. The list is customizable by date range and can be filtered using a variety of options.
- Allocation. The allocation report displays the allocated hardware as well as the percentage of your allocations currently in use.
- Billing. The billing report provides you with a summary of your bill. It shows how many
 consumable items you used during the billing cycle (VCPUs, Operating Systems, Backups, IP
 addresses, and other items you are billed for using). The report also itemizes the costs for
 those consumables.
- Usage. The Usage Report displays what is currently in use by each VM, including RAM, VCPUs,
 OS, Backup, and the number of IPs.

Sorting the Reports

The reports are sorted by date/time stamp and arranged in ascending order, oldest first. At this time, there is no way to sort the columns further within the report, but you may export the report and manipulate the data in a third-party program.

Exporting the Reports

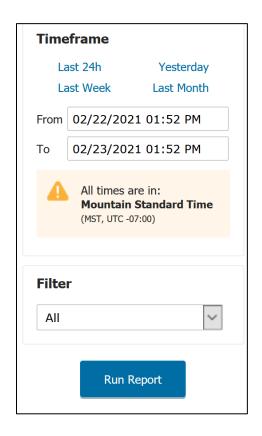
Most reports can be exported so that you can access them later. After running a report, click the **Export Report** icon at the top-right section of the report and follow the prompts to save an Excel or CSV file to your computer.

ACTION LOG

The action log provides a list of actions that have happened on an account, including VM creations, deletions, and modifications, pricing updates, user creation/modification, and other actions.

To view the action log:

- 1. **Sign in** to the Client Portal.
- 2. Click the Reports link.
- 3. Select Action Log.



- 4. In the **Timeframe** box on the left, choose from the following:
 - Last 24h. Click this link to run the report for a 24-hour timeframe.
 - Yesterday. Click this link to run the report for the prior day, beginning at 12:00:01 a.m. and ending at midnight, Mountain Standard Time (Arizona). This is the default selection.
 - Last Week. Click this link to run the report for the prior week, beginning at 12:00:01

 a.m. Sunday and ending at 11:59:59 p.m. on Saturday, Mountain Standard Time
 (Arizona).
 - Last Month. Click this link to run the report for the prior month, beginning at 12:00:01 a.m. on the first day of the month and ending at 11:59:59 p.m. on the last day of the month, Mountain Standard Time (Arizona).
 - Alternatively, you may enter a custom date range in the From and To fields using the format MM/DD/YYYY HH:MM [AM/PM].
- 5. Use the **Filter** to limit the displayed actions, choose from these options:
 - All. Displays all actions that match the settings chosen in previous fields.
 - My Account did to other accounts. Displays all actions that match the settings chosen
 in previous fields AND are actions that a user from your own account performed on
 another account (not your own).

- Other accounts did to my account. Displays all actions that match the settings chosen
 in previous fields AND are actions that a user from another account performed on
 your own account.
- Actions I did to my own account. Displays all actions that match the settings chosen in previous fields AND are actions that you performed on your own account.
- 7. Click Run Report.

Actions

Some of the actions that can be seen in this report are:

- New Account Created
- New Domain Added
- Account Profile Modified
- New User Created
- User Profile Modified
- User Deactivated
- User Reactivated
- Account Suspended
- Account Deactivated
- Account Reactivated
- New Pricing Profile Created
- Pricing Profile Assigned to Org
- Resource Allocation Changed
- Ownership Transferred
- VM Powered Off Guest OS (User)
- VM Powered Off Guest OS (System)
- VM Powered Off Forced (User)
- VM Powered Off Forced (System)
- VM Powered On (User)
- VM Powered On (System)
- New CSS File Uploaded
- VM Created
- VM Modified VCPU, RAM, or Storage
- Public IP Address Added to VM
- Public IP Address Removed From VM
- Firewall Turned On
- Firewall Turned Off
- Firewall Set to Remote Access Only

- Firewall Rules Modified
- **VM Rebooted** (Only shows up if a VM is rebooted from the Client Portal Portal, not if performed by logging in to the VM to reboot.)
- VM Deleted
- VM Cloned
- VM Configuration Created
- VM Consoled
- Load Balancer Pool Created
- Load Balancer Pool Modified
- Load Balancer Pool Deleted
- Reserved IP Removed
- Reserved IP Added
- Image Node Transfer
- Image Library Upload Failure
- Export to Image Library Successful
- Image Library Upload Successful

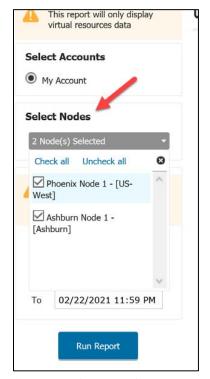
NOTE: Some of the actions will offer additional data reports. If there is a **View Report** link next to an action, click the link to view the information.

ALLOCATION

The Allocation screen shows the amount of current and past hardware resources assigned to you.

To view the allocation report:

- 1. Sign in to the Client Portal.
- 2. Click the Reports link.
- 3. In the drop-down menu, select Allocation.
- 4. Select the Node(s) you wish to run a report for.



- 5. In the **Timeframe** box on the left, choose from the following:
 - Last 24h. Click this link to run the report for a 24-hour timeframe.
 - **Yesterday**. Click this link to run the report for the prior day, beginning at 12:00:01 a.m. and ending at midnight, Mountain Standard Time (Arizona). This is the default selection.
 - Last Week. Click this link to run the report for the prior week, beginning at 12:00:01 a.m. Sunday and ending at 11:59:59 p.m. on Saturday, Mountain Standard Time (Arizona).
 - Last Month. Click this link to run the report for the prior month, beginning at 12:00:01 a.m. on the first day of the month and ending at 11:59:59 p.m. on the last day of the month, Mountain Standard Time (Arizona).
 - Alternatively, you may enter a custom date range in the **From** and **To** fields using the format **MM/DD/YYYY HH:MM** [AM/PM].
- 6. Click Run Report.

NOTE: This report only displays virtual resources' data.

Columns

The following data columns are available in this report:

- Node Name
- Node ID
- **VM**. The name of the VM the dataset refers to. The VM name is a hot link; click it to expand the dataset for the VM and to populate the rest of the columns.
- From and To. These columns indicate the date/time range the VM dataset refers to. This dataset begins and ends when changes are made to the VM, and only displays data existing

within the data range selected when running the report. The **From** column indicates the date a dataset status began. The **To** column indicates the end date for the dataset's status.

- Power
- VCPU
- RAM (GB)
- Primary Storage (GB)
- Secondary Storage (GB)
- OS
- Public IPs

BILLING

To open the billing screen:

- 1. Sign in to the Client Portal.
- 2. Click the Reports link.
- 3. In the drop-down menu, select Billing.
- 4. Click to select the **Nodes** to report on.



- 5. In the **Timeframe** box on the left, choose from the following:
 - Last 24h. Click this link to run the report for a 24-hour timeframe.
 - **Yesterday**. Click this link to run the report for the prior day, beginning at 12:00:01 a.m. and ending at midnight, Mountain Standard Time (Arizona). This is the default selection.
 - Last Week. Click this link to run the report for the prior week, beginning at 12:00:01 a.m. Sunday and ending at 11:59:59 p.m. on Saturday, Mountain Standard Time (Arizona).

- Last Month. Click this link to run the report for the prior month, beginning at 12:00:01 a.m. on the first day of the month and ending at 11:59:59 p.m. on the last day of the month, Mountain Standard Time (Arizona).
- Alternatively, you may enter a custom date range in the From and To fields using the format MM/DD/YYYY HH:MM [AM/PM]
- 7. Click Run Report.

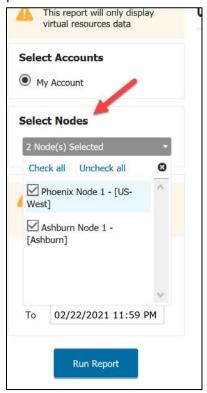
NOTE: This report usually updates every two hours. If you run a report and the timeframe ends within the last two hours, your report may be slightly off, usually just a matter of a few cents. We recommend running the billing report for a timeframe at least two hours after that timeframe ends.

USAGE

The Usage report is designed to give you an overview of the VMs in use during a date range. The report provide a summary of each VM's usage of billable services such as Power, VCPU, RAM, and Operating Systems.

To access the Usage Report:

- 1. Sign in to the Client Portal.
- 2. Click the Reports tab.
- 3. In the drop-down menu, select Usage.
- 4. Click to select the **Nodes** to report on.



- 5. In the **Timeframe** box on the left, choose from the following:
 - Last 24h. Click this link to run the report for a 24-hour timeframe.
 - Yesterday. Click this link to run the report for the prior day, beginning at 12:00:01 a.m. and ending at midnight, Mountain Standard Time (Arizona). This is the default selection.
 - Last Week. Click this link to run the report for the prior week, beginning at 12:00:01

 a.m. Sunday and ending at 11:59:59 p.m. on Saturday, Mountain Standard Time
 (Arizona).
 - Last Month. Click this link to run the report for the prior month, beginning at 12:00:01 a.m. on the first day of the month and ending at 11:59:59 p.m. on the last day of the month, Mountain Standard Time (Arizona).
 - Alternatively, you may enter a custom date range in the **From** and **To** fields using the format **MM/DD/YYYY HH:MM** [AM/PM].

Columns

The only populated column upon the first completed report displays will be the VM column. The rest of the columns only display after you click one of the VMs in the list to expand it, as there can be more than one row of data per VM, broken out by date range.

The following data columns are available in this report:

- Node Name
- Node ID
- VM. The name of the VM the dataset refers to. The VM name is a hot link; click it to expand the dataset for the VM and to populate the rest of the columns.
- **From** and **To**. These columns indicate the date/time range the VM dataset refers to. This dataset begins and ends when changes are made to the VM, and only displays data existing within the data range selected when running the report. The **From** column indicates the date a dataset status began. The **To** column indicates the end date for the dataset's status.
- Power
- VCPU
- RAM (GB)
- Storage (GB)
- OS
- Public IPs

MY ACCOUNT

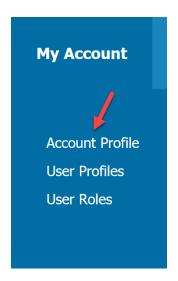
This section of the Client Portal provides information on the administrative tools used to maintain your account and any accounts under you.

ACCOUNT PROFILE

The Account Profile displays the account details for your organization and provides access to editing functionality for some of the information.

To access the Account Profile:

- 1. **Sign in** to the Client Portal.
- 2. Open the My Account mega menu.
- 3. Click Account Profile.



Included Information

Most of the following information can be modified by clicking the **Edit** icon.

- Current Status. Click the Explain Status link for a more in-depth explanation.
- Network Connectivity.
- Account ID. The ID assigned to your organization by the system. This cannot be edited.
- Client Assigned ID. If a Client Assigned ID exists, it will display here.
- Name (Account). The name of the organization as it appears in the system's official records.
- Account Email.



- **Type**. The account type, end user in this case.
- Primary Contact Name.
- **Primary Email**. Usually, the same as account email.
- Primary Phone.
- Technical Contact Name. The name of the person in charge of the technical details of the
 account.
- Technical Contact Phone. The contact phone of the person in charge of the technical details
 of the account.
- Technical Contact Email.
- Client Of. The name of your provider. By default, your provider will be phoenixNAP.
- **Sign Up Date**. The date your service was first activated.
- Password Phrase or Ubersmith Password Phrase. The password phrase that has been set up for the account. This is used for support purposes and should be given to your vendor whenever you make contact by phone, email, or chat.
- Application Key. Empty if you are not using external API.
- Shared Secret. Empty if you are not using external API
- 'Create VM' Email. If you choose Yes when a new VM is created, a notification email will be sent. Click No if you wish to disable this option.

Click **Update** when you are done making the changes or click **Reset** to revert the changes.

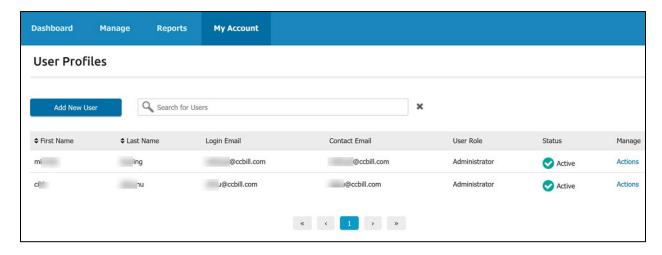
USER PROFILES

The User Profiles area lets you create new admin users, modify existing admin users, and change the passwords of existing admin users within your organization.

To access the User Profiles area of the admin:

- 1. **Sign in** to the Client Portal.
- 2. Open the My Account mega menu.
- 3. Click **User Profiles**.

When the screen loads, the list shows all existing users.



The data contains the following columns:

- First Name
- Last Name
- Login Email
- Contact Email
- User Role. (One of the predefined RBAC user roles.)
- Status. Active or Not Active.
- Manage. 'Actions' link.

NOTE: Users are automatically set to **Not Active** after 6 months of inactivity (not signing in) and will be prevented from signing in.

Available Actions

Add a New User. Allows you to create a new user for your organization from scratch.

By clicking the **Actions** link under the Manage column, three actions are available:

- **Modify User**. Allows you to make changes to an existing user profile, such as changing the contact email address or user role.
- **Reset Password**. Allows you to change the password for the user.
- **View Assigned Roles and Permissions.** For more information on user roles and permissions, refer to the User Roles section of the user manual.



ADD NEW USER

To add a new user:

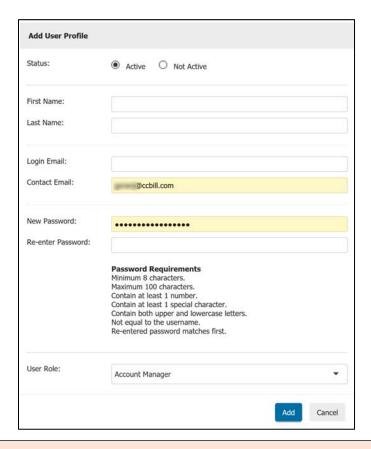
- 1. Sign in to the Client Portal.
- 2. Open the My Account mega menu.
- 3. Click User Profiles.
- 4. Click the **Add New User** button.

Add New User

- 5. Insert the necessary information in the available fields:
 - Status. Active or Not Active.
 - First Name / Last Name.
 - Login Email. Enter the user's login email.
 - Contact Email. Enter the contact email address of the user.
 - New Password. Enter the password the user will use to sign in to the phoenixNAP Client Portal.
 - Re-enter Password. Re-enter the password the user will use to sign in to the phoenixNAP Client Portal.
 - User Role: Select one of six (6) predefined user roles.

NOTE: The login email cannot be changed later.

6. Click OK to save the new user information.



NOTE: You will need to contact Support for your Username and Password; for security purposes, this information is not sent in the welcome email.

MODIFY USER

To modify a user:

- 1. Sign in to the Client Portal.
- 2. Click My Account > User Profiles.
- 3. On the User Profiles screen, **locate the user** requiring an update.
- 4. Click the **Actions** link under the Manage heading.
- 5. Click Modify User.
- 6. Make any necessary changes to the available fields. Login email and User ID cannot be changed.
- 7. Click **Update** to commit your changes.

RESET PASSWORD

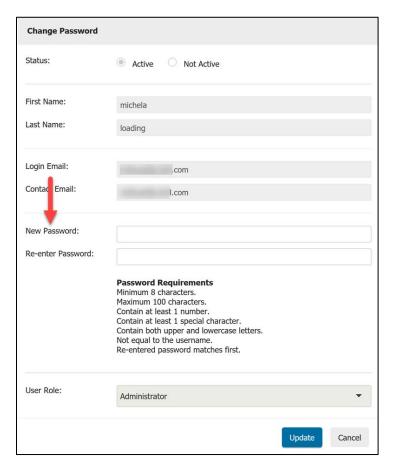
To reset your password:

- 1. Sign in to the Client Portal.
- 2. Open the **My Account** mega menu.

- 3. Click the **User Profiles**.
- 4. On the **User Profiles** screen, locate the user requiring a password reset.
- 5. Click the Actions link under the Manage heading.
- 6. Click Reset Password.



7. Type in the new password and confirm it by re-typing it in the **Re-enter Password** field.



8. Click **Update** to apply the changes.

USER ROLES

The **Client Portal User Roles** feature is a sophisticated Role-Based Access Control (RBAC) system used to regulate access* to PNCP users. When appropriately used, RBAC enables you to carry out complex access schemes for your users.

To reach the **User Roles** page:

- 1. Log in to the Client Portal.
- 2. Open the My Account mega menu.
- 3. Click User Roles.

*Access is defined as the user's ability to perform specific view, create and/or modify tasks in the Client Portal.

What is RBAC?

Role-Based Access Control (RBAC) is a secure method of restricting access to authorized users. It is a useful tool that allows organizations to have greater control over their PNCP account through the Segregation of Duties (SoD). It ensures that only appropriate users can see and access functions they are experts in and prohibits users from accessing parts of the system that are not under their job role. The **Account Manager** assigns users to specific roles, where each role defines permission-levels. This ensures that every user has access according to their level of knowledge and authority.

Roles, Permissions, and Users

- Permissions are assigned to roles. Click Actions > View Permissions to see a list of permissions associated with a specific role.
- Users are assigned to roles. Click Actions > View Assigned Users to see a list of users assigned to a specific role.

What is RBAC useful for?

RBAC is useful when you need to:

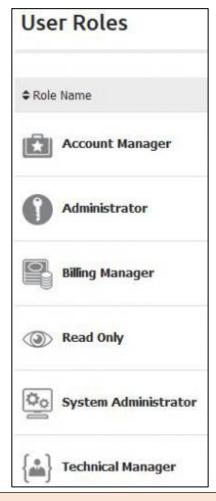
- 1. Restrict the number of users with write permissions.
- 2. Assign access to users according to their position in your organization.
- 3. Configure permissions that reflect the level of knowledge of each user.

NOTE: Every user is required to have an assigned role. One (1) role can be assigned per user.

Available User Roles

Each predefined PNCP role is purposely built so that the most common business roles are immediately catered for.

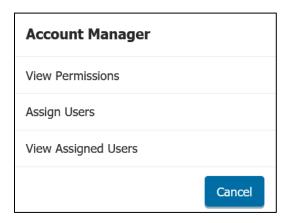
- Account Manager. Grants access for the user to change account-wide settings, create and modify accounts, and manage users.
- Administrator. A privileged role that provides a "superuser" level of permissions. It is also automatically granted to the first user created on a new account.
- Billing Manager. A role that provides access to billing and payment features and reports as well as some basic read-only access to the account's PNAP services infrastructure.
- Read Only. Grants access to view all features in the account but not to make any changes or create any new resources.
- System Administrator. This role is designed for users
 who manage existing VMs or Bare Metal infrastructure,
 allowing them to console into the devices, reboot them,
 and similar. It does not allow the user to create or delete
 any devices.
- Technical Manager. A role that grants access to technical features such as creating VMs and Bare Metal servers, setting Public Cloud firewall rules and Load Balancer pools, and similar. Technical Managers can also perform all the actions of a System Administrator.



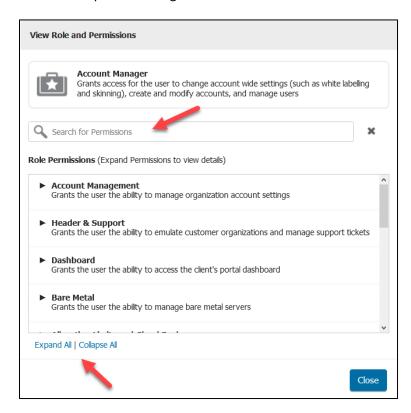
NOTE: Please note that each user can only be assigned ONE role. It is NOT possible to assign several roles to one user.

Manage Users

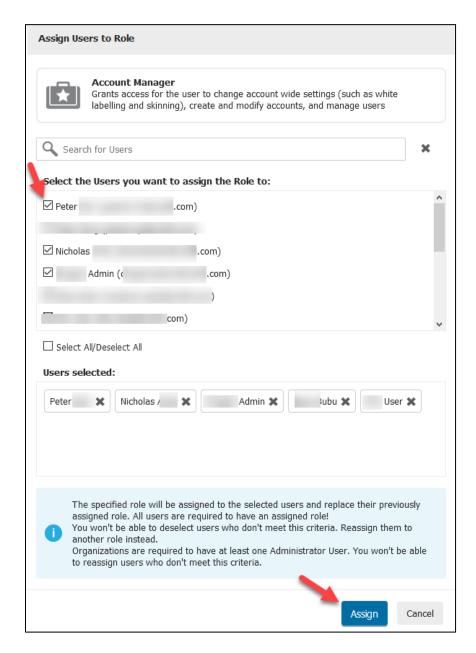
To manage users and roles, click the **Actions** link in the row of the role you want to manage. Possible **Actions** include:



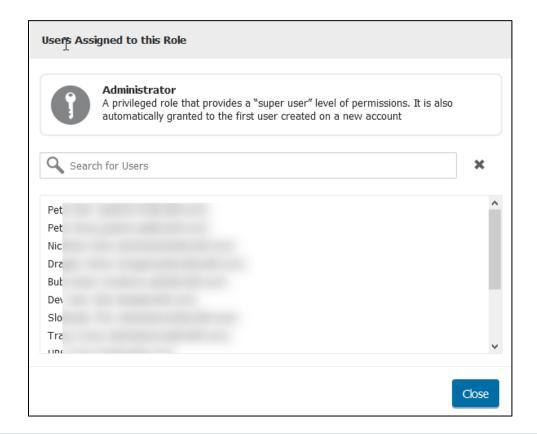
• **View Permissions.** Select to get a list of permissions associated with each role. You can search for permissions or expand all categories.



Assign Users. Select users to be assigned to a role. Click Assign after you have selected the
users.



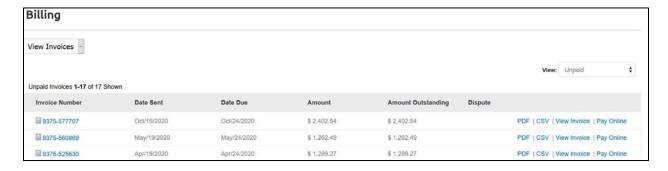
• **View Assigned Users.** View the list of users assigned to a role. Use the search field to look up a user.



BILLING (INVOICES)

To reach the billing screen:

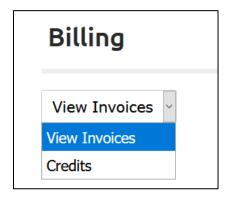
- 1. Sign in to the Client Portal.
- 2. Open the My Account mega menu.
- 3. Click Billing.



To change the sorting of the list, click the column name.

List

On the billing screen, you can view a list of your invoices and credits. From the drop-down menu in the upper-left corner, choose **View Invoices** or **Credits**.



Invoices

Filter the list of Invoices by opening the drop-down menu in the upper-right corner. You can select:

- Unpaid
- Paid
- All

Credits

Filter the list of Credits by opening the drop-down menu in the upper-right corner, from which you can select:

- Current Credits
- All Credits

CHECK BALANCE

To view your balance:

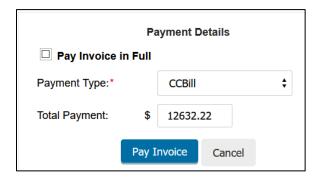
- 1. Sign in to the Client Portal.
- 2. Open the My Account mega menu.
- 3. Click Billing.
- 4. Click **View Invoice** in the row of the invoice you want to inspect. Alternatively, you can click the invoice number. This action opens a new window with the invoice summary.
 - **PDF**. Download the invoice as a PDF file.
 - CSV. Download the invoice as a CSV file.

UNPAID INVOICES

To view your unpaid invoices and make a payment, follow these steps:

- 1. On the billing screen, choose **Unpaid** from the drop-down menu at the top right, labeled View.
- 2. Locate the invoice you wish to pay.

- 3. Click **Pay Online** in the last column of the invoice. You can also view the invoice and pay from that screen.
- 4. Choose Payment Type from the drop-down menu:
 - CCBill. Enter your total payment amount or click the Pay Invoice in Full checkbox. Click
 Pay Invoice.
 - Select CCBill if you do not have any credit card information stored in the system prior to the December 2016 billing update.
 - Select Pay with Existing Card if you want to pay with a credit card used prior to the December 2016 billing update.
 - PayPal. Enter your total payment amount or click the Pay Invoice in Full checkbox.
 Click Pay Invoice. Follow your normal PayPal procedures to complete a payment using this method.

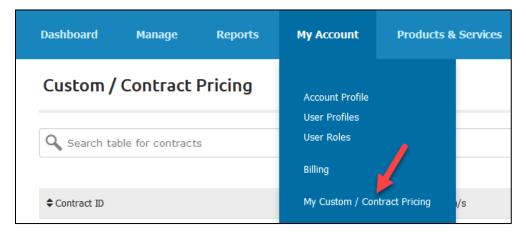


MY CUSTOM / CONTRACT PRICING

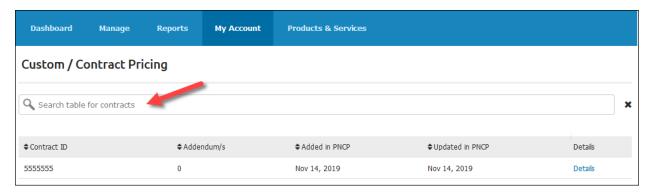
The **Custom / Contract Pricing** section is a searchable table of your existing contracts. This page also includes any addendums to your contracts.

To access the My Custom / Contract Pricing page:

- 1. Log in to the Client Portal.
- 2. Navigate to the **My Account** mega menu.
- 3. Select My Custom / Contract Pricing.



4. The page loads a **table** with your contracts. Use the **search bar** to locate a contract if your list is extensive.



The table contains the following columns:

- Contract ID. A unique ID of your contract.
- Addendum/s. The number of addendums attached to your contract.
- Added in PNCP. The date when the contract was added to the Client Portal.
- Updated in PNCP. The date when the contract was updated in the Client Portal.
- **Details.** The link that loads the Contract Details page with the detailed information for the selected contract.

VIEW CONTRACT DETAILS

To view pricing details for a contract:

- 1. Log in to the Client Portal.
- 2. Navigate to the My Account mega menu.
- 3. Select My Custom / Contract Pricing.
- 4. Click the **Details** link in the last column for the server in question.



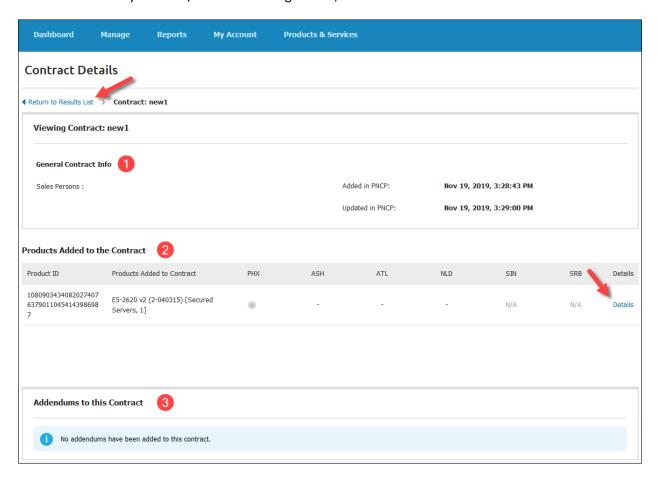
The **Custom / Contract Pricing** page loads. It contains the following sections:

1. **General Contract Info.** This section shows the Sales Persons' names as well as the contract creation and update date and time.

- Products Added to the Contract. This table lists all products with data center locations for the
 contract. The *Details* link takes you to the <u>Location Management</u> screen, where you can see
 additional location information for the selected product.
- 3. **Addendums to this Contract.** If there are addendums to your contract, this section will show them. You can view an addendum by clicking the link.



To return to the My Custom / Contract Pricing screen, click the **Return to Results List** link.

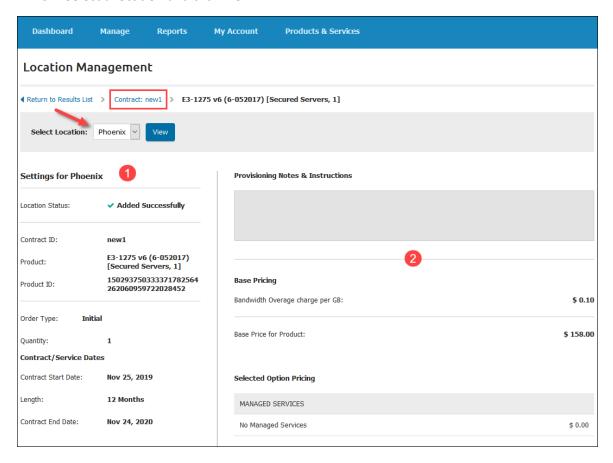


LOCATION MANAGEMENT

To view the location and more details for a product on a contract:

- 1. Log in to the Client Portal.
- 2. Navigate to the **My Account** mega menu.

- 3. Select My Custom / Contract Pricing.
- 4. Click the **Details** link in the last column for the contract in question.
- 5. Click **Details** again for the server you want to load location details.
- 6. Select a **location** and click **View**.



The Location Management screen contains the following sections:

- 1. **Settings.** This screen displays order and contract details for the selected location, as well as the status of the deployment.
- 2. **Pricing.** This section shows the base pricing and the prices for the selected options for a contracted location. The box at the top shows if there are any notes or instructions.

You can navigate back to the contract details by using the breadcrumb navigation as marked on the image above.

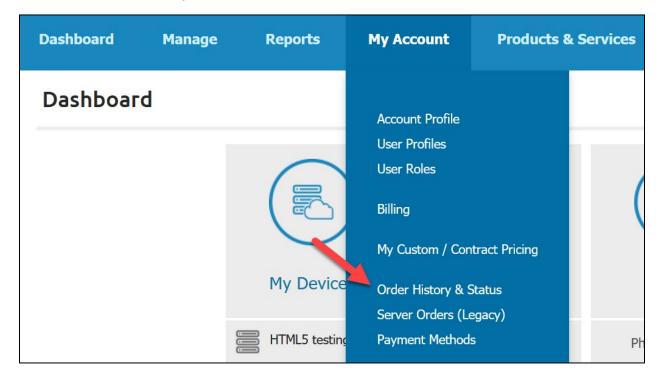
ORDER HISTORY & STATUS

The **Order History & Deployment Status** section provides a list of all orders and their status. The list shows both contracts and month-to-month purchases.

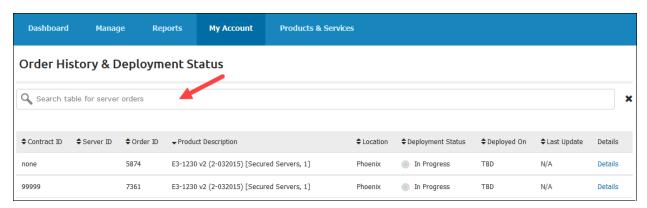
To load the **Order History & Status** page:

1. Log in to the Client Portal.

- 2. Navigate to the **My Account** mega menu.
- 3. Select Order History & Status.



- 4. The page shows the table with your past and current products. Use the **search bar** to locate a server if your list is extensive.
 - Note that **every unique server is listed separately**, even if ordered on the same contract or form.



The table contains the basic details of your order:

- Contract ID. Shown only for contracted orders. Not available for month-to-month purchases.
- **Server ID.** A value assigned automatically once the server is deployed. Not available while the order is in progress.
- Order ID. A unique ID of your order.
- **Product Description.** The description of the product you ordered.
- **Location.** The location of a data center where your server is deployed.

- **Deployment Status.** There are three possible statuses:
 - In Progress represents the server for which the order is still in process: pending deployment, waiting for payment, etc.)
 - o **Active** represents a deployed and actively used server.
 - o **Cancelled** represents a server for which the order has been cancelled due to a declined or unsuccessful payment, failed installation, etc.
- **Deployed On.** The date when your server is successfully deployed. The column displays TBD for orders in progress.
- Last Update. The date of the last update for the entry.
- **Details.** The link that loads the Order Details page with the detailed information for the selected product.

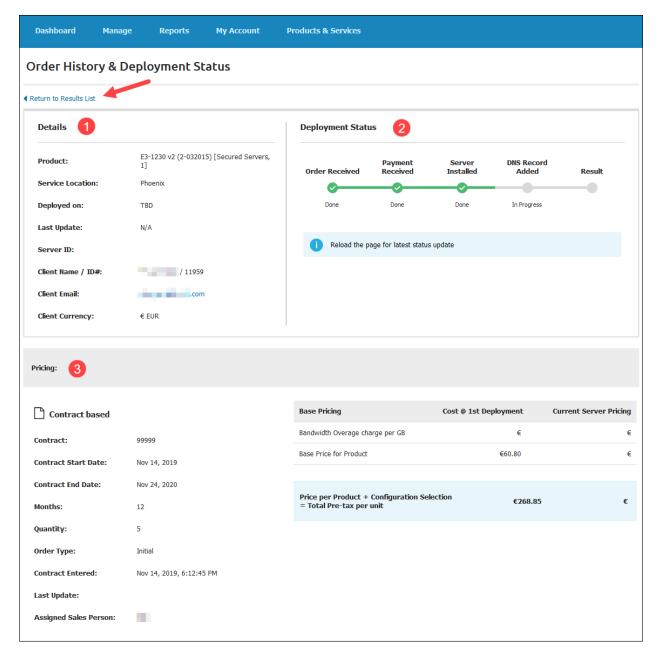
VIEW ORDER DETAILS

To view order details for a server:

- 1. Log in to the Client Portal.
- 2. Navigate to the **My Account** mega menu.
- 3. Select **Order History & Status**.
- 4. Click the **Details** link in the last column for the server in question.



The **Order Details** page loads. It contains the following sections:



- 1. **Details.** This section of the page shows general details regarding the product in question, such as description, location, deployed and last update dates, client name and email, etc.
- 2. **Deployment Status.** The status is represented in the form of a progress bar. When a step is completed, a green checkmark appears. Please reload the page to check for status updates.
- 3. **Pricing.** The pricing section displays all pricing details for the selected product. Depending on the order type, the left side shows either contract details or order details. If any discounts have been applied, this table shows that as well.
 - On the right side, the product options at the time of purchase are listed along with the pricing information.

To return to the Order History & Deployment status screen, click the Return to Results List link.

SERVER ORDERS (LEGACY)

The Server Orders screen allows you to view a list of your server orders.

To reach the Server Orders (Legacy) page:

- 1. Sign in to the Client Portal.
- 2. Open the My Account mega menu.
- 3. Select Server Orders (Legacy).

The list will show the following columns:

- Order Id #. Click the order number to get the order details.
- **Total**. The total amount paid in dollars.
- Order Time.
- Recent Activity.

PAYMENT METHODS

To view or edit Payment Methods:

- 1. **Sign in** to the Client Portal.
- 2. Open the My Account mega menu.
- 3. Click Payment Methods.

You will find a drop-down menu at the upper-left side of the screen. There are two payment options:

- CCBill
- PayPal Subscriptions

CCBILL

As a trusted leader in global payment processing since 1998, CCBill processes more than a billion dollars in transactions each year and is committed to delivering innovative solutions, reliable problem-solving techniques, and a myriad of payment options.

Features of CCBill

- Supported Payment Cards: Visa, MasterCard, Discover, and JCB
- Available payment Options Specific for Europe: SEPA Direct Debit, Giropay, and iDEAL
- Available Currencies: USD, CAD, EUR, GBP, AUD, JPY
- Additional Payment Options: CCBill Pay

NOTE: Using CCBill does not incur any additional charges.

If you select to pay with CCBill, you are redirected to a secure payment form where you can choose among the many different payment options in the offer, including credit cards and CCBill Pay. This consumer tool enables you to store up to 25 payment options.

Switching between Multiple Credit Cards

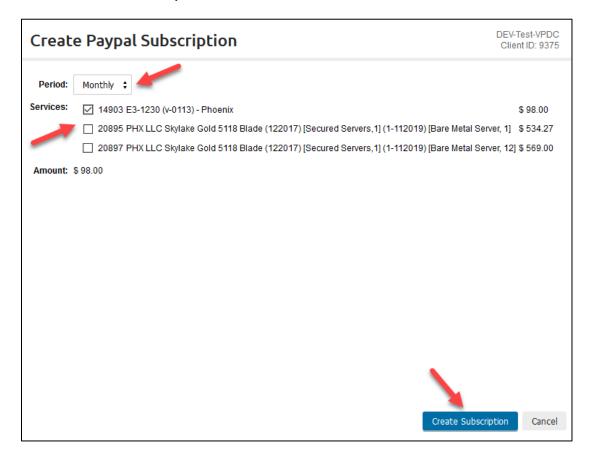
If you are using multiple credit cards, please use the **Buy with CCBill** option. We advise you to create a **CCBill Pay™** account to store up to 25 payment cards. Select the **Pay & Create** option to create a CCBill Pay™ account and store the payment card option used to make the transaction.

PAYPAL SUBSCRIPTIONS

- 1. Sign in to the Client Portal.
- 2. Click My Account > Payment Methods.
- 3. From the drop-down menu, choose PayPal Subscriptions.

Add a PayPal Subscription

- 1. On the Payment Methods screen, click the Create PayPal Subscription button.
- 2. Choose a **billing period** and **service**.
- 3. Click Create Subscription.



Your browser should automatically take you to the **Billing Information** screen, but if it doesn't, click **Create Subscription** one more time.

- 4. You MUST have a **PayPal account** for this purchase. You have two options:
 - Use an existing PayPal account. Enter your email and password and click Log In. Follow regular PayPal procedures to complete the payment using this method.
 - Create a PayPal account. Provide the required information and click Continue.

SUPPORT TICKETS

To check the status of your submitted tickets:

- 1. **Sign in** to the Client Portal.
- 2. Open the **My Account** mega menu.
- 3. Select Support Tickets.

Alternatively, you can view your submitted tickets on the Client Portal landing page, or by clicking All Tickets in the Support drop-down menu.

Filter

Filter out tickets in the **View** drop-down menu:

- Open/On Hold Tickets
- Closed Tickets
- All Tickets

Search for a Ticket

To search for a specific ticket:

- Go to the Support Tickets page.
- Click the **Search for a Ticket** link.
- In the first drop-down menu, choose **Ticket Type**:
 - Open/On Hold Tickets
 - Open Tickets
 - On Hold Tickets
 - Closed Tickets
 - o All Tickets
- In the second drop-down menu, choose a specifier.
 - Any Field
 - o Ticket ID
 - Subject
 - Author
 - Body

- Provide specifier detail (e.g., If you chose **Ticket ID** in the second drop-down menu, enter the ID of a ticket you are searching for).
- Click Search.



Ticket List

The list displays the information about the ticket.

- Ticket #
- Subject
- Author. The user who submitted the ticket.
- **Opened**. Time and date when the ticket was created.
- **Updated**. Here you can check for any ticket status updates.
- Priority
- **Assigned**. The name of the person assigned to process your request.
- **Department**. The department that will deal with the ticket.
- Type. Open, On Hold, or Closed.

Click the **Ticket #** or **Subject** link to view more details for the ticket. In this window, you can click any the available hotlink, such as:

- **Post a Followup**. Select this option if you have more information about the problem that the Support may have need.
- Reply/Reply & Quote. Do this to post a reply to comments or messages associated with the ticket.
- Reload Ticket. Use this option to refresh the ticket and view more current data.
- **Ticket Event Log**. This option will show you a detailed list of every event associated with the ticket.

SERVICES LISTING

The Services Listing section shows all the services ever provided to you.

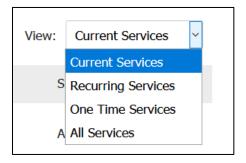
To reach this screen:

1. Sign in to the Client Portal.

- 2. Open the My Account mega menu.
- 3. Click Services Listing.

Filter

You may filter services by choosing a type of service from the **View** drop-down menu in the upper-right corner of the screen.



Choose from:

- Current Services
- Recurring Services
- One Time Services
- All Services

Screen Info

On the Services Listing screen, you can find:

- 1. Service ID
- 2. Service Description
- 3. Service Plan
- 4. **Current Renewal Period**. Duration of service. After the expiration date, the service must be renewed to remain active.
- 5. Cost
- 6. Payment Method
- 7. Status. Active or Inactive.

Child Services

Click the Plus sign (if any) next to a Service ID to see sub-services.

2-FACTOR AUTHENTICATION

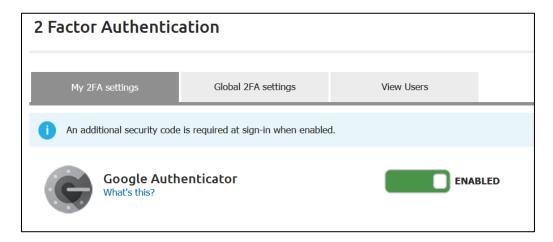
Enabling 2-factor authentication adds another layer of security to your Client Portal account. When enabled, in addition to providing your username and password, you need to supply a security code to gain access. We will send you the verification code you need to enter.

When 2-factor authentication is not enabled, just log in as you normally would.

Google Authenticator

Google Authenticator offers users a two-step authentication procedure using one-time passcodes. To enable Google Authenticator 2-Factor Authentication:

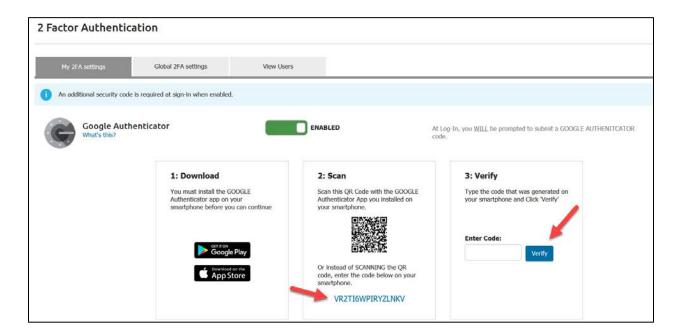
- 1. Sign in to the Client Portal.
- 2. Open the My Account mega menu.
- 3. Click **2 Factor Authentication**.
- 4. See the switch next to Google Authenticator. Toggle the switch to **Enabled** to activate 2-Factor Authentication.



Installing the Google Authenticator App

Note: you must install the Google Authenticator app on your smartphone before you continue.

- 1. Depending on your smartphone's OS, download the app from one of the two following links:
 - Android 4.4 or later
 - iOS 5.0 or later
- 2. When you first enable 2-Factor Authentication, we will provide you with a QR code. Scan the code with the Google Authenticator App you installed on your smartphone OR enter the numerical code we provide below the QR code.
- 3. The Google Authenticator App generated a code. Enter the code in the appropriate field and click **Verify**.



NOTE: Please note that after three (3) incorrect entries, the toggle switch returns to Not Enabled and you need to start the process again.

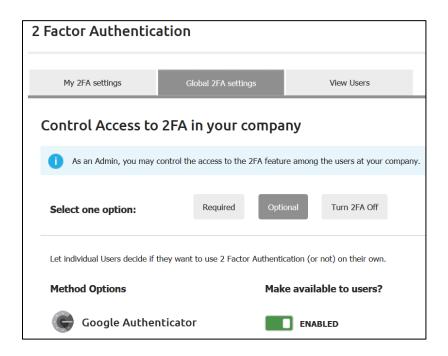
Logging in with Google 2-Factor Authentication Enabled

- 1. Navigate to the login page.
- 2. Enter your Email and Password and click Sign In.
- 3. You will be prompted to enter the Google Authenticator verification code and complete the sign in.

Control Access to 2-Factor Authentication

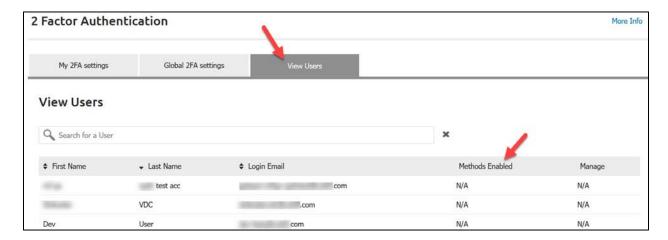
As an Administrator, you can control access to the 2-Factor Authentication feature among the users at your company. You may select to:

- Require Users use 2-factor auth.
- Enable 2-factor auth as an optional feature.
- Turn off 2-factor auth.



View Users

Select the **View Users** tab to see a list of account users and whether they have any 2-factor authentication methods enabled.



PRODUCTS AND SERVICES

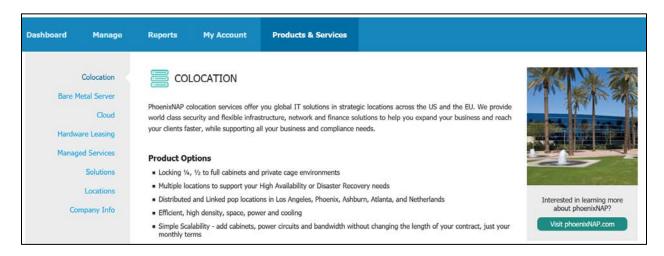
The **Products & Services** tab offers information about phoenixNAP and its wide array of services.

To reach the **Products & Services** screen:

- 1. Sign in to the Client Portal.
- 2. Click the Products & Services tab.

Here, you will find the following information:

- Colocation
- Bare Metal Server
- Cloud
- Hardware Leasing
- Managed Services
- Solutions
- Locations
- Company Info



To keep up with the latest offerings, make sure to check **Products & Services** in the phoenixNAP Client Portal regularly.

GLOSSARY

2-Factor Authentication

An additional layer of security. This feature is powered by Google and, when enabled, after supplying your username and password, you are required to supply a security code to gain access.

Activated

Used to refer to the status of users. Activated users can log into the UI and use the portal's functions. The opposite is Deactivated.

Allocation Limits

The limit of your physical resources (VCPUs, Storage, RAM, etc.)

Backup

An option in the user interface that indicates that the VM should be backed up in case of failure.

Billing Frequency

A specific day of the month or a period in days representing the billing period and frequency.

Clone

To make an exact copy of a VM that belongs to the same organization. Cloning will copy not only the VM's settings (VCPU, memory, etc.) but also all the installed software and data on the source VM.

Cluster

A group of VMs under one vCenter installation.

Console

Use the console link to access your device to perform administrative tasks, install software, or perform other tasks. The console is a particularly useful tool if your server appears unresponsive.

Deactivated

Used to refer to the status of users. Deactivated users can't log into the UI and can't use the functions there. The opposite is Activated.

DNS (Domain Name System)

DNS servers maintain a directory of domain names and translate them to IP addresses.

Domain Extension

The notation at the end of a web address that specifies an Internet category or a country code.

Domain Verification

The process of verifying the ownership of newly added domains. As the domain admin, you should receive a verification email and confirm the verification process. Alternatively, you may verify domain ownership via DNS string.

Firewall

A networking device that sits between a server and the rest of the Internet that decides what network traffic to allow through and what to block based on the rules configured within it.

Typically, a firewall is used to only allow access to IP addresses and ports that must be used for a server to accomplish its task. Traffic going to any port not specifically allowed by a firewall is blocked.

Firewall Rules

A user-configurable set of policies that dictate what traffic the firewall allows to pass through and what traffic to block.

Forward DNS

A forward DNS lookup will, when supplied with a domain name (for example, google.com), return the IP address for the supplied domain.

Fully Qualified Domain Name (FQDN)

FQDN is the complete domain name for a specific computer or host on the Internet. It consists of two parts: the hostname and the domain name. For example, *mymail.example.com*. The hostname is *mymail*, which is located within the domain *example.com*.

Health Check

Health Checks ensure that the Load Balancer distributes new requests only to servers that are operating and ready to receive them. A health check can return values *Healthy* or *Unhealthy*.

Host

In terms of virtual machines, the host is the physical machine on which the virtual machine is living. One host can support many virtual machines.

Load Balancer

A networking device that can distribute workloads among multiple VM's or physical servers.

Load Balancer Pool

A collection of IP addresses that have been identified as possible targets in a load-balanced system. Each entry in the pool is an IP address that the load balancer can choose to use to support traffic going to the load balancer IP for that particular pool. The IP address does not have to be on the cloud; it can be an IP for a cloud VM, an EC2 VM, or even a physical server somewhere.

Memory (RAM)

RAM stands for Random Access Memory and is the memory or information storage in a computer that is used to store running programs and data.

Name Server

A name server is a web server that has DNS software installed. It is a server that is managed by a web host, specifically designated for managing the domain names that are associated with all the hosting provider's accounts.

Powered Off

Refers to a VM that has been powered down but is still provisioned and, in most cases, able to be powered back on. Powered off VMs are billed at a different rate than powered on VMs.

Powered On

Refers to a VM that is booted up and running and able to be accessed. In most cases, a Powered on VM can be powered off. Powered on VMs are billed at a different rate than Powered Off VMs.

Private Cloud

Refers to the virtualized compute and storage resources on an infrastructure dedicated to one user or company.

Private IP

Refers to connectivity into a private extranet network, which, by its design, emulates the functioning of the Internet. We assign one private IP to every VM automatically and customers are allowed to access their VMs even if they do not want to make them accessible to the public Internet.

PTR Record

PTR records resolve an IP address to a fully qualified domain name (FQDN). They are also called Reverse DNS records. PTR records are mainly used to check if the server name is associated with the IP address from where the connection was initiated.

Public Cloud

Refers to the virtualized compute and/or storage resources on an infrastructure shared between multiple users or companies.

Public IP

Public IP addresses are addresses assigned to computers and devices so that they can find each other on the Internet.

Read-Only Permissions

One of two permission levels for users in the UI. Read-Only users can perform read actions.

Reboot

Immediately power off and power on a VM. Reboots can be triggered for VMs from the UI.

Remote Access

Virtual firewalls can be placed in a *Remote Access Only* state, where all traffic is blocked, except access port 22 (SSH) and port 3389 (RDP). Access from the console remains enabled.

Reserved IP Address

Also known as a "leased IP address". It is an IP that was formerly assigned to a Virtual Machine belonging to a customer but was designated to be kept for use on future VMs during the deprovisioning of the VM.

Reverse DNS

A reverse DNS lookup is used to look up the domain name for a supplied IP address. This can be a useful feature to anyone, but it is practical for those running an outgoing mail server as it can check a sender's address.

Suspend

A function that places a user, or a group of users, into a temporary "read-only" mode to resolve potential billing, fraud, or other issues. While suspended, the users can't modify or create any products or configurations. The previous set up continues to function as is.

Tags

Tags are used to sort your devices into manageable categories and containers. They have no effect on how your devices run or how they are billed. They simply make it easier for you to filter and manage your devices.

TTL

TTL stands for Time to Live and it is a numerical value of how long a DNS record will be cached before it needs to be refreshed. The default value is 3600 seconds.

VCPU

A virtual CPU assigned to a VM.

Virtual Firewall

A virtual firewall behaves like a standard firewall and provides the same security features.

Virtual Machine (VM)

A virtual computer/server. A VM always has four main configurable elements — VCPU, memory, storage, and operating system. A VM allows other optional services to be used with it (firewall rules, load balancer pools, public IP addresses, and a backup option).

VM Configuration

A stored recallable set of configurations for a VM (VCPU, memory, etc.) that a given user can pick when creating a new VM to quickly fill out the form and spin up a machine.

VM Template

A template created and modified by a client (installed certain software, set up certain configurations, etc.) in order to create a VM that is tailored to serve a specific purpose. The client can then use this customized VM as a base to create a template to be used to quickly deploy a new VM with the identical custom configuration.

VMWare Tools

VMWare Tools is an optional set of utilities that enhances the performance of a virtual machine's guest operating system and improves the management of a virtual machine.

VPDC

Virtual Private Data Center (VPDC) is a custom virtualized hosting environment based on VMware that blends shared and dedicated resources.