VSkyPoint Administration Portal Guide

Document Revision: v1.1

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1 Introduction

VSkyPoint is designed to run as a Virtual Machine that provides secure, centrally-managed, fully-personalized desktop services on the Promise hyper-converged VSkyCube system. The VSkyPoint Administration Portal is the configuration and management mechanism for the VSkyPoint VDI (Virtual Desktop Infrastructure) solution, providing VSkyPoint administrators/operators a single interface from which they can configure and manage users and their desktops. The Administration Portal offers the following benefits:

- **Comprehensive Resource Reports and Information**
  The Administrative Portal's intuitive, menu-driven interface provides a comprehensive overview of available resources and existing configurations to provide administrative personnel the context they need to help them create users, define user rules, allocate computing resources, customize storage and manage usage.
- **Well Defined, Repeatable Resource Provisioning.**
  Logical group and rule-based provisioning helps administrators quickly customize desktops that are suitable for their use cases, and apply them across their organizations, while preserving the flexibility to tailor resources for single users or special needs.

VSkyPoint is built on top of VSkyCube virtualization architecture and distributed Software-Defined Storage Controller (SDSC) technology, providing:

- **Simple, Cost-Effective Scaling of Performance and Storage Capacity**
  VSkyCube provides true pay-as-you grow scale-out architecture, providing simple scaling from deployments as small as one physical node to many tens of nodes. Processing power and network bandwidth is added with each deployed node, with overall performance scaling linearly with each additional node. Storage capacity scales from the terabyte range all the way to multiple petabyte deployments.
- **Extreme High Availability and Resilience**
  The VSkyCube architecture is designed at each level to provide resiliency and help ensure system availability at all times.
  - Automatically triggered self-healing of data block level corruption.
  - Hard-drive health monitoring and checking to fend against drive failure
  - Network RAID (or RAIN) at the node level to protect from single-point failures.
- **Software-Defined and Application-Driven Usage Model**

  The VSkyCube SDSC design was motivated by the need to provide a true software-defined and application-driven usage model. Specifically, storage is created at the time an application is launched. Furthermore, the application provisions the storage based on its needs in terms of capacity, performance, data protection, and other attributes like caching and tiering.

2 Quick Start

The VSkyPoint application can be quickly created on the VSkyCube by using the VSkyView Application Wizard. A brief overview of this process can be found below. More detailed information can be found in your VSkyCube and VSkyView Quick Start and User Guides.

2.1 Creating a VSkyPoint Application

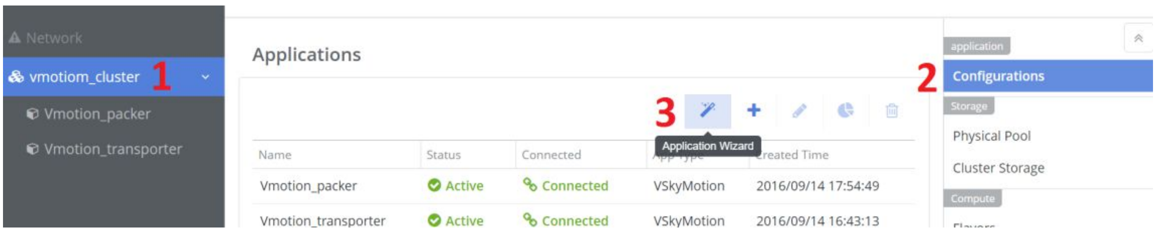
2.1.1 Before You Begin

Please note that port 80, 8888, 7777 must be open on firewall to ensure proper function. Before beginning please upload the VSkyPoint image to the target VSkyCube.

2.1.2 Starting the Application Wizard

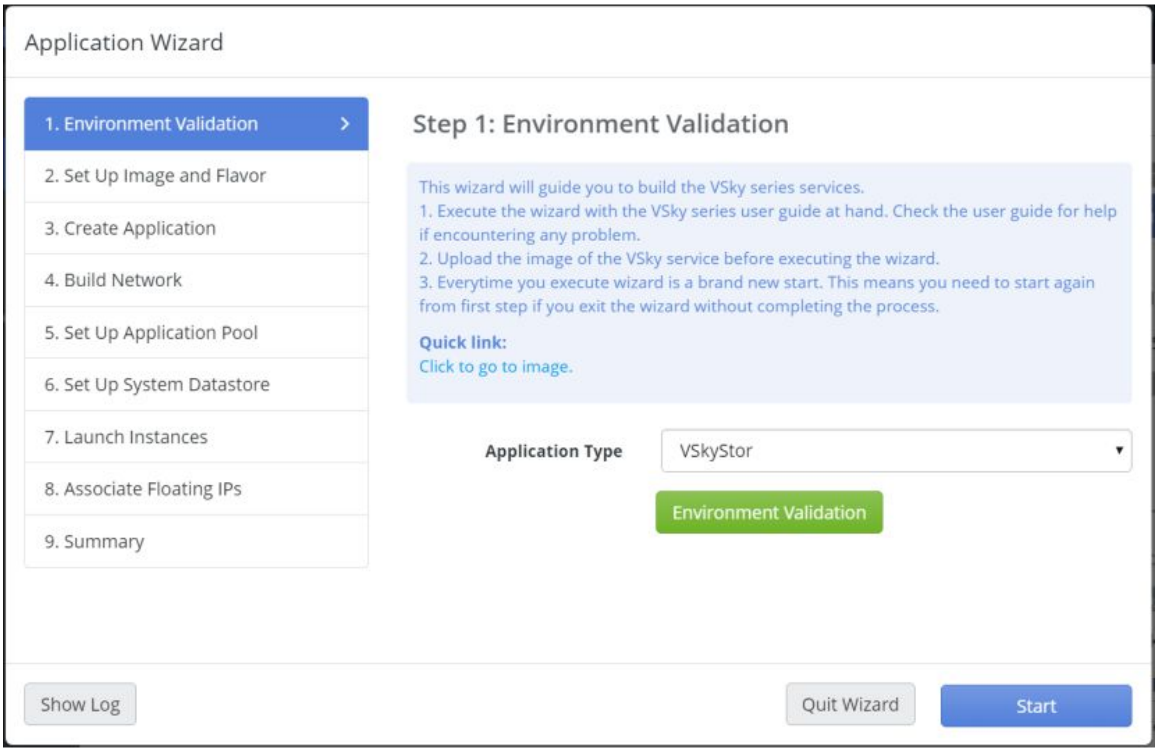
In the VSkyView management portal:

1. Select the target for installation
2. Click **Configurations** *(2)*
3. Click the **Application Wizard** *(3)* icon. The wizard will begin guidance through the installation procedure.



2.1.3 **Using the Application Wizard**

The Application Wizard contains steps to validate the environment then install, launch and provision the VSkyPoint Application. The descriptions below only give a brief overview of the steps. For more detail, please consult the VSkyCube and VSkyView Quick Start and User Guides.



1. **Environment Validation**

   This portion of the wizard allows users to automatically check that the system requirements are met for running VSkyPoint.

   - **Application Type** - Select **VSkyPoint**
   - Click **Environment Validation**. If no issues are identified click **Start** to begin setup

2. **Set Up Image and Flavor**

   This portion of the wizard allows users to specify the VSkyPoint Image and the type of virtual machine it will run on.

   - **Image -** Choose the previously uploaded VSkyPoint image file.
   - **Instance Count -** currently VSkyPoint only supports a single instance.
   - **Flavor -** Choose the instance flavor that fits the intended application. Resources used can be changed after deployment by "resizing" the instance.

3. **Create Application**
   - **Name -** Enter a name for the instance
   - **Type –** Make sure that **VSkyPoint** is selected.

4. **Build Network**
    - **Internal Network -** Configures the local network inside of the cluster.
    - **External Network -** Configures the external network for users to access the service.
    - **Allocation IP Pools -** Specifies the IP ranges over which system will automatically assign to virtual machines and devices.
5. **Set Up Application Pool**
   This step sets up a storage quota for the VSkyPoint (and thus users' data volumes) can be set here. Storage size can be extended after deployment.
6. **Set Up System Datastore**
   Create individual data-stores within the storage quota for the VSkyPoint users to access as their data volume.
7. **Launch Instance**

   Once the previous steps are completed, this step launches the virtual machine for VSkyPoint. This step may take a couple of minutes.
8. **Associate Floating IP**

   Once the Virtual Machine is launched, this step associates an external IP to the instance so users can access it.
9. **Summary**

   Once all the steps have been completed, a summary of the entire process will be provided in this step.

2.2 Manually Launching VSkyPoint on VSkyCube

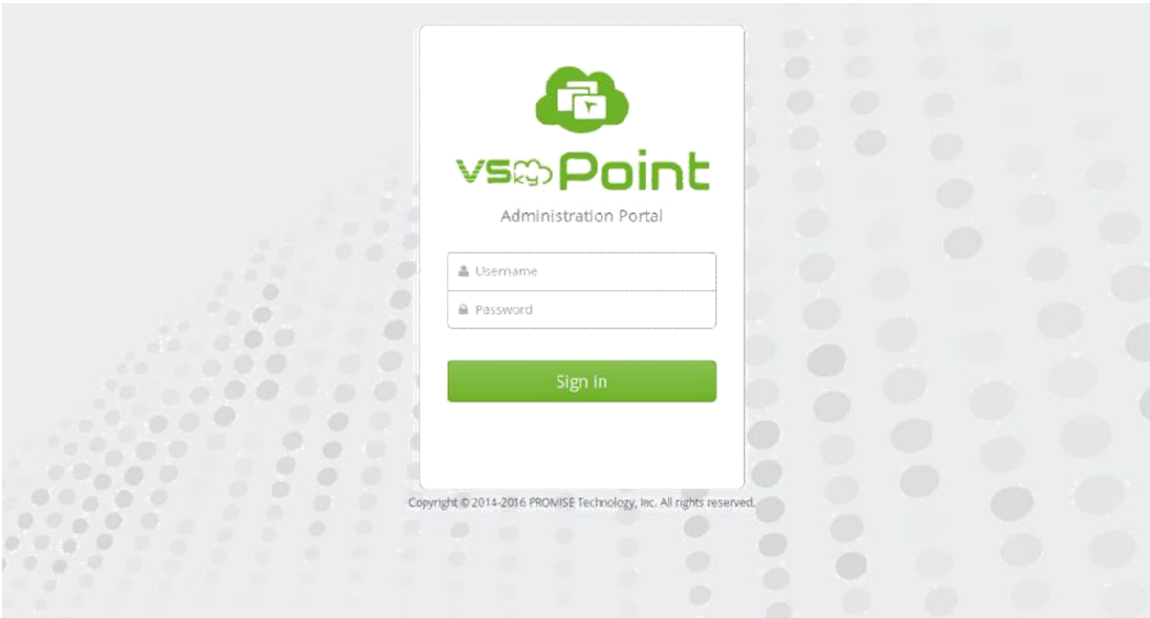
A VSkyPoint instance can also be manually launched without the aid of the wizard. The basic steps to perform this are below:

1. Create the VSkyPoint type application by adding it manually.
2. Upload the VSkyPoint software image.
3. Create the application pool and system-type datastore.
4. Create the external and internal networks.
5. Edit the security group rules.
6. Launch the VSkyPoint instance.
7. Associate the floating IP to the instance.

3 Usage

3.1 Logging onto System

The Administration portal will be available at the http://<VSkyPoint Floating IP>/admin



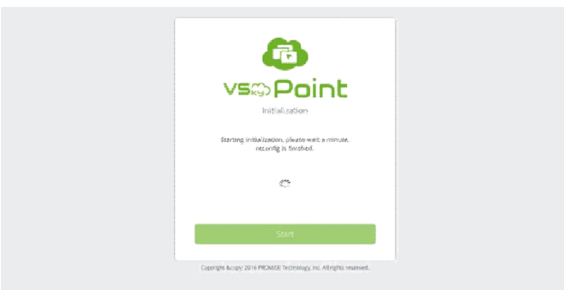
Default initial username and password are: **Admin/ Admin**

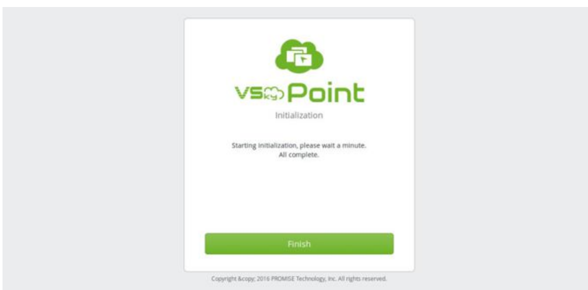
3.1.1 Initialization

A one-time initialization screen will appear the first time a user visits the Administration Portal. The main purpose of the initialization process is to apply configuration and create the tokens necessary for the VSkyPoint application to run.

Follow the following two steps to initialize portal:

1. Click the ***Start*** button. Initialization of VSkyPoint instance will begin.





2. Once the initialization is complete, the ***Finish*** button will become available. Clicking the button will bring up the login screen.

3.2 Home Page Overview

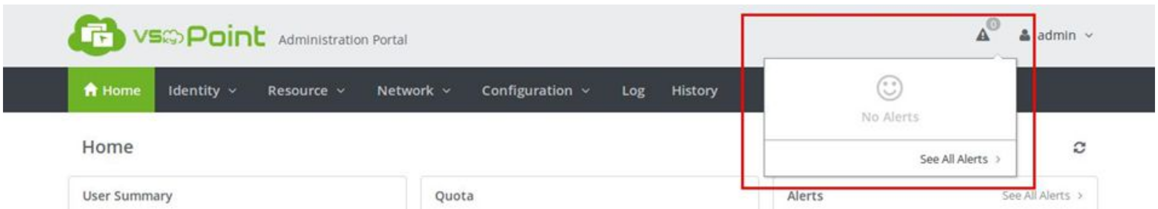
The Home page is the default landing page once you have logged in. The home page is split into a few logical sections:

3.2.1 Alert/ Account Configuration

The top bar of the VSkyPoint Administration Portal GUI remains consistent across contexts. On the top right corner of this area, there are two main functional blocks:

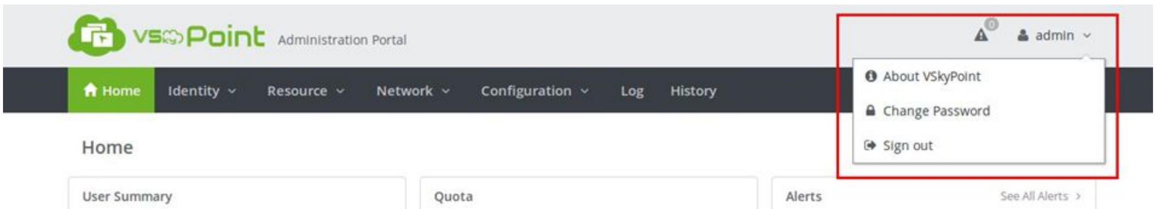
Alert Area

The warning triangle icon will highlight when the administrator receives an alert message. The icon also has a badge indicating the number of unread/unchecked alerts. Clicking on the Alert icon brings up a popup with the latest alerts. Click ***See All Alerts>*** to access the list of alerts.



Account Configuration Point

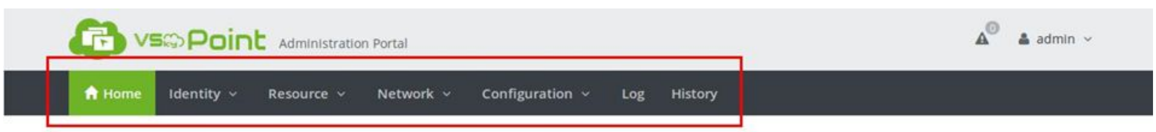
The name of the user currently logged into the portal will appear to the right of the alert icon. Clicking the down carat beside the username will Dropdown menu beside account contains the following items:



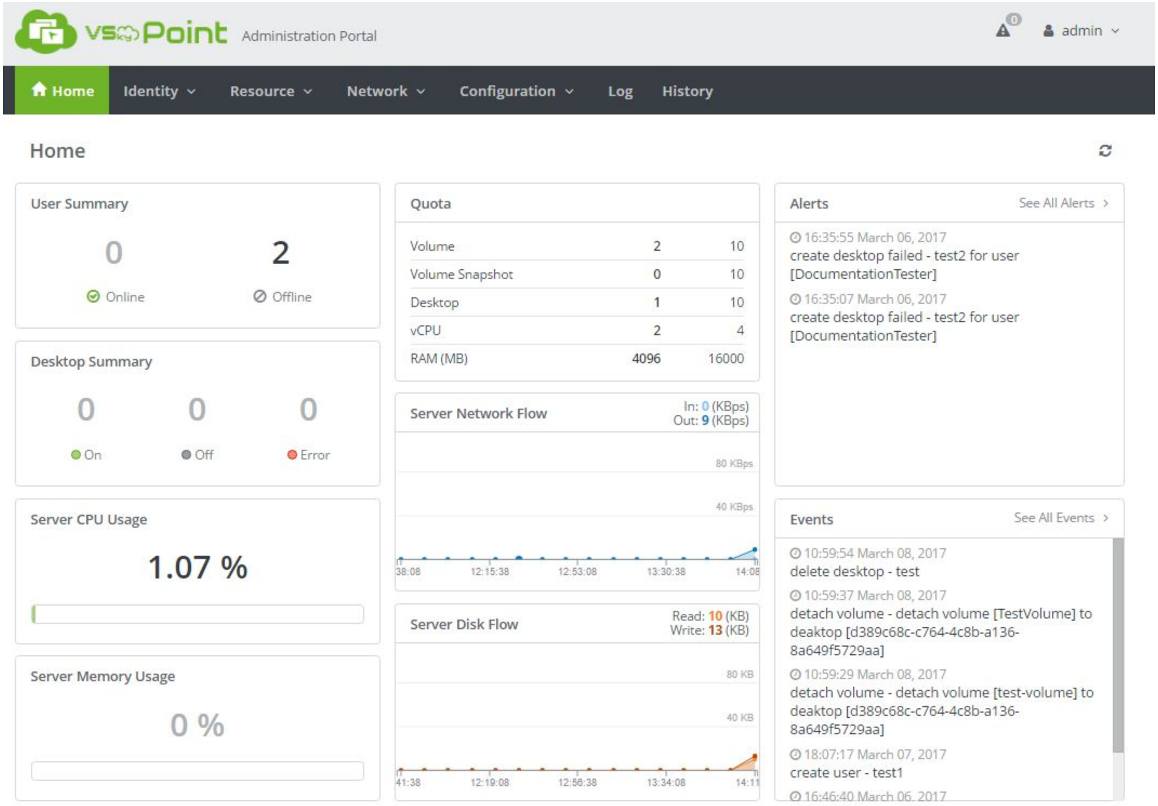
- ***About VSkyPoint*** - Shows the portal version
- ***Change Password*** – Allows the user to update their password
- ***Sign out –*** Signs the user out of the portal.

3.2.2 Navigation Bar

- The Navigation bar organizes the functions of the portals into a few logical sections, which are described in more detail in the later portions of this manual.



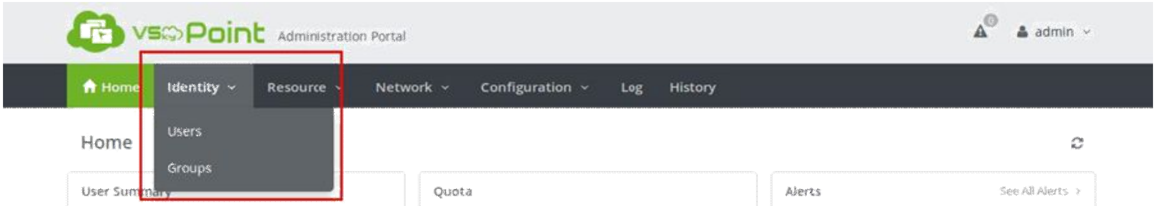
3.2.3 **Resource Overview**



The Home page provides a comprehensive overview of the VSkyPoint Application resource status. The overview is split into the following sections:

- User Summary – The total number of online and offline users.
- Desktop Summary – The number of Desktops that are running, shutdown (but still taking up virtualized resources) or are in an error state.
- Server CPU Usage – Percentage of compute resources left on the VSkyPoint Instance.
- Server Memory Usage – Percentage of Instance memory that has been allocated to desktops.
- Quota – A list of important resources. The first column is the total amount of resources that have been committed; the second column is the total available to this instance of VSkyPoint.
    - Volume – The number of User-Volumes
    - Volume Snapshot – The number of User Volume snapshots
    - Desktop – The number of Virtualized Desktops
    - vCPU – The number of Virtual CPUs
    - RAM (MB)– The total amount of RAM memory
- Server Network flow – Total 10 minute interval bandwidth in and out of the VSkyPoint instance
- Server Disk Flow – Total 10 minute interval disk read/write volume of the VSkyPoint instance.
- Alerts – Error and high priority information
- Events – A running log of events on the device

4 Identity - User/Group Configuration



The Identity section of the portal deals with the details of the users and user-groups. This section is split into two portions

Users

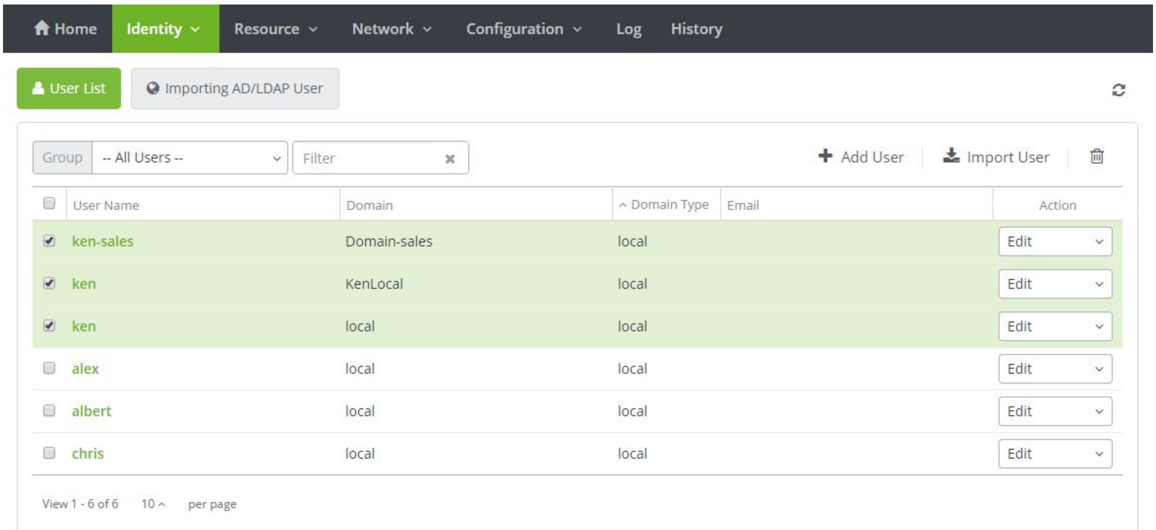
In this section, administrators will be able to define the accounts which are able to access the VSkyPoint service**.**

Groups

In this section, administrator will be able to define groups which control how approved accounts can interact with the system.

4.1 Users

To access the **Users** context, click ***Identity > Users***. This will bring up the following menu:



4.1.1 User List

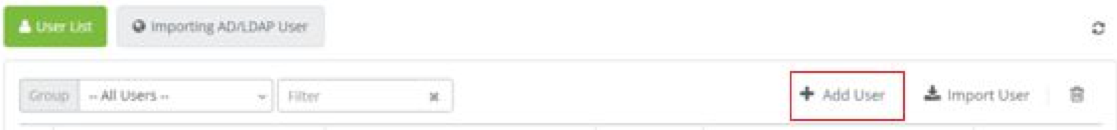
The Identity menu begins in the list context, which contains the following functions:

- Paginated list of existing users

  Users can be sorted in ascending and descending order alphabetically according to their ***Domain***, ***Domain Type***, and ***Email*** address by clicking on the corresponding column. The default view shows 10 users per page, with 20 and 50 users per page available.

- Filter options

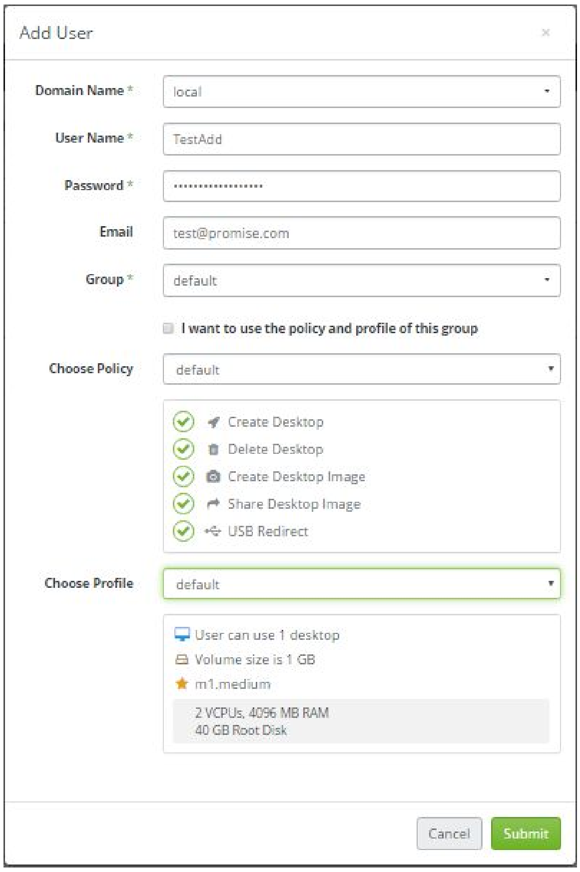
  Users can be filtered by group using the ***Group*** drop-down, or a free-input ***Filter*** field is available, which will dynamically narrow down the user-list based on matching the input string with the user names.



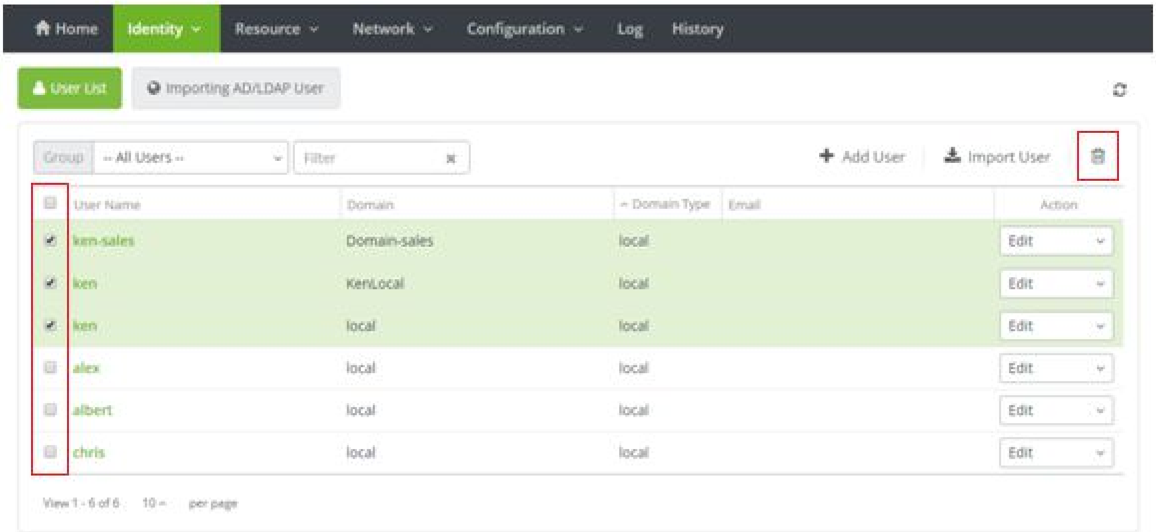
4.1.2 Adding a User

Users can be added individually by clicking ***Add User*** in the User List context**.** This will bring up the *Add User* dialog box.

1. Select a ***Domain Name***.
2. Provide a unique ***User Name.***
3. Provide a ***Password*** for the user
4. Optionally an ***Email*** address can be entered for the user.
5. Select the ***Group*** that the user belongs to. If desired, click the check box to apply the default policy and profile of the selected group.
6. If the group policies and profiles are not applied, you may ***Choose Policy*** for the user from the drop-down. Details of the policy chosen will display in the box below the drop-down.
7. If the group policies and profiles are not applied, you may ***Choose Profile*** for the user from the drop-down. Details of the profile chosen will display in the box below the drop-down.
8. Click ***Submit*** to add the user to the list.



4.1.3 Deleting User(s)



Administrators may delete one or multiple users by:

1. Selecting the ***Delete*** option from the ***Action*** drop-down in the last column of the user listing

-Or-

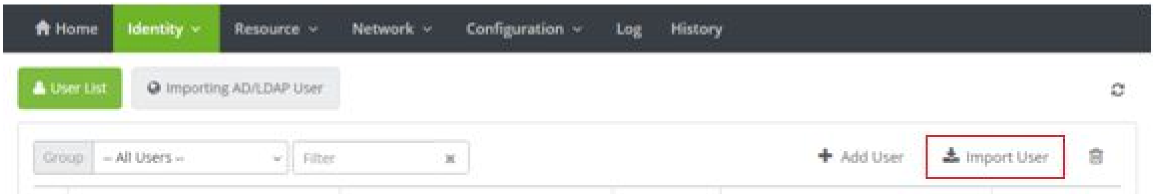
1. Select the checkbox in front of the user account that requires deletion. Multiple selections can be made, or alternately the top-left box checkbox will select all of the users listed.
2. After selections are complete, clicking the trash can icon in the top-right corner will delete the selected users.

4.1.4 User Actions

The last column of the user list contains an ***Action*** drop-down. Since these actions are straightforward they will not be addressed separately. Administrators can choose from the following actions:

- ***Edit*** the user email address.
- ***Change Password*** for the account.
- ***Delete*** the user account.

4.1.5 Importing Users by CSV File



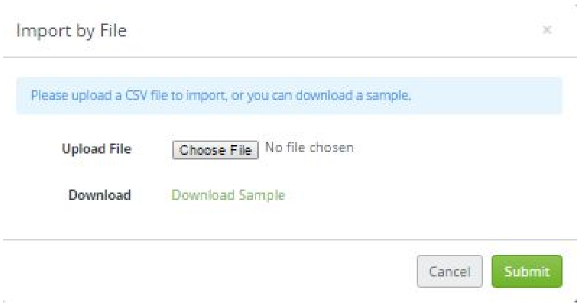
Administrators can import users into the system using a CSV file by clicking ***Import User***.

This will bring up a dialog which allows users to upload the Excel file for processing.

- Click ***Choose File*** to select the CSV file, and then click ***Submit*** to upload the file.
- Click ***Download Sample*** link to download a CSV file for formatting reference.

Please note that certain rules apply to the importation of users by CSV.

- Domains and Groups that are specified in the CSV will automatically be created if they do not exist.
- Groups created via import will also take on the last-created profile and policies in the system.
- Usernames cannot be repeated within a domain (no re-importation of existing users)

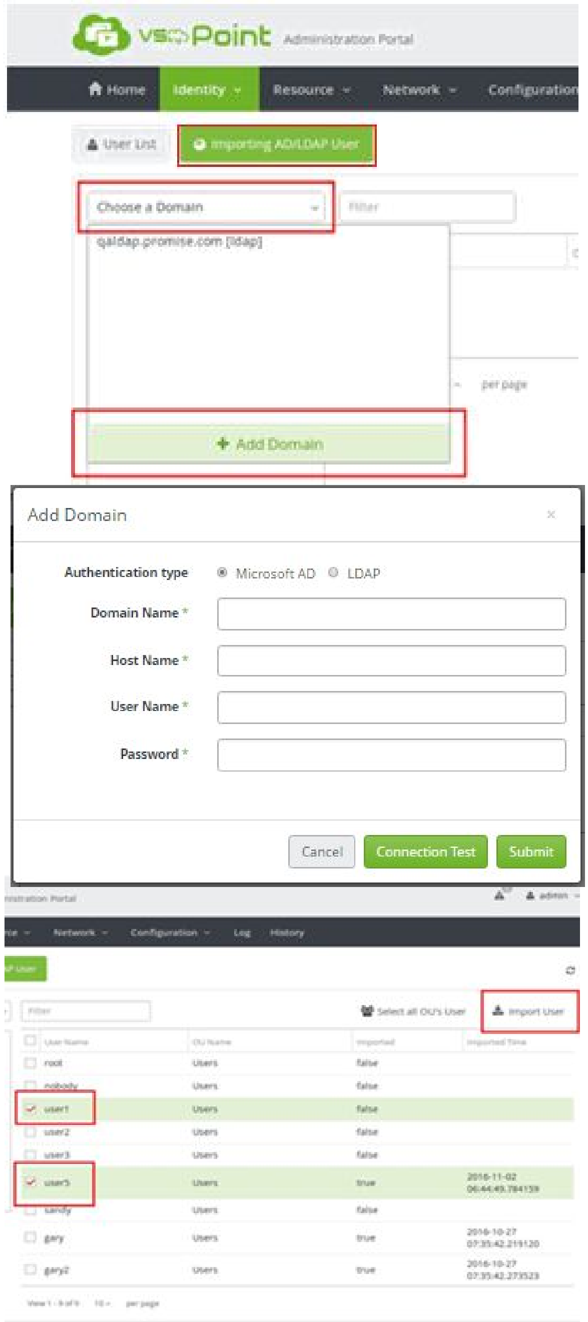


4.1.6 Importing AD/LDAP Users

Administrators can import users from external Microsoft Active Directory or LDAP servers by clicking on ***Importing AD/LDAP User*** to enter the AD/LDAP import context.

In this context:

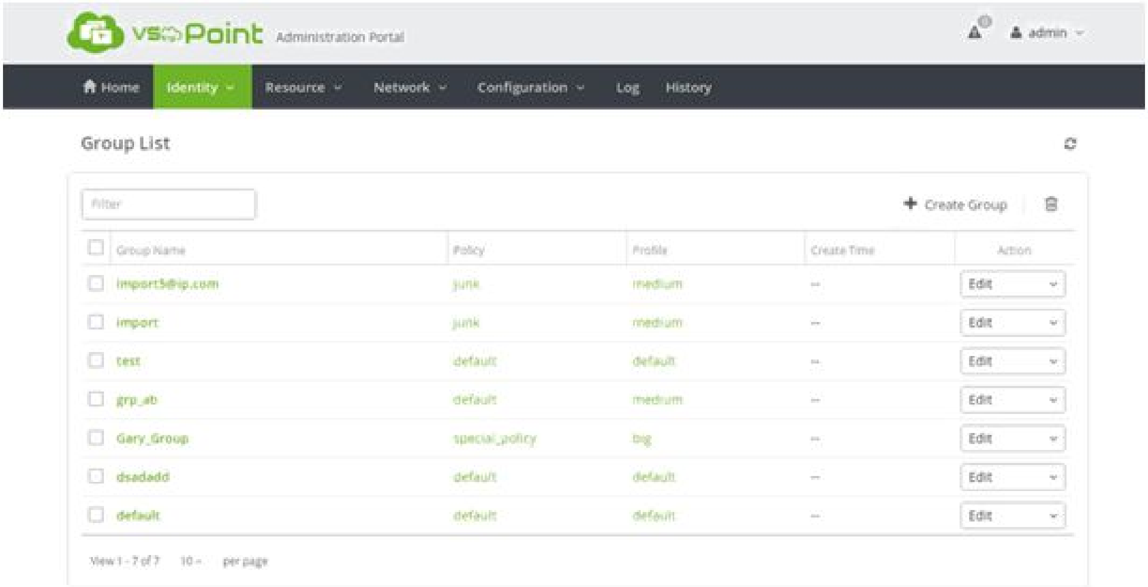
1. ***Choose a Domain*** from the drop-down.
2. If a domain has not been added already, you click ***Add Domain*** to add a domain. From the resulting dialog box:
    - Select either ***Microsoft AD*** or ***LDAP*** for the domain type
    - Specify the ***Domain Name***
    - Provide a ***Host Name*** for the domain
    - Enter a valid domain ***User Name***
    - Enter the corresponding ***Password***
    - Optionally you can click ***Connection Test*** to test the connection to the specified host.
    - Click ***Submit*** to add the domain.
3. After selecting the Domain you can browse the available domain structure in the window below. Clicking on the folder will expand and show users available to import on the right.
4. One or multiple users can be selected by clicking the checkbox in front of the user account listing, alternately click top-left box to select all of the users listed, or clicking on the ***Select all OU's User*** will select all available users.
5. After selections are complete, clicking ***Import User*** in the top-right corner will add the selected users.



4.2 Groups

Access to the group list can be displayed by clicking ***Identity > Users.***

4.2.1 Group List



The Group menu begins in the list context, which contains the following functions:

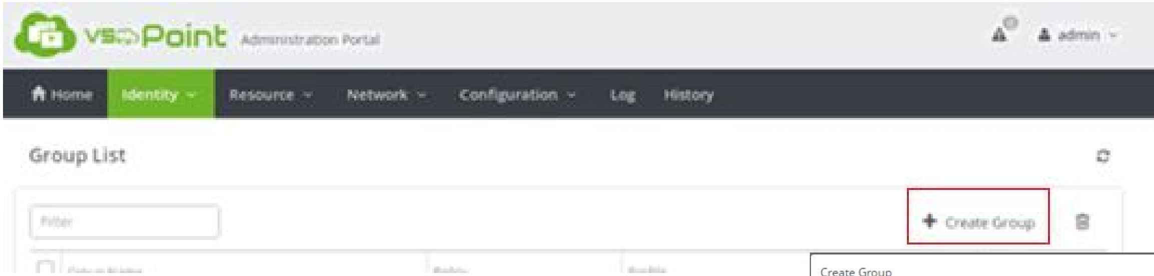
- Paginated list of existing groups

  Groups can be sorted in ascending and descending order alphabetically according to their ***Group Name***, Default ***Policy***, and Default ***Profile*** by clicking on the corresponding column. The default view shows 10 groups per page, with 20 and 50 groups per page available.

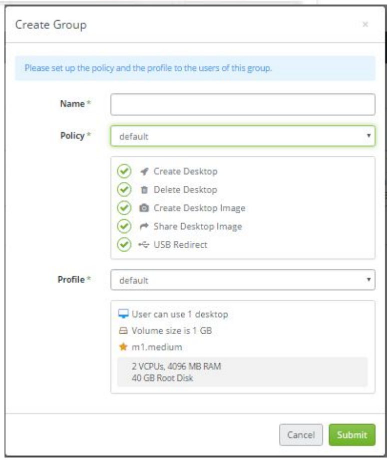
- Filter options

  Groups can be filtered by a free-input ***Filter*** field, which will dynamically narrow down the group-list based on matching the input string with the group names.

4.2.2 Create a Group



Clicking ***Create Group*** in the group list context will bring up the group creation dialog.



1. Enter a ***Name*** for the group
2. Select a default ***Policy*** to apply to the group members. Members may have their own specific policies.
3. Select a default ***Profile*** to apply to the group. Group members may also have specific profiles.

4.2.3 Delete Group(s)

Please note that prior to deleting a group all users in the group must be assigned to another group that will not be deleted. Administrators may delete one or multiple groups using the following steps:

- To delete a group, you can choose to ***Delete*** from the ***Action*** drop-down menu following the group you want to delete.

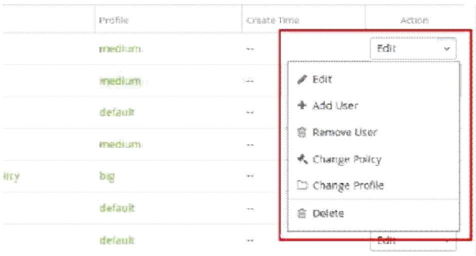
-Or-

1. Select the checkbox in front of the group that requires deletion. Multiple selections can be made, or alternately the top-left box checkbox will select all of the groups listed.
2. After selections are complete, clicking the trash can icon in the top-right corner will delete the selected groups.

4.2.4 Group Actions

The ***Actions*** drop-down behind each group listing allows users to perform the following actions:

- ***Edit*** the group name
- ***Add User*** to the group
- ***Remove User*** from the group
- ***Change Policy*** of the group
- ***Change Profile*** of the group

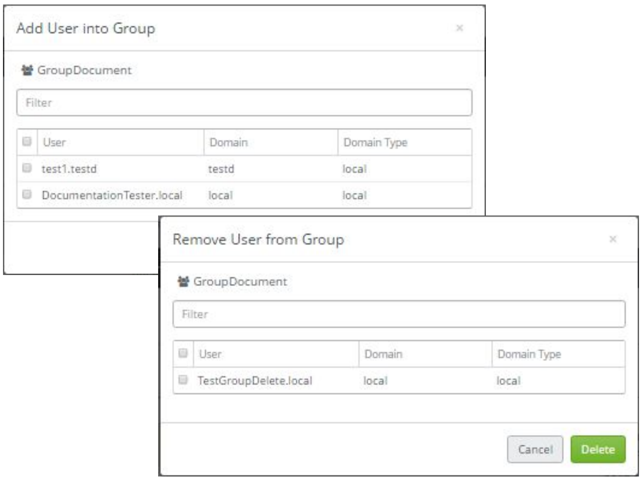


Editing the group name is straightforward they will not be addressed separately.

Add/Remove User

When choosing to add or remove a User, a list of available users will be displayed in a pop-up.

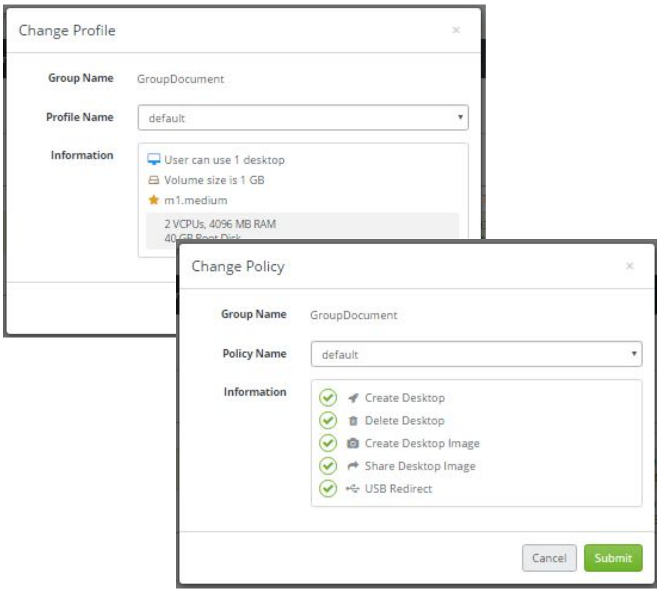
1. Select the checkbox in front of the user(s) to add/remove to the group. Alternately the top-left box checkbox will select all of the users listed.
2. After selections are complete, click the **Add** (or **Remove)** button to finish the process.



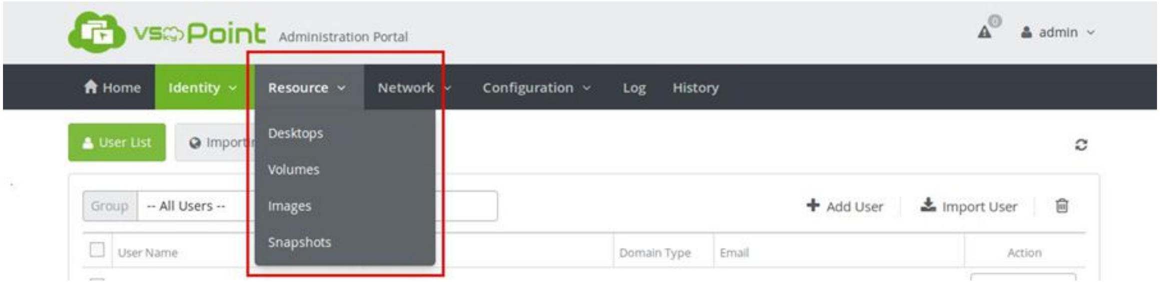
Changing Profile/Policy

When changing the profile or policy, a popup will appear, displaying the current option.

1. Choose a different profile/policy from the drop-down. Details for the selected option will display in the *Information* section
2. Click **Submit** to apply your selection.



5 Resource



The ***Resource*** section contains four categories related to system resources and capacities.

Desktops

This section allows Administrators to provision and manage virtual machines assigned to each user.

Volumes

The Volumes section allows administrators to provision, manage and assign storage volumes.

Images

The administrator can manage disk and VM images from the Images section.

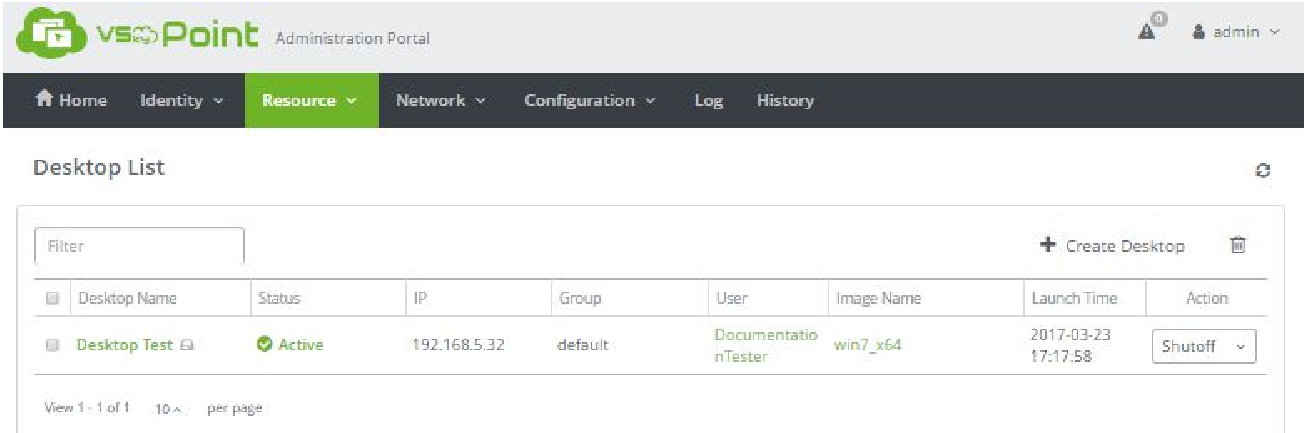
Snapshots

Virtual machine snapshots are managed in the Snapshots section.

5.1 Desktops

To access the desktop list, click ***Resource > Desktop.***

5.1.1 Desktop List



The Desktop menu begins in the list context, which contains the following functions:

- Paginated list of existing desktops

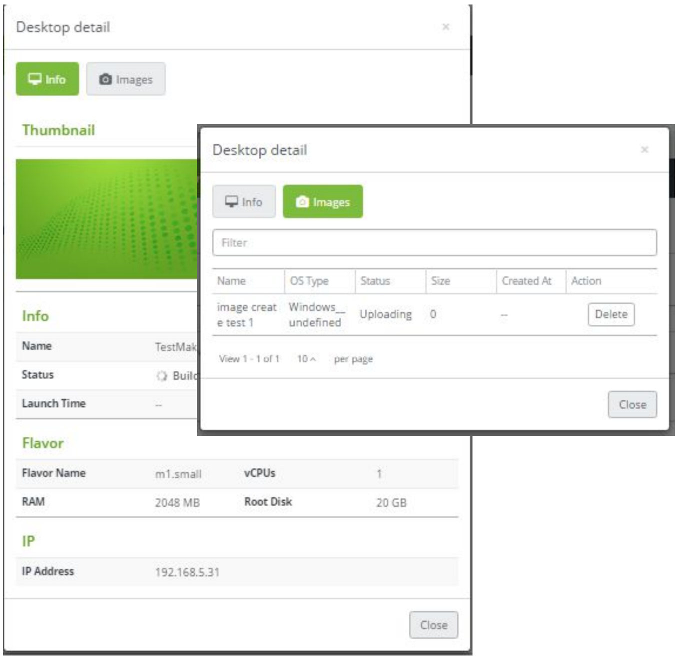
  Desktops can be sorted in ascending and descending order alphanumerically according to their ***Desktop Name***, ***Status***, ***IP*** address and ***Launch Time*** by clicking on the corresponding column. The listing also displays the *Group*, *User*, and *Image* used by the desktop. The default view shows 10 desktops per page, with 20 and 50 desktops per page available.

- Filter options
  Desktops can be filtered by a free-input ***Filter*** field, which will dynamically narrow down the Desktop-list based on matching the input string with the desktop names.

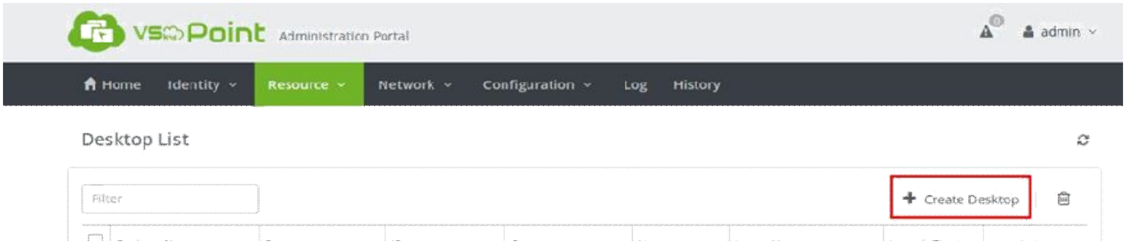
Desktop Information

More detailed information about a specific desktop can be obtained by clicking on the ***Desktop Name***.

- In the ***Info*** section, a thumbnail of the Desktop screen will be provided, as well as the provisioned resources and IP address.
- The ***Image*** section lists images that have been created from this desktop.
  The listing can be filtered or sorted. Clicking the ***Delete*** action allows users to delete single images from this context.

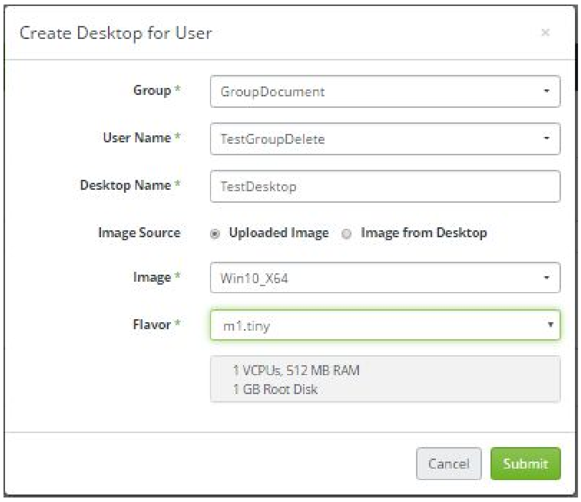


5.1.2 Create a Desktop



VSkyPoint allows administrators to create desktops for specific users. This is accessed by the ***Create Desktop*** button in the Desktop List Context. In this context:

1. Select the ***Group*** of the user that you want to add the Desktop from the drop-down
2. Choose a ***User Name*** from the drop-down to specify the desktop user.
3. Provide a ***Desktop Name***
4. Select the ***Image Source*** type
    - Choose ***Uploaded Image*** to use an image already uploaded from an external source.
    - To create the desktop from an existing desktop snapshot, choose **Image from Desktop.**
5. Select the ***Image*** to use. The contents will populate automatically depending on your selection in the previous step.



6. Select the ***flavor*** of the desktop to create from the drop-down. Details of the flavor selected will display below the selection box. Please note that the system will not allow you to create a desktop if the image selected cannot run on the flavor chosen.
7. Click ***Submit*** to create the desktop

5.1.3 Delete a Desktop

Please note that prior to deleting a desktop all volumes attached to the desktop must be detached. Administrators may delete one or multiple desktops using the following steps:

1. Choose to ***Delete*** from the ***Action*** drop-down menu following the desktop

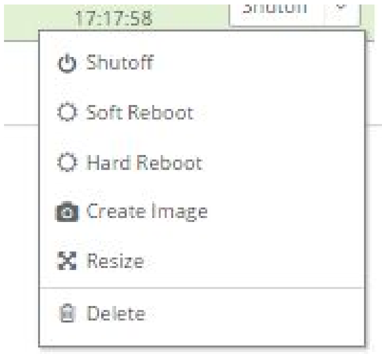
-Or-

1. Select the checkbox in front of the desktop to be deleted. Multiple selections can be made, or alternately the top-left box checkbox will select all of the listed desktops.
2. After selections are complete, clicking the trash can icon in the top-right corner will delete the selected desktops.

5.1.4 Desktop Actions

The ***Actions*** drop-down behind each desktop listing allows users to perform the following actions:

- ***Start Up*** the desktop
- ***Shutoff*** the desktop
- ***Soft Reboot*** – equivalent to pressing reset
- ***Hard Reboot*** – equivalent to power-cycling the desktop
- ***Create Image***, or snapshot of the desktop
- ***Resize*** the desktop, changing the flavor of Virtual Machine
- ***Delete*** the desktop

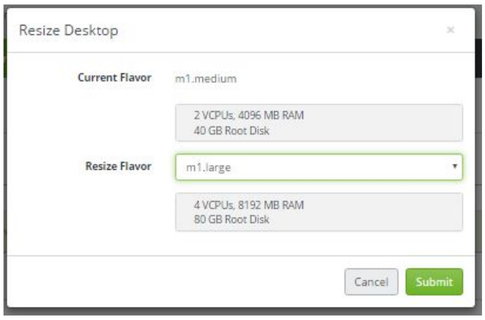


Most of these actions are straightforward in nature, and will not be addressed separately.

Resizing a Desktop

Selecting Resize from the action menu will bring up a popup allowing the user to choose another flavor for their desktop.

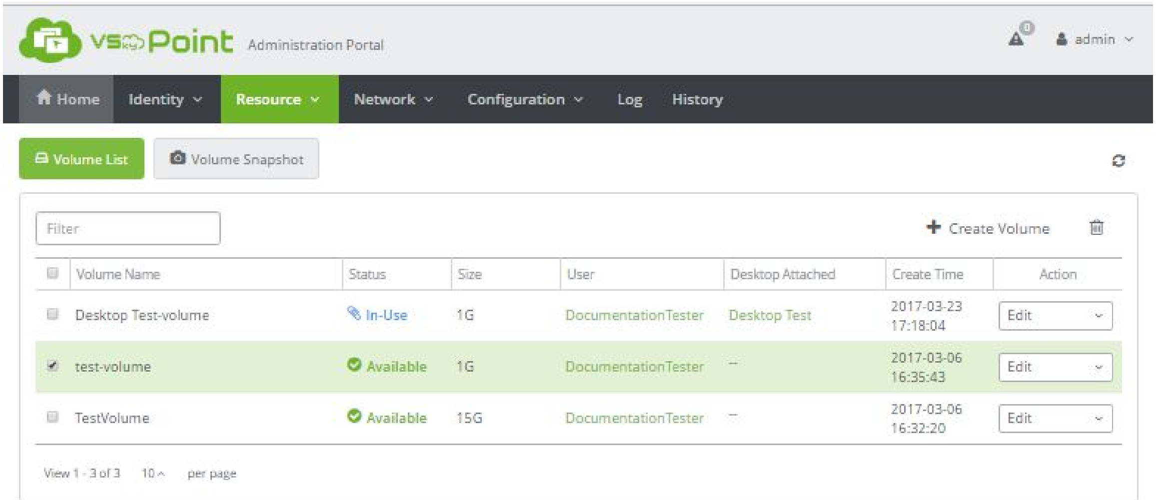
The details for the current flavor will be displayed. Users can select a ***Resize Flavor*** to change to and click ***Submit*** to finalize the changes.



5.2 Volumes

The Volume list can be accessed under ***Resource> Volumes.***

5.2.1 Volume List



The Volumes menu begins in the list context, which contains the following functions:

- Paginated list of existing volumes

  Volumes can be sorted in ascending and descending order alphanumerically according to their ***Volume Name***, ***Status***, and ***Size*** in GB by clicking on the corresponding column. The listing also displays the *User* that owns the volume, the *Desktop Attached* to the volume, and the *Create Time* of the volume. The default view shows 10 volumes per page, with 20 and 50 volumes per page available.

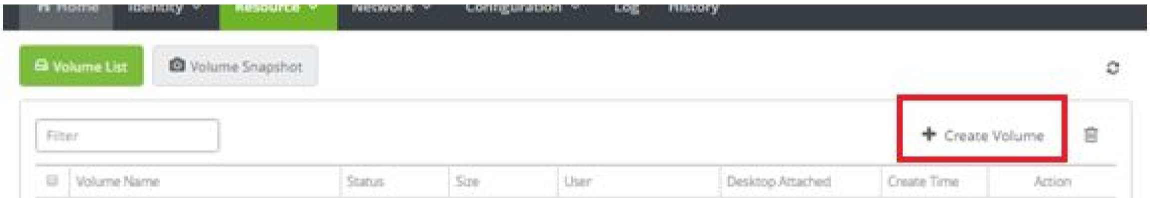
- Filter options

  Volumes can be filtered by a free-input ***Filter*** field, which will dynamically narrow down the volume list based on matching the input string with the volume names.

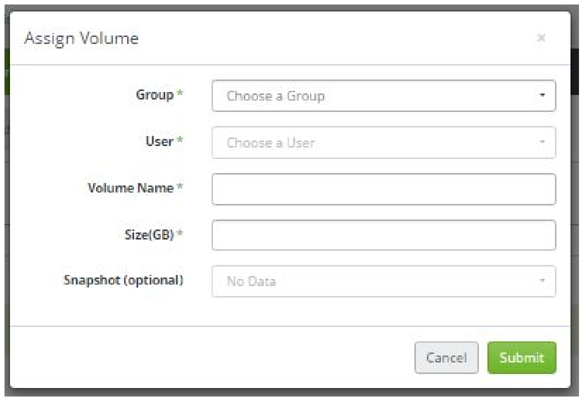
User/Desktop Information

More detailed information about the user and/or desktop associated with a volume can be obtained by clicking on the ***User*** or ***Desktop Attached*** listing.

5.2.2 Create a Volume



VSkyPoint allows administrators to create volumes for specific users. This is accessed by the ***Create Volume*** button in the Volume List Context. In this context:



1. Select the ***Group*** of the user that you want to add the Volume from the drop-down
2. Choose a ***User Name*** from the drop-down to specify the volume user.
3. Provide a ***Volume Name***
4. Enter a volume ***Size(GB)***.
5. Optionally you can select to create the volume from an existing volume snapshot by selecting the snapshot from the ***Snapshot (optional)*** drop-down.
6. Click ***Submit*** to create the volume

5.2.3 Delete a Volume

Please note that prior to deleting a volume it must not be *In-Use.* Administrators may delete one or multiple volumes using the following steps:

1. Choose to ***Delete*** from the ***Action*** drop-down menu following the volume

-Or-

1. Select the checkbox in front of the volume to be deleted. Multiple selections can be made, or alternately the top-left box checkbox will select all of the listed volumes.
2. After selections are complete, clicking the trash can icon in the top-right corner will delete the selected volumes.

5.2.4 Volume Actions

The ***Actions*** drop-down behind each volume listing allows users to perform the following actions. Please note that the volume must not be attached to a desktop for many of the functions. For volumes that are already attached (e.g. the Status displays *In-Use),* only the Edit and Detach functions will be available:

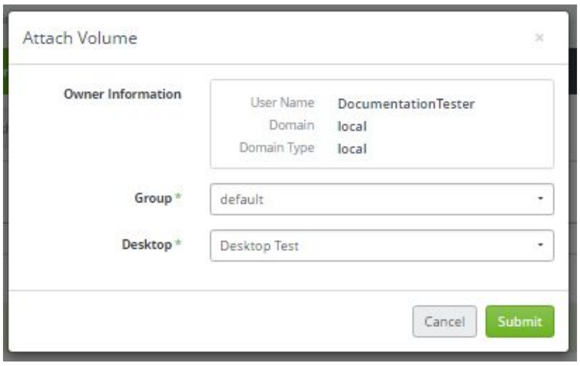
- ***Edit*** the volume name
- ***Attach*** the volume to a Desktop
- ***Detach*** a volume from a Desktop
- ***Extend*** the volume to increase its size
- ***Create Snapshot*** of the volume for use in creating other volumes.
  - Snapshots created using this action will be available in the *Volume Snapshots* menu.
- ***Delete*** the Volume

Most of these actions are straightforward in nature, and will not be addressed separately.

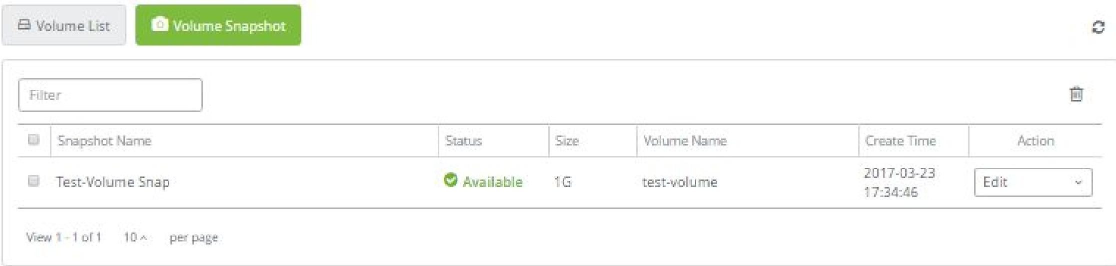
Attaching Volumes

Select ***Attach*** from the action list to bring up the popup. In this context:

1. Select the ***Group*** of the desktop that you wish to attach the volume to
2. A list of available devices will automatically populate in the ***Desktop*** drop-down. Select the desktop that the volume will be attached to.
3. Click ***Submit*** to finalize your changes.



5.2.5 Upload Image



The ***Volume Snapshot*** button brings up a listing of volume snapshots with the following functions:

- Paginated list of existing snapshots

  Snapshots can be sorted in ascending and descending order alphanumerically according to their ***Snapshot Name***, ***Status***, ***Size*** in GB, and ***Create Time*** by clicking on the corresponding column. The listing also displays the *Volume Name* of the volume that the snapshot was created from. The default view shows 10 snapshots per page, with 20 and 50 snapshots per page available.

- Filter options

  Snapshots can be filtered by a free-input ***Filter*** field, which will dynamically narrow down the snapshot list based on matching the input string with the snapshot names.

5.2.6 Deleting a Volume Snapshot

Please note that prior to deleting a Volume Snapshot, it must be *Available* status. Administrators may delete one or multiple volume snapshots using the following steps:

1. To delete a volume snapshot, you can choose to ***Delete*** from the ***Action*** drop-down menu following the snapshot you want to delete.

-Or-

- Select the checkbox in front of the snapshot that requires deletion. Multiple selections can be made, or alternately the top-left box checkbox will select all of the snapshots listed.
- After selections are complete, clicking the trash can icon in the top-right corner will delete the selected snapshots.

5.2.7 Volume Snapshot Actions

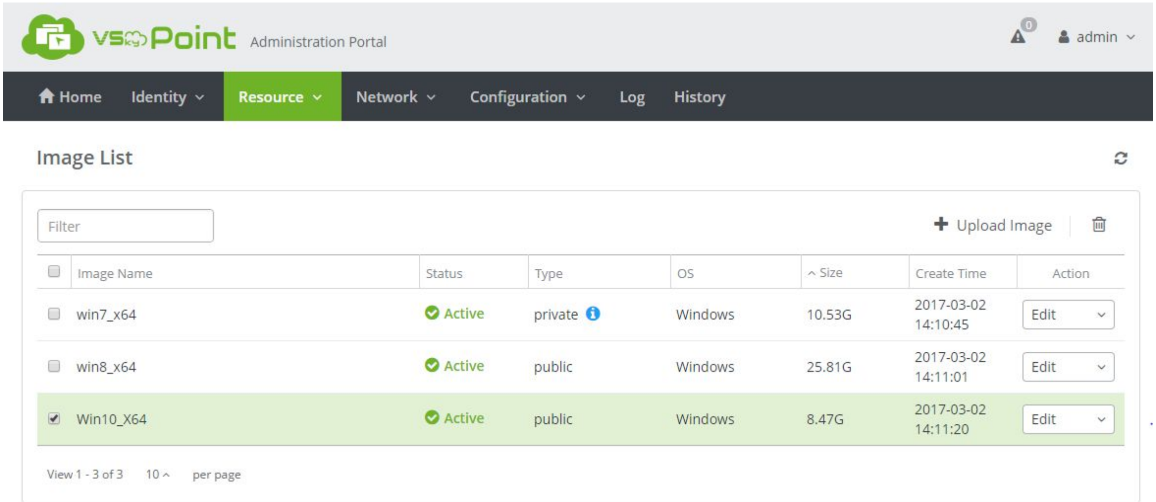
The ***Actions*** drop-down behind each snapshot listing allows users to perform the following actions:

- ***Edit*** the volume snapshot name
- ***Delete*** the volume snapshot

5.3 Uploaded Images

To access the uploaded image List, click ***Resource > Uploaded Images.***

5.3.1 Uploaded Image List



The uploaded image menu begins in the list context, which contains the following functions:

- Paginated list of existing Images

  Images can be sorted in ascending and descending order alphanumerically according to their ***Image Name***, ***Status***, ***Type***, ***OS***, ***Size*** in GB, and ***Create Time*** by clicking on the corresponding column. The default view shows 10 images per page, with 20 and 50 images per page available.

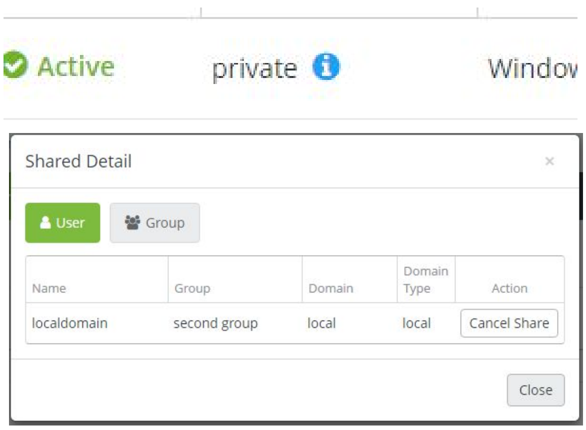
- Filter options

  Uploaded images can be filtered by a free-input ***Filter*** field, which will dynamically narrow down the image list based on matching the input string with the image names.

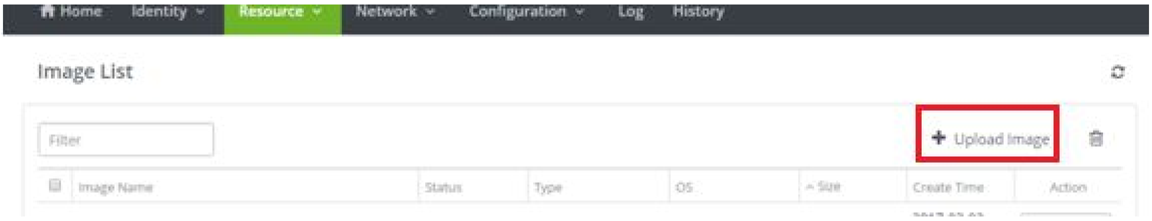
Private Image Information

If an image type is private, a blue information dot will appear by the private type listing. Clicking on this dot will bring up a popup showing any ***User*** or ***Group*** that the image is shared with.

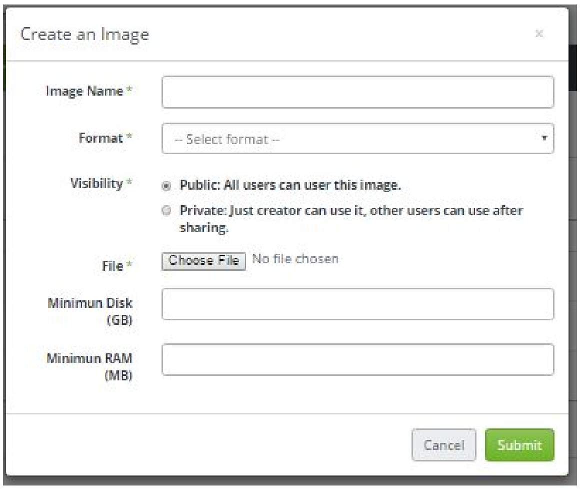
In either of these contexts, clicking on ***Cancel Share*** will remove the User/Group from the share list.



5.3.2 Upload an Image



Uploaded images can be used as a base for new virtual desktops. To upload a new image, click the ***Upload Image*** button in the Image List Context. This will bring up the image creation popup. In this context:



1. Enter an ***Image Name*** for the uploaded image; this will be used to identify the image in the future.
2. Select the ***Format*** of the uploaded image. Supported image formats are:
   - QCOW2
   - Raw
3. Select the ***Visibility*** of the image
4. Click the ***Choose File*** button to bring up a system menu, allowing you to select the image file to upload.
5. Optionally you can specify a ***Minimum Disk (GB)*** and ***Minimum RAM (MB)*** size. Desktop creation with this image will be disallowed unless these requirements are met.
6. Click ***Submit*** to upload the image.

5.3.3 Delete an Uploaded Image

Administrators may delete one or multiple image using the following steps:

1. Choose to ***Delete*** from the ***Action*** drop-down menu following the image

-Or-

1. Select the checkbox in front of the image to be deleted. Multiple selections can be made, or alternately the top-left box checkbox will select all of the listed images.
2. After selections are complete, clicking the trash can icon in the top-right corner will delete the selected images.

5.3.4 Uploaded Image Actions

The ***Actions*** drop-down behind each volume listing allows users to perform the following actions. Please note that the volume must not be attached to a desktop for many of the functions. For volumes that are already attached (eg. the Status displays *In-Use),* only the Edit and Detach functions will be available:

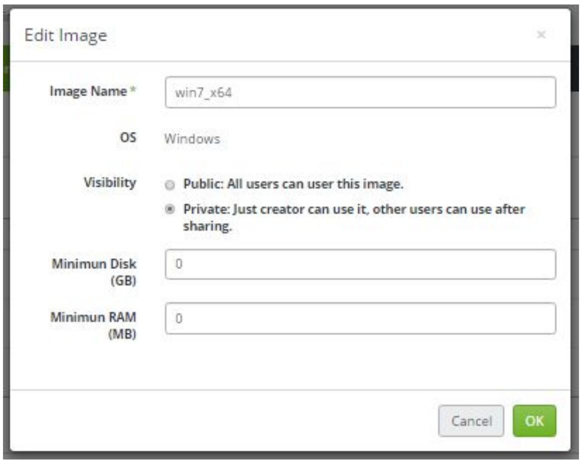
- ***Edit*** the image
- ***Share*** the image to a group or user.
- ***Delete*** the Volume

Deletion is straightforward in nature, and will not be addressed separately.

Editing Images

Select ***Edit*** from the action list to bring up the *Edit Image* popup. In this context you may edit the following details for the image:

- The ***Image Name***
- The ***Visibility*** of the image
- Optionally you can specify a ***Minimum Disk (GB)*** and ***Minimum RAM (MB)*** size. Desktop creation with this image will be disallowed unless these requirements are met.

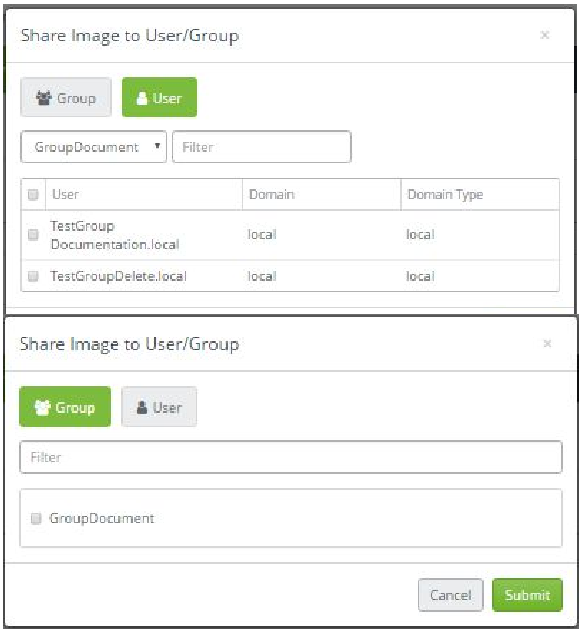


Clicking ***Submit*** will finalize any changes.

Sharing Images

Select ***Share to*** from the action list to bring up the sharing popup. In this context you may choose:

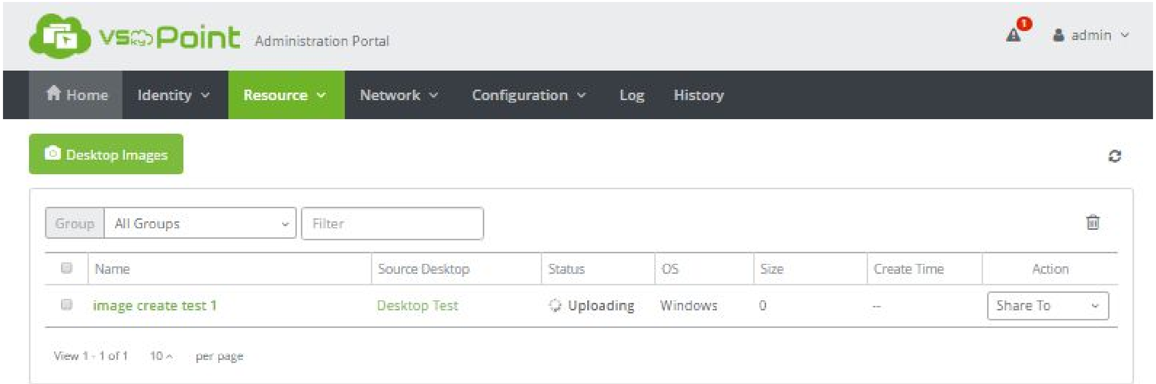
- ***Group*** lists the available groups. ***User*** provides a drop-down to select a group. Once the group is selected, individual users in the group will be listed.
  - Select the checkbox in front of one or more Groups/Users to share the image to the selection. Alternately the top-left box checkbox will select all of the listed options.
  - The listings can be filtered dynamically by inputting text in the *Filter* box.



5.4 Desktop Images

Click ***Resource > Desktop Images*** to access the desktop image menu,

5.4.1 Desktop Image List



The desktop image menu begins in the list context, which contains the following functions:

- Paginated list of existing Images

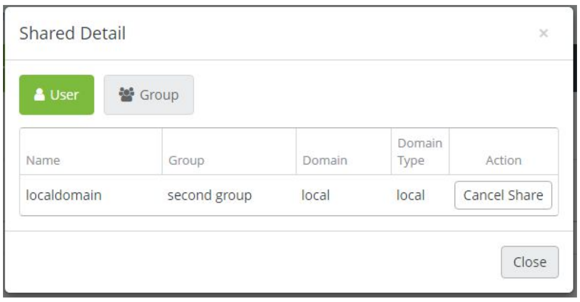
  Images can be sorted in ascending and descending order alphanumerically according to their image ***Name***, ***Source Desktop***, ***Status***, ***OS***, ***Size*** in GB, and ***Create Time*** by clicking on the corresponding column. The default view shows 10 images per page, with 20 and 50 images per page available.

- Filter options

  Desktop images can be filtered by a free-input ***Filter*** field, which will dynamically narrow down the image list based on matching the input string with the image names. The ***Group*** drop-down also allows the list to be quickly filtered by *All Groups* or any individual group.

Image Information

By default desktop images are private (e.g. only visible to the source desktop user). Sharing is possible. Clicking on the desktop name will bring up a popup showing any ***User*** or ***Group*** that the image is shared with.



In either of these contexts, clicking on ***Cancel Share*** will remove the User/Group from the share list.

Source Desktop Information

Hovering over the name of the source desktop will provide information on the desktop user and group.

5.4.2 Create a Desktop Image

Desktop image creation is done via the ***Actions*** drop-down behind each desktop listing in ***Resource > Desktops.***

5.4.3 Delete a Desktop Image

Administrators may delete one or multiple image using the following steps:

2. Choose to ***Delete*** from the ***Action*** drop-down menu following the image

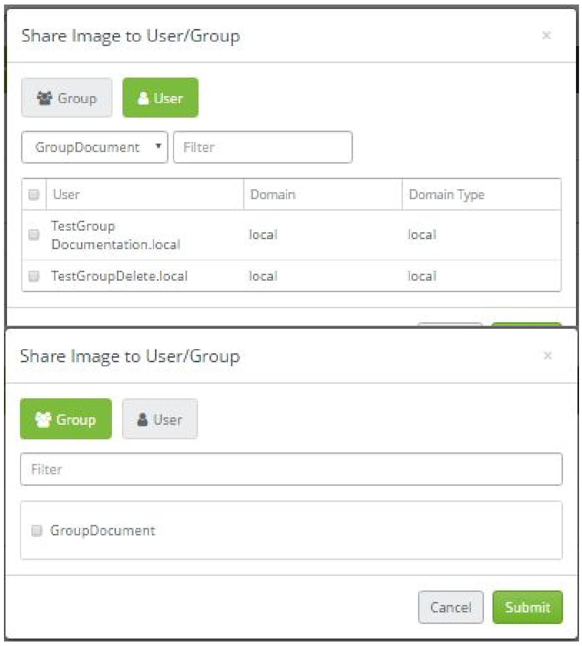
-Or-

3. Select the checkbox in front of the image to be deleted. Multiple selections can be made, or alternately the top-left box checkbox will select all of the listed images.
4. After selections are complete, clicking the trash can icon in the top-right corner will delete the selected images.

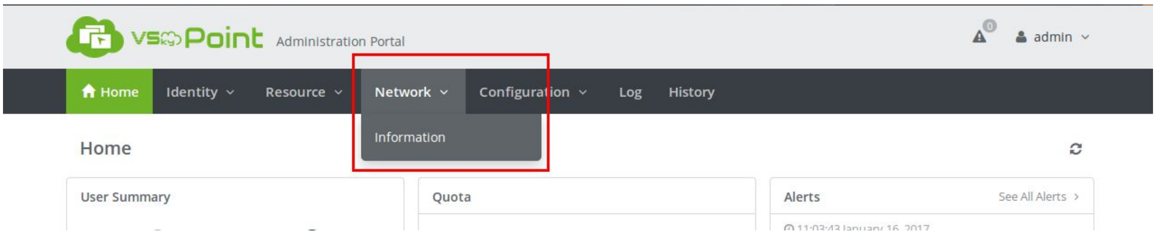
5.4.4 Sharing Desktop Images

Select ***Share to*** from the action list to bring up the sharing popup. In this context you may choose:

- ***Group*** lists the available groups. ***User*** provides a drop-down to select a group. Once the group is selected, individual users in the group will be listed.
    - Select the checkbox in front of one or more Groups/Users to share the image to the selection. Alternately the top-left box checkbox will select all of the listed options.
    - The listings can be filtered dynamically by inputting text in the *Filter* box.



6 Network

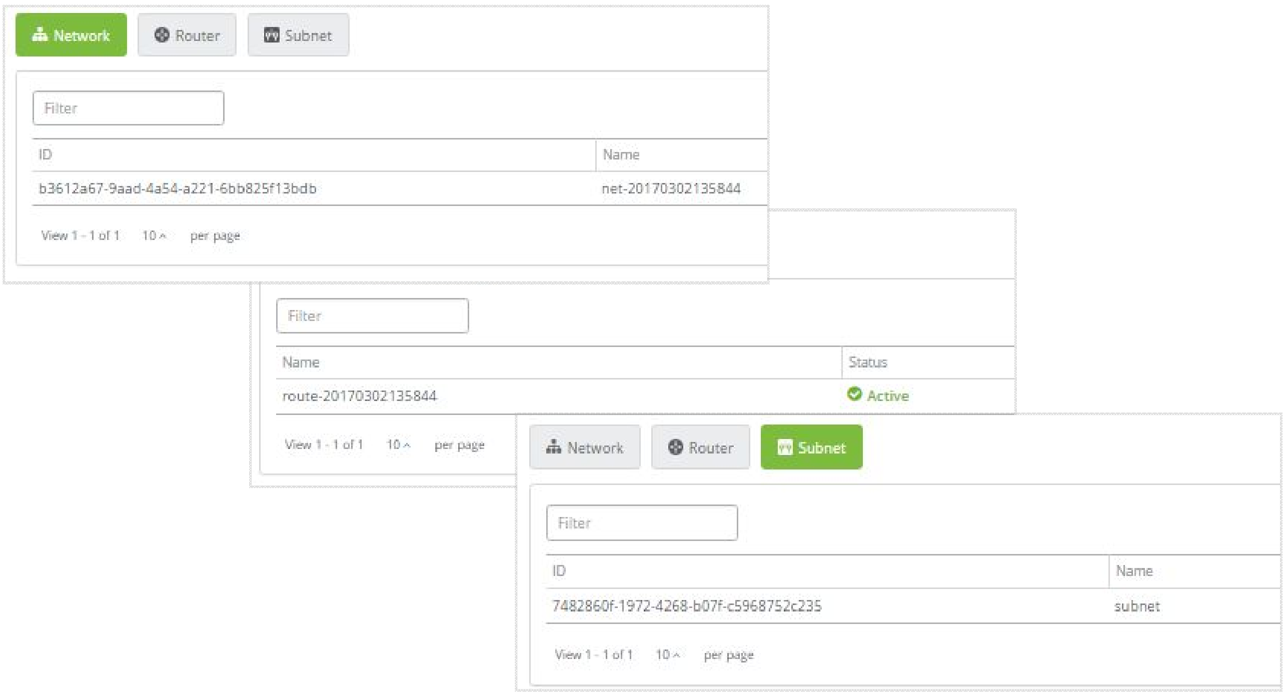


The ***Network*** section contains only one category, ***Information***. This section provides read-only network details regarding the VSkyPoint Instance. This information is provided for debugging/informational purposes only, as network configuration is not in the scope of VSkyPoint.

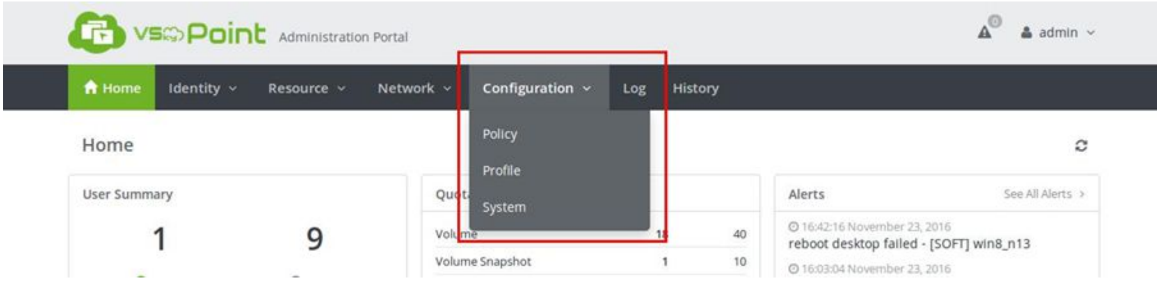
6.1 Information

Information is provided for the following aspects of the network, which can be used in conjunction with VSkyView to help plan networking:

- ***Network*** – the network *ID* and *Name*
- ***Router*** – the router *Name* and *Status*
- ***Subnet*** – the subnet *ID* and *Name*



7 Configuration



The ***Configuration*** section contains three related categories:

- ***Policy*** – Allows administrators to manage user policies
- ***Profile*** – Allows administrators to manage user profiles
- ***System*** – Allows administrators to manage detailed system configuration items.

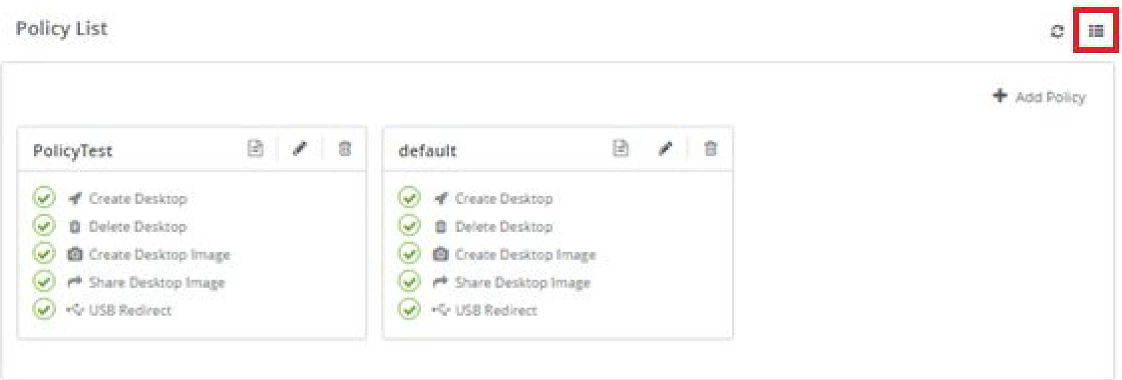
7.1 Policy

Policies are a set of rules that can be applied to one or multiple users. The use of policies allows administrators to set consistent rules for groups of users. Policy configuration can be accessed by clicking ***Configuration > Policy***.

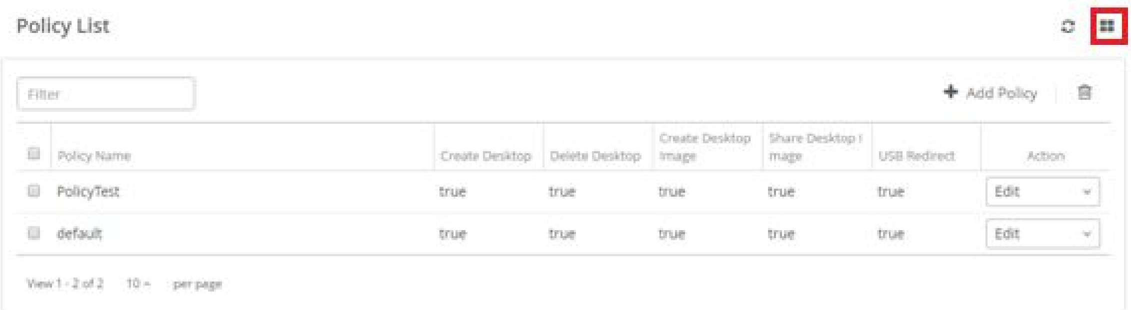
7.1.1 Policy List

The default landing point for policy configuration is the policy list. There are two views available, which can be toggled with the highlighted pointer:

- Grid View – Provides an at-a-glance overview of policies with separate action buttons for each policy. Best used with fewer policies.



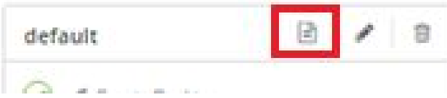
- List View – Contains sortable columns, Policy Name Filter, and an action drop-down.



Functions, if enabled, will show a checkbox beside the function name (grid view) or true in the column (list view). If disabled, a red X (grid view) or false (list view) will appear instead. The following functions are covered:

- *Create Desktop* – based on assigned Flavors
- *Delete Desktop* – delete user's own desktop
- *Create Desktop Image*
- *Share Desktop Image*
- *USB Redirect* – Direct Local Machine USB functions to the VM

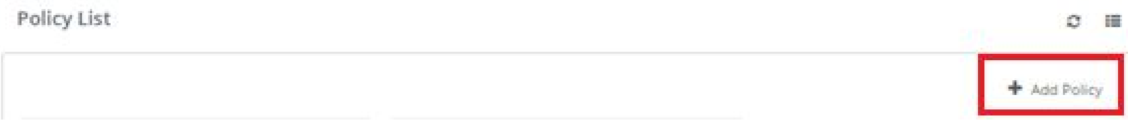
7.1.2 Policy User Info



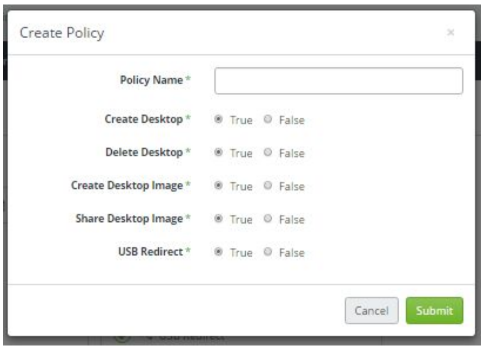
In the grid-view, clicking on the page icon will display a list of users that a policy applies to.

The list is divided by ***Group***. Selecting the group will show the applicable users which follow the policy, as well as the Domain and Source information of the user.

7.1.3 Add Policy



VSkyPoint allows administrators to add new policies. In either Grid or List view, this is accessed by the ***Add Policy*** button. In this context:

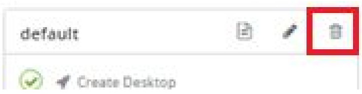


1. Provide a new ***Policy Name***
2. Select whether to enable (***True***) or disable (***False***) each of the listed functions for the new policy.
3. Click ***Submit*** to create the policy.

7.1.4 Delete Policy

Please note that prior to deleting a policy all users to which the policy applies must be assigned to another policy that will not be deleted. Administrators may delete one or multiple policies using the following steps:

In Grid View



Click the Trash Can Icon in the action bar of a policy to delete it.

In List view

1. Choose ***Delete*** from the ***Action*** drop-down menu following policy to be deleted.

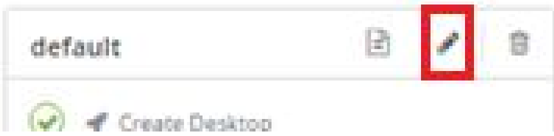
-Or-

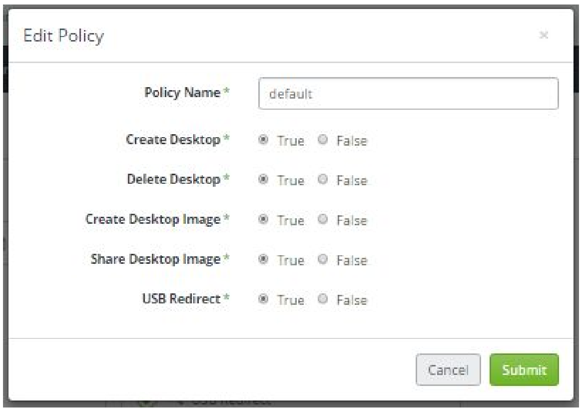
1. Select the checkbox in front of the policy that requires deletion. Multiple selections can be made, or alternately the top-left box checkbox will select all of the policies listed.

After selections are complete, clicking the trash can icon in the top-right corner will delete the selected policies.

7.1.5 Edit Policy

VSkyPoint allows administrators to edit existing policies. In either Grid view, this is accessed by the ***Edit policy*** button, and in the list view it is accessed by selecting ***Edit*** from the action drop-down. In this context the following can be edited:





1. ***Policy Name***
2. Select whether to enable (***True***) or disable (***False***) each of the listed functions for the new policy.
3. Click ***Submit*** to finalize any changes to the policy.

7.2 Profile

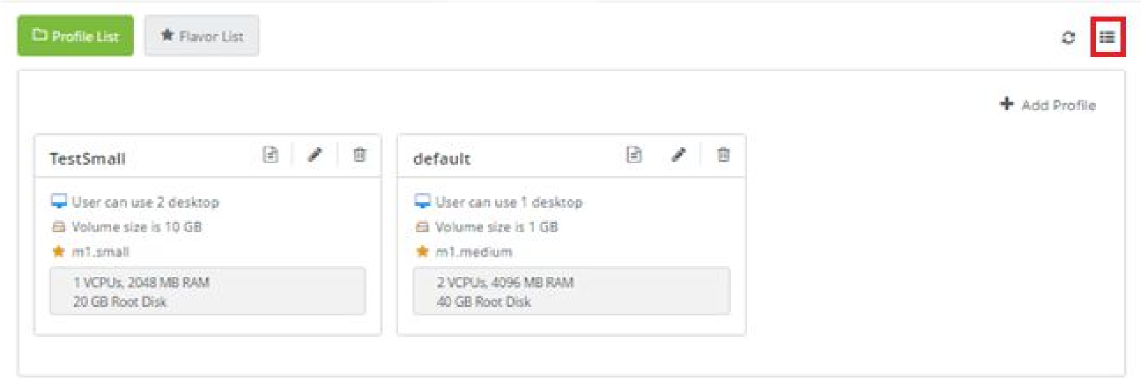
Profiles are sets of defined hardware resource rules that can be applied to users or groups of users. Each profile contains a subset of resource limitations called a ***Flavor***, which is the Hardware resource description (CPU, RAM and Disk)

Profile configuration can be accessed by clicking ***Configuration > Policy***.

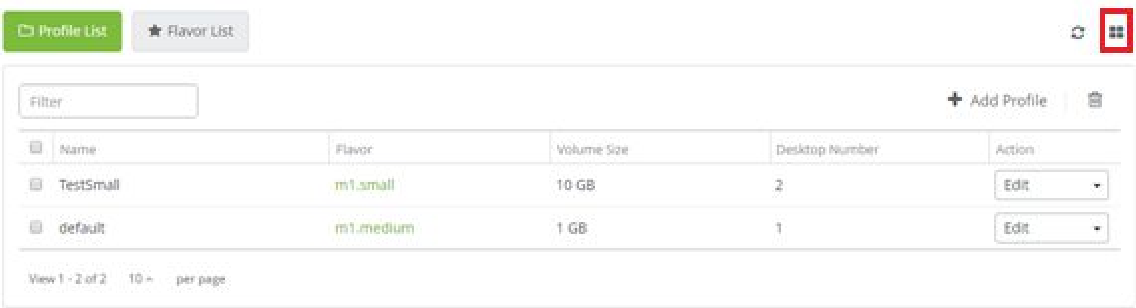
7.2.1 Profile List

The default landing point for profile configuration is the profile list. There are two views available, which can be toggled with the highlighted pointer:

- Grid View – Provides an at-a-glance overview of profiles with separate action buttons for each profile. Best used with fewer profiles.



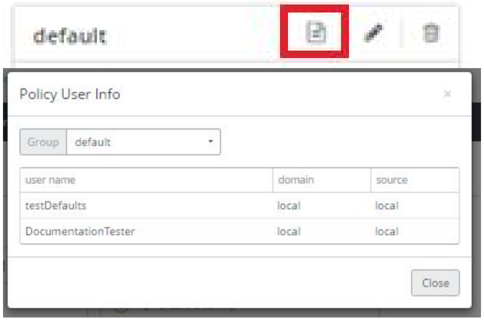
- List View – Contains sortable columns, Profile Name Filter, and an action drop-down.



The following information is provided for each profile:

- The number of desktops the user can possess in their account.
- The default volume size that is provided to each Desktop the user has.
- The default flavor, or machine resource that is enabled for the Profile.
    - Details for each flavor can be seen by either hovering over the flavor name (in list view) or below the flavor name (in grid view).

7.2.2 Profile User Info

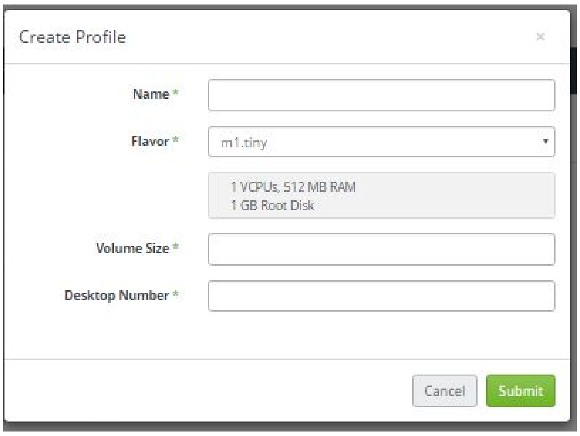


In the grid-view, clicking on the page icon will display a list of users that a profile applies to.

The list is divided by ***Group***. Selecting the group will show the applicable users which follow the profile, as well as the Domain and Source information of the user.

7.2.3 Create Profile

VSkyPoint allows administrators to add new profiles. In either Grid or List view, this is accessed by the ***Add Profile*** button. In this context:



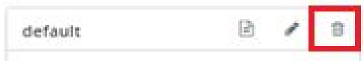
1. Provide a new profile ***Name***
2. Select the ***Flavor*** that user desktops will default to from the drop-down.
3. Enter the ***Volume Size***, in GB, that each user desktop will begin with.
4. Enter the ***Desktop Number*** each user with this profile will be able to create.
5. Click ***Submit*** to create the profile.

7.2.4 Delete Profile

Please note that prior to deleting a profile all users to which the profile applies must be assigned to another profile that will not be deleted. Administrators may delete one or multiple profiles using the following steps:

In Grid View

Click the Trash Can Icon in the action bar of a profile to delete it.



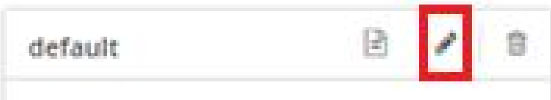
In List view

1. Choose ***Delete*** from the ***Action*** drop-down menu following profile to be deleted.

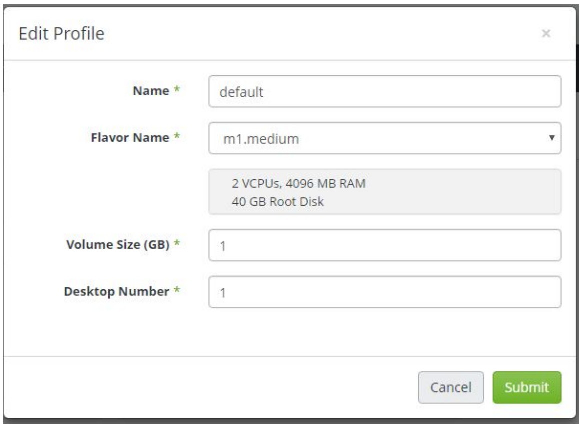
-Or-

1. Select the checkbox in front of the profile that requires deletion. Multiple selections can be made, or alternately the top-left box checkbox will select all of the profiles listed.
2. After selections are complete, clicking the trash can icon in the top-right corner will delete the selected profiles.

7.2.5 Edit Profile

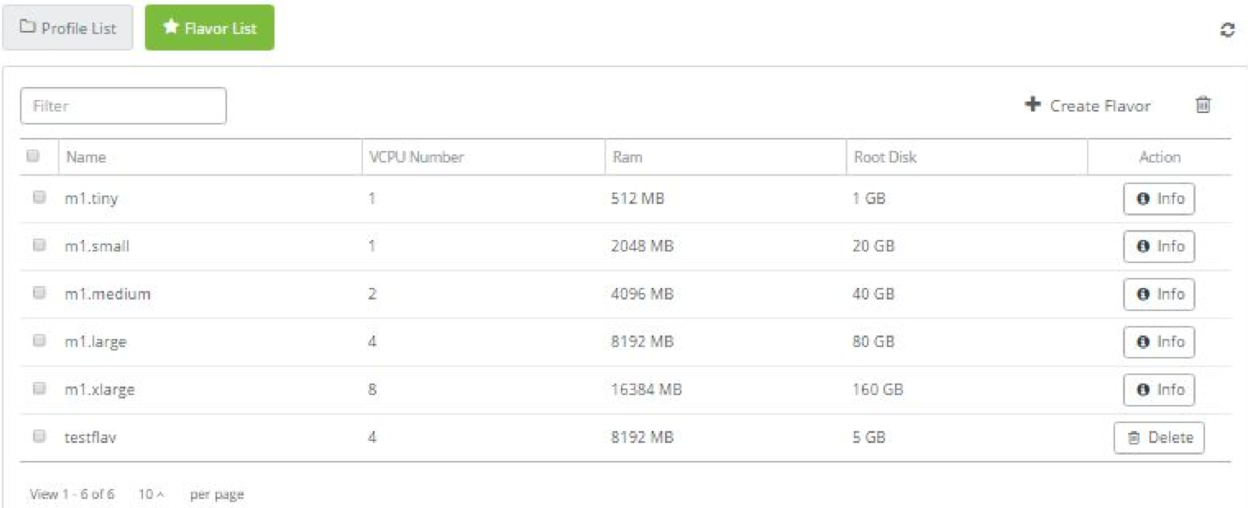


VSkyPoint allows administrators to edit existing policies. In the grid view this is done by selecting the ***Edit Profile*** button, and in the list view it is accessed by selecting ***Edit*** from the action drop-down. In this context the following can be changed



1. The profile ***Name***
2. The ***Flavor*** that user desktops will default to from the drop-down. Please note that only Flavors with sizes greater than the current flavor can be configured.
3. The ***Volume Size***, in GB, that each user desktop will begin with.
4. The ***Desktop Number*** each user with this profile will be able to create.
5. Click ***Submit*** to finalize any profile.

7.2.6 Flavor List



The ***Flavor List*** button brings up a list of hardware flavors configured on the system, with the following functions:

- Paginated list of existing flavors

  Flavors can be sorted in ascending and descending order alphanumerically according to their ***Name***, ***VCPU Number***, ***RAM***, ***Root Disk*** size in GB, by clicking on the corresponding column. The default view shows 10 flavors per page, with 20 and 50 flavors per page available.

- Filter options

  Flavors filtered by a free-input ***Filter*** field, which will dynamically narrow down the flavor list based on matching the input string with the flavor names.

7.2.7 Create Flavor

VSkyPoint allows administrators to new policies. In either Grid or List view, this is accessed by the ***Add Profile*** button. In this context:

1. Provide a new ***Flavor Name***
2. Enter the number of ***VCPU***s that each instance of this flavor will have.
3. Enter the ***RAM Size (MB)*** each instance of this flavor will have.
4. Enter the ***Root Disk Size (GB)*** each instance of this flavor will have.
5. Click ***Submit*** to create the flavor.

7.2.8 Delete Flavor

Default flavors (m1.tiny, small, medium, large, xlarge) cannot be deleted. Follow these steps to delete a flavor:

1. Click on the ***Delete*** button in the *Action* column following flavor to be deleted.

-Or-

1. Select the checkbox in front of the flavor that requires deletion. Multiple selections can be made, or alternately the top-left box checkbox will select all of the flavors listed.
2. After selections are complete, clicking the trash can icon in the top-right corner will delete the selected flavors.

7.3 System

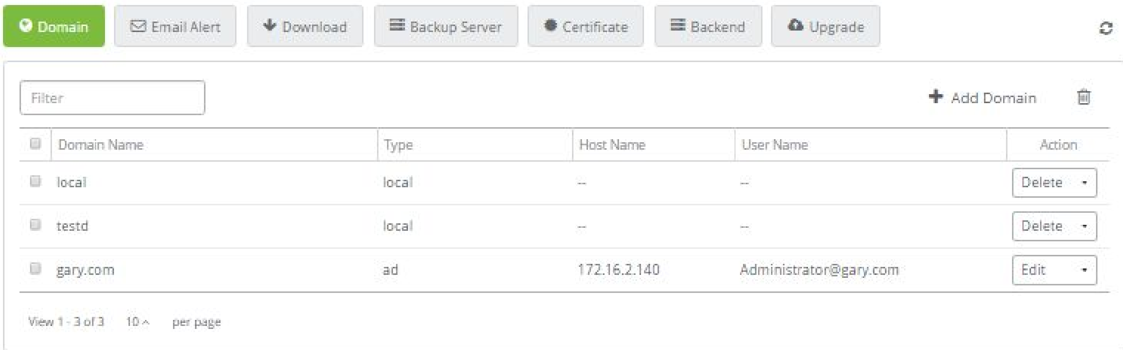
The system portion of the configuration menu allows users to define specific system behaviors and configure other operational elements.

7.3.1 Domain

The domains that apply to the VSkyPoint application can be managed in the menu under ***Configuration> System> Domain***. The following domain types are available.

- Local
- Microsoft AD (Active Directory)
- LDAP

Domain List



The ***Domain*** button brings up a list of domains, with the following functions:

- Paginated list of existing domains

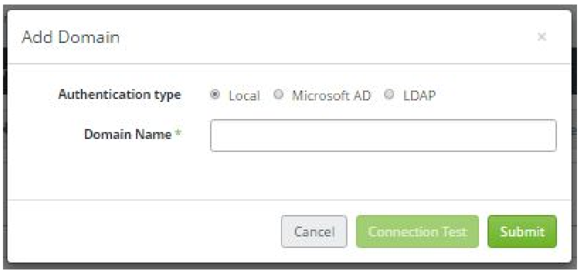
  Domains can be sorted in ascending and descending order alphanumerically according to their ***Type***, ***Host Name***, and ***User Name*** by clicking on the corresponding column. The default view shows 10 domains per page, with 20 and 50 domains per page available.

- Filter options

  Domains can be filtered by a free-input ***Filter*** field, which will dynamically narrow down the domain list based on matching the input string with the domain names.

Add Domain

To add a domain to the system:



1. Click ***Add Domain***
2. Select a domain ***Authentication type*** for the domain.
3. Provide a ***Domain Name***
4. If ***Microsoft AD*** or ***LDAP*** is selected as the domain type:
    - enter the ***Host Name*** for the authentication server
    - enter a valid ***User Name***
    - enter the corresponding ***Password***
    - Optionally click ***Connection Test*** to test connection to the provided host.
5. Click ***Submit*** to add the Domain.

Delete Domain

1. Select the ***Delete*** option from the *Action* drop-down following domain to be deleted.

-Or-

1. Select the checkbox in front of the domain that requires deletion. Multiple selections can be made, or alternately the top-left box checkbox will select all of the domains listed.
2. After selections are complete, clicking the trash can icon in the top-right corner will delete the selected domains.

Edit Domain

If ***Microsoft AD*** or ***LDAP*** is selected as the domain type, the domain can be edited by selecting the ***Edit*** option from the *Action* drop-down.

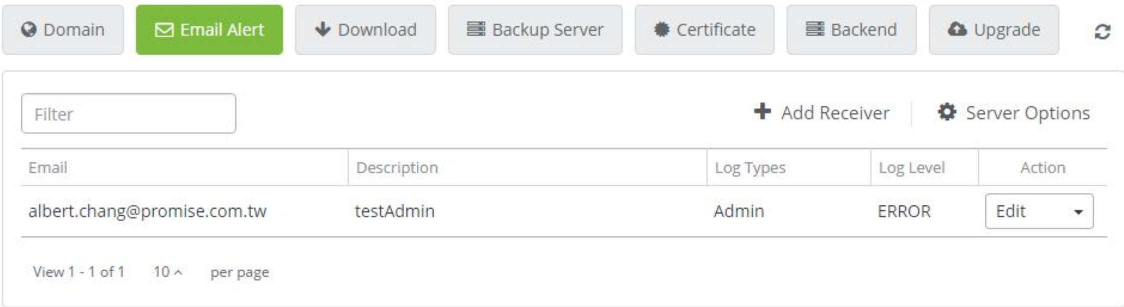
The following can be changed:

- the ***Host Name*** for the authentication server
- the ***User Name***
- the corresponding ***Password***
- Optionally ***Connection Test*** can be clicked to test connection to the edited host.

2. Click ***Submit*** to finalize any changes to the domain

7.3.2 Email Alerts

The ***Configuration> System > Email Alert*** menu allows Administrators to configure email receivers



for different events, as well as configure details of the email server used to send these emails.

Email List

The default view is a list of Emails with the following functions:

- Paginated list of configured Email alert receivers.

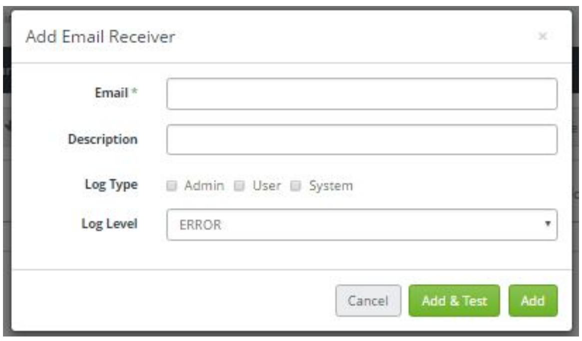
  Receivers can be sorted in ascending and descending order alphanumerically according to their, destination ***Email, Description***, ***Log Types***, and ***Log Level*** by clicking on the corresponding column. The default view shows 10 receivers per page, with 20 and 50 receivers per page available.

- Filter options

  Alerts can be filtered by a free-input ***Filter*** field, which will dynamically narrow down the receiver list based on matching the input string with the destination Email names.

Add Receiver

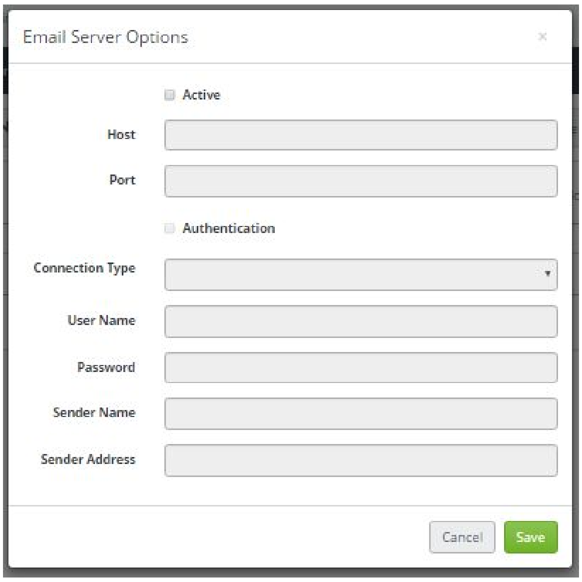
To add a new Email Receiver to the system:



1. Click ***Add Receiver***
2. Enter the ***Email*** address of the receiver.
3. Optionally provide a ***Description*** for the receiver to identify the account.
4. Select the one or more types of logs that will be sent to the receiver
   - ***Admin***
   - ***User***
   - ***System***
5. Select the ***Log Level*** of events that will trigger a notification email.
   - ***Warning***
   - ***Error***
6. Click ***Add*** to add the user or ***Add & Test*** to add the email and send a test email.

Server Options

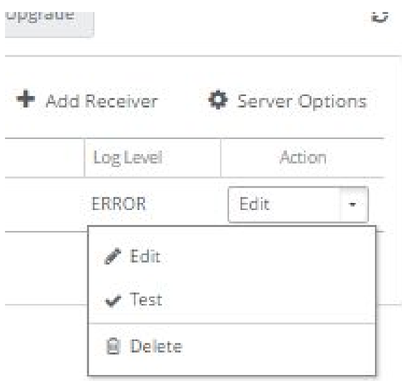
To add configure the system e-mail server:



1. Click ***Server Options***
2. Select the ***Active*** checkbox to activate the server. No e-mails will be sent unless the server is active.
3. Enter the ***Host*** address of the e-mail server.
4. Enter the ***Port*** of the e-mail server.
5. If the server requires authentication
    - Click the ***Authentication*** checkbox
    - Select the ***Connection Type***
    - Enter a valid ***User Name***
    - Enter the corresponding ***Password***
6. Provide a ***Sender Name*** for the alert emails.
7. Provide a ***Sender Address***, or reply-to address for the alert emails.
8. Click ***Save*** to save the server options.

Email Actions

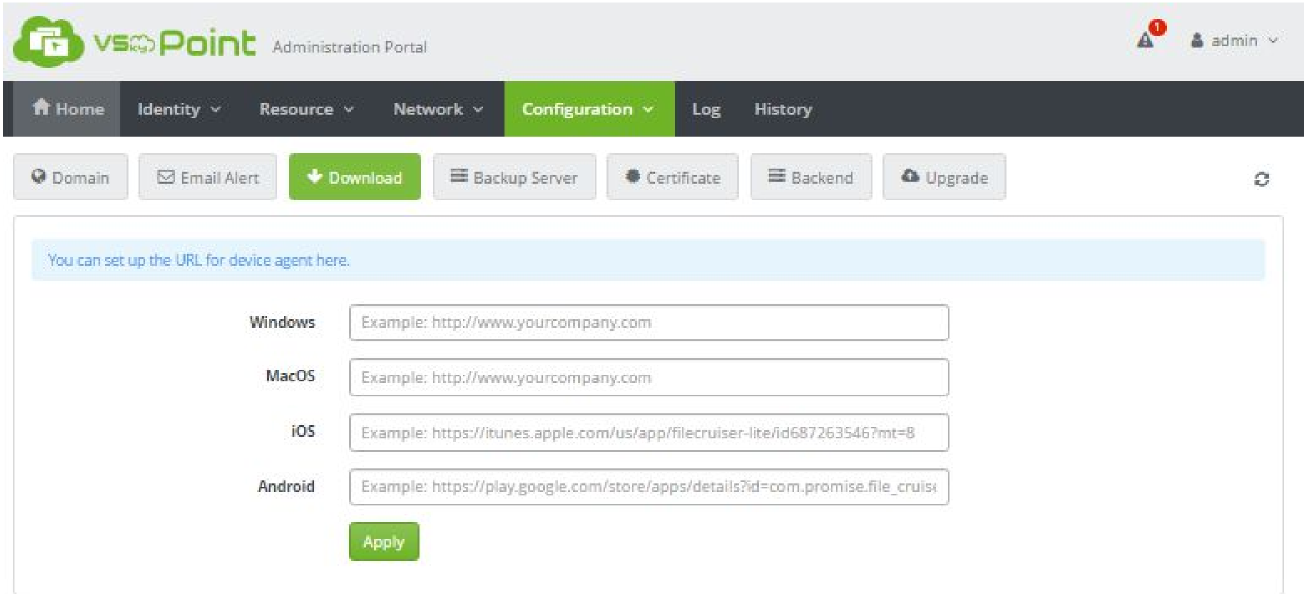
The following actions are available for e-mail recipients



- **Edit** – allows changes to be made to the E-mail address as well log type and level of existing recipients
- **Test** – sends a test email to the user
- **Delete** – deletes the recipient from the list

7.3.3 **Download Link**

The ***Configuration> System > Download*** section allows the Administrator to manage download links for the VSkyPoint Agents.



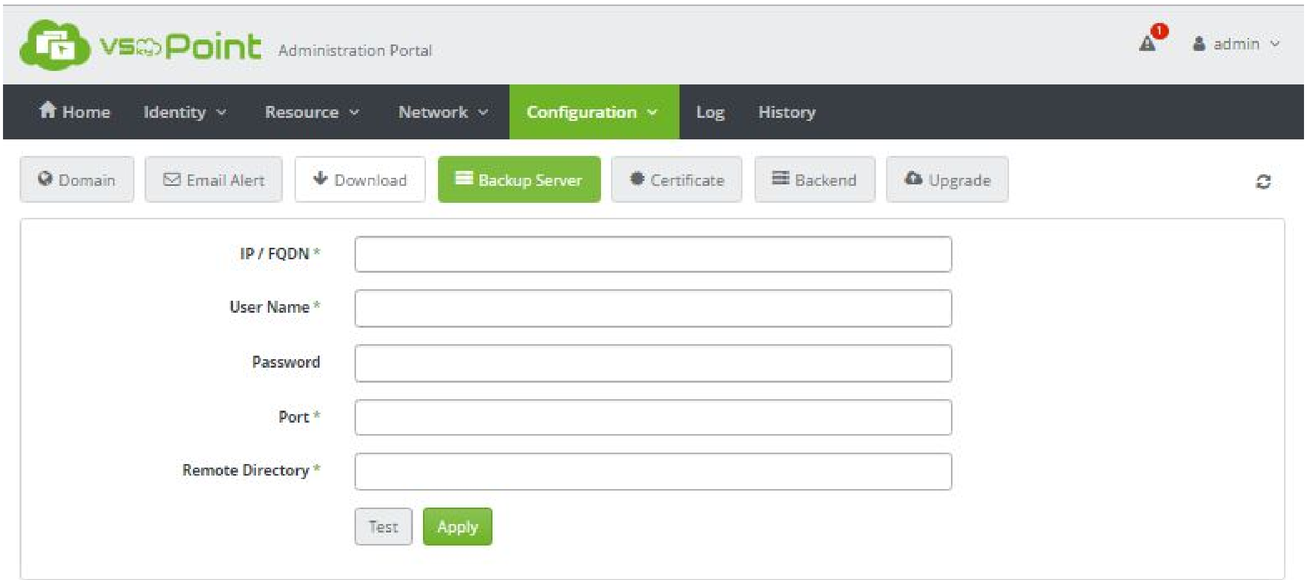
For each supported OS, please provide the address where the Agent can be downloaded. Currently there are four supported client types:

- Windows - please note that there are separate x64 and x86 clients.
- MacOS
- iOS - the latest version will be on the Apple store
- Android – the latest version will be on the Google Play store.

Click ***Apply*** to save the inputs. The links will show up in the sign-in page.

7.3.4 Backup Server

VSkyPoint is able to backup its logs to an external FTP server. The configuration for this function is found under ***Configuration> System > Backup Server***. In this menu:

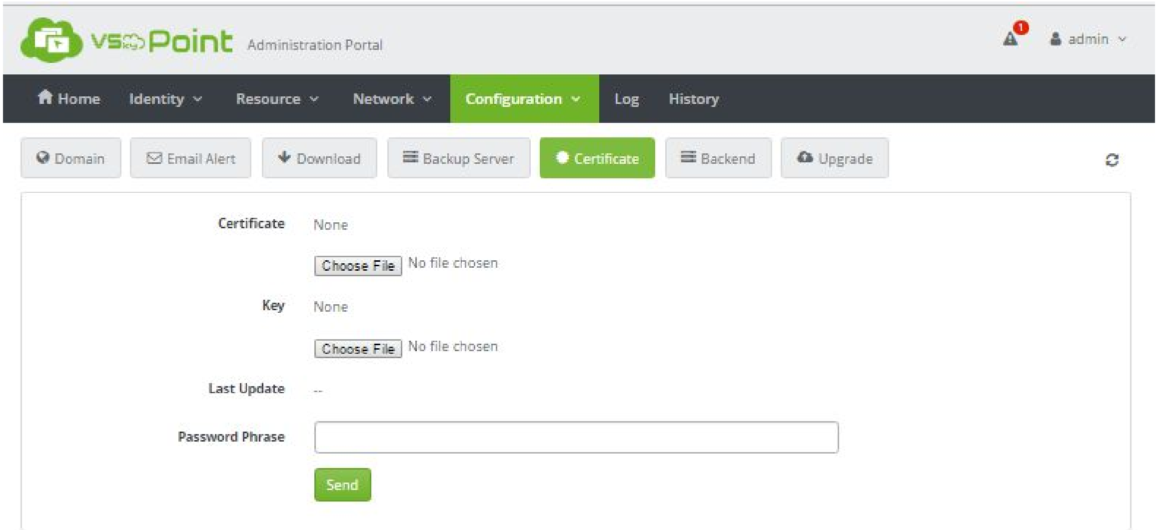


Enter an ***IP/FQDN*** for the FTP server target for the backup.

1. Enter the ***User Name*** used to log-in to the server
2. Enter the corresponding ***Password***
3. Specify the ***Port*** where the FTP server can be accessed.
4. Specify the ***Remote Directory*** in the destination server's directory structure where the backup logs will be stored.
5. Optionally click ***Test*** to perform a test upload for validation.
6. Click ***Apply*** to save the changes to the configuration.

7.3.5 SSL Certificate

In order to support HTTPS, the Administrator can upload their own certificate files under ***Configuration> System > Certificate.***

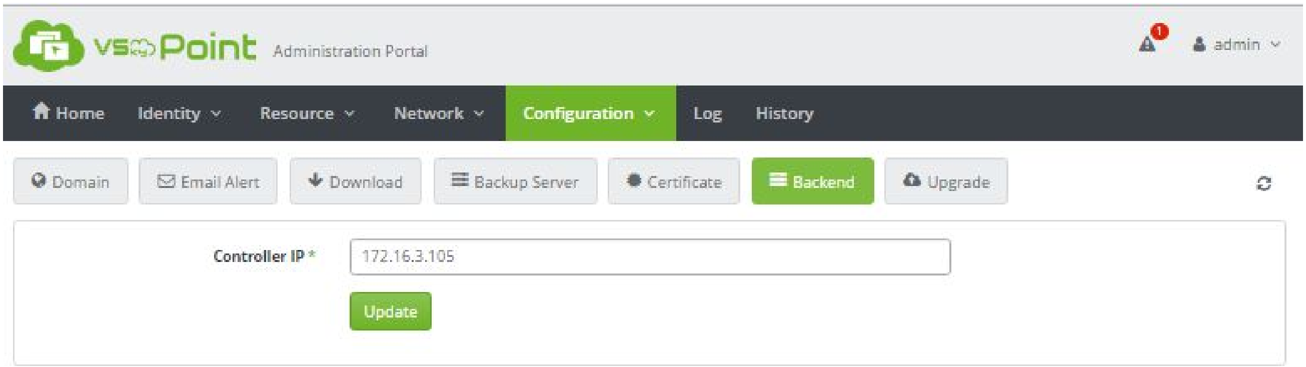


This menu will display the current SSL Certificate and key information, as well as the last update date. The menu also allows administrators to update their certificate with the following steps:

1. Upload SSL Certificate
   - Click ***Choose File*** under the *Certificate* heading and choose the applicable Certificate
2. Choose and upload Private Key
   - Click ***Choose File*** under the *Key* heading and choose the corresponding Private Key
3. Provide a ***Password Phrase*** for the private key if necessary.
4. Click ***Send*** to update the SSL Certificate.

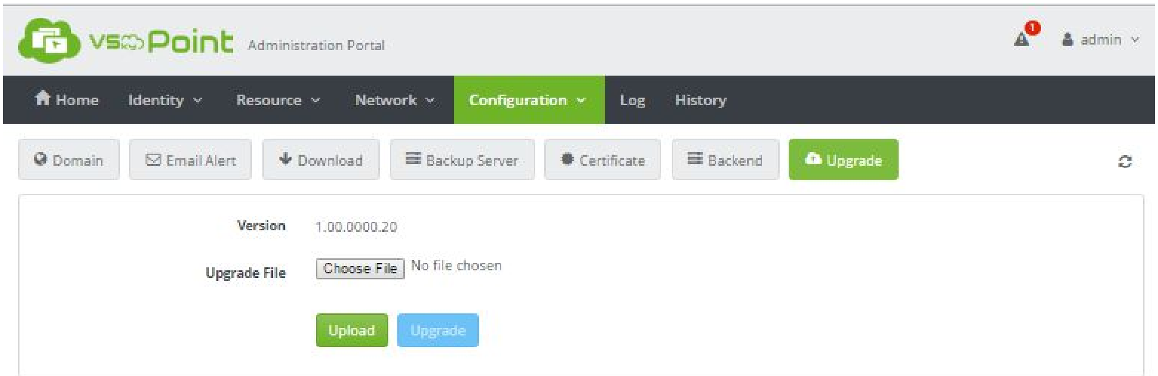
7.3.6 Backend IP

The ***Configuration> System > Backend*** button allows Administrators to configure the VSkyCube controller IP for the VSkyPoint application.



If necessary enter a new ***Controller IP*** in the field and click ***Update*** to change the backend location for the application.

7.3.7 Upgrade



In the Upgrade context, Administrators can upgrade VSkyPoint Portal by uploading an upgrade patch. The current *Version* of the portal is also displayed on this page.

To perform a portal upgrade, follow these steps:

1. Clicks ***Choose File*** and selects the upgrade patch (the format should be a tar ball file)
2. Click ***Upload*** to load the patch onto the device.
3. Once the upload is complete, the ***Upgrade*** option will become available. Click it to execute the upgrade patch

The Administrator will be signed out automatically and portal will be upgraded and restarted.

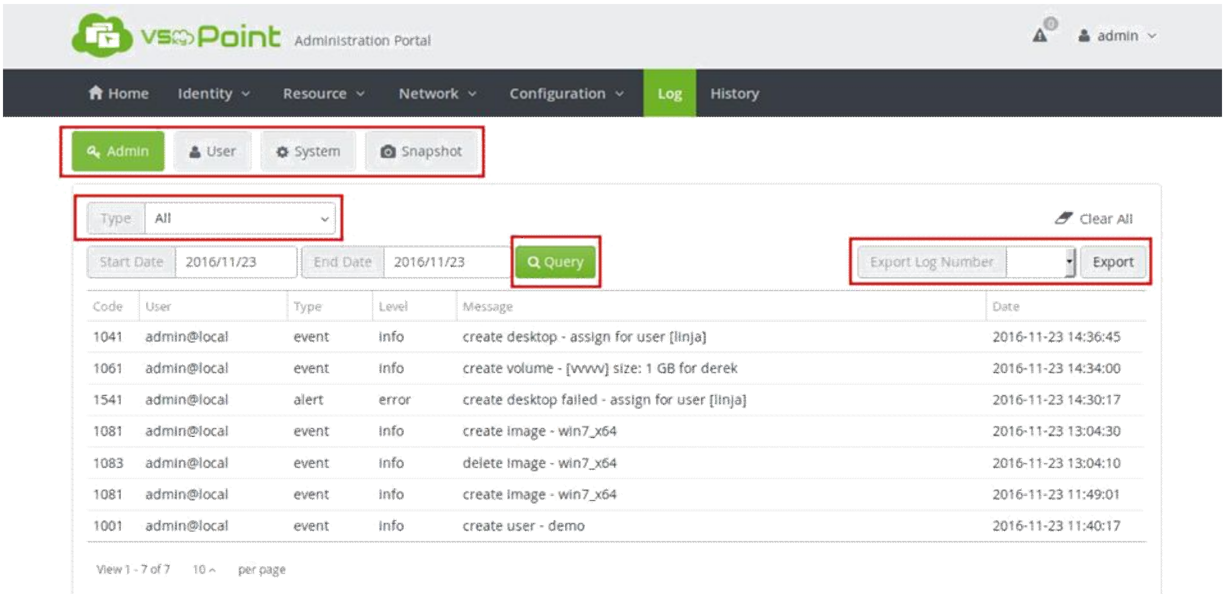
8 Log

Log information is divided into four sections, with a dedicated button for each. These correspond to the four major types of logs available on the system.

- ***Admin*** – logs for Admin Portal
- ***User*** – logs for User Portal
- ***System*** – system logs
- ***Snapshot*** – snapshot creation logs

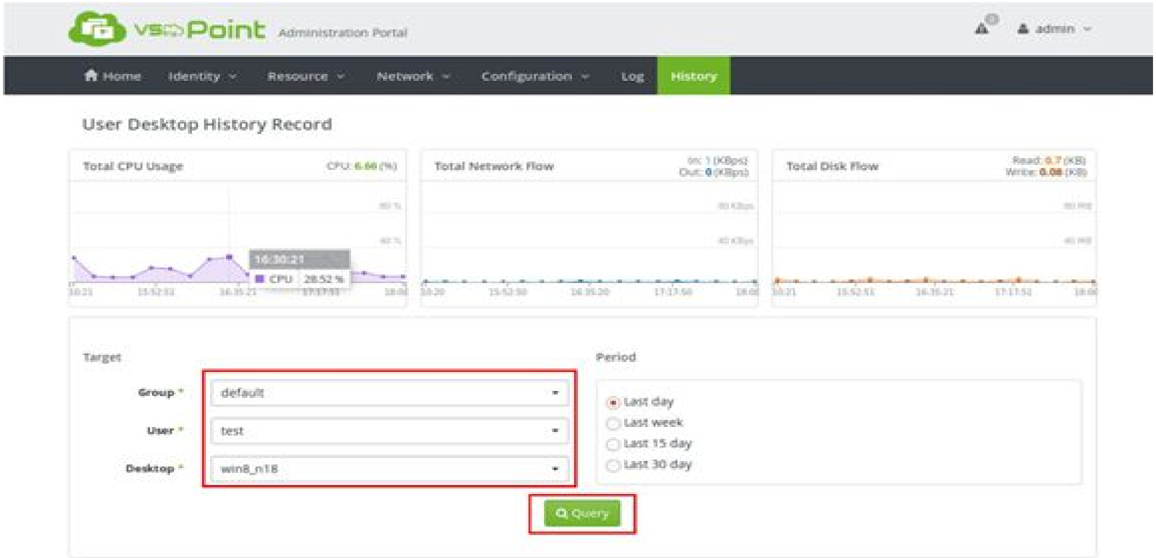
Within these sections Administrators may:

- select from the ***Type*** drop-down menu to filter logs by type
- click column headers to sort information
- exports log by choosing the log number and then click ***Export***
- enter a ***Start Date*** and ***End Date*** then click ***Query*** to display logs from a certain period of time



9 History

History allows Administrators to look up the resource usage history of some target desktops



The history menu shows total CPU, Network and Disk usage statistics for an individual desktop, over a 1 – 30 day range.