STONEFLY

Setup Guide | SCVM Deployment for VMware ESXi

Using OVA Template

vmware ESXi

Last update 07/09/2022

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1. Introduction

The purpose of this document is to guide user though the steps required to deploy a Storage Concentrator Virtual Machine (SCVM) on VMware ESXi 5.x and 6.x and 7.x system using an .OVA file. OVA is a virtual appliance package file that contains files for distribution of software that runs on a virtual machine. The installation described in this document is for a base SCVM.

2. System Requirements

Following are the prerequisites for installing a new SCVM:

1. This document assumes that ESX host is already installed and available for the SCVM to be deployed.

2. 8 GB or more of reserved memory for use by the SCVM.

3. 4 Core CPU.

4. A minimum of 32 GB of storage for loading the StoneFly StoneFusion is required.

5. Two virtual networks defined in VMware ESXi server:

    5.1. One for the LAN,

    5.2. Another for the SAN.

    There must be at least one physical interface reserved for each network.

6. Additional storage space (internal or external) to be managed by the SCVM.

7. SCVM package (SCVM OVA File, documents, and additional files).

Note: Please refer to this link to download the OVA file.
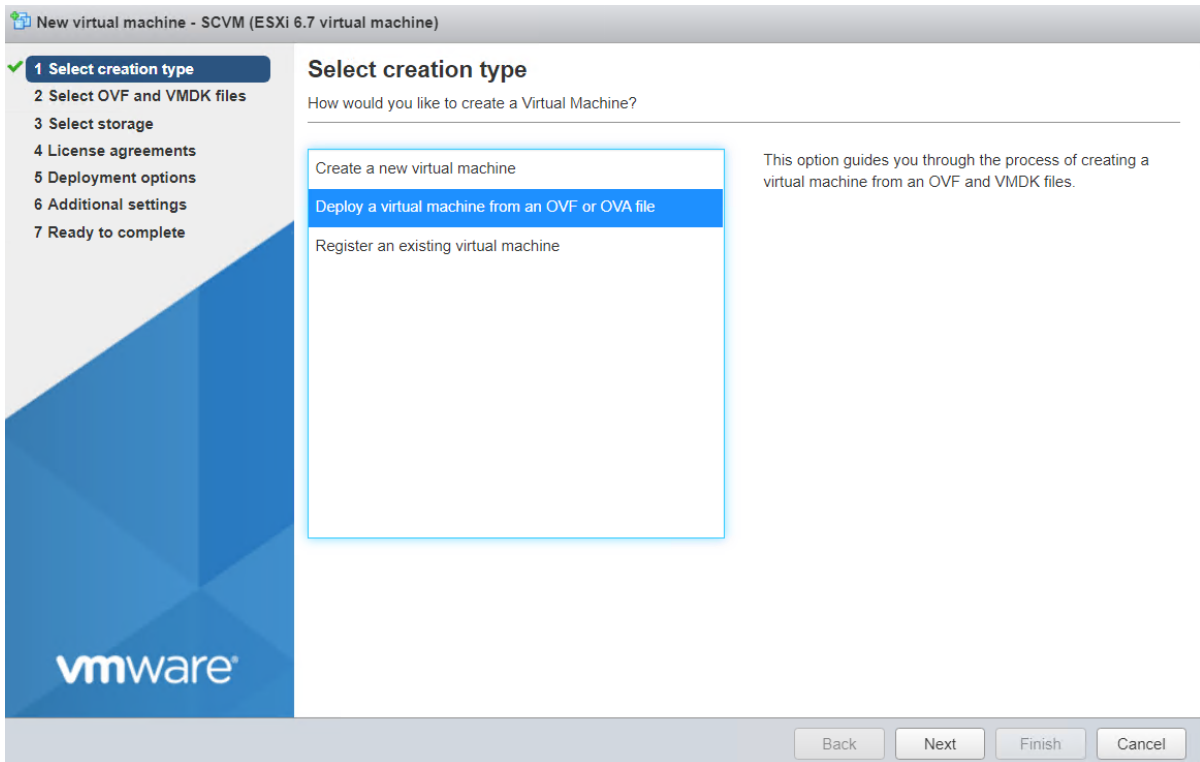
3. SCVM Deployment

For SCVM deployment, there's a need to create a VM using downloaded OVA file. Once it is created, the virtual machine will then be tuned up for installation.
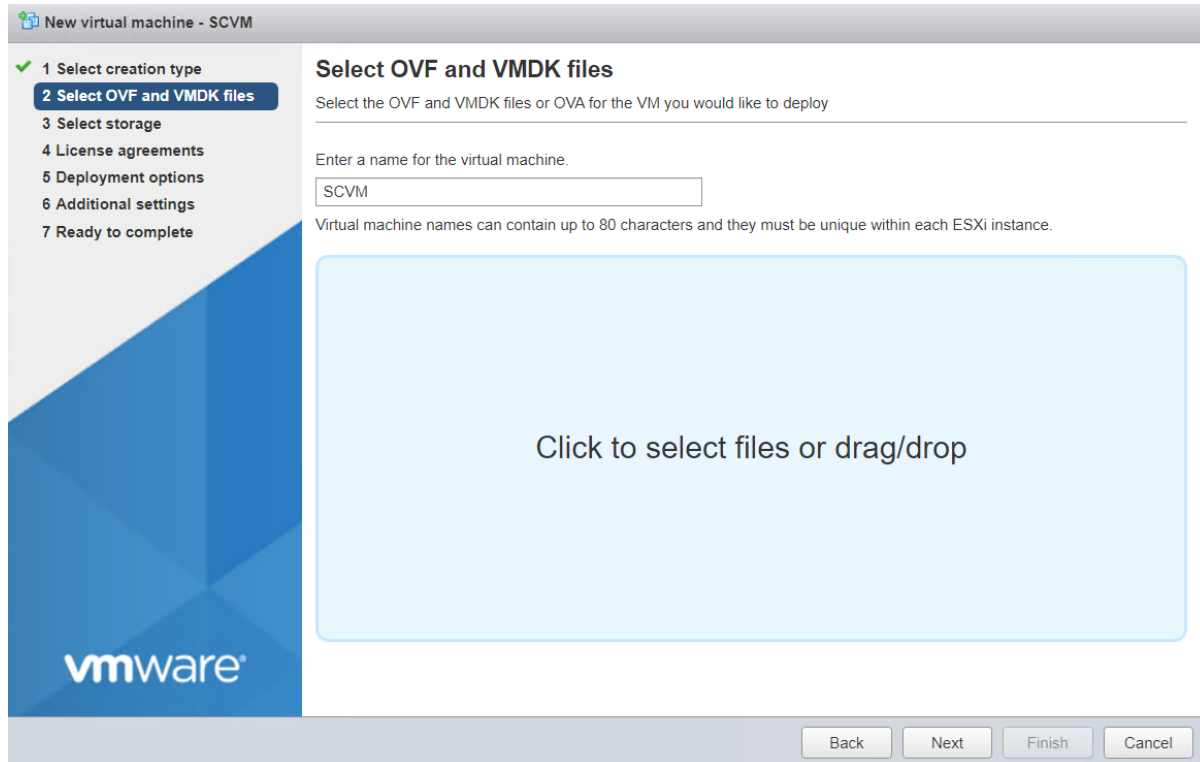
3.1 Create a VM with OVA

1.   Log in to the VMware ESXi Web Client and go to the VMs tab.

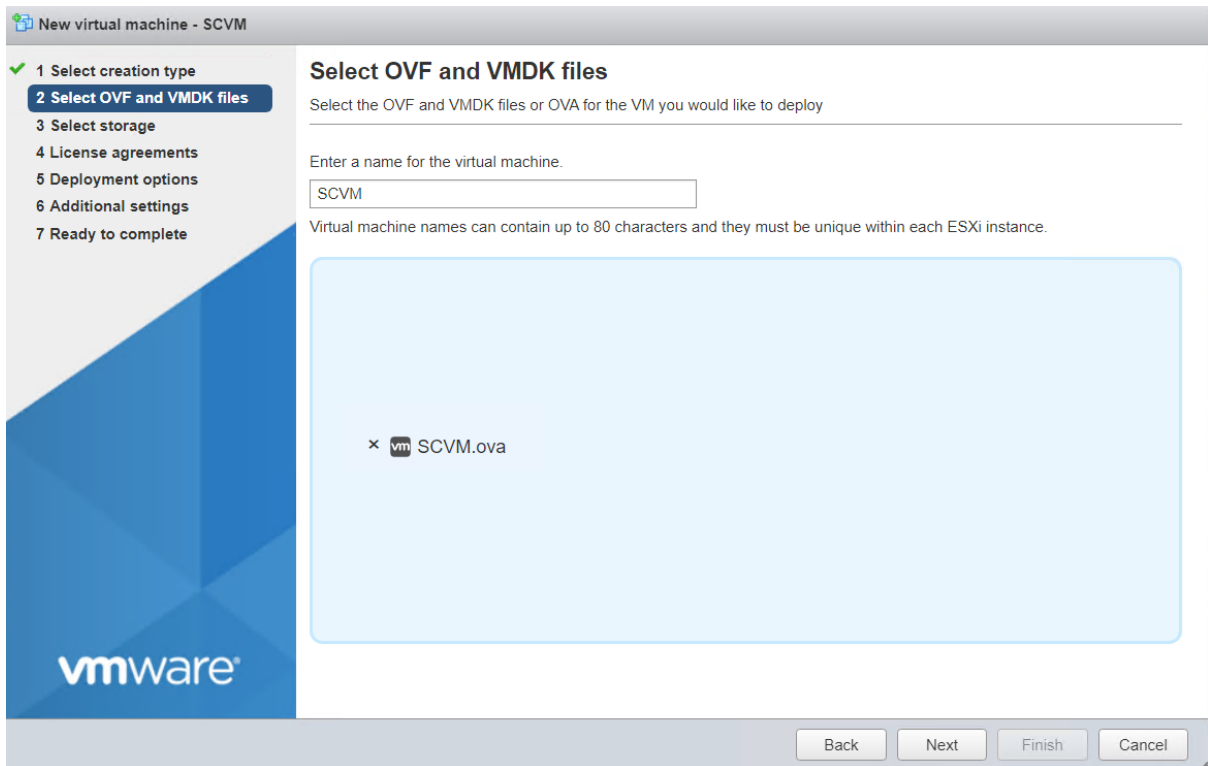2.   Click on **Create/Register VM**
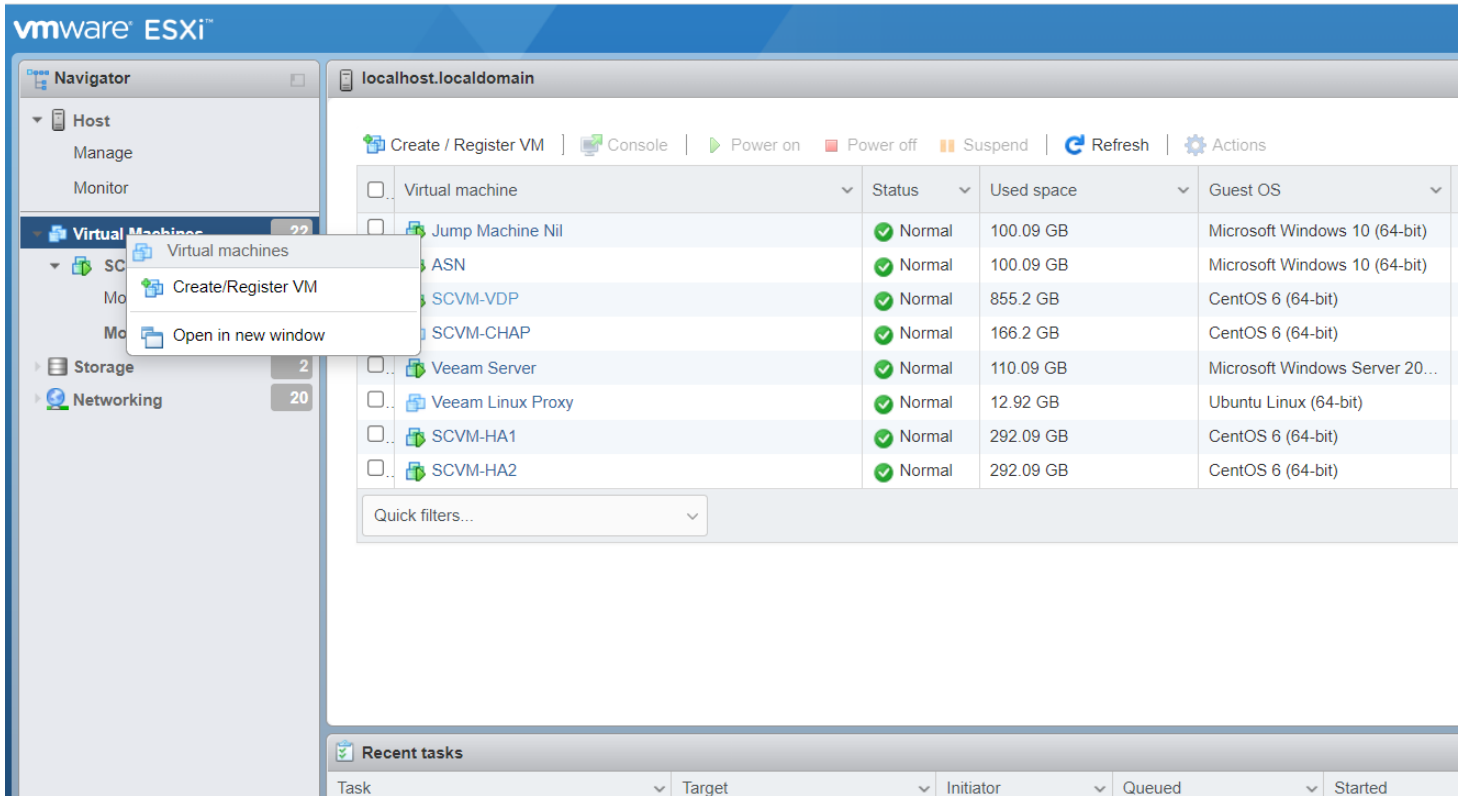
3. Select **Deploy a virtual machine from an OVF or OVA file** option and click on Next
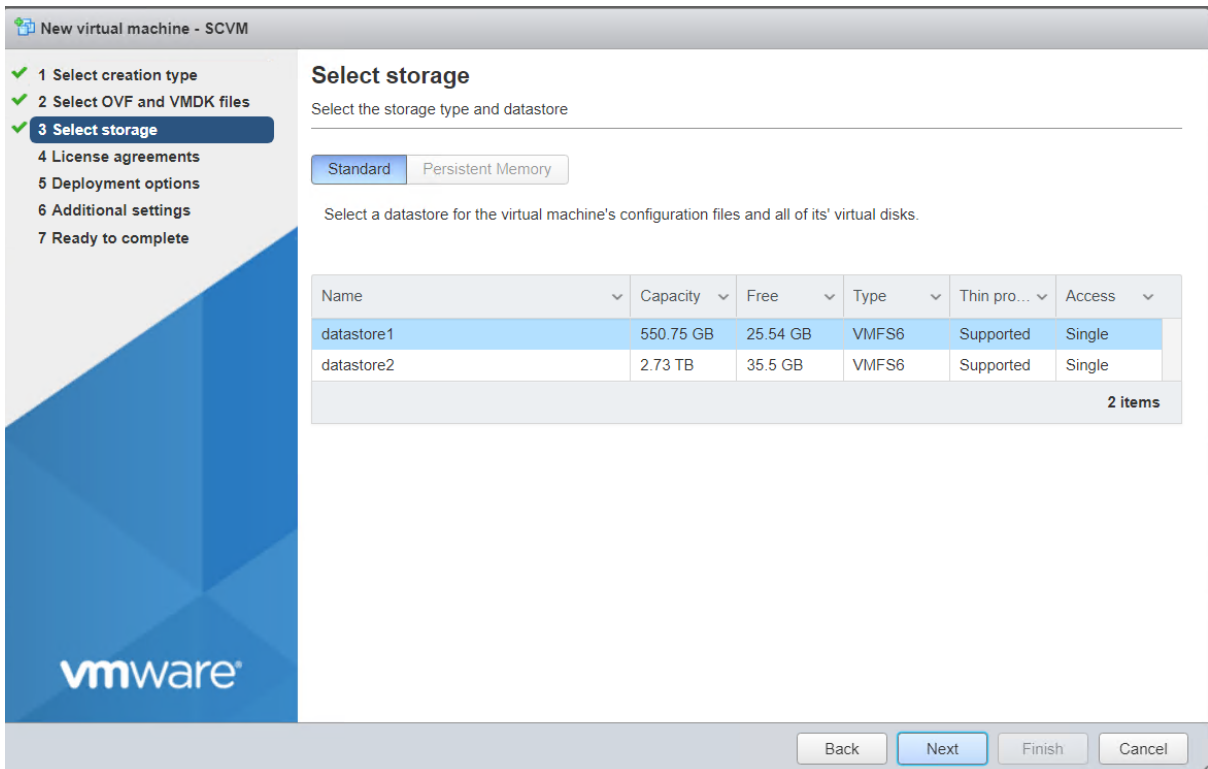

4. Specify **Name for the virtual machine** and **click to select files or drag/drop** the downloaded OVA file for SCVM

5.   After uploading the OVA file and click **Next**

6.   **Select Storage** from available datastore

7.   The order of NIC is very important. Use NIC1: **VM Management Network** for management network and NIC2: **Data Network** for data network

8.   Select **Thick Provision** radio button and Click on **Next** to continue

9.   Verify the settings and hit Finish

10.   Wait for the Virtual Machine Deployment. This will take few minutes

3.2 Edit VM Settings for SCVM

1. Right click on the deployed Virtual Machine and select **Edit Settings** option
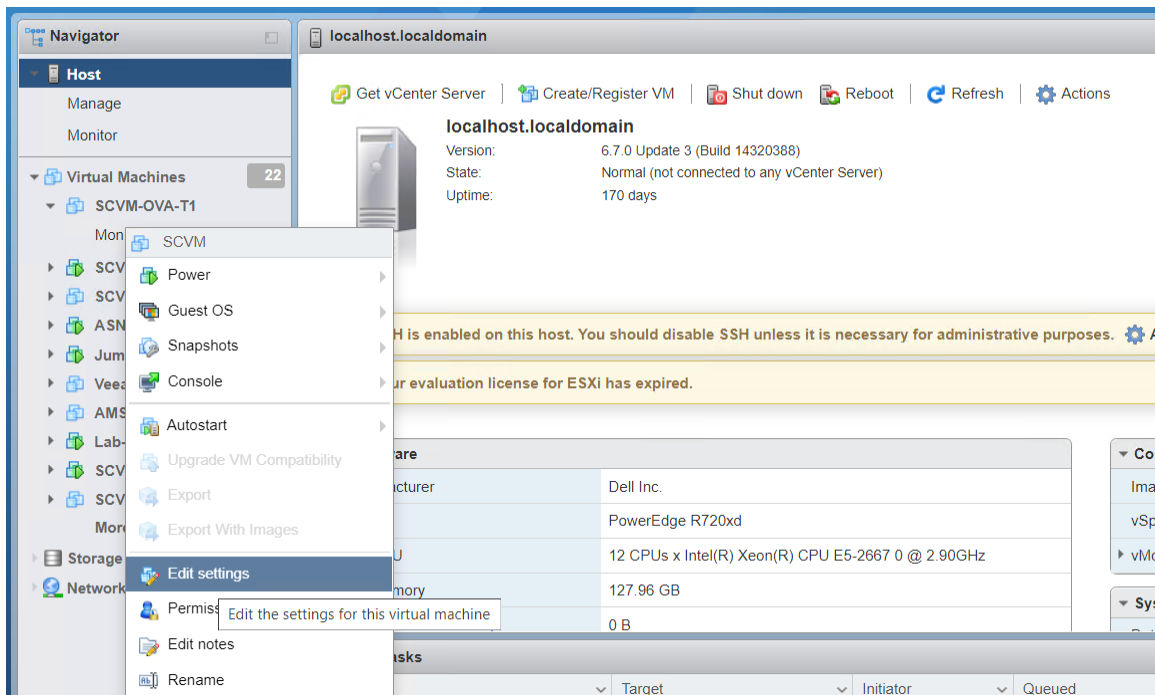
2. Click on **Memory** and adjust for a base system (If needed) and select **Reserve all guest memory.** Systems using encryption require minimum of 8 GB. Systems using deduplication require a larger memory size. This setting can be changed at any time as needed.

3. Click on **CPUs** and select number of CPU's to use. Number of CPU's will have an effect on performance. This can be monitored and changed later. **4 CPU's** are recommended for a base system. This can be set using Number of virtual sockets and Number of cores per socket: fields.
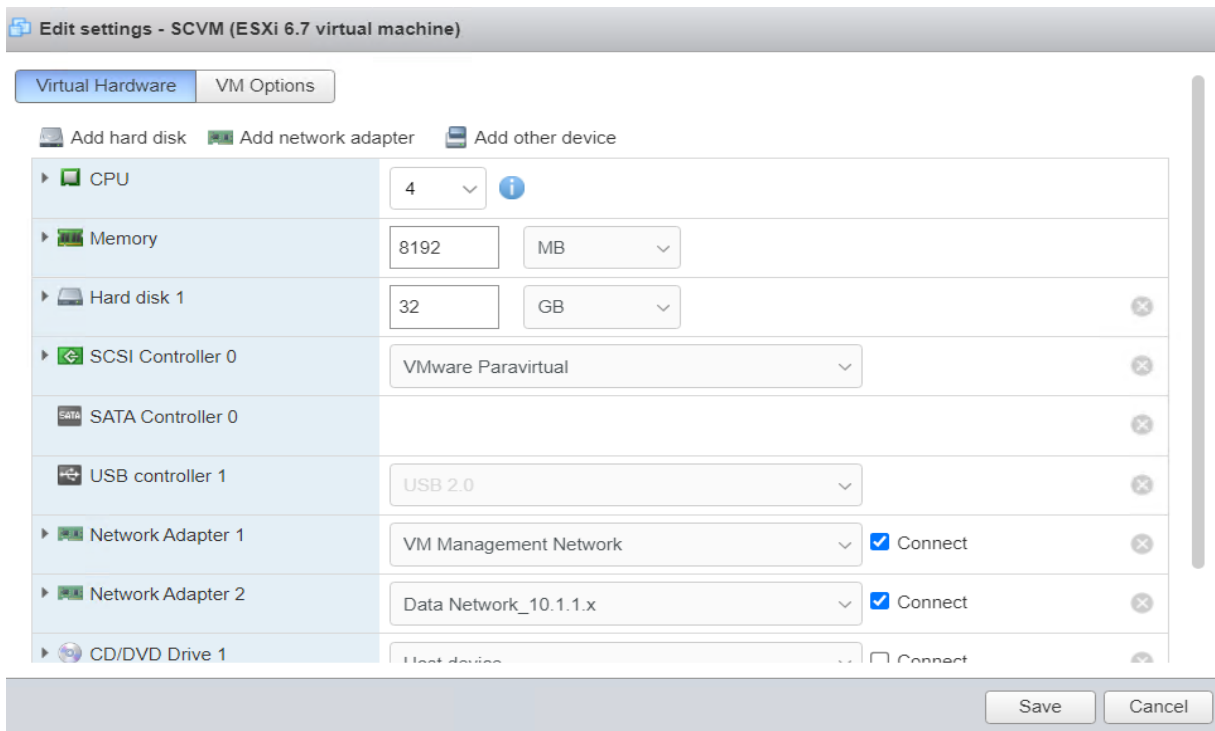
4. **Add hard disk** to create a new virtual disk and click **Next**
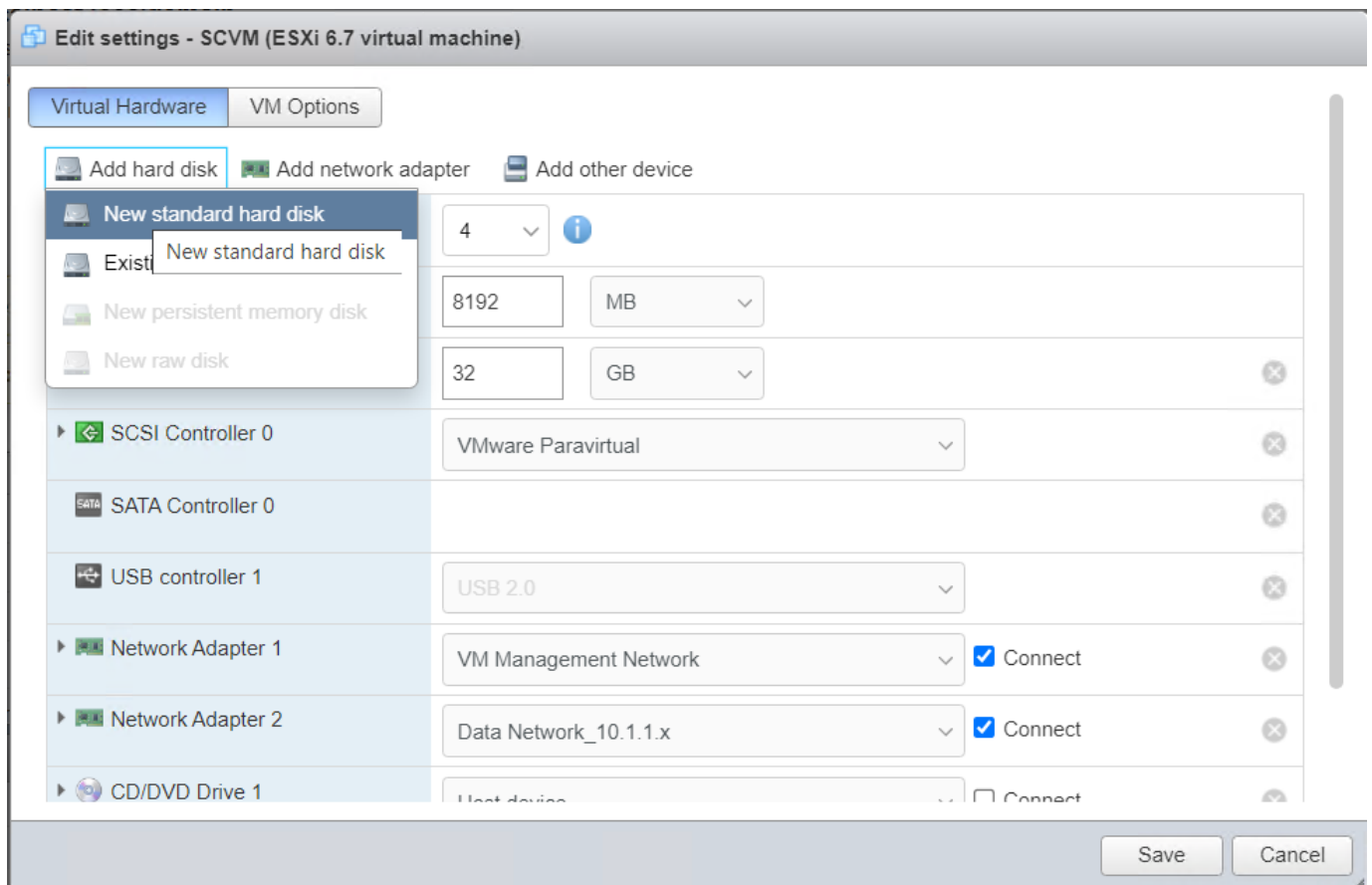
5. Specify the disk size and set **Disk Provisioning** to **Thick Provision lazily zeroed** for particular datastore in **Location** and hit **Save**

SCVM uses the first 64KB of any disk added. Make sure to add this to the required space when creating a new disk. In this example 100.1GB disk will be created. This allows for 100GB of usable disk plus the overhead. Set Disk Provisioning to Thick Provision lazily zeroed and click on **Browse** to select the datastore to use. In this example the selected data store is datastore2. Click on Next to **Save**
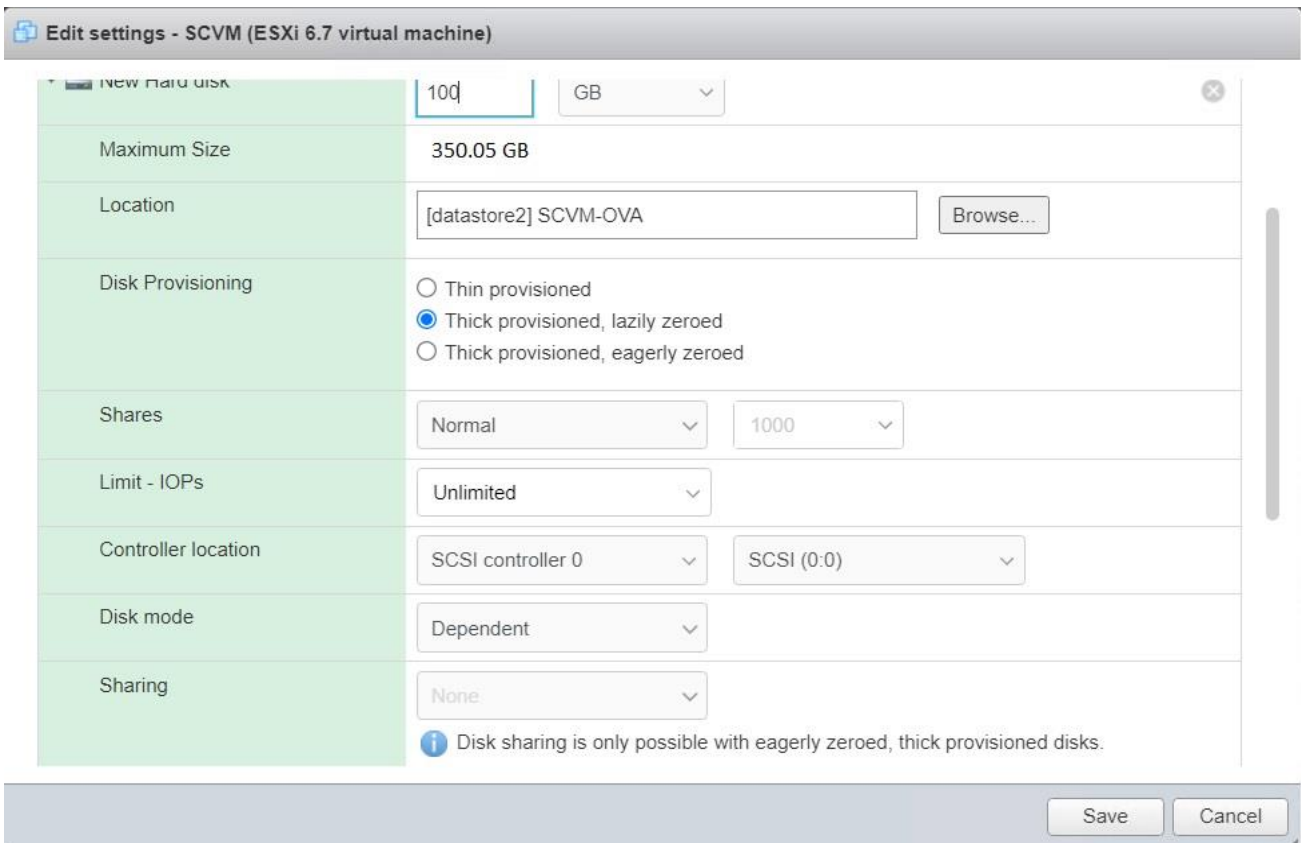
6. Select **SCSI Controller** with **Disk mode** as **Independent**

7. Review the setting and **Save** the changes.
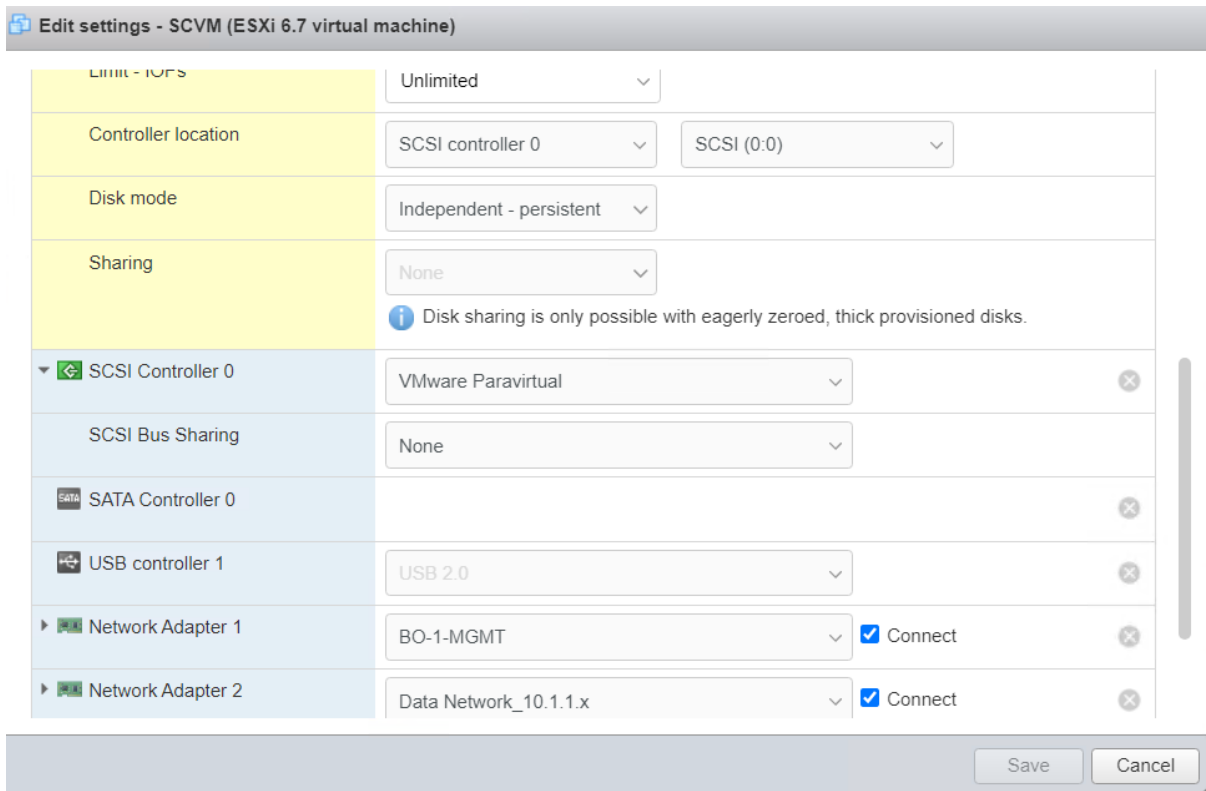
8. **Power on** the newly created virtual machine

9. Launch the console for VM

10. Wait for the system to complete the booting process and **login** into the user console

11. To begin with the user service menu **login** with userID as **console** and password as **coni100o**

12. Enter **2** to configure the **Network**

```
System Name: SC-192-168-0-254 IP: 192.168.0.254 Version: 8.0.4.22

Storage Concentrator

Service
-----------------
1- Admin.....
2- Network...
q- Logout

-> 2
```

13. Configure the network settings. After saving the settings by **s**, enter **q** at the command prompt to exit back to the service menu.

```
System Name: SC-192-168-0-254 IP: 192.168.0.254 Version: 8.0.4.22

Storage Concentrator

Service->Network
-----------------
1- Default Gateway (192.168.0.254 -> 100.100.100.153)
2- Management IP Address (192.168.0.254 -> 100.100.100.160)
3- Management Netmask (255.255.255.0)
4- Management Network (192.168.0.0 -> 100.100.100.0)
5- Management Broadcast (192.168.0.255 -> 100.100.100.255)
6- Management Use DHCP (No)
7- Primary DNS Server ( -> 100.100.100.151)
8- Secondary DNS Server ()
s- Save Changes

q- Back to Service...

->
```

14. After saving the network configuration, the configured IP will appear as

```
StoneFly Storage Concentrator
System Name: SC-100-100-100-160   IP: 100.100.100.160   Version: 8.0.4.22
Browse to http://100.100.100.160 for the Graphical User Interface.
On the CRT console, use <Alt-F1> for messages, <Alt-F2> for login.
The GUI will be disabled while the Console Service Menu is in use.
Powered by StoneFly - Copyright (c) 2002-2022. All Rights Reserved.
SC-100-100-100-160 login: _
```
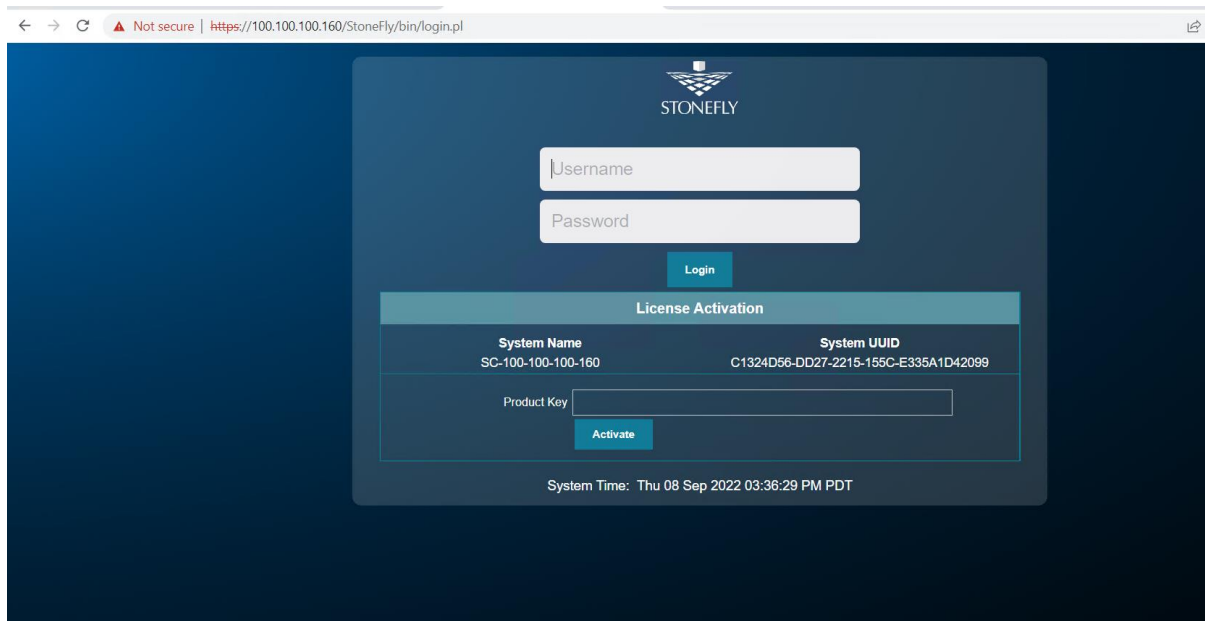
4. SCVM Configuration

Open the SCVM's Management IP on a Web Browser and if the product isn't licenced, here you'll find the System UUID please copy this string and share with the support team , the team will generate the trial license for you and send it back to you accordingly.
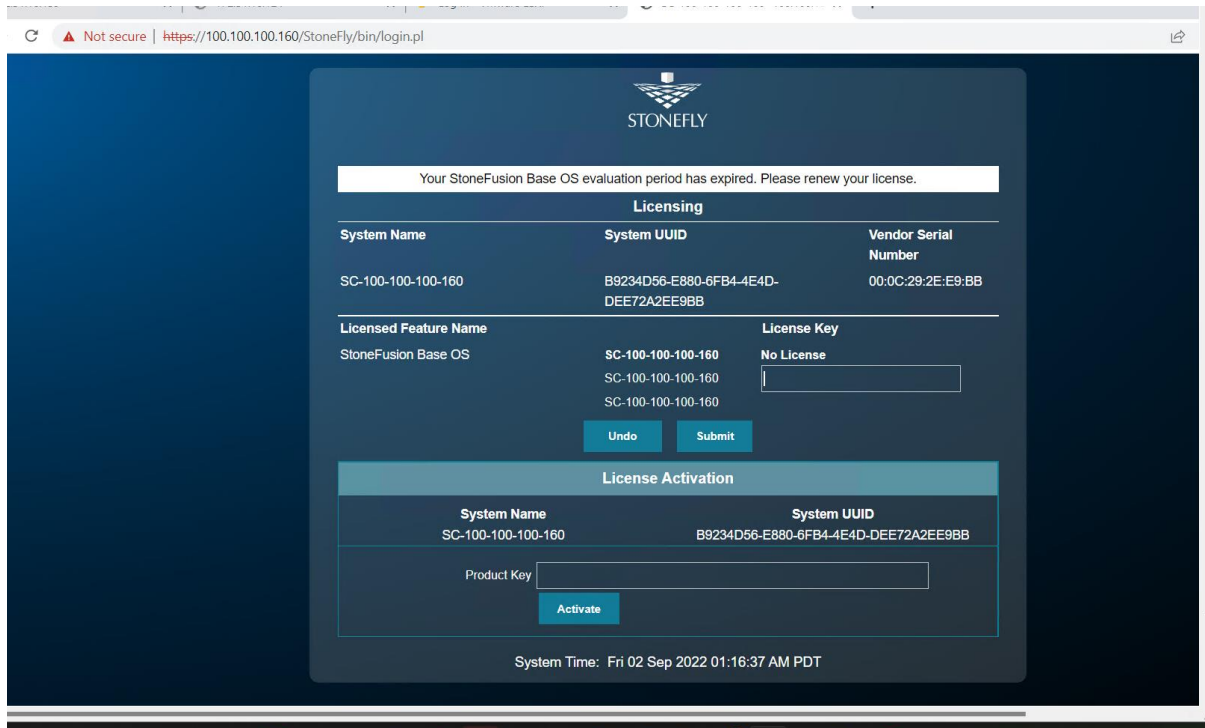
1. If licensed, please login to using username as **admin** with **M@n4g1ng** as password

2. After successful login, SCVM dashboard will appear as first screen
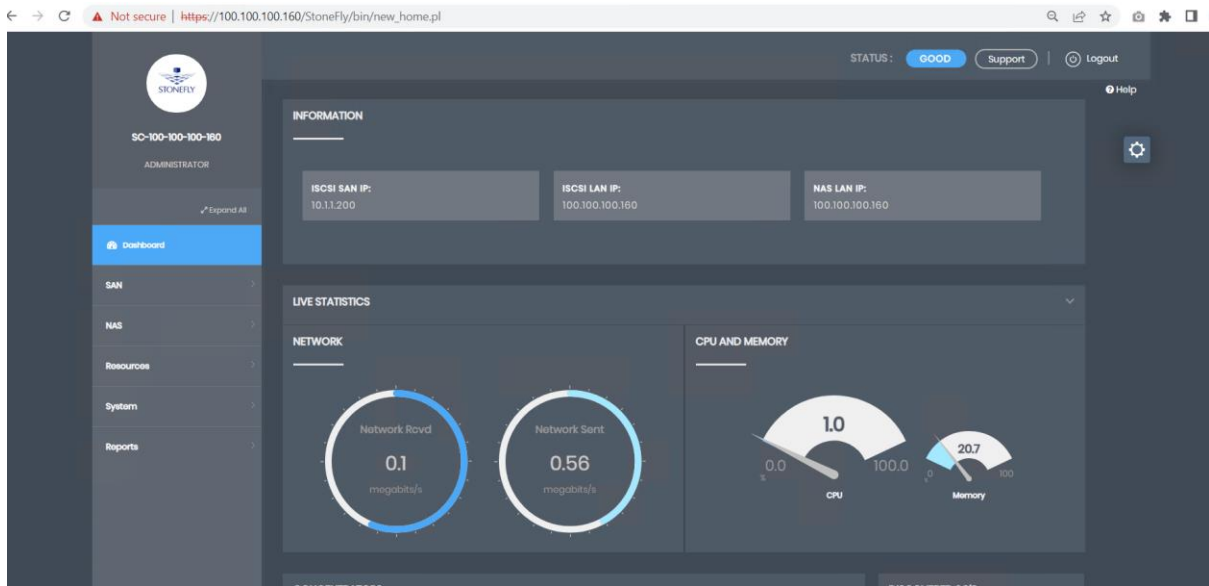
3. The default User ID's are stonefly for **administrative users** and demo for **observer**. The default passwords should be changed on first login to secure the system.

    3.1 To change the passwords navigate to **System** > **User** > **Detail** > **Select User** and enter the new password and click on **Submit**. This should be performed for both default User IDs

    3.2 To add new user client on the **Add User** tab and specify the username along with password
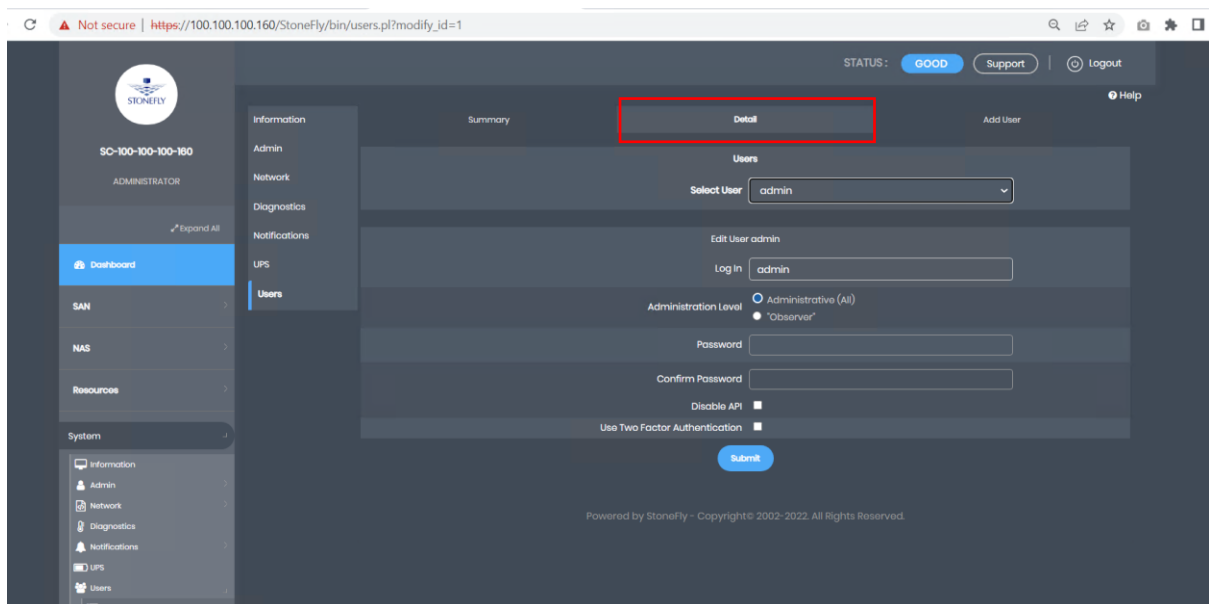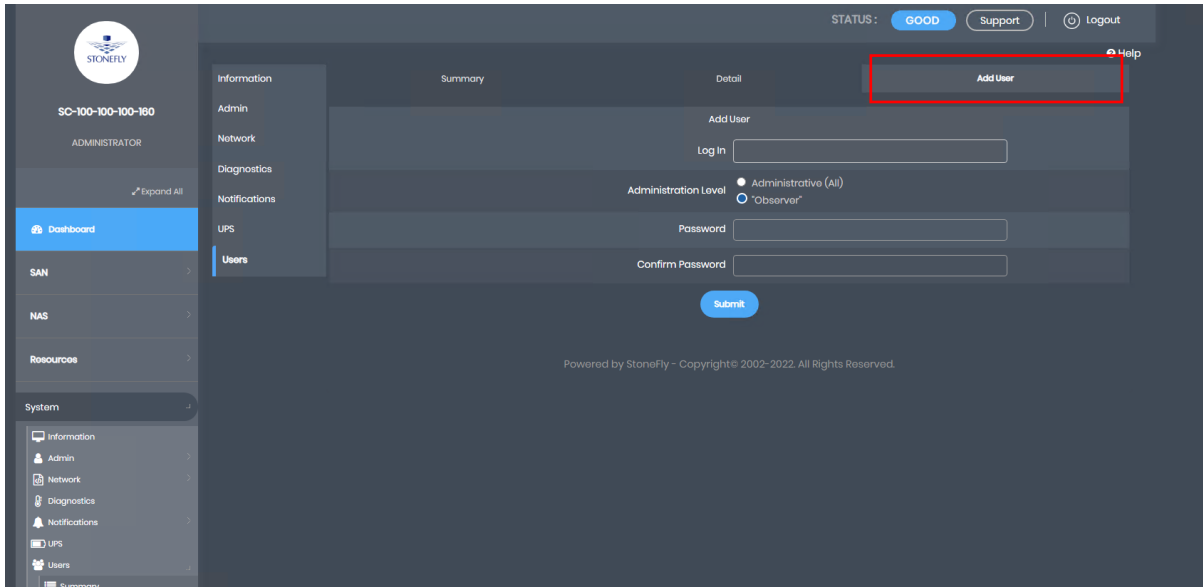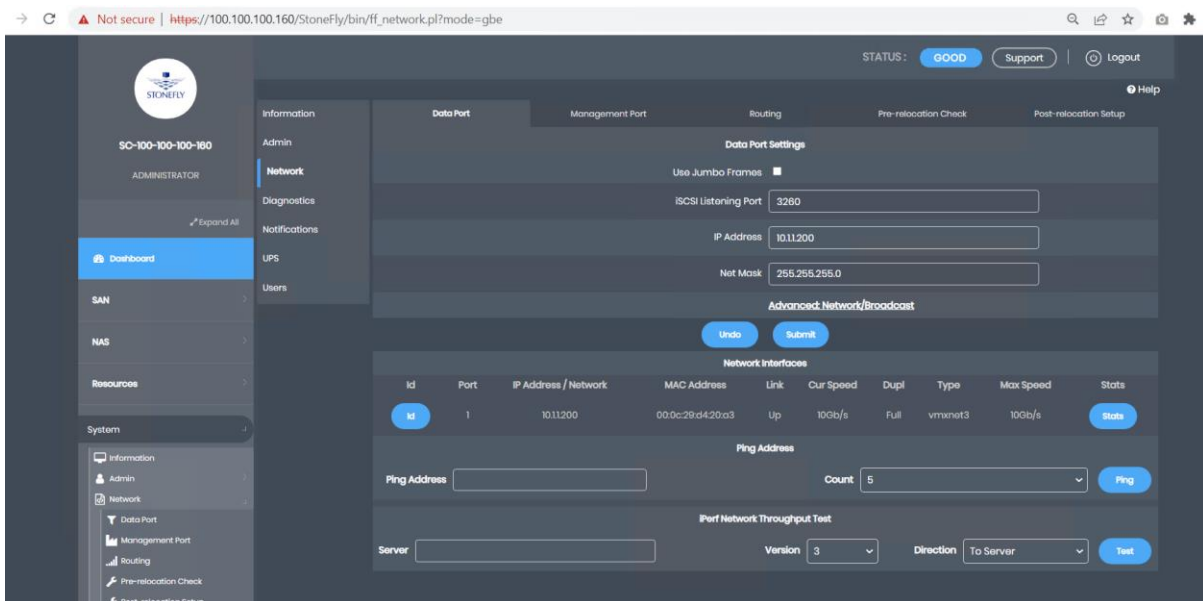
4. To configure network;
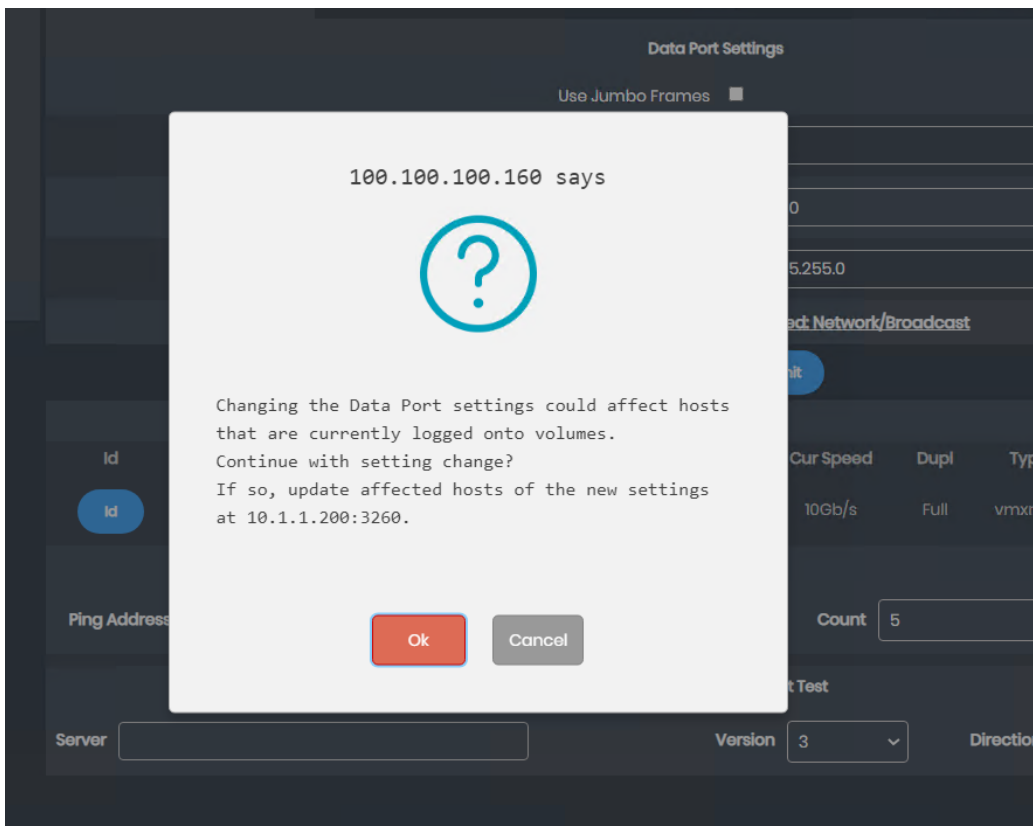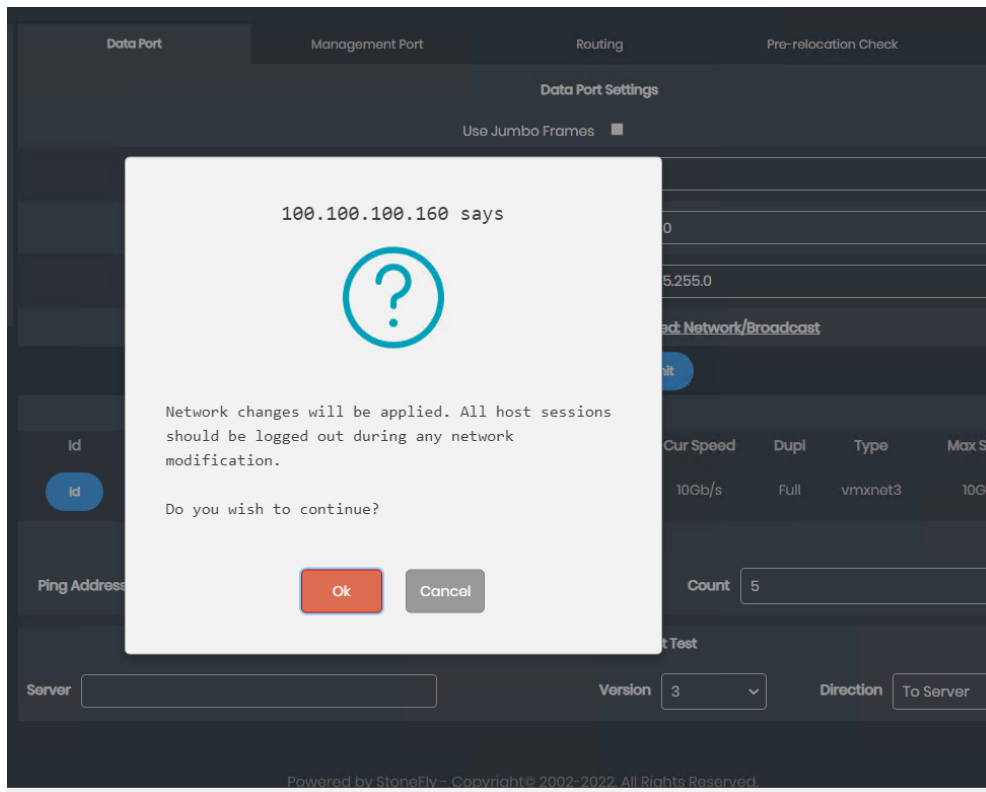
   4.1. Navigate to **System** -> **Network**-> **Local iSCSI Data Port** page.

   4.2. **Enter** the Local Host GbE IP Address and click on **Submit**.
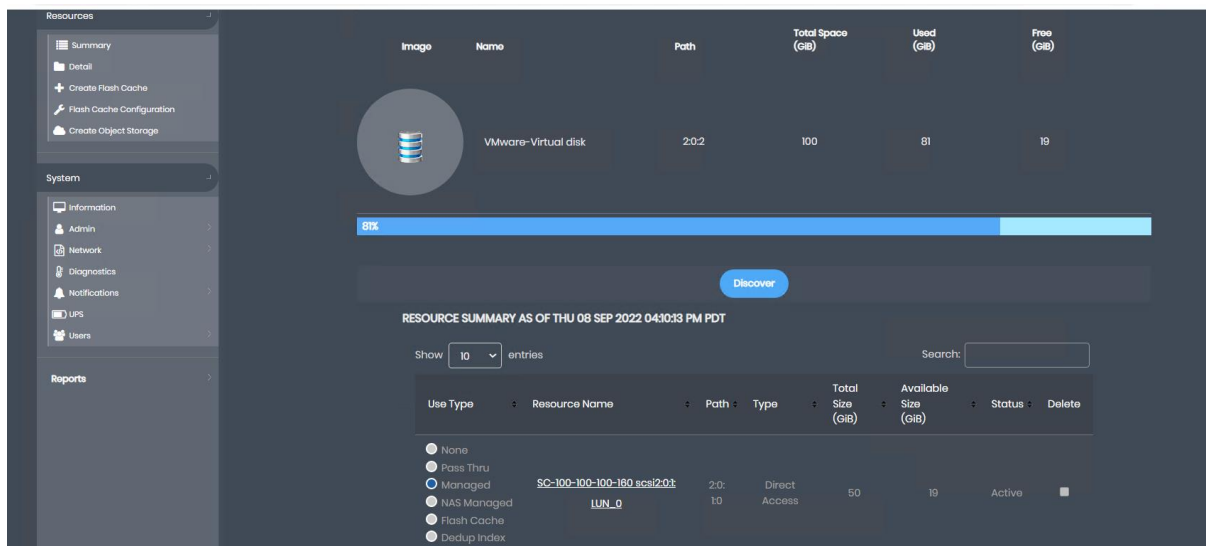

Note: It is recommended to have data network segregated from the management network.

5. Review the popups and click on **Ok**.

6. Navigate to **Resources** -> **Summary** page. A list of available resources will be displayed.

7. The use type must be set before a resource can be used. Use Type include:

      7.1. **Managed** is the most common, this allows for iSCSI and NAS

          volume creation plus Advanced Features based upon licensing.

      7.2. **Pass Thru** is only used when migrating existing data into a Stone-Fly volume and should only be used temporarily.

      7.3. **Flash Cache** is only used when higher speed storage is available to cache write operation for a slower speed resource.

      7.4. **NAS Managed** can only be used to create NAS volumes and cannot be split into multiple volumes.

In most cases the use type of **Managed** should be selected. Select the same and click hit **Submit** button.

The configuration is completed at this point. iSCSI or NAS volumes can now be created as needed.

5. Other Available Features

The Storage Concentrator User Guide is available to discover more features available. Some of the available features are listed below:

High availability Cluster

This feature allows for the creation of an Active-Active Cluster of 2 SCVM's. This allows for maintenance on 1 system while the other remains active for host utilization.

Scale Out

This feature allows for expanding NAS volumes while distributing workloads between multiple Storage Concentrators. Scale Out node can be created across SCVM and physical hardware.

iSCSI

iSCSI volumes can have snapshots, sync mirroring, Async replication, thin volumes, encryption and deduplicated volumes.

NAS

NAS volumes can be configured with snapshots.

SCVM Deployment

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