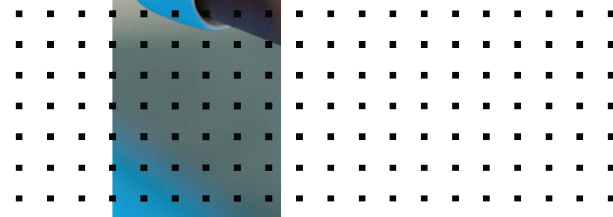


Nutanix AHV Installation Guide

FortiSIEM 6.4.1



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10/04/2023

FortiSIEM 6.4.1 Nutanix AHV Installation Guide

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Change Log

Date	Change Description
04/08/2019	Initial version of FortiSIEM Nutanix AHV Installation Guide.
11/20/2019	Release of FortiSIEM Nutanix AHV Installation Guide for 5.2.6.
03/30/2020	Release of FortiSIEM Nutanix AHV Installation Guide for 5.3.0.
03/17/2021	Release of FortiSIEM Nutanix AHV Installation Guide for 6.1.x
03/19/2021	Revision 1: Added Migration section.
03/25/2021	Release of FortiSIEM Nutanix AHV Installation Guide for 6.2.0.
04/22/2021	Revision 2: Added Install Log section.
05/07/2021	Release of FortiSIEM Nutanix AHV Installation Guide for 6.2.1.
06/07/2021	Updated Elasticsearch screenshot for 6.2.x guides.
07/06/2021	Release of FortiSIEM Nutanix AHV Installation Guide for 6.3.0.
08/26/2021	Release of FortiSIEM Nutanix AHV Installation Guide for 6.3.1.
10/15/2021	Release of FortiSIEM Nutanix AHV Installation Guide for 6.3.2.
11/17/2021	Updated Register Collectors instructions for 6.x guides.
12/22/2021	Release of FortiSIEM Nutanix AHV Installation Guide for 6.3.3.
01/18/2022	Release of FortiSIEM Nutanix AHV Installation Guide for 6.4.0.
05/23/2022	Release of FortiSIEM Nutanix AHV Installation Guide for 6.4.1.
08/18/2022	Updated All-in-one Installation section.
10/20/2022	Updated Register Collectors instructions for 6.x guides.
12/14/2022	Release of FortiSIEM Nutanix AHV Installation Guide for 6.4.2.
09/01/2023	Release of FortiSIEM Nutanix AHV Installation Guide for 6.4.3.

Fresh Installation

- [Pre-Installation Checklist](#)
- [All-in-one Installation](#)
- [Cluster Installation](#)

Pre-Installation Checklist

Before you begin, check the following:

- Ensure that your system can connect to the network. You will be asked to provide a DNS Server and a host that can be resolved by the DNS Server and responds to ping. The host can either be an internal host or a public domain host like google.com.
- Deployment type – Enterprise or Service Provider. The Service Provider deployment provides multi-tenancy.
- Whether FIPS should be enabled
- Install type:
 - All-in-one with Supervisor only, or
 - Cluster with Supervisor and Workers
- Storage type
 - Online – Local or NFS or Elasticsearch
 - Archive – NFS or HDFS
- Before beginning FortiSIEM deployment, you must configure external storage
- Determine hardware requirements:

Node	vCPU	RAM	Local Disks
Supervisor (All in one)	Minimum – 12 Recommended - 32	Minimum <ul style="list-style-type: none">• without UEBA – 24GB• with UEBA - 32GB Recommended <ul style="list-style-type: none">• without UEBA – 32GB• with UEBA - 64GB	OS – 25GB OPT – 100GB CMDB – 60GB SVN – 60GB Local Event database – based on need
Supervisor (Cluster)	Minimum – 12 Recommended - 32	Minimum <ul style="list-style-type: none">• without UEBA – 24GB• with UEBA - 32GB Recommended <ul style="list-style-type: none">• without UEBA – 32GB• with UEBA - 64GB	OS – 25GB OPT – 100GB CMDB – 60GB SVN – 60GB
Workers	Minimum – 8 Recommended - 16	Minimum – 16GB Recommended – 24GB	OS – 25GB OPT – 100GB

Node	vCPU	RAM	Local Disks
Collector	Minimum – 4 Recommended – 8 (based on load)	Minimum – 4GB Recommended – 8GB	OS – 25GB OPT – 100GB

Note: compared to FortiSIEM 5.x, you need one more disk (OPT) which provides a cache for FortiSIEM.

For OPT - 100GB, the 100GB disk for /opt will consist of a single disk that will split into 2 partitions, /OPT and swap. The partitions will be created and managed by FortiSIEM when `configFSM.sh` runs.

Before proceeding to FortiSIEM deployment, you must configure the external storage.

- For NFS deployment, see *FortiSIEM - NFS Storage Guide* [here](#).
- For Elasticsearch deployment, see *FortiSIEM - Elasticsearch Storage Guide* [here](#).

All-in-one Installation

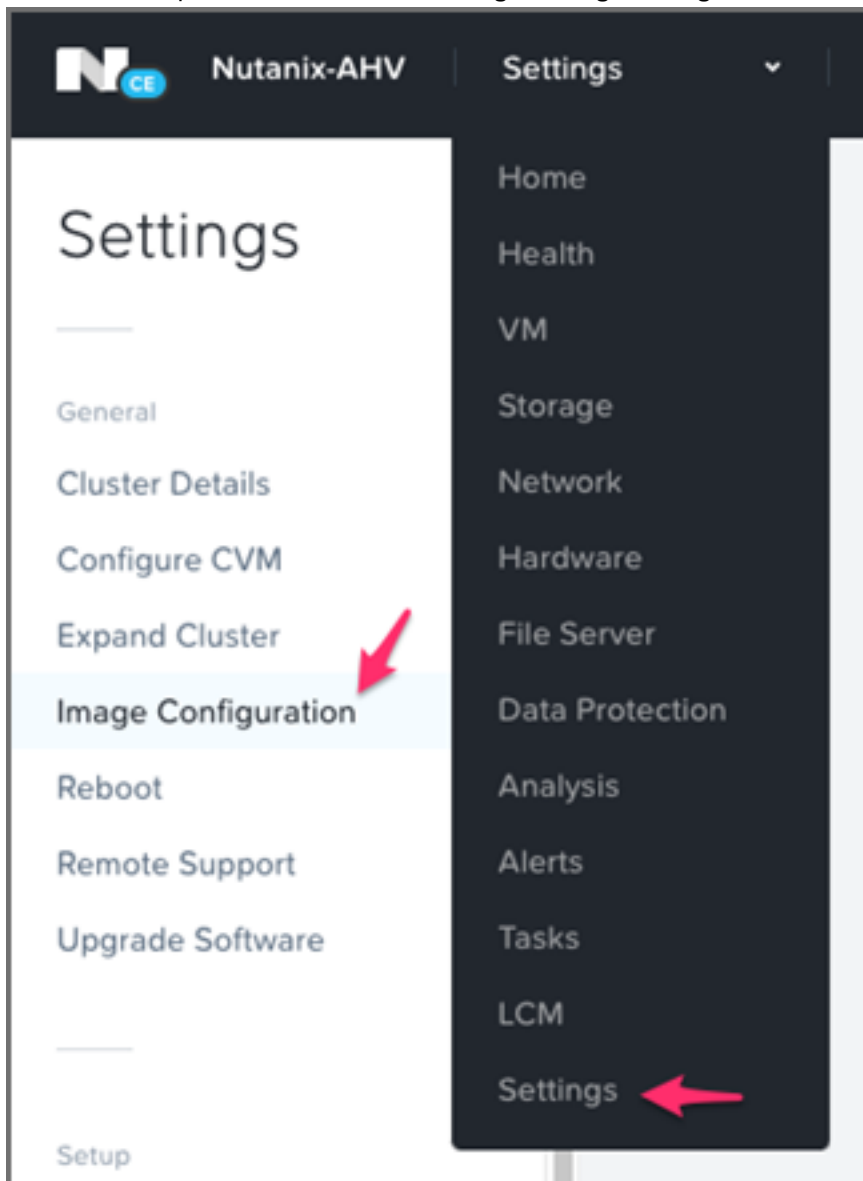
This is the simplest installation with a single Virtual Appliance. If storage is external, then you must configure external storage before proceeding with installation.

- [Import FortiSIEM into Nutanix AHV Prism Console](#)
- [Configure FortiSIEM via GUI](#)
- [Upload the FortiSIEM License](#)
- [Choose an Event Database](#)

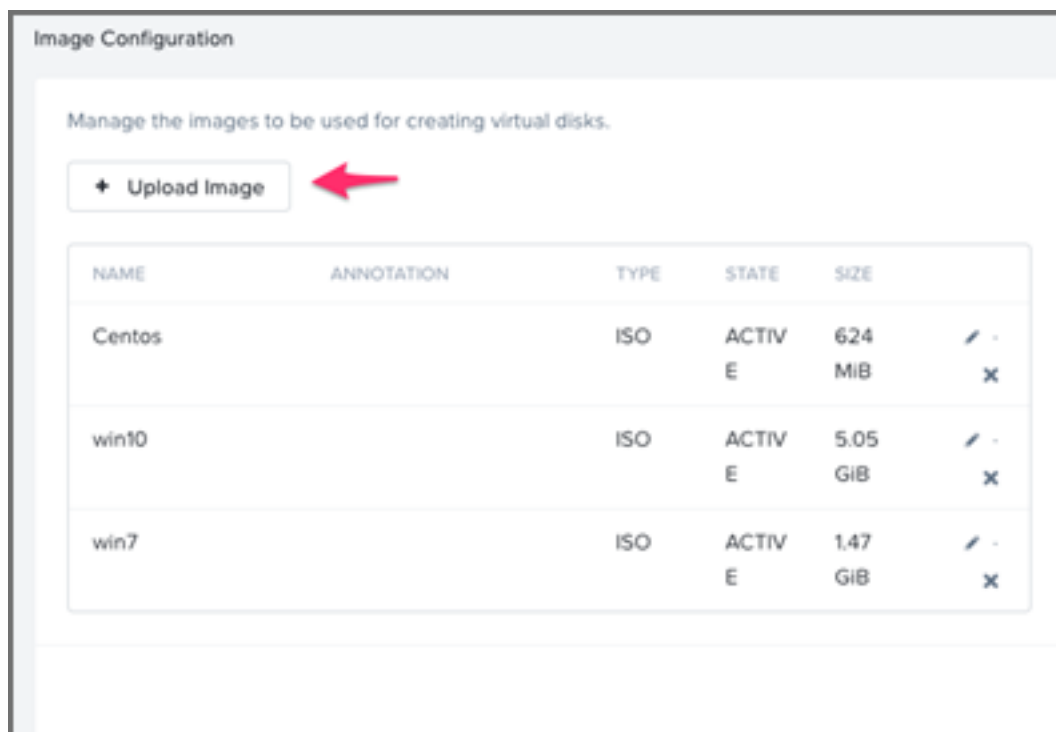
Import FortiSIEM into Nutanix AHV Prism Console

1. Go to the Fortinet Support website <https://support.fortinet.com> to download the KVM package `FSM_Full_All_KVM_6.4.1_build1415.zip`. See [Downloading FortiSIEM Products](#) for more information on downloading products from the support website.
2. Download the packages for Super/Worker and Collector to the location where you want to install the image. For example: `FSM_Full_All_KVM_6.4.1_build1415.zip`.
3. Unzip the `.zip` file to get the `FortiSIEM-6.4.1.1415.qcow2` file.
4. Login to the Nutanix AHV Prism Console.

5. Click on the drop-down list and select **Settings > Image Configuration**.



6. Click **Upload Image** from the **Image Configuration** page.



7. Select Upload a file, click on Choose File, and browse to the `FortiSIEM-6.4.1.1415.qcow2` file.
 - a. From the **Storage Container** drop-down list, select a storage container.
 - b. From the **Image Type** drop-down list, select **DISK**.
 - c. In the **Name** field, provide the name of the image.
 - d. Click **Save**.

- e. Wait for the image upload to complete before proceeding to the next step.

Create Image

Name: FortiSIEM-6.1.1.0118 (c)

Annotation: [Empty]

Image Type: DISK (b)

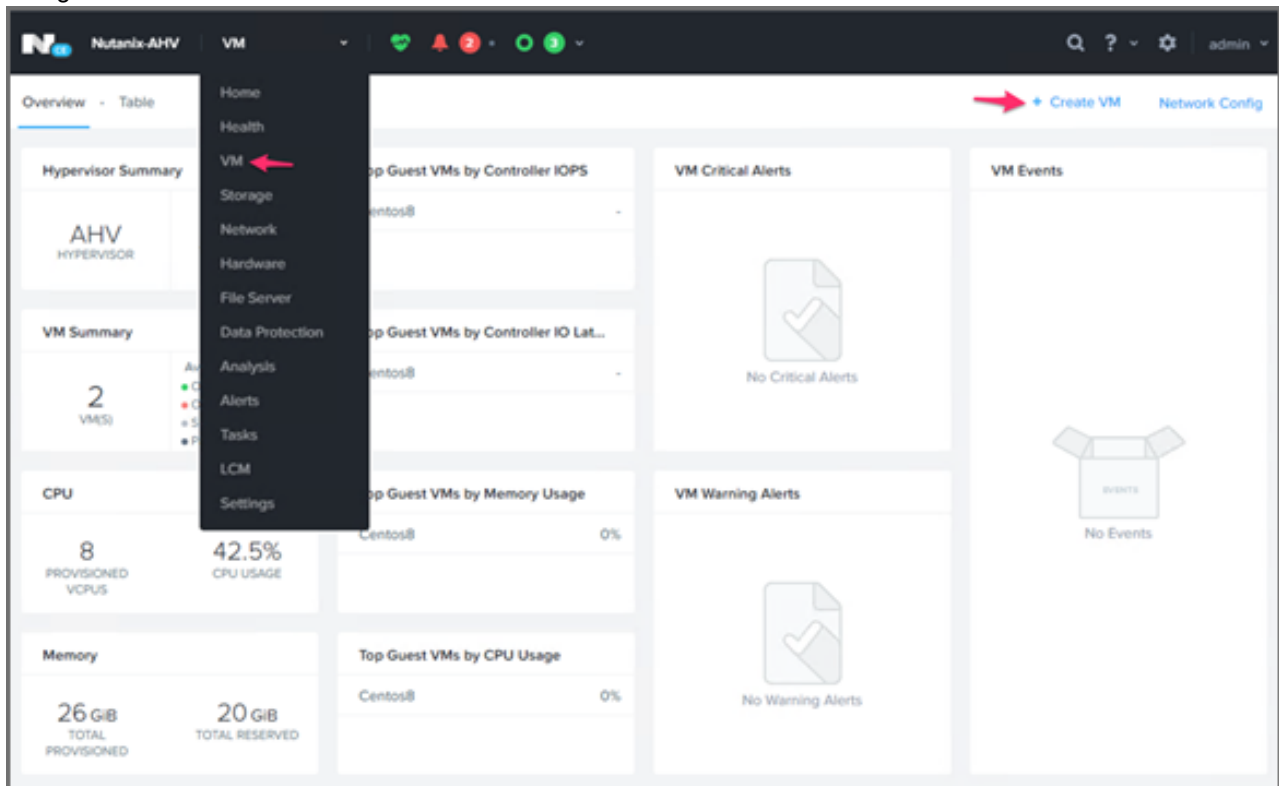
Storage Container: default-container-43082970730805 (a)

Image Source:

- From URL
- Upload a file (7) Choose File FortiSIEM-6.1.1.0118.qcow2

Buttons: < Back, Cancel, Save (d)

- 8. Navigate to VM > Create VM.

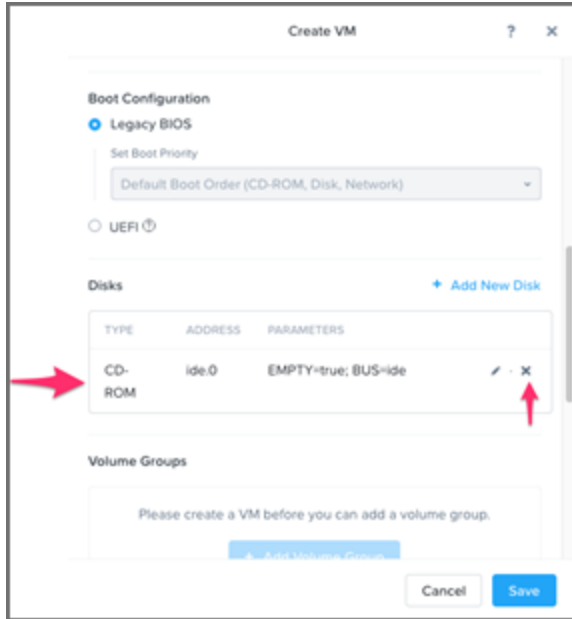


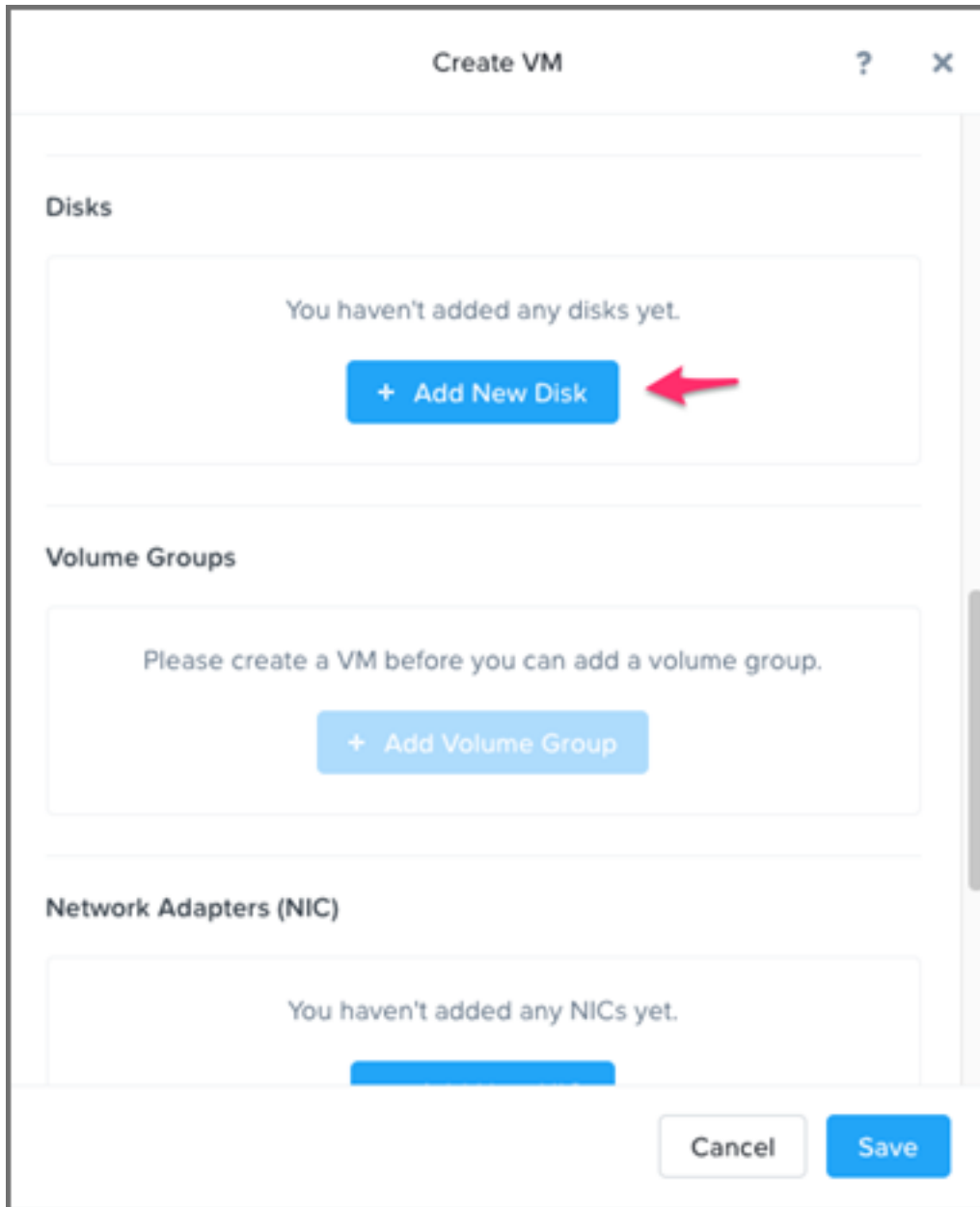
The screenshot shows a 'Create VM' window with the following fields and values:

- Name:** fsm-super-611
- Description:** Optional
- Timezone:** (UTC) UTC, Cluster (dropdown)
- Use this VM as an agent VM
- Compute Details:**
 - vCPU(s):** 8
 - Number Of Cores Per vCPU:** 1
 - Memory:** 32 GiB

Buttons: Cancel, Save

9. Scroll down in the Create VM window, continue to select Legacy BIOS, and at CD-ROM, click "X" to remove.



10. Click **Add New Disk**.

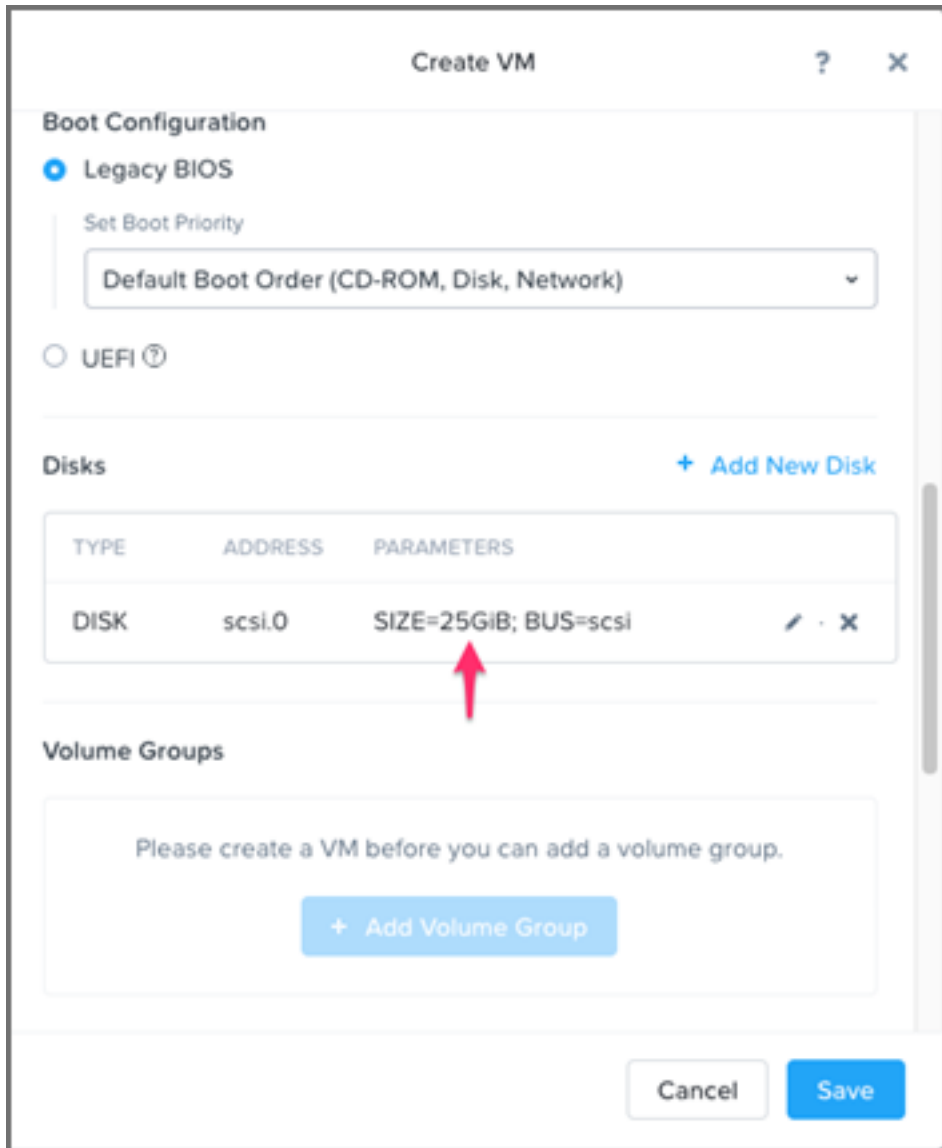
11. In the **Add Disk** dialog, take the following steps:
- From the **Type** drop-down list, select **DISK**.
 - From the **Operation** drop-down list, select **Clone from Image Service**.
 - From the **Bus Type** drop-down list, select **SCSI**.
 - From the **Image** drop-down list, select the FortiSIEM image you created earlier (FortiSIEM-6.4.1.1415).
 - From the **Index** drop-down list, select **Next Available**.

f. Click **Add**.

The screenshot shows a dialog box titled "Add Disk" with a close button (X) and a help button (?). The dialog contains several configuration options:

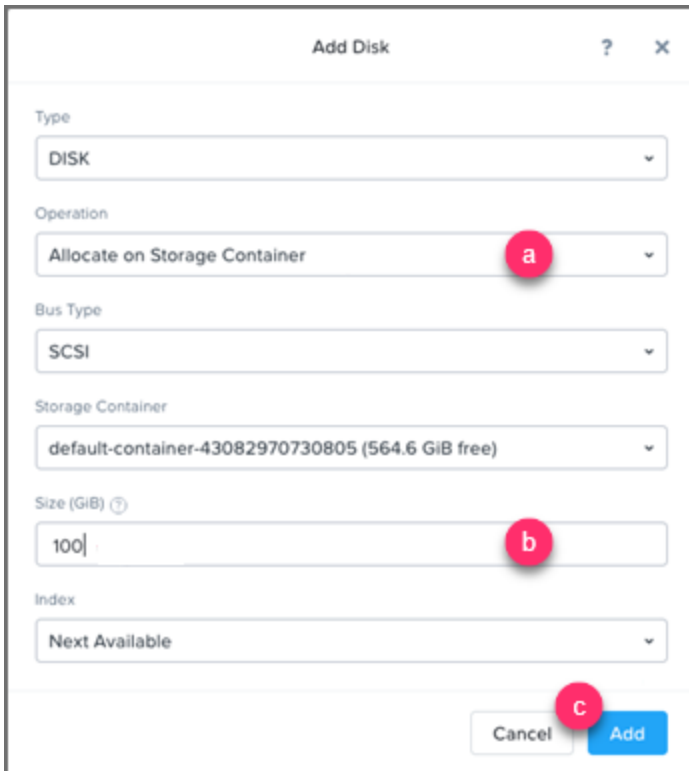
- Type:** A dropdown menu with "DISK" selected. A red circle labeled "a" is positioned to the right of the dropdown arrow.
- Operation:** A dropdown menu with "Clone from Image Service" selected. A red circle labeled "b" is positioned to the right of the dropdown arrow.
- Bus Type:** A dropdown menu with "SCSI" selected. A red circle labeled "c" is positioned to the right of the dropdown arrow.
- Image:** A dropdown menu with "FortiSIEM-6.11.0118" selected. A red circle labeled "d" is positioned to the right of the dropdown arrow.
- Size (GiB):** A text input field containing "25". Below the field is a note: "Please note that changing the size of an image is not allowed."
- Index:** A dropdown menu with "Next Available" selected. A red circle labeled "e" is positioned to the right of the dropdown arrow.
- Buttons:** At the bottom right, there are two buttons: "Cancel" and "Add". A red circle labeled "f" is positioned over the "Add" button.

You will now see the OS disk 25GiB in the list of disks shown.



12. For the Supervisor, you will need to add the 100GB /opt disk. Click **Add New Disk**, and take the following steps:
- From the **Operation** drop-down list, select **Allocate on Storage Container**.
 - In the **Size (GiB)** field, enter "100".

c. Click **Add**.



13. Similar to the previous step, add an extra two disks by taking the following steps **twice**:

- a. Click **Add New Disk** for each new disk.
- b. In the **Size** field, enter "60".
- c. From the **Operation** drop-down list, select **Allocate on Storage Container**.
- d. Click **Add**.

Disk	Size	Disk Name
Hard Disk 2	100GB	/opt For OPT - 100GB, the 100GB disk for /opt will consist of a single disk that will split into 2 partitions, /OPT and swap. The partitions will be created and managed by FortiSIEM when configFSM.sh runs.
Hard Disk 3	60GB	/cmdb
Hard Disk 4	60GB	/svn
Hard Disk 5	60GB+	/data (see the following note)

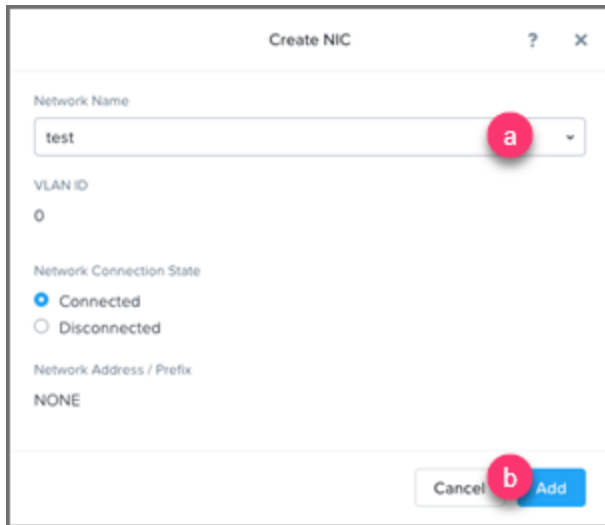
Note on Hard Disk 5:

- Add a 5th disk if using local storage in an All In One deployment. Otherwise, a separate NFS share or Elasticsearch cluster must be used for event storage.

- 60GB is the minimum event DB disk size for small deployments, provision significantly more event storage for higher EPS deployments. See the [FortiSIEM Sizing Guide](#) for additional information.
- NFS or Elasticsearch event DB storage is mandatory for multi-node cluster deployments.

14. Click on **Add New NIC**, and take the following steps:

- a. From the **Network Name** drop-down list, select the correct network.
- b. Click **Add**.
- c. Click **Save**.

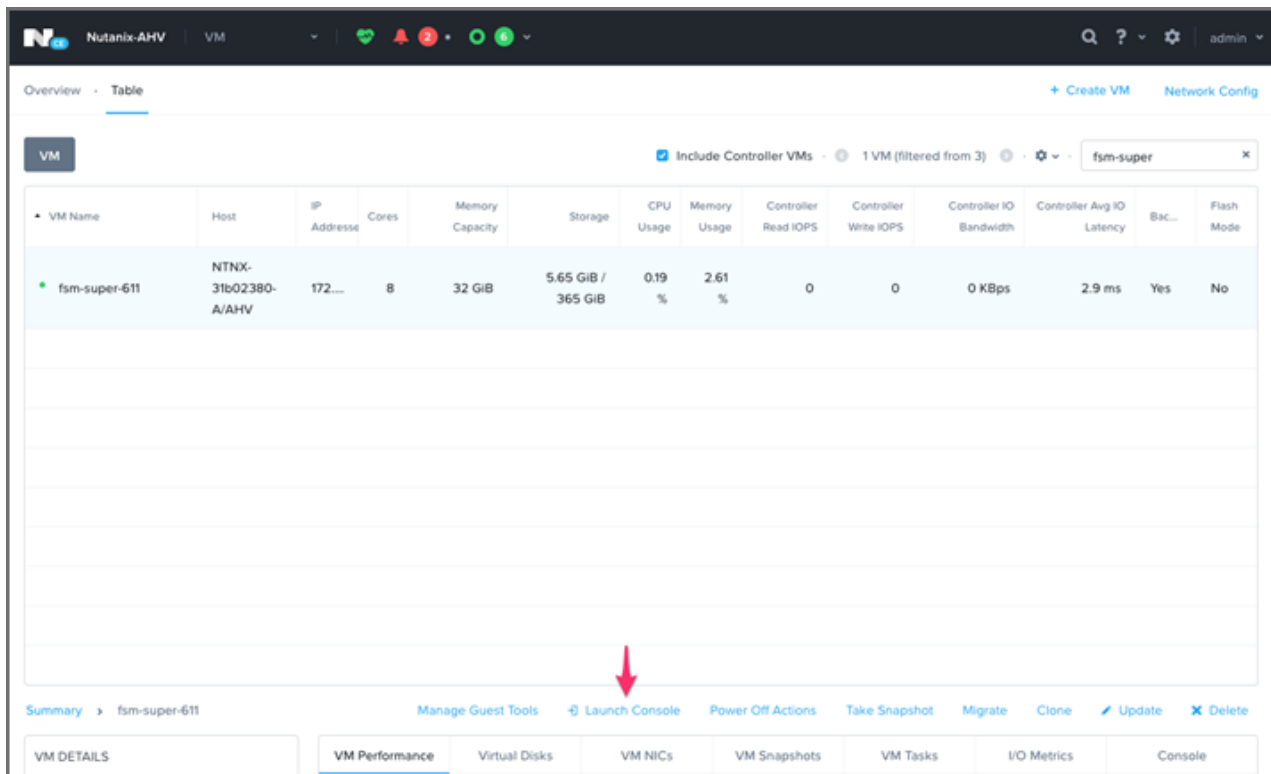


15. Navigate to **VM > Table** to find your newly created fsm-super-6## VM, then click **Power On**.

The screenshot shows the Nutanix AHV VM management interface. At the top, there's a navigation bar with 'Nutanix-AHV' and 'VM' tabs. Below that, there's a search bar and a filter dropdown set to 'fsm-super'. A table lists VMs with columns for Name, Host, IP Address, Cores, Memory Capacity, Storage, CPU Usage, Memory Usage, Controller Read IOPS, Controller Write IOPS, Controller IO Bandwidth, Controller Avg IO Latency, Back... and Flash Mode. The first row is 'fsm-super-611' with 8 Cores and 32 GiB Memory Capacity. Below the table, there's a 'Summary' section for 'fsm-super-611' with details like Name, Description, ID, and Host. To the right of the summary is a 'VM Performance' section with tabs for CPU Usage, Virtual Disks, VM NICs, VM Snapshots, VM Tasks, I/O Metrics, and Console. The CPU Usage and Memory Usage graphs show 0% usage with a peak of 0.01%.

VM Name	Host	IP Address	Cores	Memory Capacity	Storage	CPU Usage	Memory Usage	Controller Read IOPS	Controller Write IOPS	Controller IO Bandwidth	Controller Avg IO Latency	Back...	Flash Mode
fsm-super-611			8	32 GiB	5.62 GiB / 365 GiB	0%	0%	-	-	-	-	Yes	No

16. Click on **Launch Console** to open the console.



17. After the VM has booted up to the login prompt, log in with the default login credentials:

User: root

Password: ProspectHills

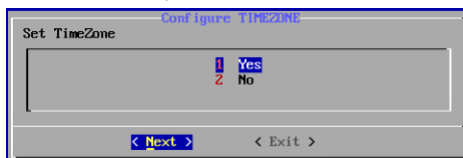
18. You will be required to change the password. Remember this password for future use.

At this point, you can continue configuring FortiSIEM by using the GUI.

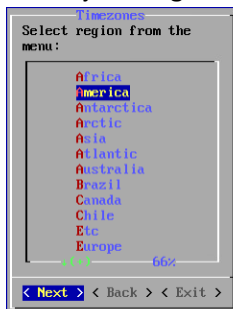
Configure FortiSIEM via GUI

Follow these steps to configure FortiSIEM by using a simple GUI.

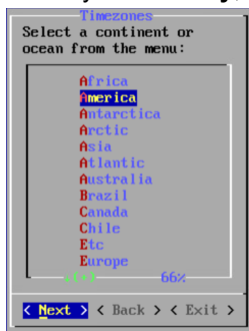
1. Log in as user `root` with the password you set in **Import FortiSIEM into Nutanix AHV Prism Console Step 17** above.
2. At the command prompt, go to `/usr/local/bin` and enter `configFSM.sh`, for example:
`configFSM.sh`
3. In VM console, select **1 Set Timezone** and then press **Next**.



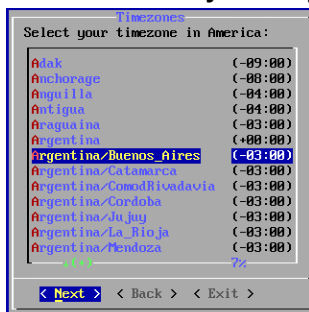
4. Select your **Region**, and press **Next**.



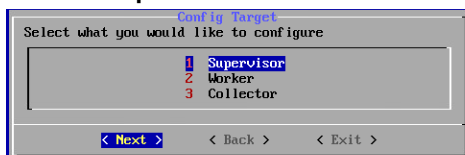
5. Select your **Country**, and press **Next**.



6. Select the **Country** and **City** for your timezone, and press **Next**.



7. Select **1 Supervisor**. Press **Next**.



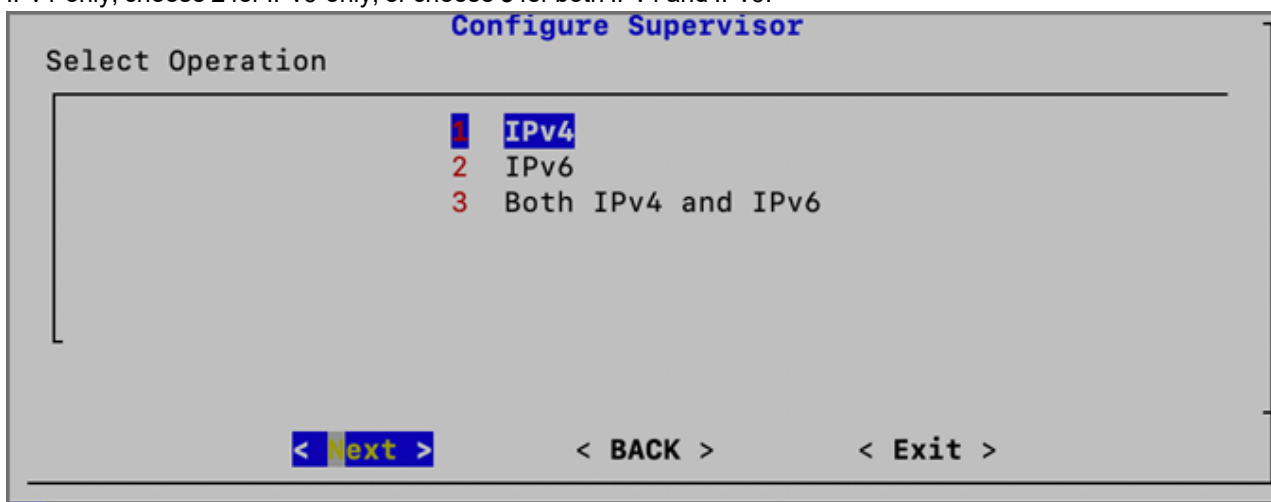
Regardless of whether you select **Supervisor**, **Worker**, or **Collector**, you will see the same series of screens.

8. If you want to enable FIPS, then choose **2**. Otherwise, choose **1**. You have the option of enabling FIPS (option **3**) or disabling FIPS (option **4**) later.

Note: After Installation, a 5th option to change your network configuration (**5 change_network_config**) is available. This allows you to change your network settings and/or host name.

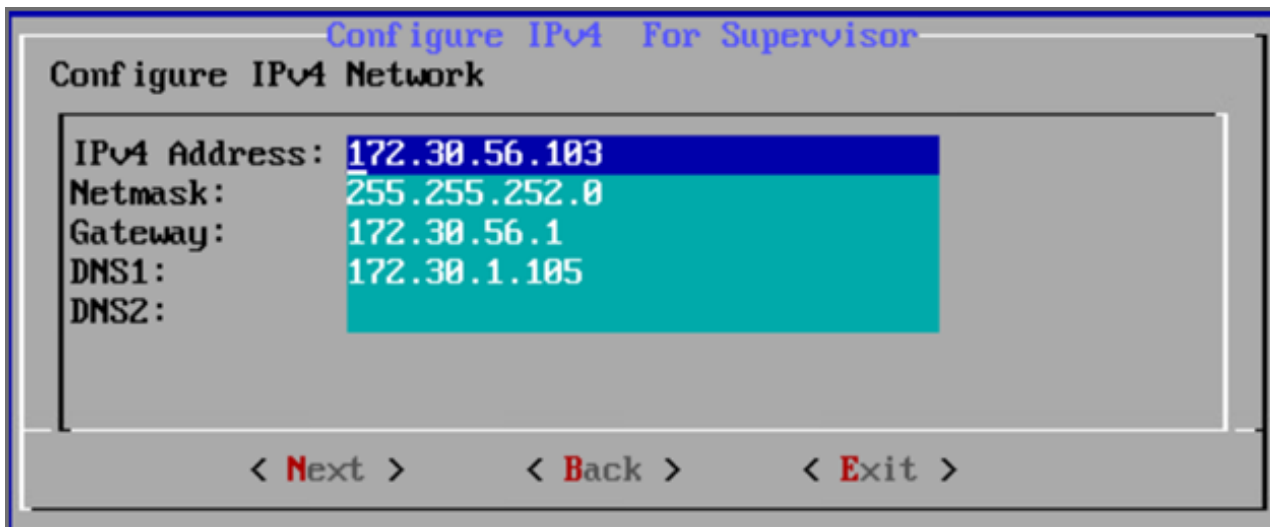


9. Determine whether your network supports IPv4-only, IPv6-only, or both IPv4 and IPv6 (Dual Stack). Choose **1** for IPv4-only, choose **2** for IPv6-only, or choose **3** for both IPv4 and IPv6.



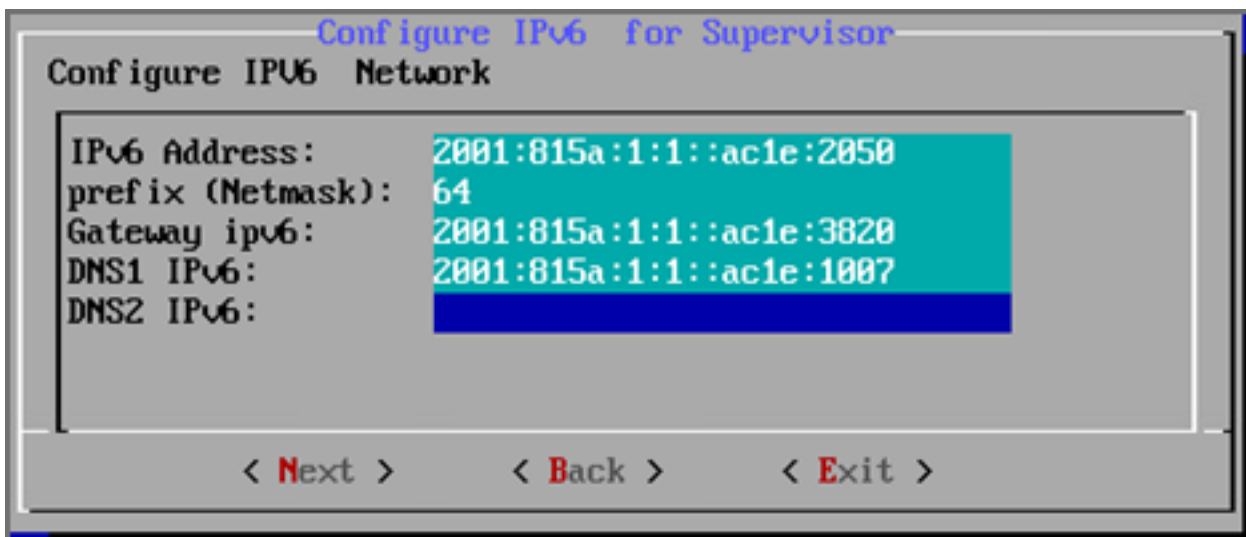
10. If you choose **1** (IPv4) or choose **3** (Both IPv4 and IPv6), and press **Next**, then you will move to step 11. If you choose **2** (IPv6), and press **Next**, then skip to step 12.
11. Configure the network by entering the following fields. Press **Next**.

Option	Description
IPv4 Address	The Supervisor's IPv4 address
NetMask	The Supervisor's subnet
Gateway	Network gateway address
DNS1, DNS2	Addresses of the DNS servers



12. If you chose **1** in step 9, then you will need to skip to step 13. If you chose **2** or **3** in step 9, then you will configure the IPv6 network by entering the following fields, then press **Next**.

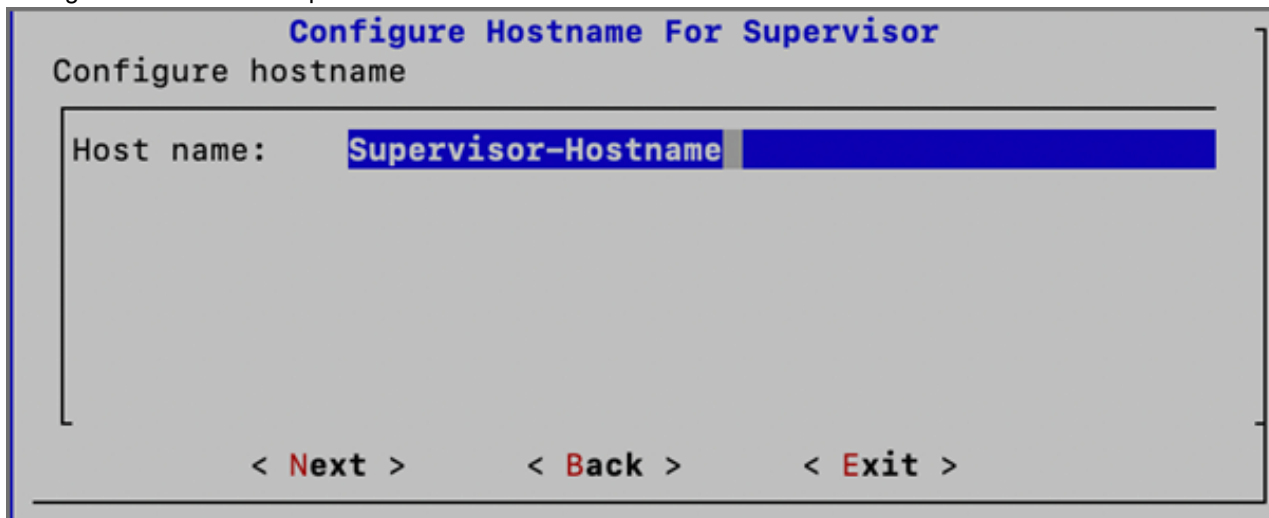
Option	Description
IPv6 Address	The Supervisor's IPv6 address
prefix (Netmask)	The Supervisor's IPv6 prefix (Netmask)
Gateway ipv6	IPv6 Network gateway address
DNS1 IPv6, DNS2 IPv6	Addresses of the IPv6 DNS server 1 and DNS server2



Note: If you chose option **3** in step 9 for both IPv4 and IPv6, then even if you configure 2 DNS servers for IPv4 and IPv6, the system will only use the first DNS server from IPv4 and the first DNS server from the IPv6 configuration.

Note: In many dual stack networks, IPv4 DNS server(s) can resolve names to both IPv4 and IPv6. In such environments, if you do not have an IPv6 DNS server, then you can use public IPv6 DNS servers or use IPv4-mapped IPv6 address.

13. Configure Hostname for Supervisor. Press **Next**.



Configure Hostname For Supervisor
Configure hostname

Host name: **Supervisor-Hostname**

< **Next** > < **Back** > < **Exit** >

Note: FQDN is no longer needed.

14. Test network connectivity by entering a host name that can be resolved by your DNS Server (entered in the previous step) and can respond to a ping. The host can either be an internal host or a public domain host like google.com. Press **Next**.

Note: By default, "google.com" is shown for the connectivity test, but if configuring IPv6, you must enter an accessible internally approved IPv6 DNS server, for example: "ipv6-dns.fortinet.com"

Note: When configuring both IPv4 and IPv6, only testing connectivity for the IPv6 DNS is required because the IPV6 takes higher precedence. So update the host field with an approved IPv6 DNS server.



Configure Supervisor
Enter host for checking network connectivity

ipv6-dns.fortinet.com

< **Next** > < **Back** > < **Exit** >

15. The final configuration confirmation is displayed. Verify that the parameters are correct. If they are not, then press **Back** to return to previous dialog boxes to correct any errors. If everything is OK, then press **Run**.

```

Configure Supervisor
Run Configuration Command:

python /usr/local/bin/configureFSM.py -r super -z America/Los_Angeles -i
172.30.56.103 -m 255.255.252.0 -g 172.30.56.1 --host sp56103-3103-v46 -t 64
--dns1 172.30.1.105 --dns61 2001:815a:1:1::ac1e:1007 --i6
2001:815a:1:1::ac1e:3103 --m6 64 --g6 2001:815a:1:1::ac1e:3820 -o change_ip
--testpinghost ipv6-dns.fortinet.com

< Run >      < Back >      < Exit >

```

The options are described in the following table.

Option	Description
-r	The FortiSIEM component being configured
-z	The time zone being configured
-i	IPv4-formatted address
-m	Address of the subnet mask
-g	Address of the gateway server used
--host	Host name
-f	FQDN address: fully-qualified domain name
-t	The IP type. The values can be either 4 (for ipv4) or 6 (for v6) or 64 (for both ipv4 and ipv6).
--dns1, --dns2	Addresses of the DNS servers
--i6	IPv6-formatted address
--m6	IPv6 prefix
--g6	IPv6 gateway
-o	Installation option (install_without_fips , install_with_fips , enable_fips , disable_fips , change_network_config*) *Option only available after installation.
-z	Time zone. Possible values are US/Pacific , Asia/Shanghai , Europe/London , or Africa/Tunis
--testpinghost	The URL used to test connectivity

16. It will take some time for this process to finish. When it is done, proceed to [Upload the FortiSIEM License](#). If the VM fails, you can inspect the `ansible.log` file located at `/usr/local/fresh-install/logs` to try and identify the problem.

Upload the FortiSIEM License



Before proceeding, make sure that you have obtained valid FortiSIEM license from Forticare. For more information, see the [Licensing Guide](#).

You will now be asked to input a license.

1. Open a Web browser and log in to the FortiSIEM UI. Use link `https://<supervisor-ip>` to login. Please note that if you are logging into FortiSIEM with an IPv6 address, you should input `https://[IPv6 address]` on the browser tab.
2. The License Upload dialog box will open.

3. Click **Browse** and upload the license file.
Make sure that the **Hardware ID** shown in the License Upload page matches the license.
4. For **User ID** and **Password**, choose any **Full Admin** credentials.
For the first time installation, enter `admin` as the user and `admin*1` as the password. You will then be asked to create a new password for GUI access.
5. Choose **License type** as **Enterprise** or **Service Provider**.
This option is available only for a first time installation. Once the database is configured, this option will not be available.
6. Proceed to [Choose an Event Database](#).

Choose an Event Database

For a fresh installation, you will be taken to the Event Database Storage page. You will be asked to choose between **Local Disk**, **NFS** or **Elasticsearch** options. For more details, see [Configuring Storage](#).

After the License has been uploaded, and the Event Database Storage setup is configured, FortiSIEM installation is complete. If the installation is successful, the VM will reboot automatically. Otherwise, the VM will stop at the failed task.

You can inspect the `ansible.log` file located at `/usr/local/fresh-install/logs` if you encounter any issues during FortiSIEM installation.

After installation completes, ensure that the `phMonitor` is up and running, for example:

```
# phstatus
```

The response should be similar to the following.

```
Every 1.0s: /opt/phenix/bin/phstatus.py
System uptime: 21:12:02 up 1:11, 1 user, load average: 0.16, 0.20, 0.36
Tasks: 27 total, 0 running, 26 sleeping, 0 stopped, 0 zombie
Cpu(s): 16 cores, 6.2%us, 2.1%sy, 0.0%ni, 91.4%id, 0.0%wa, 0.2%hi, 0.1%si, 0.0%st
Mem: 65782100k total, 10366036k used, 55336064k free, 4352k buffers
Swap: 2621436k total, 0k used, 2621436k free, 2469820k cached

PROCESS          UPTIME          CPU%          UIRT_MEM      RES_MEM
phParser          41:23           0             2176m         550m
phQueryMaster    41:41           0             1020m         77m
phRuleMaster     41:41           0             1079m         504m
phRuleWorker     41:41           0             1363m         205m
phQueryWorker    41:41           0             1303m         279m
phDataManager    41:41           0             1419m         205m
phDiscover       41:41           0             513m          53m
phReportWorker   41:41           0             1433m         95m
phReportMaster   41:41           0             603m          67m
phIdentityWorker 41:41           0             1027m         50m
phIdentityMaster 41:41           0             491m          39m
phAgentManager   41:41           0             1425m         54m
phCheckpoint     42:31           0             325m          34m
phPerfMonitor    41:41           0             702m          70m
phReportLoader   41:41           0             769m         270m
phBackendPackager 41:41           0             1125m         65m
phDataPurger     41:41           0             580m          58m
phEventForwarder 41:41           0             540m          46m
phMonitor        37:24           0             2000m         53m
apache           01:10:40        0             310m          16m
Node.js-charting 01:10:19        0             915m          71m
Node.js-pm2      01:10:13        0             0             26m
AppSvc           01:10:07        0             15172m        3026m
DBSvc           01:10:38        0             317m          30m
phInomaly        01:00:07        0             307m          64m
phFortiInsightAI 01:10:40        0             23432m        430m
Redis            01:10:10        0             55m           25m
```

Cluster Installation

For larger installations, you can choose Worker nodes, Collector nodes, and external storage (NFS or Elasticsearch).

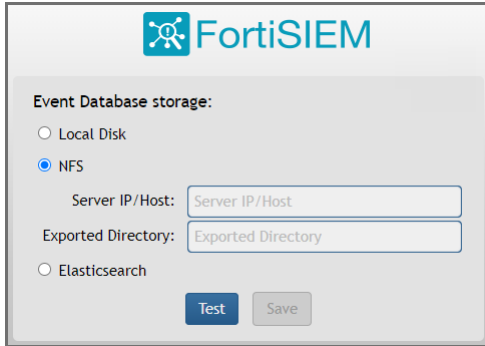
- [Install Supervisor](#)
- [Install Workers](#)
- [Register Workers](#)
- [Install Collectors](#)
- [Register Collectors](#)

Install Supervisor

Follow the steps in [All-in-one Install](#) with two differences:

- Setting up hardware - you do not need an event database.
- Setting up an Event database - Configure the cluster for either NFS or Elasticsearch.

NFS



FortiSIEM

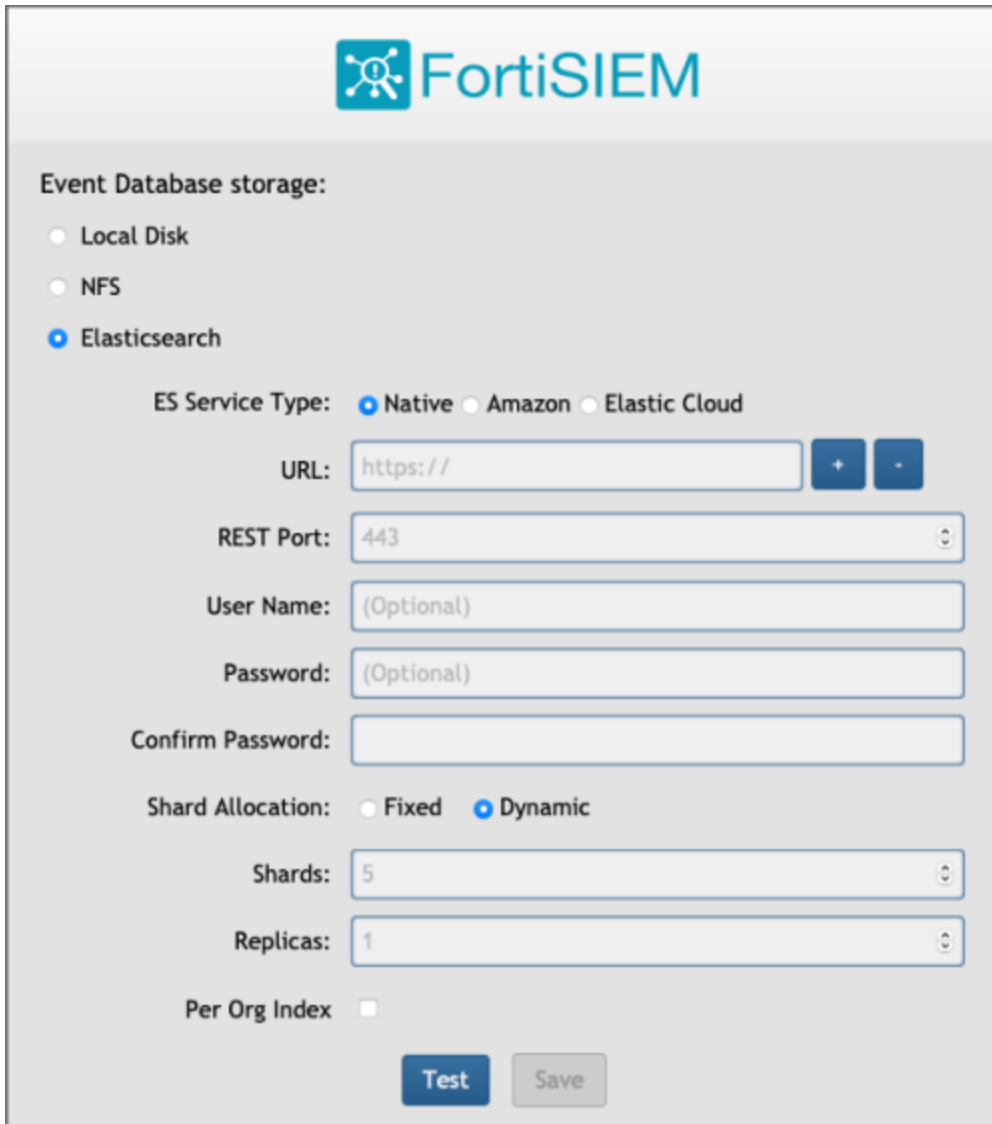
Event Database storage:

- Local Disk
- NFS
- Elasticsearch

Server IP/Host:

Exported Directory:

Elasticsearch



FortiSIEM

Event Database storage:

- Local Disk
- NFS
- Elasticsearch

ES Service Type: Native Amazon Elastic Cloud

URL:

REST Port:

User Name:

Password:

Confirm Password:

Shard Allocation: Fixed Dynamic

Shards:

Replicas:

Per Org Index

You must choose external storage listed in [Choose an Event Database](#).

Install Workers

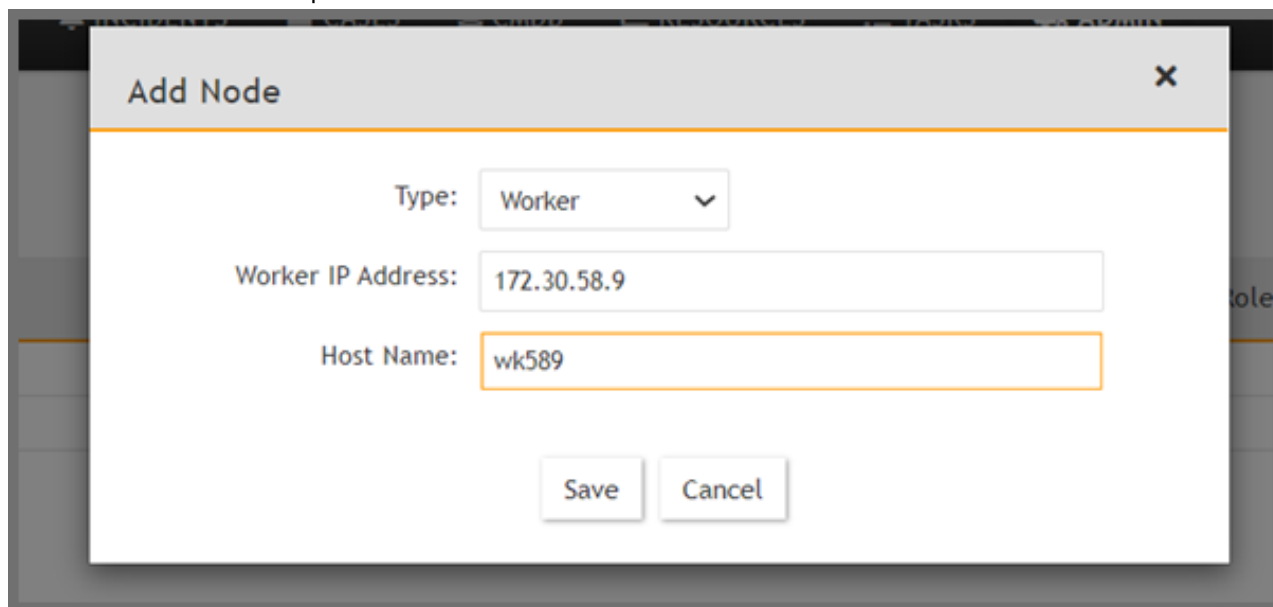
Once the Supervisor is installed, follow the same steps in [All-in-one Install](#) to install a Worker except you need to only choose OS and OPT disks. The recommended settings for Worker node are:

- CPU = 8
- Memory = 24 GB
- Two hard disks:
 - OS – 25GB
 - OPT – 100GBFor OPT - 100GB, the 100GB disk for /opt will consist of a single disk that will split into 2 partitions, /OPT and swap. The partitions will be created and managed by FortiSIEM when `configFSM.sh` runs.

Register Workers

Once the Worker is up and running, add the Worker to the Supervisor node.

1. Go to **ADMIN > License > Nodes**.
2. Select **Worker** from the drop-down list and enter the Worker's IP address and host name. Click **Add**.



The screenshot shows a modal dialog box titled "Add Node" with a close button (X) in the top right corner. The dialog contains the following fields and values:

- Type:** A dropdown menu with "Worker" selected.
- Worker IP Address:** A text input field containing "172.30.58.9".
- Host Name:** A text input field containing "wk589".

At the bottom of the dialog are two buttons: "Save" and "Cancel".

3. See **ADMIN > Health > Cloud Health** to ensure that the Workers are up, healthy, and properly added to the

system.

The screenshot displays the FortiSIEM Cloud Health interface. The top navigation bar includes 'Setup', 'Cloud Health', and 'Collector Health'. The left sidebar contains 'Device Support', 'Health' (selected), 'License', and 'Settings'. The main content area shows a table of system components:

Name	IP Address	Module Role	Health	Version	Load Average	CPU	Swap Used
sp572.fortinet.com	172.30.57.2	Supervisor	Normal	6.1.0.1238	0.95,0.47,0.43	4%	0 KB
wk573.fortinet.com	172.30.57.3	Worker	Normal	6.1.0.1238	0.1,0.2,0.16	2%	0 KB

Below this table, there is a section for 'Process level metrics for wk573.fortinet.com (172.30.57.3)'. It contains a table with the following data:

Process Name	Status	Up Time	CPU	Physical Memory	Virtual Memory	SharedStore ID	SharedStore Position
Node.js-charting	Up	1h 3m	0%	70 MB	916 MB		
httpd	Up	14m 6s	0%	16 MB	310 MB		
Redis	Up	14m 6s	0%	22 MB	51 MB		
Node.js-pm2	Up	1h 3m	0%	44 MB	899 MB		
rsyslogd	Up	1h 3m	0%	7 MB	189 MB		
phDataMaanaer	Up	14m 6s	0%	103 MB	1229 MB	1	126108

At the bottom of the interface, there is a footer with copyright information: 'Copyright © 2020 Fortinet, Inc. All rights reserved.' and system details: 'Organization: Super User: admin Scope: Global FortiSIEM'.

Install Collectors

Once Supervisor and Workers are installed, follow the same steps in [All-in-one Install](#) to install a Collector except you need to only choose OS and OPT disks. The recommended settings for Collector node are:

- CPU = 4
- Memory = 8GB
- Two hard disks:
 - OS – 25GB
 - OPT – 100GB

For OPT - 100GB, the 100GB disk for /opt will consist of a single disk that will split into 2 partitions, /OPT and swap. The partitions will be created and managed by FortiSIEM when `configFSM.sh` runs.

Register Collectors

Collectors can be deployed in Enterprise or Service Provider environments.

- [Enterprise Deployments](#)
- [Service Provider Deployments](#)

Enterprise Deployments

For Enterprise deployments, follow these steps.

1. Log in to Supervisor with 'Admin' privileges.
2. Go to **ADMIN > Settings > System > Event Worker**.
 - a. Enter the IP of the Worker node. If a Supervisor node is only used, then enter the IP of the Supervisor node. Multiple IP addresses can be entered on separate lines. In this case, the Collectors will load balance the upload

of events to the listed Event Workers.

Note: Rather than using IP addresses, a DNS name is recommended. The reasoning is, should the IP addressing change, it becomes a matter of updating the DNS rather than modifying the Event Worker IP addresses in FortiSIEM.

- b. Click **OK**.
3. Go to **ADMIN > Setup > Collectors** and add a Collector by entering:
 - a. **Name** – Collector Name
 - b. **Guaranteed EPS** – this is the EPS that Collector will always be able to send. It could send more if there is excess EPS available.
 - c. **Start Time** and **End Time** – set to **Unlimited**.
4. SSH to the Collector and run following script to register Collectors:


```
phProvisionCollector --add <user> '<password>' <Super IP or Host> <Organization> <CollectorName>
```

The password should be enclosed in single quotes to ensure that any non-alphanumeric characters are escaped.

 - a. Set `user` and `password` using the admin user name and password for the Supervisor.
 - b. Set `Super IP or Host` as the Supervisor's IP address.
 - c. Set `Organization`. For Enterprise deployments, the default name is Super.
 - d. Set `CollectorName` from [Step 2a](#).

The Collector will reboot during the Registration.
5. Go to **ADMIN > Health > Collector Health** for the status.

The screenshot shows the 'Collector Health' page in FortiSIEM. It features a table with columns: Organization, Name, IP Address, Status, Health, Up Time, CPU, Memory, Allocated EPS, Incoming EPS, Version, and Col. The table contains one entry for 'Super' with IP '172.30.57.4' and status 'up'. Below this is a detailed view of processes with columns: Process Name, Status, Up Time, CPU, Physical Memory, Virtual Memory, SharedStore ID, and SharedStore Position. Processes listed include phMonitorAgent, phParser, phPerfMonitor, phEventForwarder, and phDiscover.

Organization	Name	IP Address	Status	Health	Up Time	CPU	Memory	Allocated EPS	Incoming EPS	Version	Col
Super	CO-ORG	172.30.57.4	up	Normal	3m 4s	65%	5%	200	0	6.1.0...	100

Process Name	Status	Up Time	CPU	Physical Memory	Virtual Memory	SharedStore ID	SharedStore Position
phMonitorAgent	Up	29s	0%	575 MB	1116 MB		
phParser	Up	17s	0%	106 MB	1190 MB	99	0
phPerfMonitor	Up	17s	0%	79 MB	766 MB		
phEventForwarder	Up	17s	0%	48 MB	547 MB		
phDiscover	Up	17s	0%	53 MB	513 MB		

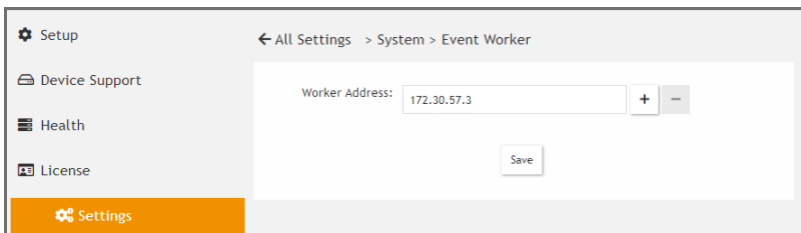
Service Provider Deployments

For Service Provider deployments, follow these steps.

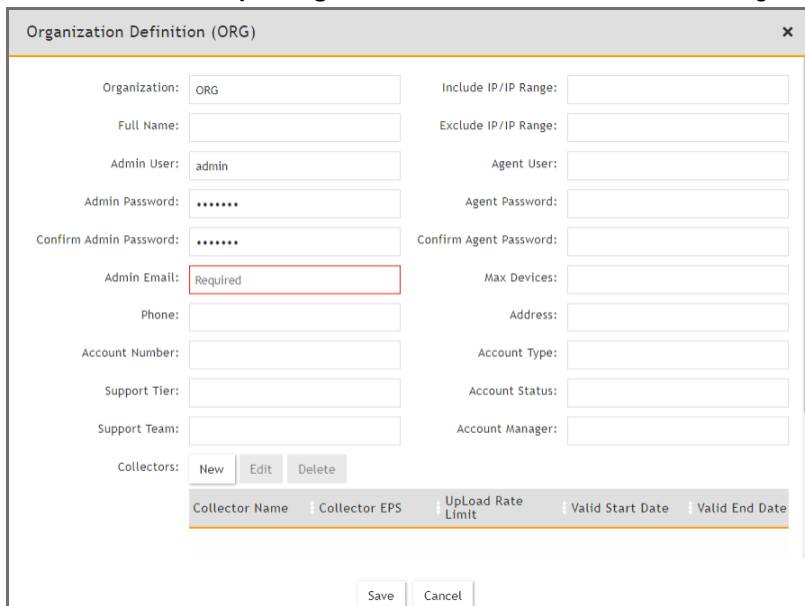
1. Log in to Supervisor with 'Admin' privileges.
2. Go to **ADMIN > Settings > System > Event Worker**.
 - a. Enter the IP of the Worker node. If a Supervisor node is only used, then enter the IP of the Supervisor node. Multiple IP addresses can be entered on separate lines. In this case, the Collectors will load balance the upload of events to the listed Event Workers.

Note: Rather than using IP addresses, a DNS name is recommended. The reasoning is, should the IP addressing change, it becomes a matter of updating the DNS rather than modifying the Event Worker IP addresses in FortiSIEM.

b. Click **OK**.



3. Go to **ADMIN > Setup > Organizations** and click **New** to add an Organization.

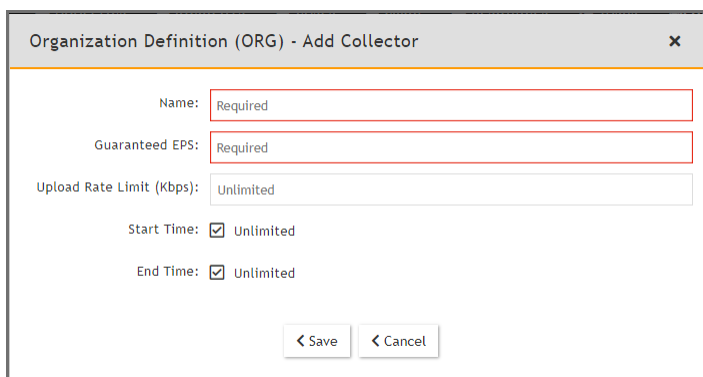


4. Enter the **Organization Name, Admin User, Admin Password, and Admin Email**.

5. Under **Collectors**, click **New**.

6. Enter the **Collector Name, Guaranteed EPS, Start Time, and End Time**.

The last two values could be set as **Unlimited**. **Guaranteed EPS** is the EPS that the Collector will always be able to send. It could send more if there is excess EPS available.



7. SSH to the Collector and run following script to register Collectors:

```
phProvisionCollector --add <user> '<password>' <Super IP or Host> <Organization> <CollectorName>
```

The password should be enclosed in single quotes to ensure that any non-alphanumeric characters are escaped.

- a. Set `user` and `password` using the admin user name and password for the Organization that the Collector is going to be registered to.
- b. Set `Super IP` or `Host` as the Supervisor's IP address.
- c. Set `Organization` as the name of an organization created on the Supervisor.
- d. Set `CollectorName` from [Step 6](#).

```

root@co574 ~# phProvisionCollector
Usage: phProvisionCollector --add <Organization-user-name> <Organization-user-password> <Supervisor-IP> <Organization-name> <Collector-name>
root@co574 ~# phProvisionCollector --add admin admin=11 172.30.57.2 ORG CO-ORG
Continuing to provision the Collector
This collector is registered successfully. Normal Exit and restart of phMonitor after collector license registration.
root@co574 ~# _
    
```

The Collector will reboot during the Registration.

8. Go to **ADMIN > Health > Collector Health** and check the status.

Organization	Name	IP Address	Status	Health	Up Time	CPU	Memory	Allocated EPS	Incoming EPS	Version	Col
Super	CO-ORG	172.30.57.4	up	Normal	3m 4s	65%	5%	200	0	6.1.0...	100

Process Name	Status	Up Time	CPU	Physical Memory	Virtual Memory	SharedStore ID	SharedStore Position
phMonitorAgent	Up	29s	0%	575 MB	1116 MB		
phParser	Up	17s	0%	106 MB	1190 MB	99	0
phPerfMonitor	Up	17s	0%	79 MB	766 MB		
phEventForwarder	Up	17s	0%	48 MB	547 MB		
phDiscover	Up	17s	0%	53 MB	513 MB		

Install Log

The install ansible log file is located here: `/usr/local/fresh-install/logs/ansible.log`.

Errors can be found at the end of the file.



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