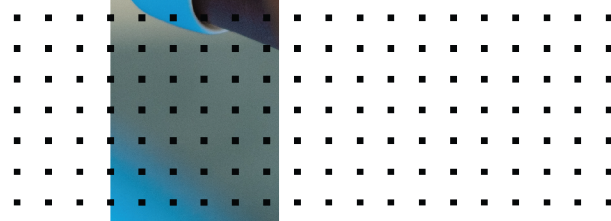
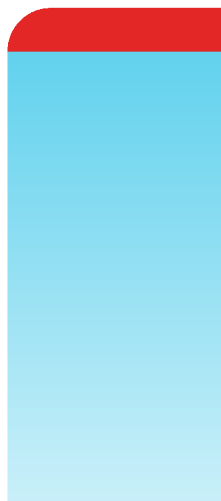


2000F Hardware Configuration Guide

FortiSIEM 6.2.1



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11/14/2023

FortiSIEM 6.2.1 2000F Hardware Configuration Guide

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Change Log

Date	Description
03/30/2018	Initial release of this guide.
06/13/2019	Revision 1: Updated instructions for "Using FortiSIEM".
09/11/2019	Revision 2: Changed the location where you obtain images to https://support.fortinet.com .
08/15/2020	Revision 3: Added new sections for "Configuring FortiSIEM via a GUI", "Choose an Event Database", and "Cluster Installation".
10/09/2020	Revision 4: Added migration instructions.
11/11/2020	Revision 5: Release for 6.1.2.
12/08/2020	Revision 6: Small addition to Register Collectors.
03/23/2021	Revision 6: Release for 6.2.0.
04/20/2021	Revision 7: Updated Step 8: Choose an Event Database for 6.2.0.
05/06/2021	Revision 8: Release for 6.2.1.
05/19/2021	Revision 9: Updated Factory Reset section for 6.2.x.
06/07/2021	Updated Elasticsearch screenshot for 6.2.x guides.
07/09/2021	Updated step 5 in Step 2: Reinstall FortiSIEM application for 6.2.x guides.
11/18/2021	Revision 10: Updated Register Collectors instructions for 6.2.x guides.
10/20/2022	Updated Register Collectors instructions for 6.x guides.

Appliance Setup

Follow the steps below to setup FSM-2000F appliance.

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

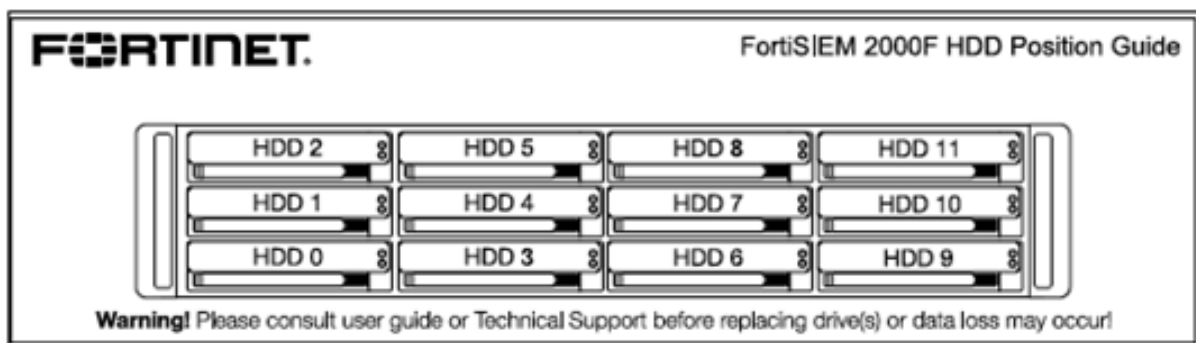
All-in-one Installation

Follow these steps to install all of the FortiSIEM components at one time.

- [Step 1: Rack mount the FSM-2000F appliance](#)
- [Step 2: Power On the FSM-2000F appliance](#)
- [Step 3: Verify System Information](#)
- [Step 4: Configure FortiSIEM via GUI](#)
- [Step 5: Generate the FortiSIEM FSM-2000F License Key file](#)
- [Step 6: Register the FortiSIEM License](#)
- [Step 7: Accessing FortiSIEM UI](#)
- [Step 8: Choose an Event Database](#)

Step 1: Rack mount the FSM-2000F appliance

1. Follow FortiSIEM 2000F QuickStart Guide [here](#) to mount FSM-2000F into the rack.
2. Insert Hard Disks positions as shown below:



3. Connect FSM-2000F to the network by connecting an Ethernet cable to Port0.



Before proceeding to the next step, connecting Ethernet cable to Port0 is required for Network configuration.

Step 2: Power On the FSM-2000F appliance

1. Make sure the FSM-2000F device is connected to a Power outlet and an Ethernet cable is connected to Port0.
2. Power On the FSM-2000F device.



FSM-2000F appliance does not have a default IP address. To connect to the GUI, an IP address must be configured using the GUI ([Step 4](#)).

Step 3: Verify System Information

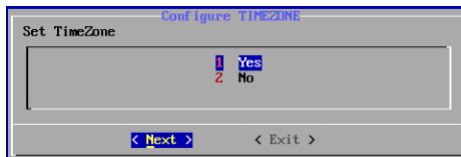
1. Connect to the FSM-2000F appliance using VGA port or Console port.
2. Login as 'root' user with password `ProspectHills`. You will be required to change the password. Remember this password for future use. Once you change the password, you will be logged out. Login again with your new password.
3. Run `get` to check the available FortiSIEM commands.
4. Use these commands to check the hardware information. After running each command, ensure that there are no errors in the displayed output.

Command	Description
<code>get system status</code>	Displays system name, version and serial number.
<code>diagnose hardware info</code>	Displays system hardware information like CPUs, Memory and RAID information.
<code>diagnose interface detail port0</code>	Displays interface status.

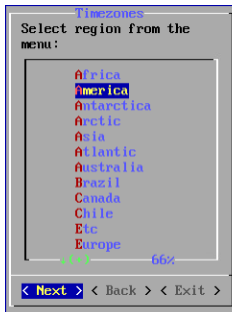
Step 4: Configure FortiSIEM via GUI

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

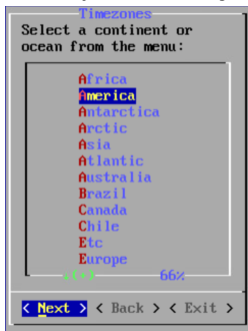
1. Log in as user `root` with the password you set in [Step 3](#) above.
2. At the command prompt, go to `/usr/local/bin` and enter `configFSM.sh`, for example:
`configFSM.sh`
3. In the console, select **1 Set Timezone** and then press **Next**.



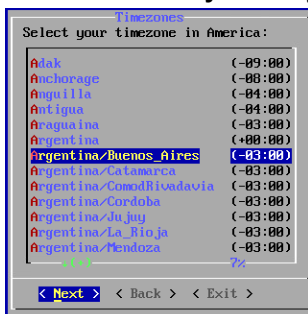
4. Select your **Region**, and press **Next**.



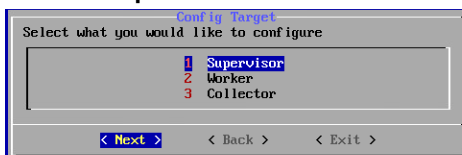
5. Select your **Country**, and press **Next**.



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

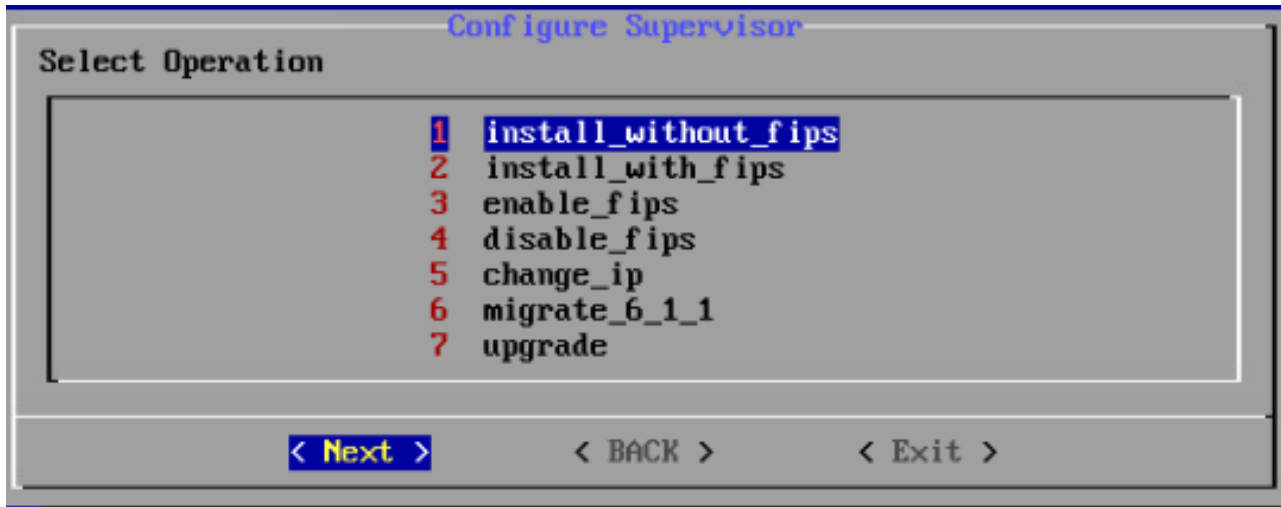


7. Select **1 Supervisor**. Press **Next**.



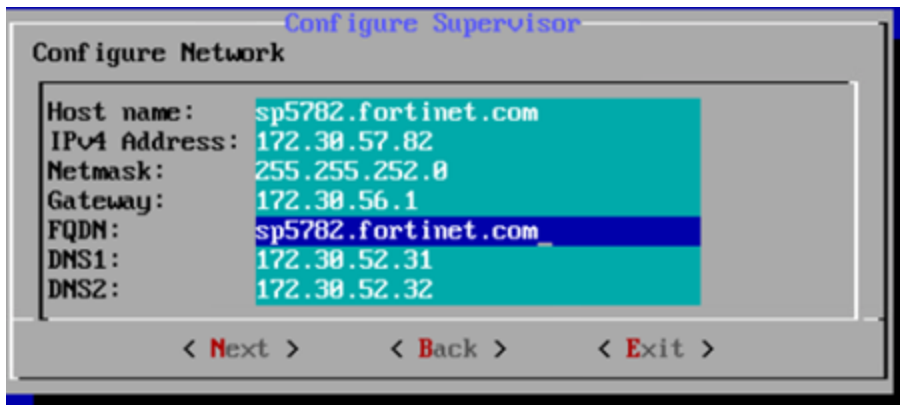
Regardless of whether you select **Supervisor** or **Worker**, you will see the same series of screens.

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.



9. Configure the network by entering the following fields. Note the IP Address--you will need it in a later step. Press **Next**.

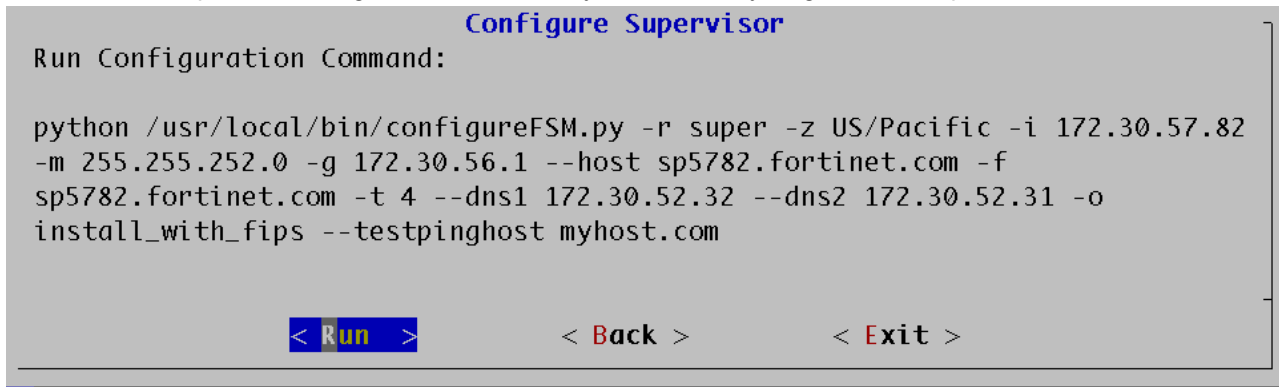
Option	Description
Host Name	The Supervisor's host name
IPv4 Address	The Supervisor's IPv4 address
NetMask	The Supervisor's subnet
Gateway	Network gateway address
FQDN	Fully-qualified domain name
DNS1, DNS2	Addresses of the DNS servers



10. Test network connectivity by entering a host name that can be resolved by your DNS Server (entered in the previous step) and responds to ping. The host can either be an internal host or a public domain host like `google.com`. For the migration to complete, the system still needs https connectivity to FortiSIEM OS update servers: `os-pkgs-cdn.fortisiem.fortinet.com` and `os-pkgs-c8.fortisiem.fortinet.com`. Press **Next**.



11. 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**.



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) Note: the 6 value is not currently supported.
--dns1, --dns2	Addresses of the DNS servers
-o	Installation option (install_without_fips , install_with_fips , enable_fips , disable_fips , change_ip , or migrate)
-z	Time zone. Possible values are US/Pacific , Asia/Shanghai , Europe/London , or

Option	Description
Africa/Tunis	
--testpinghost	The host used to test connectivity

- It will take some time to complete the FortiSIEM installation. If the installation is successful, then the appliance will reboot automatically. Otherwise, the appliance 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:

```
phParser          DOWN
phQueryMaster     DOWN
phRuleMaster      DOWN
phRuleWorker      DOWN
phQueryWorker     DOWN
phDataManager     DOWN
phDiscover        DOWN
phReportWorker    DOWN
phReportMaster    DOWN
phIpIdentityWorker DOWN
phIpIdentityMaster DOWN
phAgentManager    DOWN
phCheckpoint      DOWN
phPerfMonitor     DOWN
phDataPurger      DOWN
phEventForwarder  DOWN
phMonitor         32:18      0      1263m      568m
Apache            32:49      0      314m      17m
Rsyslogd          32:42      0      192m      4216k
Node.js-charting  32:36      0      642m      79m
Node.js-pm2       32:19      0      636m      52m
Node.js-exporter  32:31      0      10902m     59m
Node.js-jsreport  32:36      0      957m      117m
phFortiInsightAI DOWN
phAnomalyWorker   DOWN
AppSvr            32:17      4      31781m     4433m
DBSvr             32:49      0      425m      37m
phAnomalyMaster   DOWN
SVNLite           32:49      0      37923m     579m
Redis             32:21      0      204m      82m
```

Step 5: Generate FortiSIEM FSM-2000F License Key file from FortiCare

- Obtain the Hardware Serial Number from FSM-2000F appliance from [FortiCare Support Services](#).
- Follow FortiSIEM Licensing Guide [here](#) to generate the license key file - remember to use 'Hardware Serial Number' for Hardware ID.

Step 6: Register FortiSIEM License

1. Note the IP Address assigned to FortiSIEM in [Step 4](#).
2. Access FortiSIEM from browser (<https://<FortiSIEM-IP>>).
3. Upload the license file obtained from [Step 5](#) and select the **License Type** based on your deployment (note this choice can only be made once and is not reversible):
 - Enterprise for single organizations
 - Service Provider for multiple organizations
4. Click **Upload** to complete the license registration.

Step 7: Accessing FortiSIEM UI

1. Note the IP Address assigned to FortiSIEM in [Step 5](#).
2. Access FortiSIEM from browser (<https://<FortiSIEM-IP>>).
3. Login to FortiSIEM using the default user name, password, and organization:
 - **UserID:** *admin*
 - **Password:** *admin*1*
 - **Cust/OrgID:** *super* (if shown)

Step 8: Choose an Event Database

For a fresh installation, you will be taken to the Event Database Storage page.

Option	Description
Local HW Appliance Storage	Enter the "hardware" without the quotes, to use the inbuilt storage and FortiSIEM event database.
NFS	For more details, see Configuring Storage . Using NFS will not utilize the hardware appliance storage.
Elasticsearch	For more details, see Configuring Storage . Using Elasticsearch will not utilize the hardware appliance storage.

Cluster Installation

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

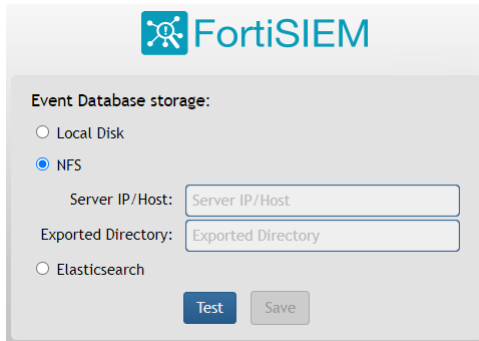
- [Installing the Supervisor](#)
- [Installing Workers](#)
- [Registering Workers](#)
- [Installing Collectors](#)
- [Registering Collectors](#)

Installing the Supervisor

Follow the steps in [All-in-one Installation](#) 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



The screenshot shows the FortiSIEM configuration interface for event database storage. At the top, the FortiSIEM logo is displayed. Below it, the section is titled "Event Database storage:". There are three radio button options: "Local Disk", "NFS", and "Elasticsearch". The "NFS" option is selected. Under the "NFS" option, there are two input fields: "Server IP/Host:" and "Exported Directory:". Below these fields are two buttons: "Test" and "Save".

Elasticsearch



The screenshot shows the FortiSIEM configuration interface for Event Database storage. At the top is the FortiSIEM logo. Below it, the section is titled "Event Database storage:". There are three radio button options: "Local Disk", "NFS", and "Elasticsearch", with "Elasticsearch" selected. Under "Elasticsearch", there are three radio button options for "ES Service Type": "Native", "Amazon", and "Elastic Cloud", with "Native" selected. The "URL:" field contains "https://" and has plus and minus buttons. The "REST Port:" field contains "443". The "User Name:" and "Password:" fields contain "(Optional)". There is an empty "Confirm Password:" field. The "Shard Allocation:" has two radio button options: "Fixed" and "Dynamic", with "Dynamic" selected. The "Shards:" field contains "5" and the "Replicas:" field contains "1". There is an unchecked "Per Org Index" checkbox. At the bottom are "Test" and "Save" buttons.

You must choose external storage listed in [Step 8: Choose an Event Database](#).

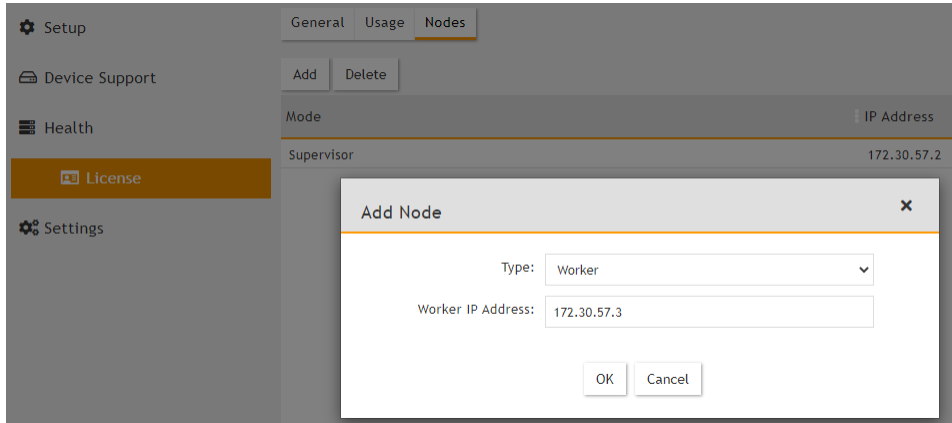
Installing Workers

Once the Supervisor is installed, follow the same steps in [All-in-one Installation](#) to install a Worker except that you choose **2 Worker** during [Step 4: Configure FortiSIEM via GUI](#) substep 7.

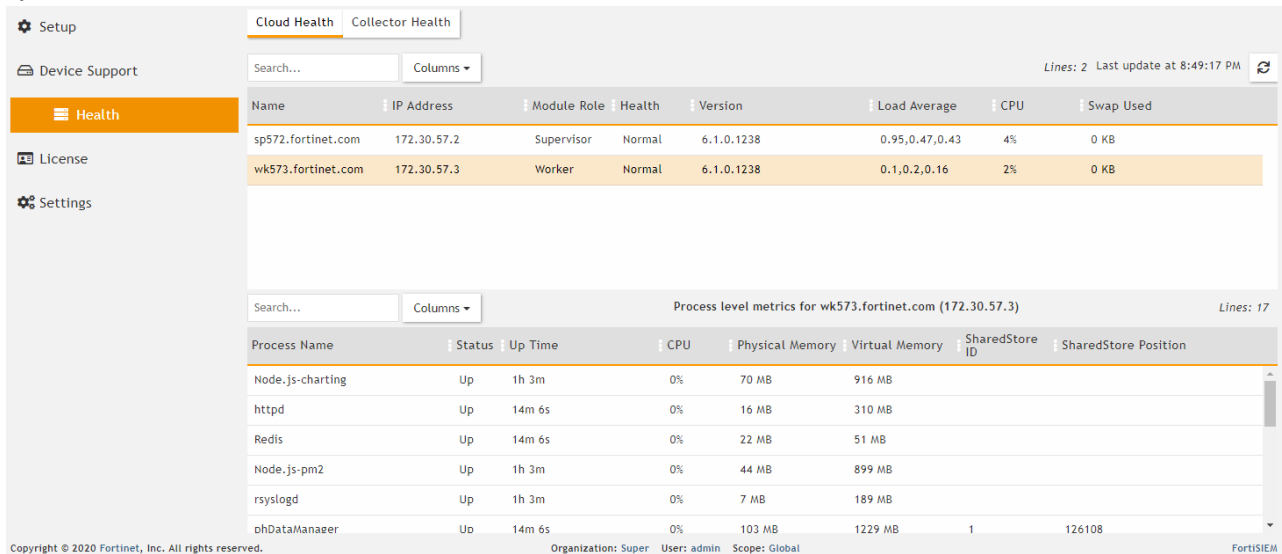
Registering Workers

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. Click **Add**.



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



Installing Collectors

Once Supervisor and Workers are installed, follow the same steps in [All-in-one Install](#) to install a Collector except 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.

Registering 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 > Collector** 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:


```
# /opt/phoenix/bin/phProvisionCollector --add <user> <password> <Super IP or Host> <Organization> <CollectorName>
```

 - 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' interface in FortiSIEM. It features a sidebar with navigation options: Setup, Device Support, Health (selected), License, and Settings. The main content area has tabs for 'Cloud Health' and 'Collector Health'. Below the tabs is a search bar and a 'Show Processes' button. A table displays the status of the collector 'Super' (CO-ORG) at IP 172.30.57.4, which is 'up' and 'Normal' with 3m 4s up time, 65% CPU, and 5% memory. Below this, a 'Close Panel' button and another search bar are visible. A second table shows the status of various processes:

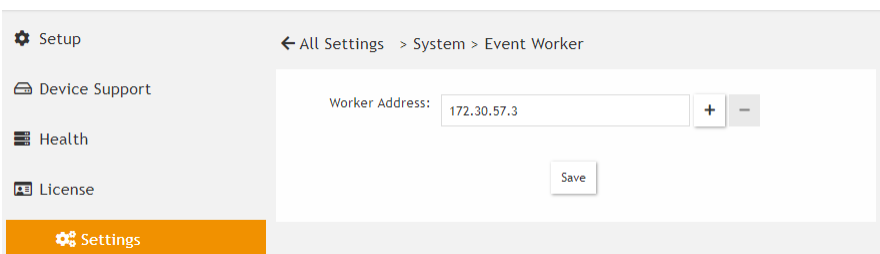
Process Name	Status	Up Time	CPU	Physical Memory	Virtual Memory	SharedStore ID	SharedStore Position
phMonitorAgent	Up	29s	0%	575 MB	1116 MB		
phParser	Up	17s	0%	106 MB	1190 MB	99	0
phPerfMonitor	Up	17s	0%	79 MB	766 MB		
phEventForwarder	Up	17s	0%	48 MB	547 MB		
phDiscover	Up	17s	0%	53 MB	513 MB		

Service Provider Deployments

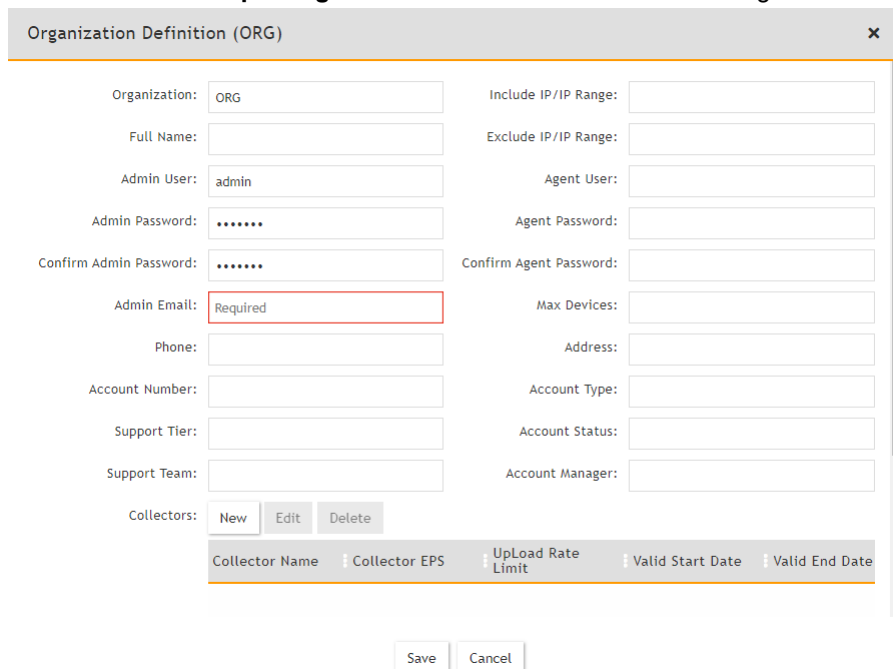
For Service Provider deployments, follow these steps.

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.

Organization Definition (ORG) - Add Collector ✕

Name:

Guaranteed EPS:

Upload Rate Limit (Kbps):

Start Time: Unlimited

End Time: Unlimited

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

```
# /opt/phoenix/bin/phProvisionCollector --add <user> <password> <Super IP or Host>
<Organization> <CollectorName>
```

- 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.

- Setup
- Device Support
- Health
- License
- Settings

Cloud Health Collector Health

Show Processes
Tunnels
Action
Search...
Columns

Lines: 1 Last update at 8:54:17 PM

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

Close Panel
Search...
Columns

Lines: 9 Last update at 8:54:24 PM

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		

Factory Reset

Follow the steps below to perform factory reset on FortiSIEM FSM-2000F.

- [Step 1: Uninstall FortiSIEM application](#)
- [Step 2: Reinstall FortiSIEM application](#)

Step 1: Uninstall FortiSIEM application

1. Connect FortiSIEM device using VGA or Console port.
2. Login as `root` user with the new password you set in [Step 3: Verify System Information](#).
3. To check the available FortiSIEM commands, run `sudo get`.
4. To uninstall FortiSIEM, run `sudo execute fsm-clean`.
This script will uninstall FortiSIEM application.
5. Reboot the system.

Step 2: Reinstall FortiSIEM application

1. Login as `root` with password `ProspectHills`. You will immediately be asked to change your password.
2. To configure RAID, run `execute format disk`.
3. To check Hardware status and RAID information, run `diagnose hardware info`.
4. To install FortiSIEM, run `execute factoryreset --force`. The command fails after partial steps. Run the same command again to complete factory reset.
This script takes a few minutes to complete FortiSIEM installation.
5. Reboot and run `/user/local/bin/configFSM.sh` to install FortiSIEM.

Follow the steps under [Appliance Setup](#) to configure FSM-2000F.



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