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01/02/2024

FortiSIEM 6.6.2 3500G Hardware Configuration Guide

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Change Log

Date	Description
06/02/2021	Initial release of this guide.
06/07/2021	Updated Elasticsearch screenshot.
07/06/2021	Release for 6.3.0.
08/26/2021	Release for 6.3.1.
10/08/2021	Remove Migration section from 6.3.x guides.
10/15/2021	Release for 6.3.2.
11/17/2021	Updated Register Collectors instructions for 6.x guides.
12/22/2021	Release for 6.3.3.
01/18/2022	Release for 6.4.0.
05/09/2022	Release for 6.5.0.
07/26/2022	Release for 6.6.0.
09/12/2022	Release for 6.5.1.
09/14/2022	Release for 6.6.1.
09/19/2022	Release for 6.6.2.
10/20/2022	Updated Register Collectors instructions for 6.x guides.
01/03/2023	Release for 6.6.3.
08/31/2023	Release for 6.6.4.

Appliance Setup

Follow the steps below to setup FSM-3500G appliance.

- All-in-one Installation
- · Cluster Installation

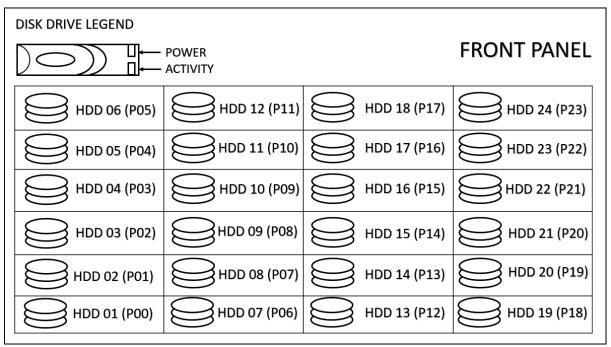
All-in-one Installation

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

- Step 1: Rack mount the FSM-3500G appliance
- Step 2: Power On the FSM-3500G appliance
- Step 3: Verify System Information
- Step 4: Configure FortiSIEM via GUI
- Step 5: Generate the FortiSIEM FSM-3500G 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-3500G appliance

- 1. Follow FortiSIEM 3500G QuickStart Guide here to mount FSM-3500G into the rack.
- 2. Insert Hard Disks positions as shown below:



3. Connect FSM-3500G 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-3500G appliance

- 1. Make sure the FSM-3500G device is connected to a Power outlet and an Ethernet cable is connected to Port0.
- 2. Power On the FSM-3500G device.



FSM-3500G 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-3500G 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
get system status	Displays system name, version and serial number.
diagnose hardware info	Displays system hardware information like CPUs, Memory and RAID information.
diagnose interface detail port0	Displays interface status (see the following table).

The following table describes the port number mapping between the 3500G physical port number label and the FortiSIEM 6.6.2 interface port numbering.

3500G Physical Port Number Label	FSM 6.6.2 Interface Port Numbering
port1	port0
port2	port1
port3	port4
port4	port5
port5	port2
port6	port3

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 VM console, select 1 Set Timezone and then press Next.



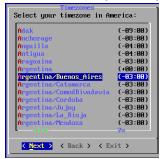
4. Select your Region, and press Next.



5. Select your Country, and press Next.



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



If installing Supervisor, select 1 Supervisor, and press Next.
 If installing a Worker, select 2 Worker, and press Next.
 If installing a Collector, select 3 Collector, and press Next.

Notes:

- The FortiSIEM Manager option is NOT valid for hardware appliances.
- The appliance type cannot be changed once it is deployed, so ensure you have selected the correct option.



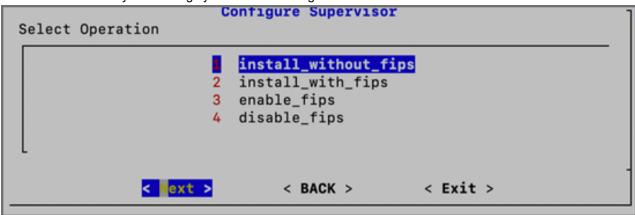


Regardless of whether you select **Supervisor** or **Worker**, you will see the same series of screens with only the header changed to reflect your target installation, unless noted otherwise.

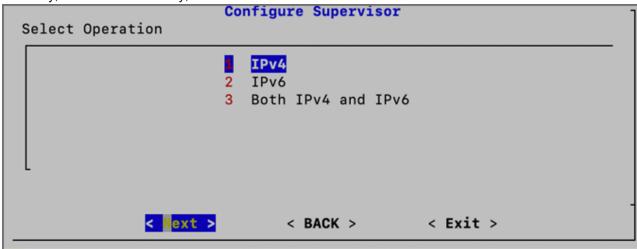
8. If you want to enable FIPS, then choose 2. Otherwise, choose 1. You have the option of enabling FIPS (option 3) or disabling FIPS (option 4) later.

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.

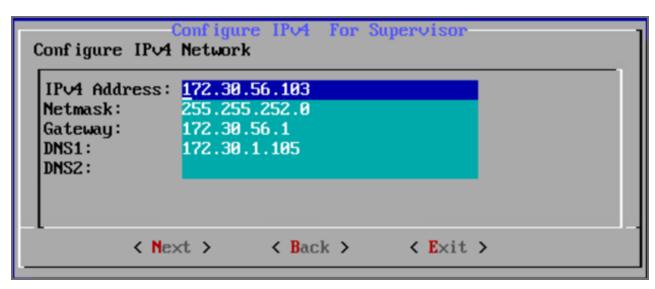


9. Determine whether your network supports IPv4-only, IPv6-only, or both IPv4 and IPv6 (Dual Stack). Choose **1** for IPv4-only, choose **2** for IPv6-only, or choose **3** for both IPv4 and IPv6.



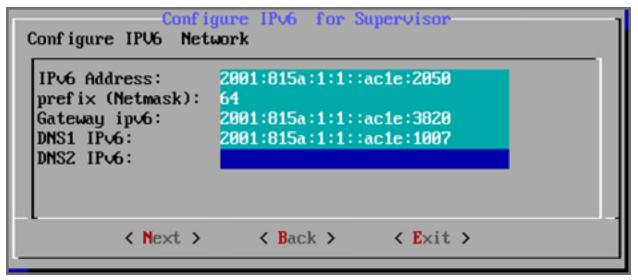
- **10.** If you choose **1** (IPv4) or choose **3** (Both IPv4 and IPv6), and press **Next**, then you will move to step 11. If you choose **2** (IPv6), and press **Next**, then skip to step 12.
- **11.** Configure the network by entering the following fields. Note the IP Address--you will need it in a later step. Press **Next**.

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



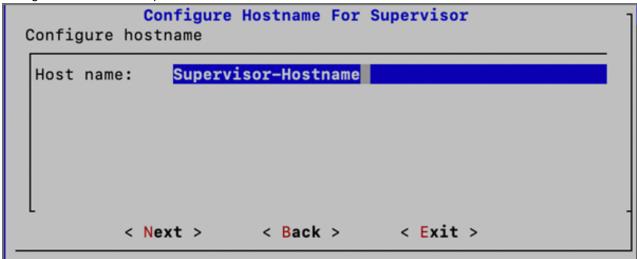
12. If you chose **1** in step 9, then you will need to skip to step 13. If you chose **2** or **3** in step 9, then you will configure the IPv6 network by entering the following fields, then press **Next**.

Option	Description
IPv6 Address	The Supervisor/Worker IPv6 address
prefix (Netmask)	The Supervisor/Worker IPv6 prefix
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/Worker. Press **Next**.

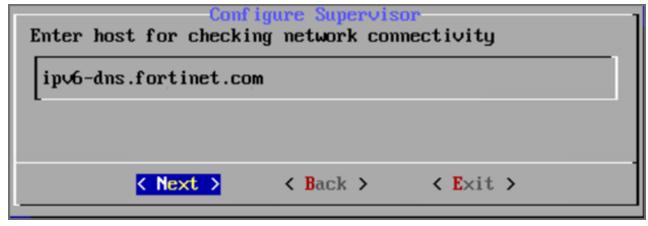


Note: FQDN is no longer needed.

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

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.



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**.

```
| 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
```

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		
-0	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 host used to test connectivity		

16. It will take some time to complete the FortiSIEM installation. If the installation is successful, then 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

For the Supervisor, Worker and Collector, 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		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-3500G License Key file from FortiCare

- 1. Obtain the Hardware Serial Number from FSM-3500G appliance from FortiCare Support Services.
- 2. 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 VM in Step 4.
- 2. Access FortiSIEM VM 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):

License Type

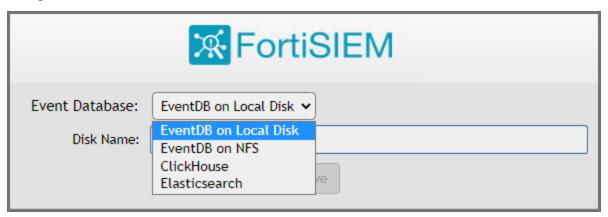
- · Enterprise for single organizations
- · Service Provider for multiple organizations
- 4. Click **Upload** to complete the license registration.

Step 7: Accessing FortiSIEM UI

- 1. Note the IP Address assigned to FortiSIEM VM in Step 5.
- 2. Access FortiSIEM VM from browser (https://<FortiSIEM-IP>). Please note that if you are logging into FortiSIEM with an IPv6 address, you should input https://[IPv6 address] on the browser tab.
- 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. From the **Event Database** drop-down list, choose **EventDB on Local Disk**, **EventDB on NFS**, **ClickHouse**, or **Elasticsearch**. For more details, see Configuring Storage.



Cluster Installation

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

- · Installing the Supervisor
- · Installing Workers
- · Registering Workers

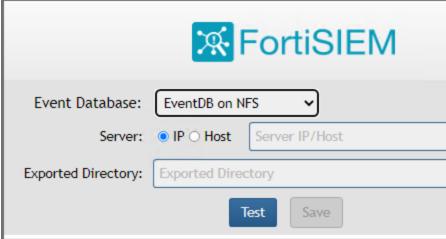
- Installing Collectors
- Registering Collectors

Installing the Supervisor

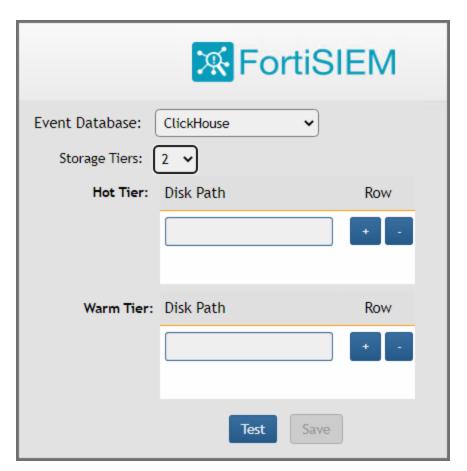
Follow the steps in All-in-one Installation with two differences:

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

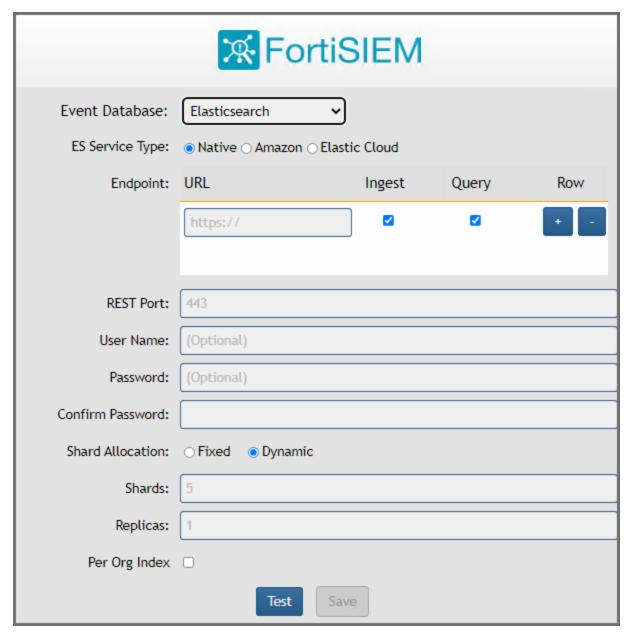
NFS



ClickHouse



Elasticsearch



You must choose external storage listed in Step 8: Choose an Event Database.

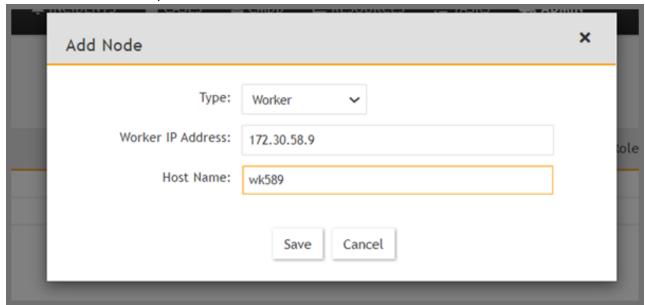
Installing Workers

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.

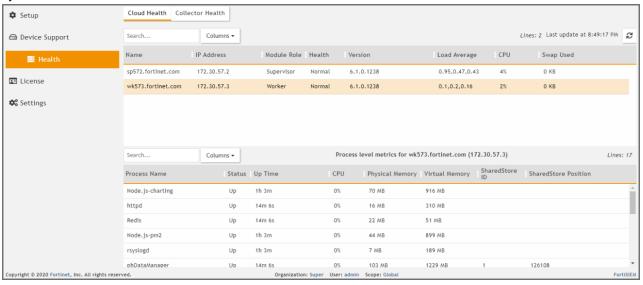
Registering Workers

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 and host name. 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 > 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:

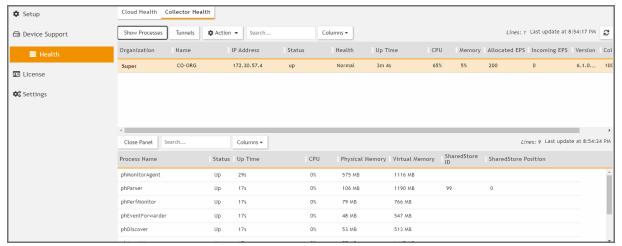
```
# /opt/phoenix/bin/phProvisionCollector --add <user> '<password>' <Super IP or
Host> <Organization> <CollectorName>
```

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.





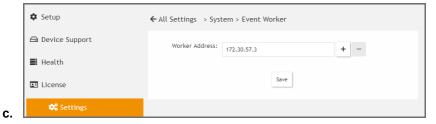
Service Provider Deployments

For Service Provider deployments, follow these steps.

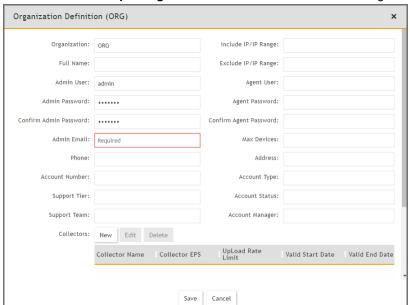
- 1. Log in to Supervisor with 'Admin' privileges.
- 2. Go to ADMIN > Settings > System > Event Worker.
 - a. Enter the IP of the Worker node. If a Supervisor node is only used, then enter the IP of the Supervisor node. Multiple IP addresses can be entered on separate lines. In this case, the Collectors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

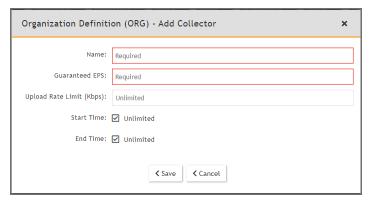






- 4. Enter the Organization Name, Admin User, Admin Password, and Admin Email.
- 5. Under Collectors, click New.
- 6. Enter the Collector Name, Guaranteed EPS, Start Time, and End Time.

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:

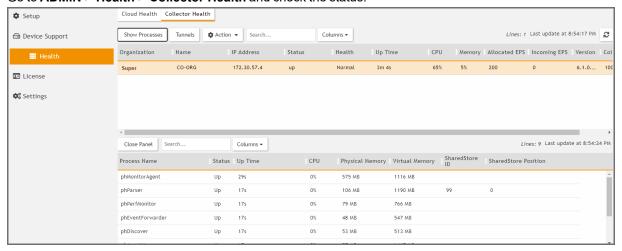
/ opt/phoenix/bin/phProvisionCollector -- add < user> ' < password>' < Super IP or Host> < Organization> < CollectorName>

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.

The Collector will reboot during the Registration.

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



Factory Reset

Follow the steps below to perform factory reset on FortiSIEM FSM-3500G.

- Step 1: Uninstall FortiSIEM application
- Step 2: Reinstall FortiSIEM application

Step 1: Uninstall FortiSIEM application

- 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 the <code>execute factoryreset --force</code> command. The command fails after partial steps. Run the same command again to complete factoryreset.

 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-3500G.



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