

Configure Sensu and other Actions to Register Clients

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Introduction

This document describes how to configure a Sensu server and other actions on CloudCenter to add or remove worker Virtual Machines (VMs) from the server.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- CloudCenter Actions
- Sensu

Components Used

This document is not restricted to specific software and hardware versions.

The information in this document was created from the devices in a specific lab environment. All of

the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Background Information

Sensu is a program designed to monitor various aspects of a machine. It can be incorporated into CloudCenter to provide increased monitoring ability to any deployed VM's. This walkthrough is designed to be an example that shows how you can integrate Sensu with CloudCenter with the use of actions.

Configure

This is designed to run on a CentOS 7 VM that has direct access to the internet. If you need to connect to a proxy, perform that configuration before you proceed.

Open these ports for incoming and outgoing: 3000, 3030, 4567, 5671, 5672, 6379.
Ensure that the Sensu server has a static IP address.

Note: All that is inside the Code Blocks is designed to be copied and pasted into the terminal.

Install Epel Repository

```
sudo yum -y install epel-release
```

Install Erlang

```
sudo yum -y install erlang
```

Install Redis, RabbitMQ, and Configure RabbitMQ

```
sudo rpm --import http://www.rabbitmq.com/rabbitmq-signing-key-public.asc
sudo rpm -Uvh http://www.rabbitmq.com/releases/rabbitmq-server/v3.4.1/rabbitmq-server-3.4.1-1.noarch.rpm
sudo rabbitmq-plugins enable rabbitmq_management
sudo yum -y install redis
sudo chkconfig redis on
sudo service redis start
sudo chkconfig rabbitmq-server on
sudo /etc/init.d/rabbitmq-server start
sudo rabbitmqctl add_vhost /sensu
sudo rabbitmqctl add_user sensu secret
sudo rabbitmqctl set_permissions -p /sensu sensu ".*" ".*" ".*"
```

Register Sensu Repository

```
echo '[sensu]
name=sensu-main
baseurl=http://repositories.sensuapp.org/yum/el/7/x86_64/
gpgcheck=0
enabled=1' |sudo tee /etc/yum.repos.d/sensu.repo
```

Install and Configure Sensu

```
sudo yum -y install sensu
```

```
sudo rm -f /etc/sensu/config.json.example
echo '{ "api": { "host": "localhost", "bind": "0.0.0.0", "port": 4567 } }' |sudo tee
/etc/sensu/conf.d/api.json
echo '{ "client": { "name": "sensu-server", "address": "127.0.0.1", "environment": "sensu",
"subscriptions": [ "linux"], "keepalive": { "handler": "mailer", "thresholds": { "warning": 250,
"critical": 300 } }, "socket": { "bind": "127.0.0.1", "port": 3030 } } }' |sudo tee
/etc/sensu/conf.d/client.json
echo '{ "rabbitmq": { "host": "127.0.0.1", "port": 5672, "vhost": "/sensu", "user": "sensu",
"password": "secret" } }' |sudo tee /etc/sensu/conf.d/rabbitmq.json
echo '{ "redis": { "host": "127.0.0.1", "port": 6379 } }' |sudo tee /etc/sensu/conf.d/redis.json
echo '{ "transport": { "name": "rabbitmq", "reconnect_on_error": true } }' |sudo tee
/etc/sensu/conf.d/transport.json
```

Enable Sensu Services

```
sudo chkconfig sensu-server on
sudo chkconfig sensu-client on
sudo chkconfig sensu-api on
sudo service sensu-server start
sudo service sensu-client start
sudo service sensu-api start
```

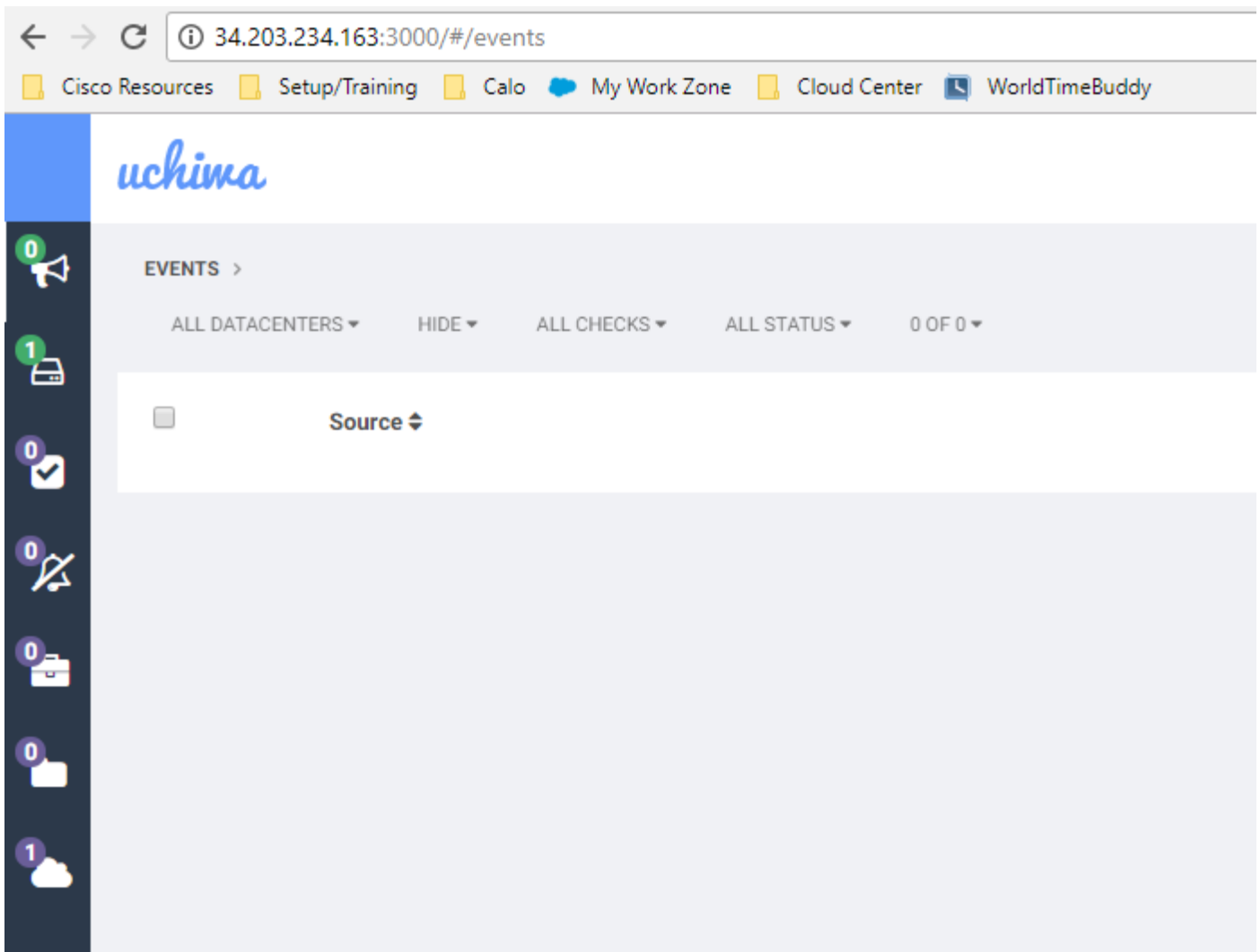
Install and Configure Uchiwa

```
sudo yum -y install uchiwa
echo '{
  "sensu": [
    {
      "name": "sensu",
      "host": "localhost",
      "port": 4567,
      "timeout": 10
    }
  ],
  "uchiwa": {
    "host": "0.0.0.0",
    "port": 3000,
    "refresh": 10
  }
}' |sudo tee /etc/sensu/uchiwa.json
```

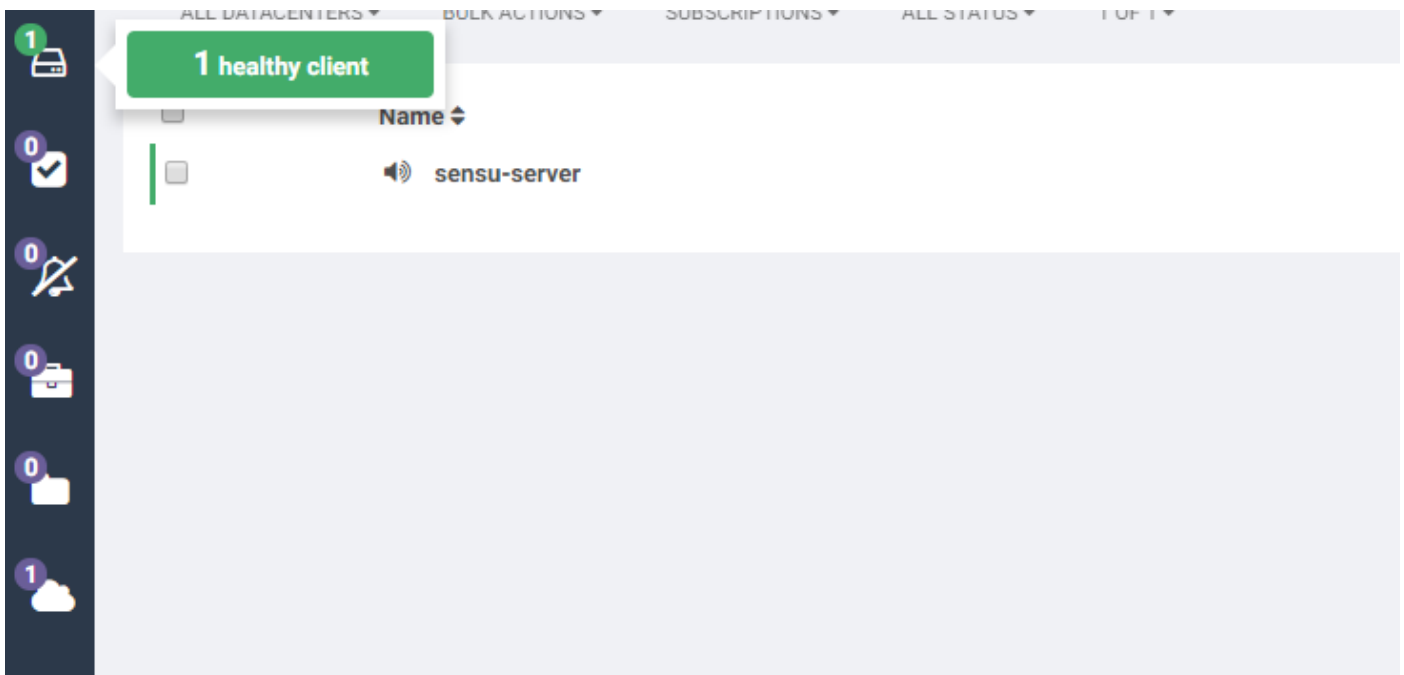
```
sudo chown uchiwa:uchiwa /etc/sensu/uchiwa.json sudo chmod 664 /etc/sensu/uchiwa.json sudo
chkconfig uchiwa on sudo service uchiwa start
```

Verify if the Server Runs

Navigate to IPAddress: **3000/#/events**



At this point, you should have one client called Sensu-server.



Configure Checks

```
echo '{  
  "checks": {
```

```

    "check-cpu-linux": {
      "handlers": ["mailer"],
      "command": "/opt/sensu/embedded/bin/check-cpu.rb -w 80 -c 90 ",
      "interval": 60,
      "occurrences": 5,
      "subscribers": [ "linux" ]
    }
  }
}' |sudo tee /etc/sensu/conf.d/check_cpu_linux.json

echo '{ "checks": { "check-disk-usage-linux": { "handlers": ["mailer"], "type": "metric",
"command": "/opt/sensu/embedded/bin/check-disk-usage.rb", "interval": 60, "occurrences": 5,
"subscribers": [ "linux" ] } } }' |sudo tee /etc/sensu/conf.d/check_disk_usage_linux.json
echo '{ "checks": { "check_memory_linux": { "handlers": ["mailer"], "command":
"/opt/sensu/embedded/bin/check-memory-percent.rb -w 80 -c 90 ", "interval": 60, "occurrences":
5, "refresh": 1800, "subscribers": [ "linux" ] } } }' |sudo tee
/etc/sensu/conf.d/check_memory_linux.json
sudo sensu-install -p cpu-checks sudo sensu-install -p disk-checks sudo sensu-install -p memory-
checks

```

Restart Sensu

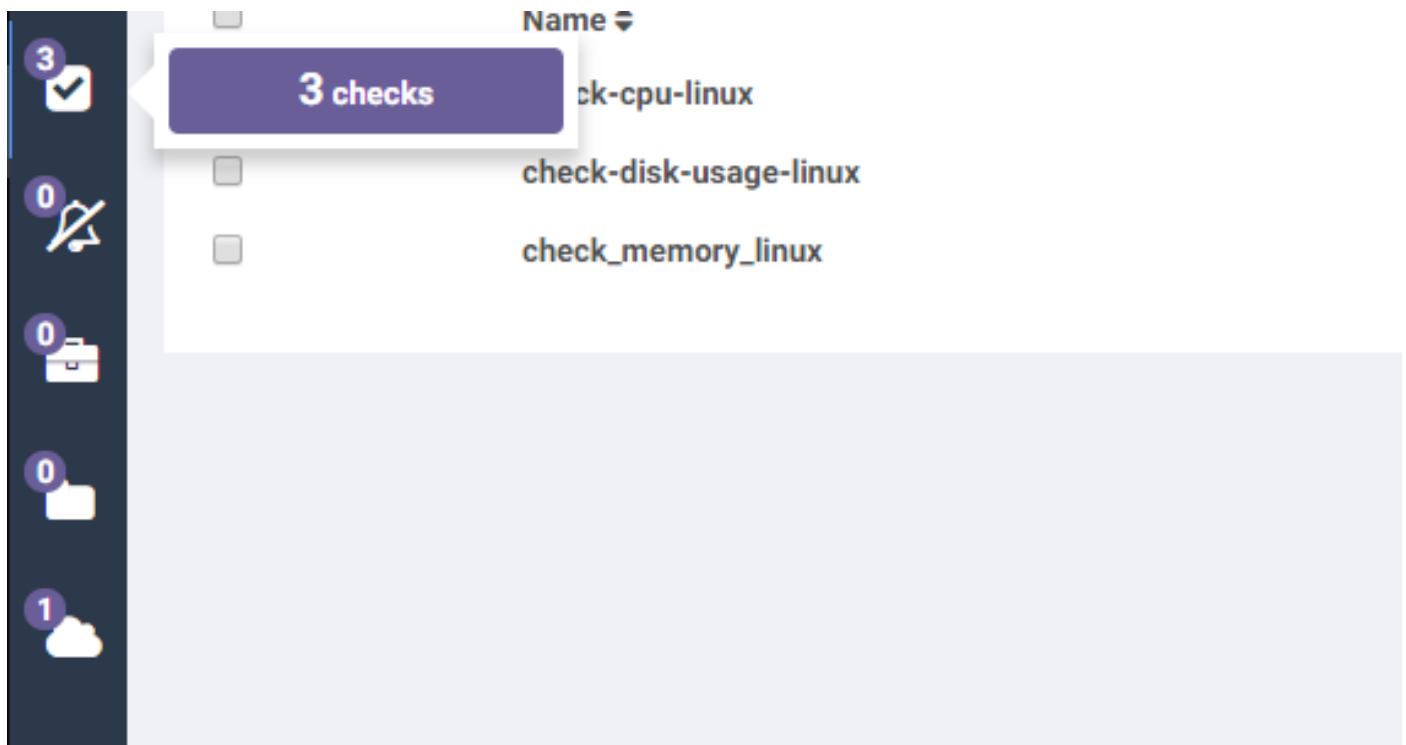
```

sudo service sensu-client restart && sudo service sensu-server restart && sudo service sensu-api
restart

```

After a minute, you should have three checks listed.

If you click on the Sensu-server client, you see detailed information from the three checks for that device.



Update Action Scripts

1. Download **Sensu.zip**.
2. Unzip file.
3. Edit **sensuinstall.sh**.
4. Change the line host to "**SensuServerIP**" to have the IP address of the Sensu Server.

```

21         handler: mailer,
22         "thresholds": {
23             "warning": 250,
24             "critical": 300
25         }
26     },
27     "socket": {
28         "bind": "127.0.0.1",
29         "port": 3030
30     }
31 }
32 }
33 ' | sudo tee /etc/sensu/conf.d/client.json
34
35 echo '{
36     "transport": {
37         "name": "rabbitmq",
38         "reconnect_on_error": true
39     }
40 }' | sudo tee /etc/sensu/conf.d/transport.json
41
42 echo '{
43     "rabbitmq": {
44         "host": "SensuServerIP",
45         "port": 5672,
46         "vhost": "/sensu",
47         "user": "sensu",
48         "password": "secret"
49     }
50 }' | sudo tee /etc/sensu/conf.d/rabbitmq.json
51
52 sensu-install -p cpu-checks
53 sensu-install -p disk-checks
54 sensu-install -p memory-checks
55 sensu-install -p nginx
56 sensu-install -p process-checks
57 sensu-install -p load-checks
58 sensu-install -p vmstats
59
60 sudo chkconfig sensu-client on
61
62 sudo service sensu-client start
63

```

5. Edit `sensuuninstall.sh`.

6. Change the line **curl -s -i -X DELETE**

http://SensuServerIP:4567/clients/\$cliqrNodeHostname to have the IP address of the Sensu Server.

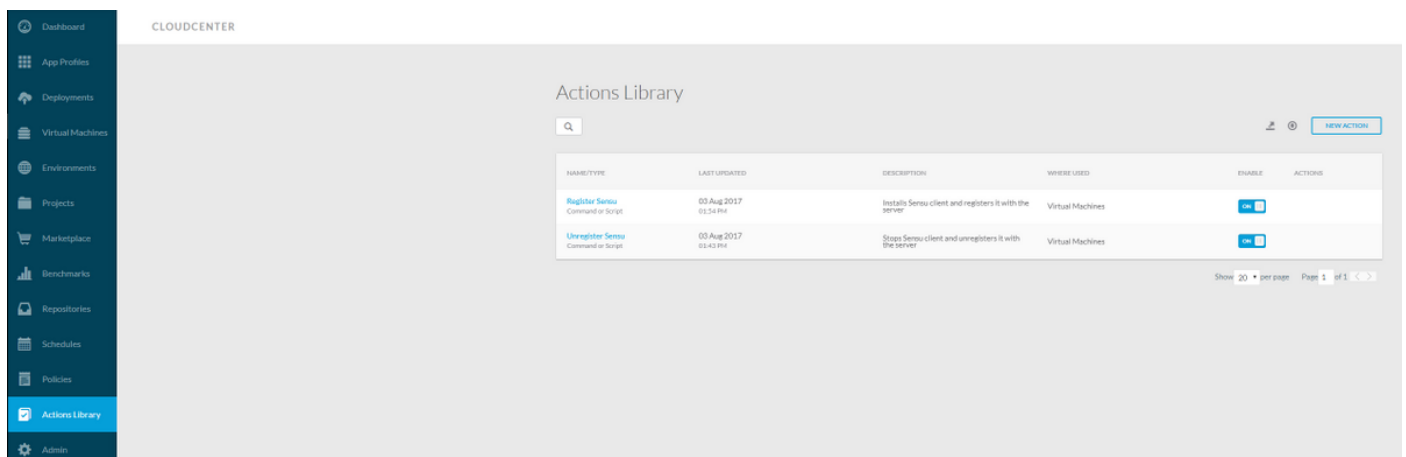
```
1 #!/bin/bash
2 . /usr/local/osmosix/etc/userenv
3
4 if ps -ef | grep sensu-client; then
5     sudo service sensu-client stop
6     curl -s -i -X DELETE http://SensuServerIP/clients/$cliqrNodeHostname
7     exit 0
8 fi
9 exit 0
10
```

7. Zip the modified files back into Sensu.zip.

8. Upload to a repository that the CloudCenter Manager (CCM) has configured.

Create Sensu Actions

Navigate to **Actions Library** and select **New Action**.



Type: Command or Script

Action Name: Register Sensu

Description: Installs Sensu client and registers it with the server

Execute Action: On Virtual Machine OS

Object Mapping:

Resource Type: CloudCenter Deployed VMs

Application Profile: All

Cloud Region: All

Cloud Account: All

Service All

Resource Type: Imported VMs (with Agent Installed)

Cloud Region: All

Cloud Account: All

OS Types: All

Action Definition:

Execute From Bundle: Yes

Location: The repo you uploaded it to, and the path to the Sensu.zip file

Script From Bundle: sensuinstall.sh



Edit Action Register Sensu

* TYPE

Command or Script

* ACTION NAME

Register Sensu

11

DESCRIPTION

Installs Sensu client and registers it with the server

ACTION TIMEOUT (IN MINUTES) ⓘ

20

* EXECUTE ACTION

On Virtual Machine OS

Externally

The action will only be available on VMs with latest CloudCenter agent version.



* REBOOT THE VM AFTER ACTION EXECUTION?

NO

* SYNC VM INFORMATION AFTER ACTION EXECUTION


NO


Object Mapping

* OBJECT TYPE	APPLIED TO	ACTIONS
CloudCenter Deployed VMs	Application Profile: ALL Cloud Region: ALL Cloud Account: ALL Service: ALL	
Imported VMs (with Agent Installed)	Cloud Region: ALL Cloud Account: ALL OS Types: ALL	

[+ OBJECT MAPPING](#)

Action Definition

* EXECUTE FROM BUNDLE
 YES 

* LOCATION  * RELATIVE PATH

* SCRIPT FROM BUNDLE

Custom Fields

If desired add custom fields to the action. They can be made to be user entered or defined here by you, locked and hidden

[+ ADD CUSTOM FIELD](#)

Save action and create another new action

Type: Command or Script

Action Name: Unregister Sensu

Description: Stops Sensu client and unregisters it with the server

Execute Action: On Virtual Machine OS

Object Mapping:

Resource Type: CloudCenter Deployed VMs

Application Profile: All

Cloud Region: All

Cloud Account: All

Service All

Resource Type: Imported VMs (with Agent Installed)

Cloud Region: All

Cloud Account: All

OS Types: All

Action Definition:

Execute From Bundle: Yes

Location: The repo you uploaded it to, and the path to the Sensu.zip file

Script From Bundle: sensuuninstall.sh

Save Action

* TYPE

Command or Script

* ACTION NAME

Unregister Sensu

DESCRIPTION

Stops Sensu client and unregisters it with the server

ACTION TIMEOUT (IN MINUTES) ⓘ

20

* EXECUTE ACTION

On Virtual Machine OS Externally

The action will only be available on VMs with latest CloudCenter agent version.


* REBOOT THE VM AFTER ACTION EXECUTION?

NO

* SYNC VM INFORMATION AFTER ACTION EXECUTION

NO


Object Mapping

* OBJECT TYPE	APPLIED TO	ACTIONS
CloudCenter Deployed VMs	Application Profile: ALL Cloud Region: ALL Cloud Account: ALL Service: ALL	

[+ OBJECT MAPPING](#)

Action Definition

* EXECUTE FROM BUNDLE

YES 

* LOCATION ▼ * RELATIVE PATH

* SCRIPT FROM BUNDLE

Custom Fields

If desired add custom fields to the action. They can be made to be user entered or defined here by you, locked and hidden

[+ ADD CUSTOM FIELD](#)

You can now use these actions on any deployed VM to register it to your Sensu server and unregister. Note that unregister does not uninstall the Sensu client, it just stops the service and removes it from the server's database (DB).

Related Information

- [Sensu](#)
- [Actions Library](#)
- [Technical Support & Documentation - Cisco Systems](#)