Using and Managing vCloud Usage Meter

vCloud Usage Meter 4.1

vmware®

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https://docs.vmware.com/

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What is vCloud Usage Meter and how does it work

1

vCloud Usage Meter is a virtual appliance that meters and collects data for products that are part of the VMware Cloud Provider Program. vCloud Usage Meter is installed on a vCenter Server instance.

How do I access vCloud Usage Meter after deployment

After you deploy vCloud Usage Meter, there are several methods for accessing settings and data.

Table 1-1. Access Methods

Access Method	Description
Virtual machine console	Provides access to configuration settings.
Web interface	Provides menus, tabs, and pages to manage products, settings, and notifications.

What kind of data does vCloud Usage Meter collect

vCloud Usage Meter collects product consumption data from vCenter Server instances and other products.

- Collected data from the vCenter Server instances includes DNS name, physical memory (RAM), and license type.

- Collected data from the virtual machine includes the metered product name, hostname, allocated and billing virtual memory (vRAM), CPU, and instance universal unique identifier (UUID).

- Collected data from products includes billing vRAM, and other metrics specific to the metered product.

How does vCloud Usage Meter report monthly product consumption data

vCloud Usage Meter works in conjunction with vCloud Usage Insight, which is a service that aggregates the data collected from vCloud Usage Meter instances, and automatically pre-fills it into the Commerce Portal. To automatically report and pre-fill your aggregated monthly product consumption data from vCloud Usage Meter into the Commerce Portal, you must register your vCloud Usage Meter instances with Commerce Portal.

To learn more about vCloud Usage Insight, see VMware vCloud Usage Insight.

For information about the VMware Cloud Provider Program, see http://www.vmware.com/partners/service-provider.

Manage the metering in vCloud Usage Meter

2

You must provide and maintain certain details for vCloud Usage Meter to collect product consumption data from vCenter Server instances. These details include the host name and credentials.

vCloud Usage Meter collects usage information on an hourly basis at the cluster level and it is averaged over the month in which the use occurs. The consumption information for individual virtual machines is not available.

This chapter includes the following topics:

- How do I add an NSX Data Center for vSphere instance for metering
- Metering vRealize Operations Manager
- How do I delete product servers in vCloud Usage Meter
- How do I de-anonymize vCloud Usage Meter reports
- How do I change vCloud Usage Meter logging level

How do I add an NSX Data Center for vSphere instance for metering

To meter the product consumption data of NSX Data Center for vSphere, you must add the NSX Manager instance to vCloud Usage Meter.

Prerequisites

- You must register the NSX Manager appliance with vCenter Server. For more information, see *Register vCenter Server with NSX Manager* in the *VMware NSX Data Center for vSphere Documentation*.
- You must add the vCenter Server instance associated with the NSX Manager to the vCloud Usage Meter list of vCenter Server instances.
- You must have the **CLI Admin** user name and password for the NSX Manager appliance that you want to add.

Procedure

1   In the main menu bar of the vCloud Usage Meter Web interface, click **Products**.

2 In the left navigation bar, click **NSX Manager**.

3 On the **NSX Manager** page, click **Add** .

4 In the **vCenter Host Name** text box, enter the vCenter Server host name or IP address.

5 In the **Endpoint** text box, enter the host name or IP address of the NSX Manager appliance.

6 In the **Username** and **Password** text boxes, enter the NSX Manager **CLI Admin** credentials.

7 Click **Add**.

Results

You successfully added NSX Manager to the list of instances. If an error occurs, a message appears in the Status column in the **NSX-v** list of instances.

Metering vRealize Operations Manager

If a vRealize Operations Manager server is associated with a vCenter Server that you added for metering, vCloud Usage Meter detects the vRealize Operations Manager and displays the servers in the vCloud Usage Meter Web interface.

To complete the vRealize Operations Manager registration and begin metering, you must provide the required credentials for each vRealize Operations Manager instance that you meter.

vCloud Usage Meter also detects all vCenter Server servers monitored by a vRealize Operations Manager. To avoid configuration issues, configure the metered vCenter Server instances, the associated vRealize Operations Manager instances, and vCloud Usage Meter to use the same time zone.

If the added vRealize Operations Manager monitors a vCenter Server, which is added for metering, vCloud Usage Meter reports the usage for this vCenter Server as `Managed vCenter` line items.

If the added vRealize Operations Manager monitors a vCenter Server, which is not added for metering, vCloud Usage Meter reports the usage for this vCenter Server as `Unmanaged vCenter Servers` line items.

Virtual Machines monitored by vRealize Operations Manager that are running on `Unmanaged vCenter Servers` are always reported as standalone.

vRealize Operations Manager Standard and Advanced editions are always reported as standalone.

vRealize Operations Manager Enterprise edition reporting depends on the type of license of the ESXi host. The vSphere Enterprise Plus license is the only license that you can include in a bundle line item. Other ESXi host licenses are reported as standalone.

How do I configure metering for a subset of virtual machines

vCloud Usage Meter can generate reports for a subset of virtual machines that vRealize Operations Manager controls. To support such a topology, you must create a specific user for vRealize Operations Manager and add it to vCloud Usage Meter.

Prerequisites

You must have administrator privileges for the vRealize Operations Manager user interface.

Procedure

1   Log in to the administration interface of vRealize Operations Manager.

2   Navigate to **Administration > Access Control** and on the **User Accounts** tab, click the **Add** button.

    The **Add User** window opens.

3   Enter the basic user information and click **Next**.

4   To assign role and allocate resources, in the **Assign Groups and Permissions** window, click **Objects**.

5   From the **Select Role** drop-down menu, select **Administrator** and select the **Assign this role to the user** check box.

6   In the **Select Object Hierarchies** pane, select the **vSphere Storage** check box.

    The vSphere inventory tree appears in the **Select Object** pane.

7   In the **Select Object** pane, select the virtual machines to be metered and click **Finish**.

8   Go to the vCloud Usage Meter Web interface and add or update the user credentials for vRealize Operations Manager.

    For more information about adding credentials for vRealize Operations Manager, see How do I add credentials for vRealize Operations Manager.

Results

You can now add the new vRealize Operations Manager credentials and generate reports only for the subset of virtual machines you selected.

How do I add credentials for vRealize Operations Manager

To meter the product consumption data of vRealize Operations Manager, you must provide the correct vRealize Operations Manager credentials in the vCloud Usage Meter Web interface.

Prerequisites

■   The vRealize Operations Manager solutions and adapters must be properly configured. For more information, see *Connecting to Data Sources* in the *vRealize Operations Manager Documentation*.

- The vRealize Operations Manager instance must be registered as a vCenter Server extension.

- You must have at least read-only privileges.

Procedure

1   In the main menu bar of the vCloud Usage Meter Web interface, click **Products**.

2   In the left navigation pane, click **vRealize Operations**.

3   On the **vRealize Operations** page, select the vRealize Operations Manager instance and click **Edit**.

4   In the **Username** text box, enter the user name.

- If you are logging in with a **local** user, use the local `user-name`.

- If you are logging in with a **non-local** user, the user name must be in the format `user-name@`*`domain-name@domain-alias`*, where *domain-alias* is the domain short name or domain alias.

5   In the **Password** text box, enter the user password.

6   Click **Save**.

To add vRealize Operations Manager, accept the certificate.

Important   Providing the correct vRealize Operations Manager user name and password is essential to ensuring proper metering. Make sure that you provide the correct vRealize Operations Manager credentials.

Results

The credentials for the vRealize Operations Manager instance are added to vCloud Usage Meter.

If you change the vRealize Operations Manager certificate or password, or prevent vCloud Usage Meter from connecting to it, the vRealize Operations Manager server status displays `Connection error!`. In this case vCloud Usage Meter cannot meter vRealize Operations Manager. After you set the correct certificate or password for vRealize Operations Manager, vCloud Usage Meter will start metering vRealize Operations Manager again.

How do I delete product servers in vCloud Usage Meter

You can delete product servers that are no longer in use.

Procedure

1   In the main menu bar of the vCloud Usage Meter Web interface, click **Products**.

2   In the left navigation pane, select the product that you want to delete.

3   On the corresponding product page, select the instance you want to delete and click **Delete**.

The product is removed from the list of product servers. After deletion, force a collection or wait for the hourly collection to ensure that the change in metering is successful. Any data that was collected before the deletion remains in the vCloud Usage Meter appliance.

How do I de-anonymize vCloud Usage Meter reports

The data transferred between vCloud Usage Meter and vCloud Usage Insight is anonymized to hide sensitive data like virtual machine name, host name, and user name. You can remove the anonymization of the Monthly Usage report and the Virtual Machine History report.

Prerequisites

- You must have a password to log in to the vCloud Usage Meter console as **root**.

- You must start the SSHD service on the vCloud Usage Meter console.

- You must download the Monthly Usage report or the Virtual Machine History report.

Procedure

1   Log in to the vCloud Usage Meter console as **usagemeter**.

2   Enter the `/opt/vmware/cloudusagemetering` directory.

```
cd /opt/vmware/cloudusagemetering
```

3   To deanonymize the anonymized Monthly Usage or Virtual Machine History report, run the command.

```
./scripts/report_deanonymize.sh [location_of_anonymized_report] [destination_for_de-
anonymized_report]
```

You can also run the script on a separate file that contains the anonymized data.

A message displays. `Your report was successfully deanonymized. The result is located at [location-of-deanonymized_report.txt]`

How do I change vCloud Usage Meter logging level

You can change the logging level of vCloud Usage Meter to collect more details.

Prerequisites

You have user privileges.

Procedure

1   In the main menu bar of the vCloud Usage Meter Web interface, click **Settings**.

2   In the left navigation pane, click **Logging Level**.

3 On the **Logging Level** page, select a level from the **Log Level** drop-down menu.

Option	Description
Trace	Select to include more refined events information than the **Debug** logging level.
Debug	Select to include more log detail than **Info**. This option causes the log capacity to fill faster.
Info	Select to include **Warn**, **Error**, **Fatal**, and **Info** messages. This level is the default logging level for vCloud Usage Meter libraries.
Warn	Select to include **Warn**, **Error**, and **Fatal** messages.
Error	Select to include **Error** and **Fatal** messages.
Fatal	Select to include **Fatal** messages.

4 Click **Save**.

Managing vCloud Usage Meter accounts

3

Administrative and management tasks occur after you deploy and configure the vCloud Usage Meter appliance. They include changes to the provisioned environment and routine administration and maintenance procedures.

This chapter includes the following topics:

- How do I reset the root password
- How do I change the root password
- How do I unlock the usagemeter account
- How do I change the usagemeter or the umauditor password

How do I reset the root password

If you lost or forgot the **root** account password, you can reset it.

If you know the **root** account password and want to change it due to security or other reasons, see How do I change the root password.

Procedure

1   In the vSphere Web Client, restart the guest operating system of the vCloud Usage Meter appliance.

2   Click the console and wait for the **Photon** screen to appear.

3   Press e to go to the **GNU GRUB** boot menu editor.

    The **GNU GRUB** menu remains on the screen for several seconds before it starts the boot sequence.

4   Use the arrow keys to go to the line that begins with `linux` and append the `rw init=/bin/bash` string at the end of the line.

5   To boot the system, press Ctrl+X or F10.

6   To reset the **root** account password, enter the `passwd` command in the console.

7   Enter a new password, then reenter the same password to confirm the change.

8   Restart the vCloud Usage Meter appliance by using the vSphere Web Client.

Results

You successfully changed the **root** account password of the vCloud Usage Meter appliance.

How do I change the root password

You can change the **root** account password due to security restrictions or other reasons.

Prerequisites

You must have a password to log in to the vCloud Usage Meter console as **root**.

Procedure

1 Log in to the virtual machine console as **root**.

2 To change the **root** password, run the `passwd` command.

3 Enter a new password, then reenter the same password to confirm the change.

4 Log out from the vCloud Usage Meter console.

Results

You have changed the **root** password and can now log in to vCloud Usage Meter as **root** with your new password.

How do I unlock the usagemeter account

If you enter a wrong password for the **usagemeter** account too many times, the account locks. You must unlock the account before logging in as **usagemeter** again.

Prerequisites

▪ You must have a password to log in to the vCloud Usage Meter console as **root**. To change the **root** account password, see How do I change the root password.

▪ You must have the correct password to log in to vCloud Usage Meter with the **usagemeter** account. This procedure is about unlocking the account. If you want to change the password of the **usagemeter** account, see How do I change the usagemeter or the umauditor password.

Procedure

1 Log in to the virtual machine console as **root**.

2 To unlock the **usagemeter** account, run the command.

```
pam_tally2 --user=usagemeter --reset
```

This operation resets the count for failed login attempts for the **usagemeter** account.

3 Log out from the vCloud Usage Meter console.

Results

You can now log in to vCloud Usage Meter as **usagemeter** with the previously set password.

How do I change the usagemeter or the umauditor password

You can change the **usagemeter** and **umauditor** account passwords due to security restrictions or other reasons.

Important Passwords for the **usagemeter** and **umauditor** accounts expire in 180 days. You must change your password before the expiration date.

Prerequisites

You can log in to the vCloud Usage Meter console as **root**.

Procedure

1 Log in to the virtual machine console as **root**.

2 To change the **usagemeter** or **umauditor** passwords, run the `passwd user-account` command.

For example: `passwd usagemeter`

3 To confirm the change, enter a new password, then reenter the same password to verify it.

4 Log out from the virtual machine console.

Results

You successfully changed the **usagemeter** or **umauditor** account password for the vCloud Usage Meter appliance.

How do I generate support bundles

You can generate support bundle collections of log files for troubleshooting purposes.

Prerequisites

You can log in to the vCloud Usage Meter console as **usagemeter**.

Procedure

1 Log in to the virtual machine console as **usagemeter**.

2 Access the `cloudusagemetering` directory.

    /opt/vmware/cloudusagemetering

3 To generate the support bundle, run the script.

    ```
    ./scripts/bundle.sh
    ```

   This process takes a few minutes. The generated support bundle file `bundle.tar.gz` is saved to the `cloudusagemetering` directory.

How do I check the status of the services in vCloud Usage Meter

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You can check if the services in vCloud Usage Meter are running.

Prerequisites

You must have a password to log in to the vCloud Usage Meter console as **root**.

Procedure

1   Log in to the virtual machine console as **root**.

2   Access the `cloudusagemetering` directory.

```
cd /opt/vmware/cloudusagemetering/
```

3   To check the status of the services in vCloud Usage Meter, run the `status.sh` script. .

`./scripts/status.sh all`

If the metered instances are running, you receive a `Running` status back. For example,

```
Process service-name status: Running
```

How do I verify if a registered in Commerce PortalvCloud Usage Meter instance is reporting product consumption data

6

You can verify if your vCloud Usage Meter 4.1.0.1 instance is reporting product consumption data to Commerce Portal.

Prerequisites

- The version of your vCloud Usage Meter is 4.1.0.1.

- You registered the vCloud Usage Meter 4.1.0.1 instance with Commerce Portal.

Procedure

1. In the main menu bar of the vCloud Usage Meter Web interface, navigate to **Settings > Usage Insight Test** .

    A **Usage Insight Test** page opens.

2. On the **Usage Insight Test** page, click **Send update to vUI**.

    If the operation completes successfully, you receive a `All Data Sent Successfully` message .

3. Verify that the status of the vCloud Usage Meter 4.1.0.1 instance is **Green** in vCloud Usage Insight. For information, see How do I check my vCloud Usage Meter reporting status.