Install on your own host

Cloud Manager

NetApp
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Install the Connector on an existing Linux host that has internet access

The most common way to create a Connector is directly from Cloud Manager or from a cloud provider's marketplace. But you have the option to download and install the Connector software on an existing Linux host in your network or in the cloud. These steps are specific to hosts that have internet access.

Learn about other ways to deploy a Connector.

If you want to create a Cloud Volumes ONTAP system in Google Cloud, then you must have a Connector that's running in Google Cloud as well. You can't use a Connector that's running in AWS, Azure, or on-prem.

Verify host requirements

The Connector software must run on a host that meets specific operating system requirements, RAM requirements, port requirements, and so on.

A dedicated host is required

The Connector is not supported on a host that is shared with other applications. The host must be a dedicated host.

CPU

4 cores or 4 vCPUs

RAM

16 GB

AWS EC2 instance type

An instance type that meets the CPU and RAM requirements above. We recommend t3.xlarge and use that instance type when you deploy the Connector directly from Cloud Manager.

Azure VM size

An instance type that meets the CPU and RAM requirements above. We recommend DS3 v2 and use that VM size when you deploy the Connector directly from Cloud Manager.

GCP machine type

An instance type that meets the CPU and RAM requirements above. We recommend n1-standard-4 and use that machine type when you deploy the Connector directly from Cloud Manager.

Supported operating systems

- CentOS 7.6
- CentOS 7.7
- CentOS 7.8
- CentOS 7.9

- Red Hat Enterprise Linux 7.6
- Red Hat Enterprise Linux 7.7
- Red Hat Enterprise Linux 7.8
- Red Hat Enterprise Linux 7.9

  The Red Hat Enterprise Linux system must be registered with Red Hat Subscription Management. If it is not registered, the system cannot access repositories to update required 3rd party software during Connector installation.

  The Connector is supported on English-language versions of these operating systems.

Hypervisor

A bare metal or hosted hypervisor that is certified to run CentOS or Red Hat Enterprise Linux
Red Hat Solution: Which hypervisors are certified to run Red Hat Enterprise Linux?

Disk space in /opt

100 GiB of space must be available

Disk space in /var

20 GiB of space must be available

Outbound internet access

Outbound internet access is required to install the Connector and for the Connector to manage resources and processes within your public cloud environment. For a list of endpoints, see Networking requirements for the Connector.

Install the Connector

After you verify that you have a supported Linux host, you can obtain the Connector software and then install it.

Required privileges

Root privileges are required to install the Connector.

About this task

- The installation installs the AWS command line tools (awscli) to enable recovery procedures from NetApp support.

  If you receive a message that installing the awscli failed, you can safely ignore the message. The Connector can operate successfully without the tools.

- The installer that is available on the NetApp Support Site might be an earlier version. After installation, the Connector automatically updates itself if a new version is available.

Steps

1. Download the Cloud Manager software from the NetApp Support Site, and then copy it to the Linux host.

   For help with connecting and copying the file to an EC2 instance in AWS, see AWS Documentation: Connecting to Your Linux Instance Using SSH.

2. Assign permissions to run the script.

```
chmod +x OnCommandCloudManager-V3.9.14.sh
```

3. Run the installation script.

   If you have a proxy server, you will need to enter the command parameters as shown below. The installer doesn't prompt you to provide information about a proxy.

   ```
    ./OnCommandCloudManager-V3.9.14.sh [silent] [proxy=ipaddress]
   [proxyport=port] [proxyuser=user_name] [proxypwd=password]
   ```

   silent runs the installation without prompting you for information.

   proxy is required if the host is behind a proxy server.

   proxyport is the port for the proxy server.

   proxyuser is the user name for the proxy server, if basic authentication is required.

   proxypwd is the password for the user name that you specified.

4. Unless you specified the silent parameter, enter **Y** to continue with the installation.

   Cloud Manager is now installed. At the end of the installation, the Cloud Manager service (occm) restarts twice if you specified a proxy server.

5. Open a web browser and enter the following URL:

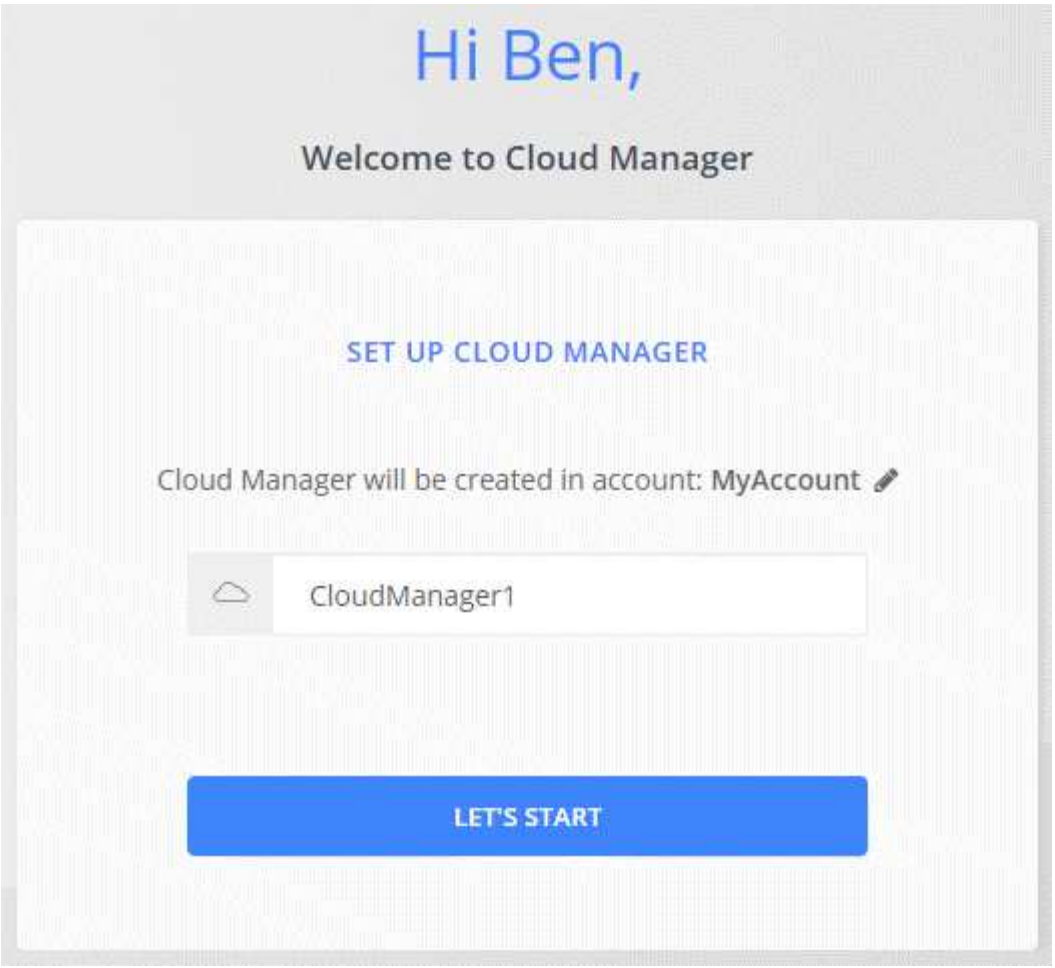
   https://*ipaddress*

   ipaddress can be localhost, a private IP address, or a public IP address, depending on the configuration of the host. For example, if the Connector is in the public cloud without a public IP address, you must enter a private IP address from a host that has a connection to the Connector host.

6. Sign up at NetApp Cloud Central or log in.
7. If you installed the Connector in Google Cloud, set up a service account that has the permissions that Cloud Manager needs to create and manage Cloud Volumes ONTAP systems in projects.
   a. Create a role in GCP that includes the permissions defined in the Cloud Manager policy for GCP.
   b. Create a GCP service account and apply the custom role that you just created.
   c. Associate this service account with the Connector VM.
   d. If you want to deploy Cloud Volumes ONTAP in other projects, grant access by adding the service account with the Cloud Manager role to that project. You'll need to repeat this step for each project.
8. After you log in, set up Cloud Manager:
   a. Specify the NetApp account to associate with the Connector.

      Learn about NetApp accounts.

   b. Enter a name for the system.



Result

The Connector is now installed and set up with your NetApp account. Cloud Manager will automatically use this Connector when you create new working environments.

After you finish

Set up permissions so Cloud Manager can manage resources and processes within your public cloud environment:

- AWS: Set up an AWS account and then add it to Cloud Manager.
- Azure: Set up an Azure account and then add it to Cloud Manager.
- Google Cloud: See step 7 above.

Install the Connector on-prem without internet access

You can install the Connector on an on-premises Linux host that doesn't have internet access. You can then discover on-prem ONTAP clusters, replicate data between them, and scan them with Cloud Data Sense.

These installation instructions are specifically for the use case described above. Learn about other ways to deploy a Connector.

Verify host requirements

The Connector software must run on a host that meets specific operating system requirements, RAM requirements, port requirements, and so on.

A dedicated host is required

The Connector is not supported on a host that is shared with other applications. The host must be a dedicated host.

CPU

4 cores or 4 vCPUs

RAM

16 GB

Supported operating systems

- CentOS 7.6
- CentOS 7.7
- CentOS 7.8
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- Red Hat Enterprise Linux 7.6
- Red Hat Enterprise Linux 7.7
- Red Hat Enterprise Linux 7.8
- Red Hat Enterprise Linux 7.9

  The Red Hat Enterprise Linux system must be registered with Red Hat Subscription Management. If it is not registered, the system cannot access repositories to update required 3rd party software during Connector installation.

  The Connector is supported on English-language versions of these operating systems.

Hypervisor

A bare metal or hosted hypervisor that is certified to run CentOS or Red Hat Enterprise Linux
Red Hat Solution: Which hypervisors are certified to run Red Hat Enterprise Linux?

Disk type

An SSD is required

Disk space in /opt

100 GiB of space must be available

Disk space in /var

20 GiB of space must be available

Docker Engine

Docker Engine version 19 or later is required on the host before you install the Connector. View installation instructions.

Install the Connector

After you verify that you have a supported Linux host, you can obtain the Connector software and then install it.

Required privileges

Root privileges are required to install the Connector.

Steps

1. Verify that docker is enabled and running.

```
sudo sysctl enable docker && sudo sysctl start docker
```

2. Download the Cloud Manager software from the NetApp Support Site.
3. Copy the installer to the Linux host.
4. Assign permissions to run the script.

```
chmod +x /path/cloud-manager-connector-offline-v3.9.14
```

5. Run the installation script:

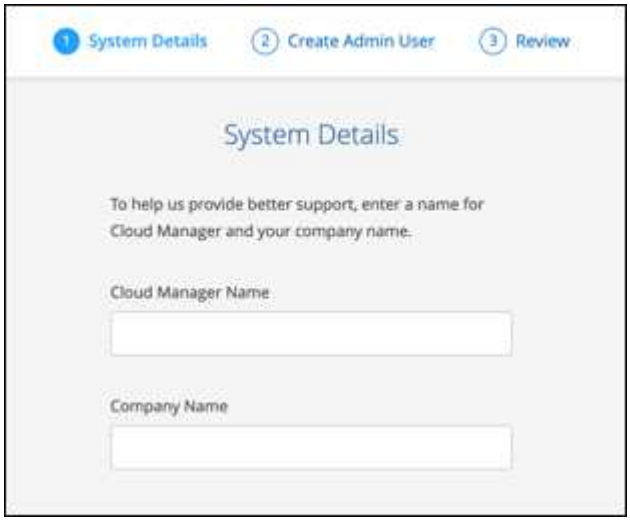
```
sudo /path/cloud-manager-connector-offline-v3.9.14
```

6. Open a web browser and enter https://*ipaddress* where *ipaddress* is the IP address of the Linux host.

   You should see the following screen.

7. Click **Set Up New Cloud Manager** and follow the prompts to set up the system.

- **System Details**: Enter a name for the Cloud Manager system and your company name.



- **Create Admin User**: Create the admin user for the system.

  This user account runs locally on the system. There's no connection to NetApp Cloud Central.

- **Review**: Review the details, accept the license agreement, and then click **Set Up**.

8. Log in to Cloud Manager using the admin user that you just created.

Result

The Connector is now installed and you can start using the Cloud Manager features that are available in a dark site deployment.

What's next?

- Discover on-prem ONTAP clusters
- Replicate data between on-prem ONTAP clusters
- Scan volume data using Cloud Data Sense

When new versions of the Connector software are available, they'll be posted to the NetApp Support Site. Learn how to upgrade the Connector.