

Installing a DSE cluster using Lifecycle Manager and OpsCenter

Lifecycle Manager (LCM) in OpsCenter allows you to easily provision, configure, and install DataStax Enterprise clusters.

The workflow when using LCM is to first install OpsCenter on a dedicated server, then use LCM to configure and install the nodes in the DSE clusters.

- All target machines are running a [supported platform](#).
- You have authentication credentials (either username and password, or an SSH key) for each machine on which DSE will be installed.
- The machines on which DSE will be installed are network accessible by the machine on which OpsCenter will be installed.
- You have access to either the public DSE repository or to an internal mirror set up by your organization.

The topology of your clusters is important. Before you begin, you should know how many clusters, datacenters, and nodes in each datacenter you need. You should decide on how you will arrange your workloads within the clusters. Will you use a [single workload per datacenter](#), or a [mixed workload cluster](#)?

The instructions show how to install a cluster consisting of a datacenter with 3 nodes dedicated to transactional workloads with DSE Graph enabled. Internode encryption, client encryption, and both authentication and authorization are enabled on all nodes.

Procedure

1. [Install and start OpsCenter](#) on one of the target machines using the installation method of your choice.
2. In a web browser, go to `http://OpsCenter host:8888`.
3. After OpsCenter loads, make sure Create a new cluster is selected and click Get Started. Lifecycle Manager will load in another window.
4. Click SSH Credentials in Lifecycle Manager, then click Add Credential. Give a Name to each individual user or key to keep track of the users or keys used in your cluster.
 1. If you are using password authentication, add the user credentials for each node in the cluster under Login User and Login Password, and click Save.
 2. If you are using a private key, enter the username under Login User, select Private Key and paste in the key, and click Save.
5. Click Config Profiles in Lifecycle Manager, then Add Config Profile.
 1. Enter a Name for this configuration profile. For example, `dse51`.

2. Select the latest version of DataStax Enterprise under DataStax Enterprise Version.
For example, `dse v5.1.0`.
6. Select `cassandra.yaml` in the left pane under Cassandra.
 1. Under `server_encryption_options` set `internode_encryption` to `all`. Set the `keystore_password` and `truststore_password` to new values.
 2. Under `client_encryption_options` select `enabled`. Set the `keystore_password` and `truststore_password` to new values.
7. Select `dse.yaml`.
 1. In the DSE Authenticator Options section under `authenticator_options` select `enabled`.
 2. In the DSE Authorizer Options section under `authorizer_options` select `enabled`.
8. Select Save to save your named config option.
9. Click Repositories in Lifecycle Manager, then Add Repository to add a DSE repository for installing and updating DSE in your cluster.
 1. Give a Name to this repository. For example, `dse`.
 2. If you are using an internal repository, click Access Private Repo and enter the repository URL and URL key.
 3. Enter the repository credentials for your repository under Username and Password.
10. Click Clusters in Lifecycle Manager, then click Adding a Cluster. This will bring up the Add Cluster dialog.
 1. Give a Name to your cluster.
 2. If you use the same SSH credentials (password or key) across all the machines in your cluster, select the name of the credentials you configured under SSH Credentials.
 3. Select the name of the configuration profile you entered under Config Profile.
 4. Select the name of the repository you entered under Repository.
 5. Click Save.
11. Click the name of the cluster you entered, then click the Add icon by Datacenters. This will bring up the Add Datacenter dialog.
12. Configure the transactional datacenter.
 1. Enter the name of your datacenter under Name.
 2. If you have different SSH credentials in each datacenter, select the name of the SSH configuration that applies to this datacenter.
 3. Select the workload for this datacenter under Workload. For the first datacenter, leave Workload set to `Cassandra` to create a transactional workload.
 4. Select DSE Graph.
 5. Click Save.
13.
 1. Select the datacenter name, then click the Add icon next to Nodes.
 2. Enter a Name for the node. For example, `dse-transactional-1`.
 3. Enter the IP address for the node under SSH IP Address.

4. If you have different SSH credentials for each node, select the name of the SSH configuration under SSH Credentials.
 5. Select Save.
 6. Repeat these steps for each node in each datacenter.
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14. Select the cluster name under Clusters, then click the drop menu to the right of the cluster name, then click Install to open the Run Installation Job dialog.
 1. Enter a new default password for the database superuser under New DSE Password.
 2. Click Submit. The installation job has been queued by the Lifecycle Manager.
 3. Click View Job Summary to track the progress of the installation.

What's next

Go the main OpsCenter interface by clicking OpsCenter Monitoring.