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Web Services and Applications Deployment Guide

Initializing Cassandra

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Contents

Creating the Cassandra keyspace

The procedures below describe how to create the Cassandra keyspace for the following scenarios:

- Development — 1 Cassandra node (appropriate for a development or lab environment)
- Single Data Center — 1 data center with a minimum of three Cassandra nodes
- Two Data Centers — 2 data centers with a minimum of three Cassandra nodes in each data center

> **Important**
> For more complex Cassandra deployments, please consult with Genesys.

Select a tab below for the procedure that matches your deployment scenario.

Development

Creating the Cassandra keyspace (1 Cassandra node)

Start

1. Copy the **ks-schema-local.cql** file from ***/installation_path/gws/data*** to the Cassandra node host.
2. By default, the replication factor is set to 1. Since this is a single node deployment, you don't need to modify this value. Refer to the Cassandra documentation for more information about replication factors.

   ```
   and strategy_options = {replication_factor : 1}
   ```

3. Create the Cassandra schema. Choose one of the following options:
   - If you are using Web Services and Applications v8.5.2.## or later, run the following command:
     `cqlsh cassandra_host --file ks-schema-local.cql`
   - If you are using Web Services and Applications v8.5.2.41 or earlier, run the following command:
     `cassandra_install_dir/bin/cassandra-cli -h cassandra_host --file ks-schema-local.txt`
     ...where *cassandra_host* is the host name (fully qualified domain name) or IP address of the Cassandra node.

End

Single Data Center

Creating the Cassandra keyspace (1 data center)

Complete the following procedure on one node in your Cassandra cluster.

Start

1. Copy the **ks-schema-prod.cql** file from ***/installation_path/gws/data*** to the Cassandra node host.
2. For fault tolerance, Genesys recommends that you use at least 3 Cassandra nodes and set the replication factor to 3. Refer to the Cassandra documentation for more information about replication factors. To modify this value, change the following line:

   ```
   and strategy_options = {replication_factor : <replication-factor-in-your-lab>}
   ```

3. Create the Cassandra schema. Choose one of the following options:
   - If you are using Web Services and Applications v8.5.2.## or later, run the following command: `cqlsh cassandra_host --file ks-schema-prod.cql`
   - If you are using Web Services and Applications v8.5.2.41 or earlier, run the following command: `cassandra_install_dir/bin/cassandra-cli -h cassandra_host --file ks-schema-prod.txt`

   cassandra_host is the host name (fully qualified domain name) or IP address of the Cassandra node.

End

Two Data Centers

Creating the Cassandra keyspace (2 data centers)

Complete the following procedure on one node in your Cassandra cluster.

Start

1. Copy the **ks-schema-prod_HA.cql** file from ***/installation_path/gws/data*** to the Cassandra node host.
2. Modify the following line:

   ```
   with strategy_options ={ AZ1 : 3, AZ2 : 3 }
   ```

   a. Add the data center name. You can use nodetool to find the name of the data center by examining the output of "nodetool ring" (the tool is located in the **bin** directory of Cassandra). The following is sample output from the nodetool:

   ```
   nodetool ring
   Address         DC           Rack   Status  State   Load      Owns     Token
   192.0.2.10      datacenter1  rack1  Up      Normal  14.97 MB  100.00%  0
   198.51.100.10   datacenter2  rack1  Up      Normal  14.97 MB  100.00%  100
   192.0.2.11      datacenter1  rack1  Up      Normal  14.97 MB  100.00%
   56713727820156410577229101238628035242
   198.51.100.11   datacenter2  rack1  Up      Normal  14.97 MB  100.00%
   56713727820156410577229101238628035242
   192.0.2.12      datacenter1  rack1  Up      Normal  14.97 MB  100.00%
   113427455640312821154458202477256070484
   ```

```
198.51.100.12  datacenter2  rack1  Up      Normal  14.97 MB  100.00%
113427455640312821154458202477256070484
```

b. Add the replication factor. Refer to the Cassandra documentation for more information about replication factors.

Based on the nodetool output above, your line might be:

```
with strategy_options ={ datacenter1 : 3, datacenter2 : 3 }
```

3. Create the Cassandra schema. Choose one of the following options:
   - If you are using Web Services and Applications v8.5.2.## or later, run the following command: `cqlsh cassandra_host --file ks-schema-prod_HA.cql`
   - If you are using Web Services and Applications v8.5.2.41 or earlier, run the following command: `cassandra_install_dir/bin/cassandra-cli -h cassandra_host --file ks-schema-prod_HA.txt`

cassandra_host is the host name (fully qualified domain name) or IP address of the Cassandra node.

End

Creating the column families

Complete the following procedure on one node in your Cassandra cluster.

Start

1. Copy the **cf-schema.cql** file from ***/installation_path/gws/data*** to the Cassandra node host.
2. Run one of the following commands to create the Cassandra schema:
   - If you are using Web Services and Applications v8.5.2.## or later, run the following command:

     `cqlsh cassandra_host --file cf-schema.cql`
3. If you are using Web Services and Applications v8.5.2.41 or earlier, run the following command:

   `cassandra_install_dir/bin/cassandra-cli -h cassandra_host --file cf-schema.txt`

End

Next step

- Starting and Testing Web Services