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Genesys Interaction Recording Solution Guide

Installing and Configuring Cassandra

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Installing and Configuring Cassandra

Cassandra 4

Installing Cassandra4

Complete this procedure for each Cassandra node.

Prerequisites

- For new deployments, we recommend Cassandra 4.1.x. The procedures below are meant to serve as a quick guide on how to do this. For more detailed information, see the [Cassandra 4.1 documentation](#).
- You have installed the latest supported openJDK 8.

Start

1. [Download the latest 4.1.x version of Cassandra](#).
2. Copy the Cassandra archive to the installation directory. For example, **/usr/local**
3. Use a tar utility to extract the files. For example, `tar -zxvf apache-cassandra-4.1.9-bin.tar.gz`
4. Add directories for data, commitlog, and saved_caches. You can create these directories anywhere or in the default locations configured in the ***Cassandra_install_dir/conf/cassandra.yaml*** file. For example:
 - **/var/lib/cassandra/data**
 - **/var/lib/cassandra/commitlog**
 - **/var/lib/cassandra/saved_caches**

End

Configuring Cassandra4

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 Datacenter: 1 datacenter with a minimum of three Cassandra nodes
- Two Datacenters: 2 datacenters with a minimum of three Cassandra nodes

Important

For more complex Cassandra deployments, please consult with Genesys

Prerequisites

- [Installing Cassandra4](#)

Follow one of the procedures that matches your deployment scenario.

Important

The files modified in this procedure are typically found in the ***Cassandra_install_dir/conf*** directory.

Development

Configuring Cassandra (1 Cassandra node)

Start

1. Modify the **cassandra.yaml** file:
 - a. Set `cluster_name` to the desired name.
 - b. Set `seeds` to the list of host name of the node. For example: `- seeds: "127.0.0.1"`
 - c. Set `listen_address` and `broadcast_address` to the IP of the node.
 - d. Set `data_file_directories`, `commitlog_directory`, and `saved_caches_directory` to the directories you created in Step 4 of [Installing Cassandra4](#).
 - e. Set the `endpoint_snitch` parameter to `SimpleSnitch` (for development only).
6. Save your changes and close the file.

End

Single Datacenter

Configuring Cassandra (1 datacenter)

Start

1. Modify the **cassandra.yaml** file:
 - a. Set the `cluster_name`. It must be the same name on all nodes.
 - b. Set `seeds` to the list of host names of all nodes. For example: `- seeds: "node1, node2, node3"`

- c. Set `listen_address` and `broadcast_address` to the IP of the node.
 - d. Set `data_file_directories`, `commitlog_directory`, and `saved_caches_directory` to the directories you created in Step 4 of [Installing Cassandra4](#).
 - e. Set the `start_rpc` parameter to `true`.
 - f. Change `endpoint_snitch` to `GossipingPropertyFileSnitch`.
7. Save your changes and close the file.
 8. Open the **`cassandra-rackdc.properties`** file and update for your cluster topology. For each node in your cluster, add the following line:

```
dc=[datacenter] rack=[rackname]
```

Where:

- `[datacenter]` is the name of the datacenter for this node.
- `[rackname]` is the name of the rack for this node.

The following is a sample **`cassandra-rackdc.properties`** file for a Single Datacenter scenario:

```
dc=datacenter1 rack=rack1
```

9. Save your changes and close the file.

End

Two Datacenters

Configuring Cassandra (2 datacenters)

Start

1. Modify the **`cassandra.yaml`** file:
 - a. Set the `cluster_name`. It must be the same name on all nodes.
 - b. Set `seeds` to the list of host names of all nodes. For example: `- seeds: "node1, node2, node3, node4, node5, node6"`
 - c. Set `listen_address` and `broadcast_address` to the host name.
 - d. Set `data_file_directories`, `commitlog_directory`, and `saved_caches_directory` to the directories you created in Step 4 of [Installing Cassandra4](#).
 - e. Change `endpoint_snitch` to `GossipingPropertyFileSnitch`.
6. Save your changes and close the file.
7. Open the **`cassandra-rackdc.properties`** file and update for your cluster topology. For each node in your cluster, add the following line:

```
dc=[datacenter] rack=[rackname]
```

Where:

- `[datacenter]` is the name of the datacenter for this node.

- `[rackname]` is the name of the rack for this node.

The following is a sample **cassandra-rackdc.properties** file for a Two Datacenter scenario:

For datacenter1 nodes:

```
dc=datacenter1 rack=rack1
```

For datacenter2 nodes:

```
dc=datacenter2 rack=rack1
```

8. Save your changes and close the file.

End

Verifying the Cassandra4 installation

Prerequisites

- [Configuring Cassandra](#)

Start

1. Start all Cassandra nodes using the following command: `Cassandra_install_dir/bin/cassandra -R`
2. Use the `nodetool` utility to verify that all nodes are connected by entering the following command: `Cassandra_install_dir/bin/nodetool status`

The following is sample output for a Single Datacenter scenario with three Cassandra nodes:

```
/genesys/apache-cassandra-4.1.4/bin$ ./nodetool status
Address      DC           Rack  Status  State  Load      Owns      Token
192.0.2.10   datacenter1 rack1  Up      Normal 14.97 MB  100.00%   -9223372036854775808
192.0.2.11   datacenter1 rack1  Up      Normal 14.97 MB  100.00%   -3074457345618258603
192.0.2.12   datacenter1 rack1  Up      Normal 14.97 MB  100.00%   3074457345618258602
```

The following is sample output for a Development scenario with a single Cassandra node:

```
/genesys/apache-cassandra-4.1.4/bin$ ./nodetool status
Address      DC           Rack  Status  State  Load      Effective-
Ownership Token
127.0.0.1    datacenter1 rack1  Up      Normal 1.89 MB
100.00%      76880863635469966884037445232169973201
```

End

Cassandra 2

Installing Cassandra2

Complete this procedure for each Cassandra node.

Prerequisites

- For new deployments, we recommend Cassandra 2.2. The procedures below are meant to serve as a quick guide on how to do this. For more detailed information, see the [Cassandra 2.2 documentation](#).
- You have installed the latest [Java SE Development Toolkit 8](#). For more information, refer to the [Java documentation](#).

Start

1. [Download the latest 2.2.x version of Cassandra](#).
2. Copy the Cassandra archive to the installation directory. For example, **/usr/local**
3. Use a tar utility to extract the files. For example, `tar -zxvf apache-cassandra-2.2.7-bin.tar.gz`
4. Add directories for data, commitlog, and saved_caches. You can create these directories anywhere or in the default locations configured in the **Cassandra_install_dir/conf/cassandra.yaml** file. For example:
 - **/var/lib/cassandra/data**
 - **/var/lib/cassandra/commitlog**
 - **/var/lib/cassandra/saved_caches**

End

Configuring Cassandra2

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 Datacenter: 1 datacenter with a minimum of three Cassandra nodes
- Two Datacenters: 2 datacenters with a minimum of three Cassandra nodes

Important

For more complex Cassandra deployments, please consult with Genesys

Prerequisites

- [Installing Cassandra4](#)

Follow one of the procedures that matches your deployment scenario.

Important

The files modified in this procedure are typically found in the ***Cassandra_install_dir/conf*** directory.

Development

Configuring Cassandra (1 Cassandra node)

Start

1. Modify the **cassandra.yaml** file:
 - a. Set seeds to the list of host name of the node. For example: `- seeds: "127.0.0.1"`
 - b. Set `listen_address` and `rpc_address` to the host name.
 - c. Set `data_file_directories`, `commitlog_directory`, and `saved_caches_directory` to the directories you created in Step 4 of [Installing Cassandra](#).
 - d. Set the `start_rpc` parameter to `true`.
5. Save your changes and close the file.

End

Single Datacenter

Configuring Cassandra (1 datacenter)

Start

1. Modify the **cassandra.yaml** file:
 - a. Set the `cluster_name`. It must be the same name on all nodes.
 - b. Set seeds to the list of host names of all nodes. For example: `- seeds: "node1, node2, node3"`
 - c. Set `listen_address` and `rpc_address` to the host name.
 - d. Set `data_file_directories`, `commitlog_directory`, and `saved_caches_directory` to the directories you created in Step 4 of [Installing Cassandra](#).
 - e. Set the `start_rpc` parameter to `true`.
 - f. Change `endpoint_snitch` to `PropertyFileSnitch`.
7. Save your changes and close the file.
8. Open the **cassandra-topology.properties** file and update for your cluster topology. For each node in your cluster, add the following line:

```
[node]=[datacenter]:[rack]
```

Where:

- *[node]* is the IP address of the node.
- *[datacenter]* is the name of the datacenter for this node.
- *[rack]* is the name of the rack for this node.

The following is a sample **cassandra-topology.properties** file for a Single Datacenter scenario:

```
192.0.2.10=datacenter1:rack1
192.0.2.11=datacenter1:rack1
192.0.2.12=datacenter1:rack1
```

9. Save your changes and close the file.

End

Two Datacenters

Configuring Cassandra (2 datacenters)

Start

1. Modify the **cassandra.yaml** file:
 - a. Set the `cluster_name`. It must be the same name on all nodes.
 - b. Set seeds to the list of host names of all nodes. For example: `-seeds: "node1, node2, node3, node4, node5, node6"`
 - c. Set `listen_address` and `rpc_address` to the host name.
 - d. Set `data_file_directories`, `commitlog_directory`, and `saved_caches_directory` to the directories you created in Step 4 of [Installing Cassandra](#).
 - e. Set the `start_rpc` parameter to `true`.
 - f. Change `endpoint_snitch` to `PropertyFileSnitch`.
7. Save your changes and close the file.
8. Open the **cassandra-topology.properties** file and update for your cluster topology. For each node in your cluster, add the following line:

```
[node]=[datacenter]:[rack]
```

Where:

- *[node]* is the IP address of the node.
- *[datacenter]* is the name of the datacenter for this node.
- *[rack]* is the name of the rack for this node.

The following is a sample **cassandra-topology.properties** file for a Two Datacenter scenario:

```
192.0.2.10=datacenter1:rack1
192.0.2.11=datacenter1:rack1
192.0.2.12=datacenter1:rack1
```



```
198.51.100.10=datacenter2:rack1
198.51.100.11=datacenter2:rack1
198.51.100.12=datacenter2:rack1
```

9. Save your changes and close the file.

End

Verifying the Cassandra2 installation

Prerequisites

- [Configuring Cassandra](#)

Start

1. Start all Cassandra nodes using the following command: *Cassandra_install_dir/bin/cassandra*
2. Use the nodetool utility to verify that all nodes are connected by entering the following command: *Cassandra_install_dir/bin/nodetool -h Cassandra_host ring*

The following is sample output for a Single Datacenter scenario with three Cassandra nodes:

```
/genesys/apache-cassandra-2.2/bin$ ./nodetool ring
Address      DC           Rack  Status  State  Load      Owns      Token
192.0.2.10   datacenter1 rack1  Up      Normal 14.97 MB  100.00%   -9223372036854775808
192.0.2.11   datacenter1 rack1  Up      Normal 14.97 MB  100.00%   -3074457345618258603
192.0.2.12   datacenter1 rack1  Up      Normal 14.97 MB  100.00%   3074457345618258602
```

The following is sample output for a Development scenario with a single Cassandra node:

```
/genesys/apache-cassandra-2.2/bin$ ./nodetool ring
Address      DC           Rack  Status  State  Load      Effective-
Ownership Token
127.0.0.1    datacenter1 rack1  Up      Normal 1.89 MB
100.00%      76880863635469966884037445232169973201
```

End