

CASSANDRA - CREATE INDEX

http://www.tutorialspoint.com/cassandra/cassandra_create_index.htm

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Creating an Index using Cqlsh

You can create an index in Cassandra using the command **CREATE INDEX**. Its syntax is as follows:

```
CREATE INDEX <identifier> ON <tablename>
```

Given below is an example to create an index to a column. Here we are creating an index to a column 'emp_name' in a table named emp.

```
cqlsh:tutorialspoint> CREATE INDEX name ON emp1 (emp_name);
```

Creating an Index using Java API

You can create an index to a column of a table using the execute method of Session class. Follow the steps given below to create an index to a column in a table.

Step1: Create a Cluster Object

First of all, create an instance of **Cluster.builder** class of **com.datastax.driver.core** package as shown below.

```
//Creating Cluster.Builder object  
Cluster.Builder builder1 = Cluster.builder();
```

Add a contact point *IPaddressofthenode* using the **addContactPoint** method of **Cluster.Builder** object. This method returns **Cluster.Builder**.

```
//Adding contact point to the Cluster.Builder object  
Cluster.Builder builder2 = builder1.addContactPoint( "127.0.0.1" );
```

Using the new builder object, create a cluster object. To do so, you have a method called **build** in the **Cluster.Builder** class. The following code shows how to create a cluster object.

```
//Building a cluster  
Cluster cluster = builder2.build();
```

You can build the cluster object using a single line of code as shown below.

```
Cluster cluster = Cluster.builder().addContactPoint("127.0.0.1").build();
```

Step 2: Create a Session Object

Create an instance of Session object using the connect method of **Cluster** class as shown below.

```
Session session = cluster.connect( );
```

This method creates a new session and initializes it. If you already have a keyspace, then you can set it to the existing one by passing the KeySpace name in string format to this method as shown below.

```
Session session = cluster.connect(" Your keyspace name " );
```

Here we are using the KeySpace called **tp**. Therefore, create the session object as shown below.

```
Session session = cluster.connect(" tp" );
```

Step 3: Execute Query

You can execute CQL queries using the execute method of Session class. Pass the query either in string format or as a Statement class object to the execute method. Whatever you pass to this method in string format will be executed on the **cqlsh**.

In the following example, we are creating an index to a column called emp_name, in a table named **emp**. You have to store the query in a string variable and pass it to the execute method as shown below.

```
//Query
String query = "CREATE INDEX name ON emp1 (emp_name);";
session.execute(query);
```

Given below is the complete program to create an index of a column in a table in Cassandra using Java API.

```
import com.datastax.driver.core.Cluster;
import com.datastax.driver.core.Session;

public class Create_Index {

    public static void main(String args[]){

        //Query
        String query = "CREATE INDEX name ON emp1 (emp_name);";
        Cluster cluster = Cluster.builder().addContactPoint("127.0.0.1").build();

        //Creating Session object
        Session session = cluster.connect("tp");

        //Executing the query
        session.execute(query);
        System.out.println("Index created");
    }
}
```

Save the above program with the class name followed by .java, browse to the location where it is saved. Compile and execute the program as shown below.

```
$javac Create_Index.java
$java Create_Index
```

Under normal conditions, it should produce the following output:

```
Index created
Loading [MathJax]/jax/output/HTML-CSS/fonts/TeX/fontdata.js
```