
SimpledServer Documentation

SimpledServer

Jun 15, 2021

- 1 Getting started with Entity Framework Core provider for Cassandra 3**
- 1.1 Install the nuget package 3
- 1.2 Configure DbContext 3
 - 1.2.1 Configure keyspaces 3
 - 1.2.2 Configure tables 4
- 1.3 Add migrations 4
- 1.4 CRUD operations 5

EFCore.Cassandra is an Entity Framework Core provider built on top of [CassandraCSharpDriver](#). It allows you to use EF Core O/RM with cassandra.

Github: <https://github.com/simpleidserver/EFCore.Cassandra>

Nuget feed: <https://www.myget.org/F/advance-ict/api/v3/index.json>

Getting started with Entity Framework Core provider for Cassandra

Note: Sample project can be found on this [url](#).

1.1 Install the nuget package

Create an empty DOTNET CORE project and install the nuget package `EFCore.Cassandra`. Similarly to any `EFCore` project, create a class which inherits `DbContext` and add models.

1.2 Configure DbContext

Open the `DbContext` implementation, override the `OnConfiguring` method and configure database access:

```
optionsBuilder.UseCassandra("Contact Points=127.0.0.1;", opt =>
{
    opt.MigrationsHistoryTable(HistoryRepository.DefaultTableName, "<schema name>");
});
```

1.2.1 Configure keyspaces

Definition : A keyspace in Cassandra is a namespace that defines data replication on nodes. A cluster contains one keyspace per node.

In order to configure a keyspace, open the `DbContext` implementation and insert the following line in the `OnModelCreating` method:

```
modelBuilder.ForCassandraAddKeyspace("<keyspace name>", ↵
↵KeyspaceReplicationSimpleStrategyClass());
```

This method contains two parameters:

- Keyspace name.
- Replication strategy.

There are two replication strategies:

- **KeyspaceReplicationSimpleStrategyClass** : Use only for a single datacenter and one rack.
- **KeyspaceReplicationNetworkTopologyStrategyClass** : Use when you have your cluster deployed across multiple datacenters.

1.2.2 Configure tables

Definition : data is stored in tables containing rows of columns, similar to SQL definitions.

In order to configure one table, open the `DbContext` implementation and insert the following line in the `OnModelCreating` method:

```
modelBuilder.Entity<Applicant>()
    .ToTable("applicants", "cv")
    .HasKey(p => new { p.Id, p.LastName });
modelBuilder.Entity<Applicant>()
    .ForCassandraSetClusterColumns(s => new { s.LastName });
```

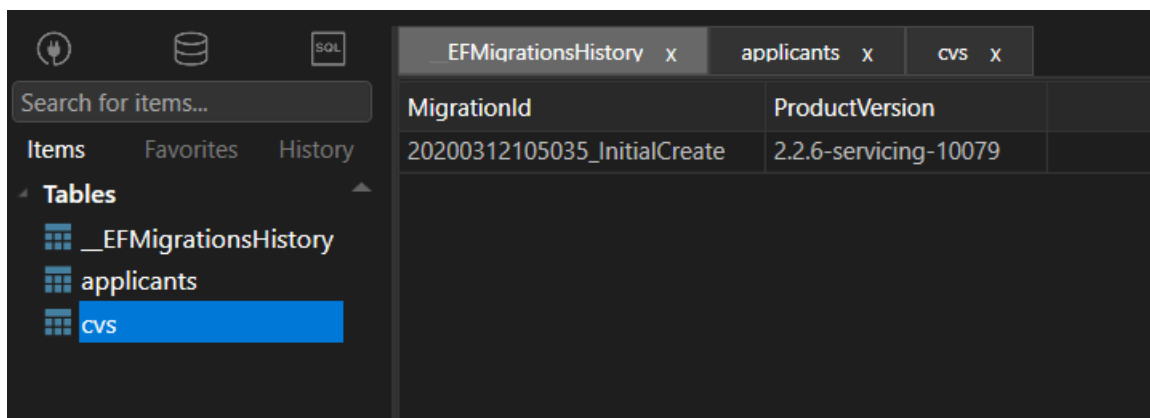
The method `ToTable` contains two parameters:

- Table name.
- Keyspace name.

1.3 Add migrations

Once the `DbContext` implementation is configured, run the command `dotnet ef migrations add InitialCreate` to add migration scripts. Run the command `dotnet ef database update` to deploy the migration scripts.

With the [TablePlus](#) tool you should see something like this:



1.4 CRUD operations

Once everything is set up, you can start playing with the `DbContext`, use LINQ to run operations like `Create`, `Delete`, `Update` or `Select`:

```
using (var dbContext = new FakeDbContext())
{
    dbContext.Applicants.Add(BuildApplicant());
    dbContext.SaveChanges();
}
```