

Isolated integration tests are [automated tests](#) that work with database objects within their own separate database. A new clean database instance is created for each test (using the default Kentico installation scripts) and then deleted after the test run. Note that integration tests are significantly slower than [unit tests with faked data](#).

All test classes with isolated integration tests must inherit from the **IsolatedIntegrationTests** base class (provided by the *CMS.Tests* library). The base class automatically performs database initialization before test runs and cleanup thereafter.



Requirements

To use isolated integration tests, you need to have **Microsoft SQL Server 2012 Express LocalDB v11** (or newer) installed. LocalDB is automatically included in Visual Studio or Microsoft SQL Server installations.

Creating isolated integration tests

1. Open the solution containing your [test project](#) in Visual Studio.
2. Make the test class inherit from the **IsolatedIntegrationTests** base class.

```
using CMS.Tests;
using NUnit.Framework;

[TestFixture]
public class MyIntegrationTests : IsolatedIntegrationTests
{
    ...
}
```

3. Write the required isolated integration test methods.
4. (Optional) Create an **app.config** file in your test project and set the following keys under the *configuration/appSettings* section:
 - **CMSTestDatabaseScriptFolderPath** – the path to the folder with files required for database creation. The folder must contain the *SQL.zip* file. If not specified, the test initialization searches the parent directories of the test project and attempts to locate the default Kentico installation scripts under the *CMS\App_Data\Install* folder path.
 - **CMSTestDatabaseFolderPath** – the path to the folder that will contain test databases. If not specified, the databases are stored in the *TestDatabases* folder under the current solution's root folder.
 - **CMSTestDatabaseInstanceName** – the name of the SQL server instance used by tests. The default value is: *(LocalDB)\v11.0*

```
<appSettings>
  <add key="CMSTestDatabaseScriptFolderPath" value="C:\inetpub\wwwroot\Kentico\CMS\App_Data\Install" />
  <add key="CMSTestDatabaseFolderPath" value="C:\CustomDBFolder" />
  <add key="CMSTestDatabaseInstanceName" value="(localdb)\CustomTestingInstance" />
</appSettings>
```

Each test in a test class inheriting from **IsolatedIntegrationTests** uses its own database, which is automatically initialized before the test run and cleaned up after.