This page provides instructions on how to set up an MVC application together with a Kentico instance so that you have a starting point for further MVC development.

Kentico provides ASP.NET MVC support based on a separate MVC application. The application takes care of the presentation and is separated from the Kentico administration. Both applications access the same database as the Kentico application and content synchronization can be handled by web farms.

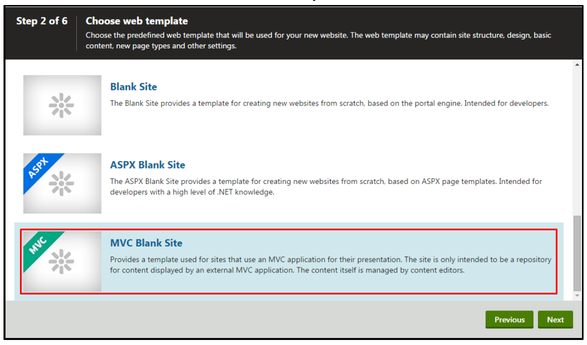
Licensing for MVC applications

You only need to purchase a license for the MVC application. The additional license for the Kentico administration and one extra web farm server is provided for free. To obtain the additional license, contact our sales department.

Setting up the Kentico instance

In order to develop an MVC application with Kentico, you need to use a content only site that will serve as a repository for content:

1. Go to the **Sites** application.
2. Click on the **New site wizard** button.
3. Select **Use web template**.
4. Click **Next**.
5. Select the **MVC Blank Site** template from the list.



Step 2 of 6 | **Choose web template**
Choose the predefined web template that will be used for your new website. The web template may contain site structure, design, basic content, new page types and other settings.

Blank Site
The Blank Site provides a template for creating new websites from scratch, based on the portal engine. Intended for developers.

ASPX Blank Site
The ASPX Blank Site provides a template for creating new websites from scratch, based on ASPX page templates. Intended for developers with a high level of .NET knowledge.

MVC Blank Site
Provides a template used for sites that use an MVC application for their presentation. The site is only intended to be a repository for content displayed by an external MVC application. The content itself is managed by content editors.

6. Continue with the remaining steps of the wizard and finish creating the new site.

Now edit ( ) your new site and on the **General** tab set the **Presentation URL**. This is the URL that will be used by the MVC application. For example, *http://localhost/MvcApplication* or *http://www.SiteDomain.com*.

Next, you need to set up a content synchronization mechanism:

1. Go to the **Settings** application.
2. Navigate to **Versioning & Synchronization** -> **Web farm**.
3. Set the **Web farm mode** to **Automatic**.
4. Click **Save**.

Ensuring unique server names

The system generates the names of automatic web farm servers by combining the machine name and the virtual directory in which the given application is running. If this combination of variables is not unique in your environment, you need to manually assign unique server names to the web farm servers. For example, this problem can occur if you run your MVC application and Kentico application on the same machine without using virtual directories, e.g. on different domains.

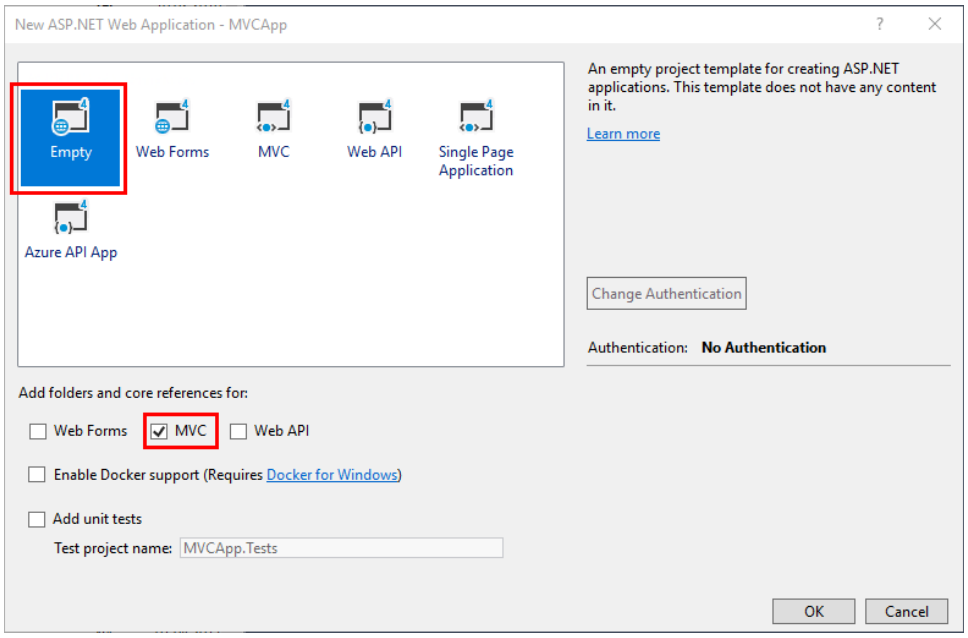
To learn how to set web farm server names manually, see *Step 5* in Configuring web farms manually.

At this point the content only site and your Kentico instance are set up to be used with an MVC application.

Setting up the MVC application

Your new MVC application needs to be configured to work with Kentico:

1. Create a new project in Visual Studio.
   - Select the **ASP.NET Web Application (.NET Framework)** project template.
   - Choose the **Empty** template option.
   - Enable the *MVC* checkbox to add folders and core references for MVC.



New ASP.NET Web Application - MVCApp

An empty project template for creating ASP.NET applications. This template does not have any content in it.

Learn more

Authentication: **No Authentication**

Add folders and core references for:

☐ Web Forms ☑ MVC ☐ Web API

☐ Enable Docker support (Requires Docker for Windows)

☐ Add unit tests

Test project name: MVCApp.Tests

2. Right-click the solution and select **Manage NuGet Packages for Solution**.
3. Install the **Kentico.Web.Mvc** integration package into your MVC application project (with all dependencies).
4. Edit the MVC project's main **web.config** file:
   - Add a connection string to your Kentico database. We recommend copying the exact connection string from the *web.config* file of the related Kentico application project.

```
<connectionStrings>
    <add name="CMSConnectionString" connectionString="Persist Security
Info=False;database=Kentico;server=myserver;user id=username;
password=mypassword;Current Language=English;Connection Timeout=120;" />
</connectionStrings>
```

   - Copy the value of the **CMSHashStringSalt** *appSettings* key from the *web.config* of the Kentico project and add the value into the same key in the MVC project's *web.config* (it is empty by default). This ensures that the MVC application generates hashes using the same salt value as the Kentico application (for example for macro signatures or page preview links).

```
<appSettings>
        <add key="CMSHashStringSalt" value="e68b9ad6-a461-4707-8e3e-
ece73f03dd02" />
        ...
</appSettings>
```

5. In the MVC application's **Global.asax** file, add a using statement for the **Kentico.Web.Mvc** namespace and add the following line in the **Application_Start** method:

```
using Kentico.Web.Mvc;
...

protected void Application_Start()
{
        ...

        // Enables and configures the selected Kentico ASP.NET MVC integration
features
        ApplicationConfig.RegisterFeatures(ApplicationBuilder.Current);
}
```

6. In the **App_Start\RouteConfig.cs** file, add a using statement for the **Kentico.Web.Mvc** namespace, and call the **MapRoutes** method (must be called before you map any of your own routes).

```
using Kentico.Web.Mvc;

public static void RegisterRoutes(RouteCollection routes)
{
        routes.IgnoreRoute("{resource}.axd/{*pathInfo}");

        // Maps routes to Kentico HTTP handlers.
        // Must be first, since some Kentico URLs may be matched by the default
ASP.NET MVC routes,
        // which can result in pages being displayed without images.
        routes.Kentico().MapRoutes();

        ...
}
```

7. Expand the project's **Properties** folder and create a new class, for example named *WebAssemblyInfo.cs*. Add the **AssemblyDiscoverable** assembly attribute into the class.
    - The attribute allows you to work with classes generated for Kentico objects.
    - The attribute is placed into a separate class because the default *AssemblyInfo* class cannot access code from external libraries in cases where the web project is precompiled with outputs merged into a single assembly (during deployment).

    ```
    using CMS;

    // Ensures that the Kentico API can discover and work with custom classes
    registered in the MVC web project
    [assembly: AssemblyDiscoverable]
    ```

8. Set a URL for the MVC application:
    - Right-click the MVC project and select **Properties**.
    - Open the **Web** tab.
    - In the **Servers** section, select Local IIS.
    - Set the **Project Url** identical to the **Presentation URL** assigned in your MVC site's settings in Kentico.
    - Click **Create Virtual Directory**.

After you run the MVC application, you can see it within the related Kentico administration interface in the **Web farm** application on the **Servers** tab, as a new server. The server's *Status* changes to *Healthy* after a few moments.

You can now continue to define the content structure of your site and develop the MVC application.