
Installing Axiell Collections

Quick reference



Axiell ALM Netherlands BV

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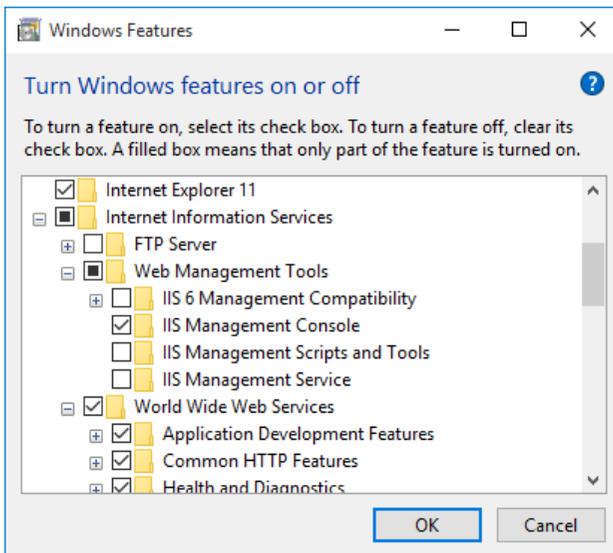
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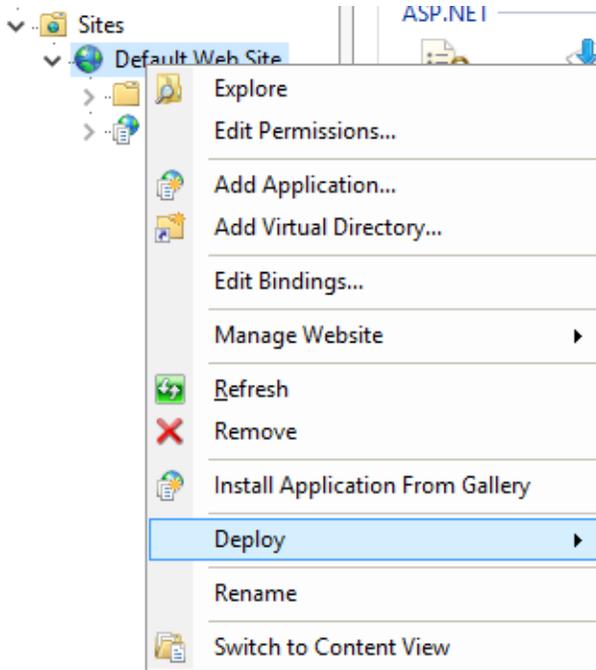
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1 Requirements

- Minimally Windows Server 2008 or Windows 7, within an Active Directory domain, with at least 100MB free disk space.
- Some requirements differ depending on whether you are about to start using Axiell Collections in combination with Adlib or Calm:
 - **Adlib**: an Adlib application (with a subfolder *\data*). A further requirement is that the application data directory is actually accessible. If the application resides locally on a server, this accessibility is in principle not a problem. However, should it be located on a different server, then you'll have to check its access rights.
 - **Calm**: a Calm application version 10.0.2 or higher. We recommend that security is enabled in the Admin program; otherwise, anybody with access to the web server could view or edit data. Ports to the Calm server have to be open through the firewall (as with CalmView) to allow users to access Collections.
- HTTP server software must be installed on the server on which the web application will be placed, such as IIS 7.0 for Windows Server 2008 or [IIS 8.5 for Windows Server 2012 R2](#). For the required Windows versions, these services are probably already available but might still have to be enabled via the *Windows Features* dialog (*Control Panel > Programs > Programs and Features > Turn Windows features on or off*).



- The IIS *Web Deploy* extension should have been installed on the IIS Server. In IIS you can check whether the extension is already available or not, by right-clicking the *Default Web Site* to open the pop-up menu: if the *Deploy* option is present in the options list, the extension is present. If not, download and install the extension from <https://www.microsoft.com/en-us/download/details.aspx?id=25230>



If the *Deploy* option doesn't become available in the pop-up menu, then deinstall the extension you just installed and see the procedure in Appendix A.

- You can deploy Collections in any folder, but by default it will be deployed in `C:\inetpub\wwwroot` with the web application name you provide during the deployment. Before you can start deployment, do make sure you have full access rights to the desired target folder, otherwise the application cannot be deployed and you'll get an error message during deployment.
- The Microsoft .NET Framework version 4.0 (or higher) must be installed on the server, yet only when IIS has already been installed (with the latest security updates), otherwise some im-

portant features of ASP.NET will be missing from the installation. So on a new server, always install IIS before you install the .NET Framework. For information about the .NET Framework, see: <https://msdn.microsoft.com/en-us/vstudio/aa496123>.

(If the .NET Framework still has to be installed, then please take into account that the web server might need rebooting after this installation.)

On IIS 7, ASP.NET must operate in integrated mode (which is the default configuration). The application pool which we will create for the Axiell Collections application, must run in this mode.

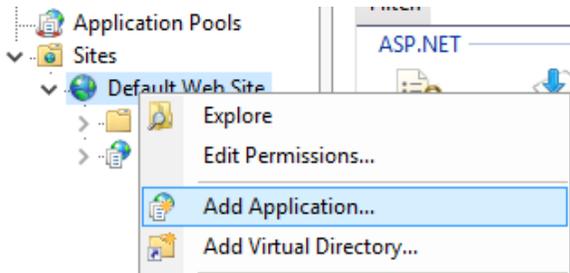
- Running Axiell Collections requires a browser: Internet Explorer (v9 or higher), Chrome, Firefox or Edge.
- Some requirements differ depending on whether you are about to start using Axiell Collections in combination with Adlib or Calm:
 - **Adlib:** if Active Directory authentication will be used for access to the database, instead of SQL authentication, then the application pool must be configured to use an account which has access to the SQL Server.
 - **Calm:** <no similar requirement>

2 Installing Axiell Collections

1. You have received the Axiell Collections deployment package (*Axiell.Alm.MVC.KendoSPA.zip*) from the Axiell ALM support desk. Place this file in a folder on the server you intend to use for Axiell Collections. Later on during this procedure, the physical files of the web application will be installed in this folder if desired (name it appropriately in that case) or in *C:\inetpub\wwwroot*, depending on what you do in step 7.
2. Open IIS on the server and create a new .Net v4.0 application pool, *AxiellCollectionsPool* for example, and leave the default basic settings (*Integrated* mode) as they are.

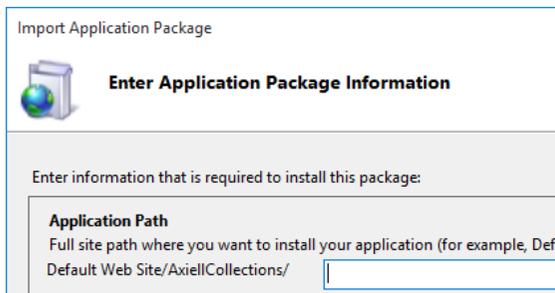


- In the *Advanced settings* of the new application pool, either set the (*Process Model*) *Identity* to use the *ApplicationPoolIdentity* (*Built-in account*) or a custom (usually a general) Active Directory account, depending on your SQL server/network access rights.
3. We recommend using HTTPS as the data transfer protocol. You would first need to acquire an SSL certificate from your local certification organisation and install it on the server. (In IIS you can find any installed certificates when you select the server in the left window pane and double-click the *Centralized certificates* icon.) Right-click your default website in IIS and select *Edit bindings* in the pop-up menu. In the window that opens, click *Add*, select the *https* binding type and then click the *Select* button to be able to select your SSL certificate. Next you'll have to redirect all HTTP requests to HTTPS, for example using [URL Rewrite](#), a plugin for IIS. Information about how to set up a redirect can be found elsewhere: [here](#) for example.
 4. In IIS, add a new application called *Collections*, underneath the *Default Web Site* and assign it your new application pool.

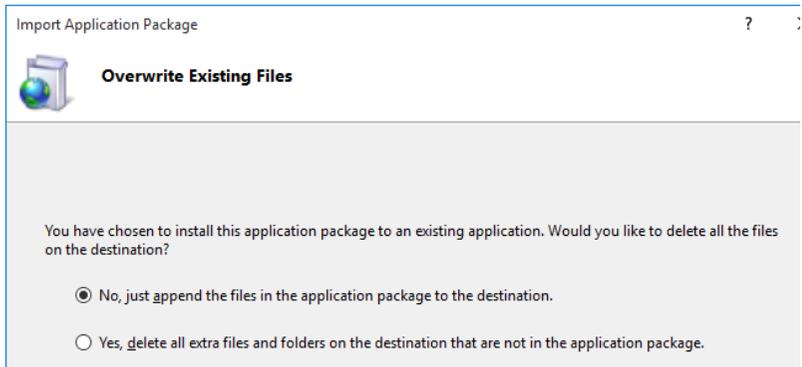


In the *Add application* window, use the *Test Settings* button to check whether a connection can actually be made.

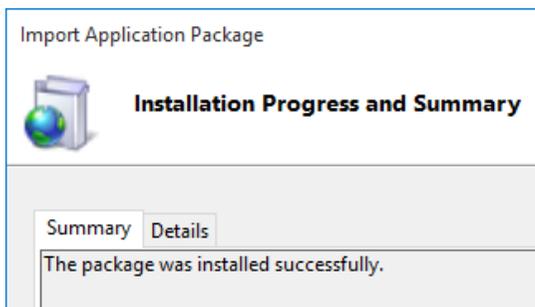
5. Underneath the *Default Web Site*, your new application is now visible. Right-click the *Default Web Site* (if you'd like the physical files to be installed in *C:\inetpub\wwwroot\<my folder name>*) or right-click the application underneath the *Default Web Site* (if you'd like the physical files to be installed in the folder containing the deployment package) and select *Deploy > Import application*. (You must also do this when you are about to upgrade an existing installation of Axiell Collections.)
6. In the *Import Application Package* wizard that has opened, *Browse* to your deployment package (*Axiell.Alm.MVC.KendoSPA.zip*) and open it. Click *Next*.
7. In the following step, leave the selected *Contents of the Package* as is and click *Next*.
8. In the *Application Path*, either remove any text from the entry field to deploy the application underneath the remaining fixed path (in which case the physical files will be installed in the folder containing the deployment package) or leave the suggested folder name in the entry field (or type a new one) to deploy the application there (in which case the physical files will be installed in *C:\inetpub\wwwroot\<my folder name>*). Click *Next*.



- In the *Overwrite Existing Files* step, choose the first option if you already have an Axiell Collections installation in place on that location, which you'd only like to upgrade: any custom settings in `\App_Data\settings.xml` remain as they were. Conversely, select the second option if this is a fresh installation and any files and folders in the target location can be deleted.



- Click *Next* to start the actual deployment now. After installation has finished, the wizard should report a successful installation. Click *Finish*.



- In IIS, right-click your Axiell Collections application and select *Explore* in the pop-up menu to open the installation folder in Windows Explorer. Open the `\App_Data` folder.
- In the `\App_Data` folder you'll have to create a `settings.xml` file if you've installed Axiell Collections for the first time. To do this, just copy and paste the `settings.example.xml` file and rename the copy to `settings.xml`. The `settings.xml` file will have to contain some custom settings to tell the web application where to look for your Adlib application, amongst others.

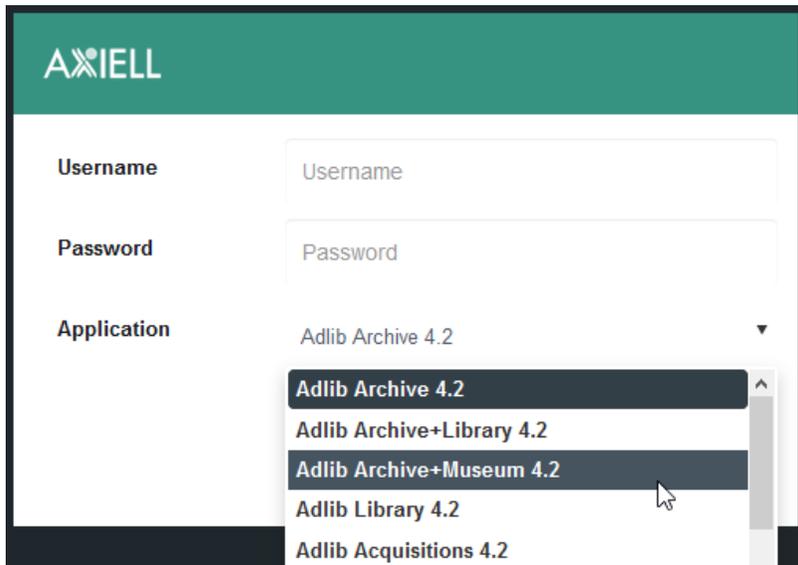
13. This step in the installation procedure differs depending on whether you are about to start using Axiell Collections in combination with Adlib or Calm:

- **Adlib:** open *settings.xml* in an appropriate editor (like Notepad++ for example). In case of a default, singular Adlib installation where all users use the same application, you can leave `<SessionManagers Current="SQL">` as is. (The "SQL" id points to the `SessionManager` Id with the same name, so if you change the session manager id, you'll have to match it in the `SessionManagers Current` setting.)

The path *Value* for the "SQL" session manager should be set to the actual, full path to your Adlib application folder, for example:

```
<SessionManager Id="SQL" ... >
<Setting Key="Path" Value="C:\Adlib\xplus" />
</SessionManager>
```

Instead of setting the path to a specific Adlib application folder (like *\xplus*), you can also set it to the Adlib software root folder (containing multiple application folders, like *\xplus*, *\library*, *\museum*, etc.) if you'd like to offer the user a choice of applications to log on to.



In most cases you'll be using a singular Adlib application, which makes the above settings all you need. In the case of an enterprise multi-tenancy situation however (multiple instances of Collections running under the same web application), where users from different branches are allowed access to only one (or some) of many different applications (each with their own user list and access rights), the current session manager should be set to "Multi". Within this `SessionManager` definition you must then list all applicable Active Directory groups (without domain) as `Key` attribute with an accompanying, appropriate id as `Value` attribute. For example:

```
<SessionManager Id="Multi" Assembly="Axiell.Alm"
Type="Axiell.Alm.Database.MultiTenant.MultiTenantApplica
tionSessionManager">
  <Setting Key="ThesauManager" Value="All-app00" />
  <Setting Key="PersonsManager" Value="All-app00" />
  <Setting Key="Guest" Value="All-app00-G" />
  <Setting Key="app01users" Value="MuseumA-app01" />
  <Setting Key="app02users" Value="MuseumB-app02" />
  <Setting Key="app03users" Value="MuseumC-app03" />
  <Setting Key="app04users" Value="MuseumD-app04" />
  <Setting Key="app05users" Value="MuseumE-app05" />
</SessionManager>
```

The ids for the different user groups that you've now specified must then be defined as separate session managers too, so that any user can be associated with the appropriate application(s) in Axiell Collections. So, for example:

```
<SessionManager Id="All-app00" Assembly="Axiell.Alm.
Database.Sql" Type="Axiell.Alm.Database.Sql.
SqlApplicationSessionManager">
  <Setting Key="Path" Value="G:\Adlib\Collections\
museums\All-app00\model\Xplus" />
</SessionManager>
```

```
<SessionManager Id="All-app00-G" Assembly="Axiell.Alm.
Database.Sql" Type="Axiell.Alm.Database.Sql.
SqlApplicationSessionManager">
  <Setting Key="Path" Value="G:\Adlib\Collections\
museums\All-app00-G\model\Xplus" />
</SessionManager>
```

```
<SessionManager Id="MuseumA-app01" Assembly="Axiell.Alm.
Database.Sql" Type="Axiell.Alm.Database.Sql.
SqlApplicationSessionManager">
  <Setting Key="Path" Value="G:\Adlib\Collections\
```

```

        museums\MuseumA-app01\model\xplus" />
</SessionManager>

<SessionManager Id="MuseumB-app02" Assembly="Axiell.Alm.
  Database.Sql" Type="Axiell.Alm.Database.Sql.
  SqlApplicationSessionManager">
  <Setting Key="Path" Value="G:\Adlib\Collections\
    museums\MuseumB-app02\model\xplus" />
</SessionManager>

<SessionManager Id="MuseumC-app03" Assembly="Axiell.Alm.
  Database.Sql" Type="Axiell.Alm.Database.Sql.
  SqlApplicationSessionManager">
  <Setting Key="Path" Value="G:\Adlib\Collections\
    museums\MuseumC-app03\model\xplus" />
</SessionManager>

<SessionManager Id="MuseumD-app04" Assembly="Axiell.Alm.
  Database.Sql" Type="Axiell.Alm.Database.Sql.
  SqlApplicationSessionManager">
  <Setting Key="Path" Value="G:\Adlib\Collections\
    museums\MuseumD-app04\model\xplus" />
</SessionManager>

<SessionManager Id="MuseumE-app05" Assembly="Axiell.Alm.
  Database.Sql" Type="Axiell.Alm.Database.Sql.
  SqlApplicationSessionManager">
  <Setting Key="Path" Value="G:\Adlib\Collections\
    museums\MuseumE-app05\model\xplus" />
</SessionManager>

```

Note that the application folder paths you set for a multi-tenancy configuration must always point to a specific Adlib application folder, like *\xplus* for example: you cannot point it to the Adlib software root folder to offer the user a choice of applications. This is because a user must have logged in first, for Collections to be able to determine which applications can be accessed by the user (so a list of available applications cannot be offered beforehand). If a root folder is specified anyway, the multi-tenancy session manager will automatically pick the first matching application in the referenced session manager.

- **Calm:** open *settings.xml* in an appropriate editor (like Notepad++ for example). In case of a default, singular Calm installation where all users use the same application, change `<SessionManagers Current="SQL">` to `<SessionManagers Current="CALM">`. (The "CALM" id points to the SessionManager Id with the same name, so if you change the session manager id,

you'll have to match it in the `SessionManagers Current` setting.) If you have enabled security, you will need to change the text that appears below `<SessionManager Id="CALM" ... >`. You will need to replace `admin` in `<User>admin</User>` with the name of a Calm account with the administrator attribute and `drum` in `<Password>drum</Password>` with the password of that administrator account.

In most cases you'll be using a singular Calm application, which makes the above settings all you need. In the case of an enterprise multi tenancy situation however, where users from different branches are allowed access to only one (or some) of many different applications (each with their own user list and access rights), the current session manager should be set to "Multi". Within this `SessionManager` definition you must then list all applicable Active Directory groups (without domain) as `Key` attribute with an accompanying, appropriate id as `Value` attribute. For example:

```
<SessionManager Id="Multi" Assembly="Axiell.Alm"
Type="Axiell.Alm.Database.MultiTenant.MultiTenantApplica
tionSessionManager">
  <Setting Key="CalmALMusers" Value="CalmALM" />
  <Setting Key="CalmRMusers" Value="CalmRM" />
</SessionManager>
```

The ids for the different user groups that you've now specified must then be defined as separate session managers too, so that any user can be associated with the appropriate application(s) in Axiell Collections. So, for example:

```
<SessionManager Id="CalmALM" Assembly="Axiell.Alm.
Database.Idle" Type="Axiell.Alm.Database.Idle.
DScribeApplicationSessionManager">
  <Version>10.0</Version>
  <Server>localhost</Server>
  <Port>2143</Port>
  <User>admin</User>
  <Password>drum</Password>
</SessionManager>
```

```
<SessionManager Id="CalmRM" Assembly="Axiell.Alm.
Database.Idle" Type="Axiell.Alm.Database.Idle.
DScribeApplicationSessionManager">
  <Version>10.0</Version>
  <Server>localhost</Server>
  <Port>2143</Port>
  <User>admin</User>
```

```
<Password>drum</Password>
</SessionManager>
```

14. Save the changes in the *settings.xml* file and close it.
15. In IIS, right-click your new application pool and choose *Recycle* in the pop-up menu.

The installation is now complete. You can start using Axiell Collections by entering the proper URL in your browser. (An Axiell Collections application installed locally on your PC can be accessed in your browser by entering `http://localhost/` in front of your web application name, for example: `http://localhost/collections.`) In most cases you'll subsequently have to log in using your own Windows login name and password.

(If there's no Active Directory on the server on which you've installed and access your (singular) Collections web application, you can log in with your Windows credentials, but you'll have to specify the name of the relevant server or pc in front of your user name, like: `my-machine\user.`)

Applications must be secured (typically on database and field level) using the Adlib access rights mechanism to restrict unauthorized users from access to certain or all data, because with a singular Axiell Collections installation any domain user can in principle log on. So typically you would set applicable access right *Read*, *Write* or *Full* for specific authorized users or user groups, and assign *None* access right to `$REST` per database to keep out all other users.

When you've configured your application for multi-tenancy, users can only log on to their designated application if they are a member of the proper Active Directory group, so typically you would populate these AD groups only with people that have at least read access to some or all of the databases, and further specify their access rights with the Adlib access rights mechanism.

If during login you get a server error stating that the system cannot contact a domain controller to service the authentication request, it means Axiell Collections has no access to the server which stores all network user names and passwords (aka the domain controller). So check whether the domain controller is accessible from the server on which Axiell Collections was installed.