



Customer Relationship
Management

CRM Web Installation Guide

Version 14.1



Notices

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Table of Contents

Preface	5
About this documentation.....	5
Notation conventions.....	5
Aurea global support.....	6
Chapter 1: Introduction	7
System Requirements.....	7
Database Considerations.....	8
Quick Installation Guide.....	8
Hardware Performance Considerations.....	8
Security.....	9
Chapter 2: Setup and Installation	11
Setup Types.....	11
CRM.designer Setup.....	11
Upgrading CRM.designer Installation.....	18
Providing the Enterprise Serial Key to the CRM.designer.....	19
Aurea CRM web Setup.....	22
Upgrading Aurea CRM web Installation.....	31
Manual Adjustments.....	32
Creating a Database Connection for Oracle.....	33
Copy ..\system\sys.....	36
Setting Up the CRM.designer Database.....	36
Setting Up Directory Security.....	46
Settings for Letters (Mail Merge).....	47
Creating the Special Users for Aurea CRM web.....	48
Linking Reps (Users) to Persons.....	51
Mail Server and E-Mail Authentication.....	51
Sort Order for Variable Catalogs.....	52
Installing Hotfixes.....	52
Client-side Installation.....	53
Configuring CRM.phone for Aurea CRM web.....	54
Settings.xml.....	55
CRM.designer.....	55
Aurea CRM web.....	56
Chapter 3: Settings and Tuning	60

Chapter 4: Aurea CRM web Install Checker.....68

Chapter 5: Troubleshooting.....70

- Determining the Web Application Identity Account.....70
- Troubleshooting Steps.....70
 - Client Log.....71
 - Server Log.....73
- Hints.....75
- Improving Performance.....88

Preface

For details, see the following topics:

- [About this documentation](#)
- [Notation conventions](#)
- [Aurea global support](#)

About this documentation

This guide is part of the documentation set for Aurea CRM.

Notation conventions

This document uses the following notation conventions:

Convention	Meaning
Fixed-width	Fixed-width font indicates code, path names, file names, environment variable names, parameter names, command names, machine names, URLs.
Bold Fixed-width	Bold Fixed-width font is used to indicate user input or to emphasize certain lines of code.
<i>Italic Fixed-width</i>	<i>Italic Fixed-width</i> font indicates a placeholder for which you must supply a value.
Bold Sans serif	Bold sans serif typeface indicates the names of graphic user interface elements such as dialog boxes, buttons, and fields.
<i>Italic serif</i>	In text, <i>italic serif</i> typeface indicates the first use of an important term. The term is defined in the glossary.
Underlined	Underlined text in command lines and parameter descriptions indicate that you only have to enter the underlined part of the command or parameter name. For example, if you use the <u>-LOGFILE</u> parameter in a command, you only need to enter <code>-LOGF</code> .
[]	Brackets enclose optional arguments.
{ a b c }	Braces enclose two or more items. You can specify only one of the enclosed items. Vertical bars represent OR separators. For example, you can specify a or b or c.

Convention	Meaning
...	Three consecutive periods indicate that you can repeat the immediately previous item. In code examples, they can be horizontal or vertical to indicate omissions.
Menu > Choice	An angle bracket between two menu items indicates that you should choose an item from a menu. For example, the notation File > > Exit means: "Open the File menu and choose Exit ."
>>	Links to related information in other chapters or documents are indicated using the >> symbol.

Aurea global support

If you encounter a problem while using an Aurea product or require assistance with downloading the software or upgrading a product release, please open a ticket on [Aurea Support Central](#). Preferably, search the articles on the [Aurea Knowledge Base](#) for solutions to your issues before opening a ticket.

Information about the support organization is available on Support Central. The product documentation is available at <https://help.aurea.com/crm/#>.

For information about purchasing an upgrade or professional services, contact your account executive. If you do not know who your account executive is, or for other queries, [contact us](#) through our [website](#).

1

Introduction

This document describes the installation of Aurea CRM web and CRM.designer.

It provides a step by step introduction to the setup and the configuration of Aurea CRM web and CRM.designer, plus recommendations on performance and security issues as well as a troubleshooting section.

For details on Aurea CRM web and CRM.designer, see [Aurea CRM web Administrator Guide](#).

The administration and configuration of core functions are described in the CRM.core Administrator Guide.

This manual assumes that you have a working Aurea CRM win installation and Aurea CRM database. For details, see [Aurea CRM win Installation Guide](#).

All available documentation can be found on the Aurea CRM support page at <https://support.aurea.com>.

This document does not cover all possible aspects of running web applications in the Microsoft IIS environment, but attempts to provide you with links to important sources of information.

All screenshots in this manual apply to the BTB vertical.

Understanding Build and Version Numbers in CRM

CRM is a highly modular system. Each module is built and integrated into a package individually. To understand how the build version number relates to each packaged module, you have to understand the version numbering schema.

Version number is assigned based on the following schema:

`Major_Version.Minor_Version.Patch_Version.Build_Version`

As modules are built individually, **Build** version is relevant to an individual module only, but not to the whole product package. Particular **Build** version of a package can consist of modules with different **Build** versions.

All modules within single product package should always match only by **Major**, **Minor** and **Patch** version, same **Build** version across all modules in a package is not expected.

System Requirements

You can find all system requirements (hardware, software, disk space, access rights, supported browsers etc.) at <https://support.aurea.com> (designer and web sections).

Database Considerations

Both Aurea CRM and CRM.designer require a Unicode database.

You need to define the character set before creating the tables.

For information on the supported character sets, see *System Requirements* available from <https://support.aurea.com>.

Quick Installation Guide

Learn about the basic installation steps.

This chapter provides a quick overview of the basic installation process. See the respective chapters for further details.

1. Install CRM.designer.
2. Install Aurea CRM web, see [Aurea CRM web Setup](#) on page 22.
3. Create/upgrade the CRM.designer database using CRM.bulkloader.
4. Create the special users WWW, SPECIAL etc., see [Creating the Special Users for Aurea CRM web](#) on page 48.

Hardware Performance Considerations

Learn about the hardware performance considerations.

Aurea CRM web is a multi-tier application. Separate the tiers (client/web application/database) physically for optimal performance.

The best performance is achieved when each tier runs on an independent computer.

Capacity planning for a web server is not an easy task. You must specify current and future needs and choose hard- and software that meets both current and the estimated future requirements. You find some interesting considerations regarding capacity planning at the Microsoft TechNet, <http://www.microsoft.com/technet/prodtechnol/windows2000serv/technologies/iis/reskit/iischp4.mspx>.

Client

Aurea CRM web's architecture tries to leverage the resources of the clients as much as possible. This minimizes both data transfer rate and the number of round trips between client and server. It also takes a lot of load from the server, and thus increases server performance and scalability.

Instead of sending HTML to the clients, Aurea CRM web sends only raw JSON data to the clients. The clients (web browser) use this JSON data to generate the user interface (HTML markup).

A fast client is more important than a faster connection to the web server.

Web Server

To determine the best web server hardware, you must analyze the client-side user behavior first.

The two main criteria are:

- The number of concurrent user requests
- The "quality" of the requests

The higher the number of concurrent requests, the higher is the need for parallel processing. This demand can be met in several ways:

- Add more CPU cores to your server. The administration efforts do not increase, but costs are higher. This is the best solution for many "light" user requests.
- Dedicated servers help sharing the workload by distributing all users into groups and assigning each group to an individual web site. Groups then operate on physically independent computers (besides the database). This increases the administration efforts, but also allows you to give each group the resources they need. If you e.g. separate power users and average users, the time-consuming queries of power users do not interfere with the simple requests of average users.
- Web farms allow multiple servers to act as a single web site. The clients access only one site, where the requests are automatically distributed among the participating servers. Site administration increases since all servers need to act exactly in the same manner. Therefore, all installed software must be of exactly the same version. Web farms allow you to scale up the site very easily by adding additional servers.

For more information, see [Running Aurea CRM web in a Windows Server Network Load Balancing Cluster](#).

Use this approach if the other scenarios mentioned cannot handle the workload or when you expect the number of user requests to grow rapidly over time.

The intensity of user access to an application varies. Therefore, estimate the number of users per user characteristic (power user, heavy user, structured user and informational user, etc.) to calculate the hardware needs accurately.

Database

See the manuals of your database vendor regarding database settings. Optimizing your database heavily depends on the user behavior analysis.

Security

Aurea CRM web does not encrypt the data transferred between client and web server.

To keep the connection secure, the underlying protocols must provide the encryption.

VPN and SSL are solutions used to secure the data transfer.

- Secure Socket Layers (SSL) use a public/private key pair for the encryption. The data is encrypted before it is sent to the client and vice versa. Almost no administration effort is necessary for SSL and it is transparent for the client. To avoid a "man in middle" attack, only distribute the certificates using secure channels. When you design the hardware setup, be aware that SSL consumes a lot of CPU power.
- Virtual Private Networks (VPN) are used to connect private networks over insecure channels (e.g. the internet). The data sent within the network is not encrypted. Only when data is sent over an insecure connection, dedicated routers and/or special software encrypt the data before transmission.

Whether you choose SSL or VPN depends on your need for speed and flexibility.

2

Setup and Installation

Aurea recommends installing first CRM.designer and then Aurea CRM web.

This ensures that the connection string for the CRM.designer database is automatically entered in the Aurea CRM web setup and `settings.xml`.

Note: Aurea CRM web and CRM.designer must be of the same service pack.

Setup Types

Learn about the setup types.

For both CRM.designer and Aurea CRM web the full setup can be executed which includes all required 3rd-party products.

CRM.designer Setup

Learn to setup CRM.designer.

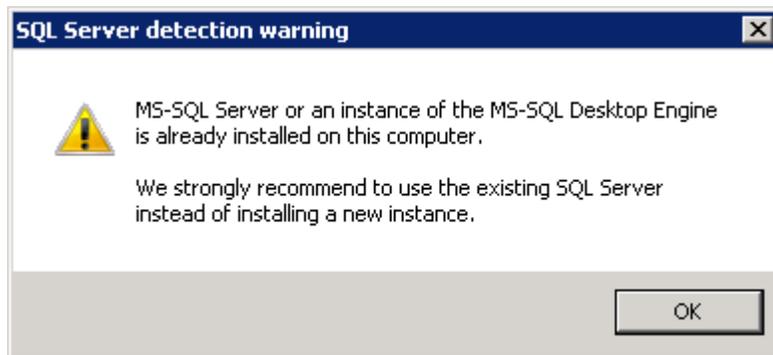
Starting the Installation

To start the installation of CRM.designer:

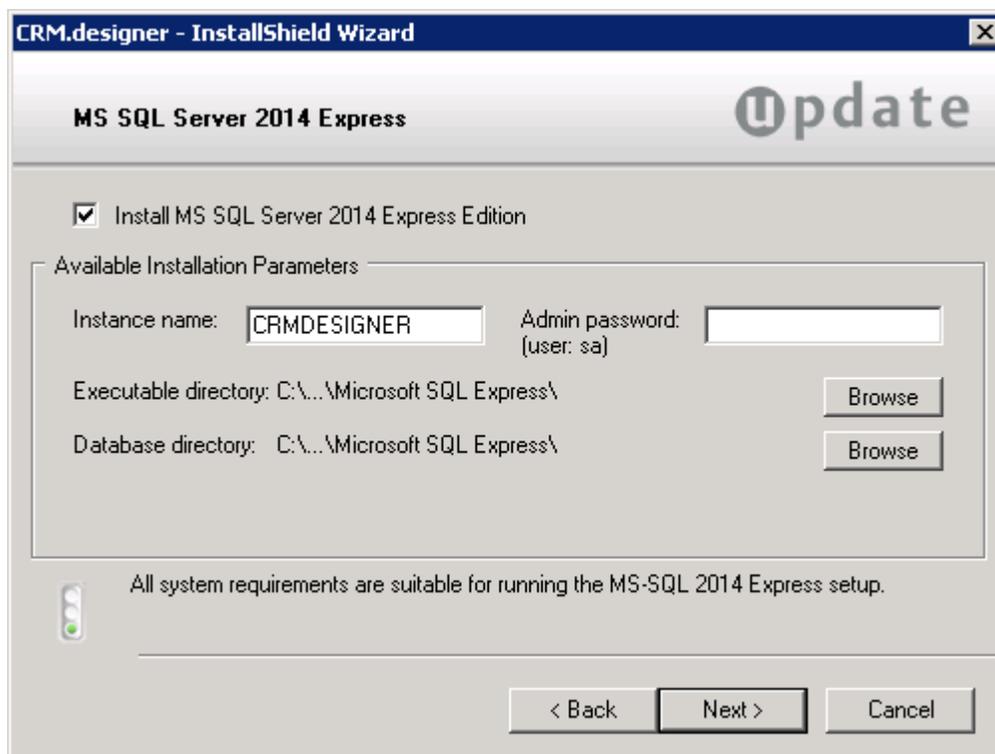
1. Copy the installation file (`CRM.designer_<version number>.exe`) to a local drive.
2. Start `CRM.designer_<version number>.exe`. Setup starts.

Installing MS SQL Server 2014 Express

1. CRM.designer requires an MS SQL database.
2. Setup searches for an existing MS SQL Server or an instance of the MS SQL Desktop Engine. If you already have MS SQL installed, the following message is displayed:



3. Click **OK**.
4. Check **Install MS SQL Server 2014 Express Edition** if you don't already have MS SQL installed or if you want to install an additional instance.
(Otherwise, leave the option unchecked and click **Next**, see [Connection Settings](#).)



5. Enter a name for this instance of MS SQL Server 2014 Express Edition in the **Instance name** field.
6. Enter a password for the administrator ("sa") in the **Admin password** field.

Note: The sa password must be at least 6 characters long and must contain characters from at least 3 of the following 4 groups:

1. Upper case characters (A-Z)
2. Lower case characters (a-z)
3. Digits (0-9)
4. The characters \$, #, %, +, -, _

The password may not contain more than two consecutive characters that also occur in the user name consecutively.

7. Click **Next** and confirm the "sa" password.
8. Click **Next**.

MS SQL Server 2014 Express Edition is installed.

Connection Settings

The screenshot shows the 'Database Configuration' step of the 'CRM.designer - InstallShield Wizard'. The window title is 'CRM.designer - InstallShield Wizard'. The main heading is 'Database Configuration' with an 'Update' icon. The 'Server Options' section includes 'Server:' (LOCALHOST), 'Admin user:' (sa), and 'Password:' (masked). The 'Database' section has 'Create new database' checked, 'Name:' (CRMdesigner), 'Initial Size: [] MB' (4), 'Database growth: [] %' (10), and 'DB collation:' ([server-standard]). The 'User' section has 'Create new user' checked, 'Name:' (CRM), and 'Passwd:' (masked). The 'Driver' section shows 'SQL Server Native Client 10.0'. At the bottom are buttons for 'Test', '< Back', 'Next >', and 'Cancel'.

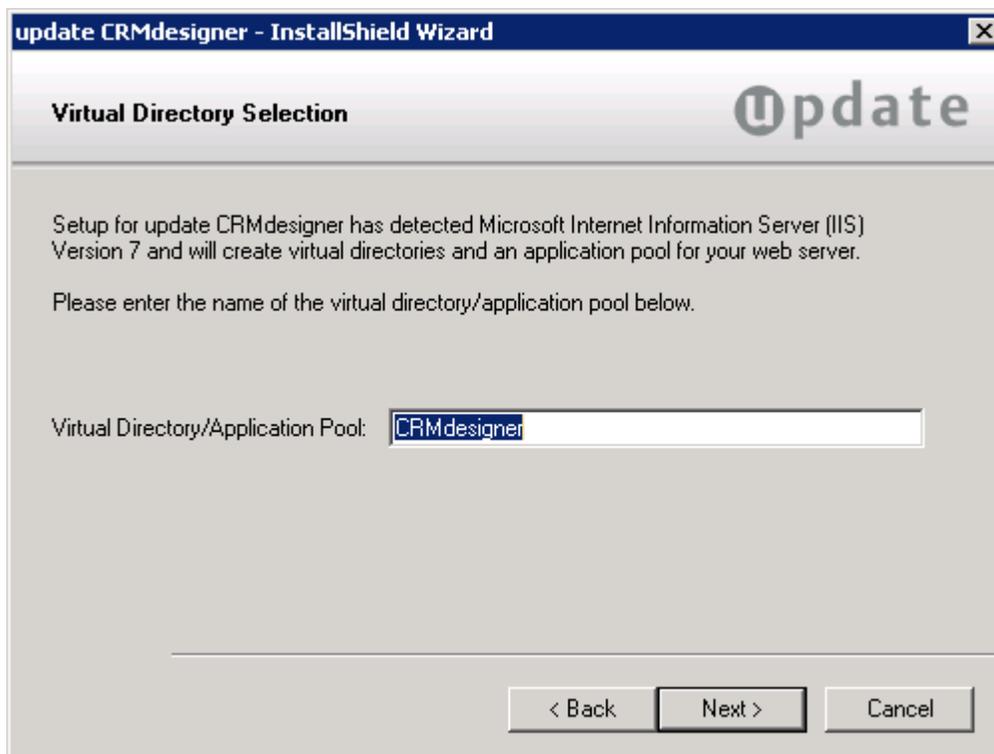
To configure the connection between CRM.designer and the MS SQL database enter the following:

1. **Server Options:** Enter the instance and server in the **Server** field.
Enter the database administrator's user name and password in the **Admin user** and **Password** fields.
2. **Database:** If you wish to create a new database, enable the **Create new database** check box. Disable the check box if you wish to use an existing database. Enter the name of the database in the **Name** field.
All valid sort orders for the database are listed in the **DB collation** field. Select the desired entry.

3. **User:** If you wish to add a new user for the database, enable the **Create new user** check box. Disable the check box if you wish to use an existing user. Enter the user name and password.
4. **Driver:** Select the desired SQL driver in the **Driver** field:
 - **SQL Server Native Client 10.0** for MS SQL Server 2008 R2
 - **SQL Server Native Client 11.0** for MS SQL Server 2012 and 2014
5. Click **Test** to test the database connection.
6. Click **Next**.

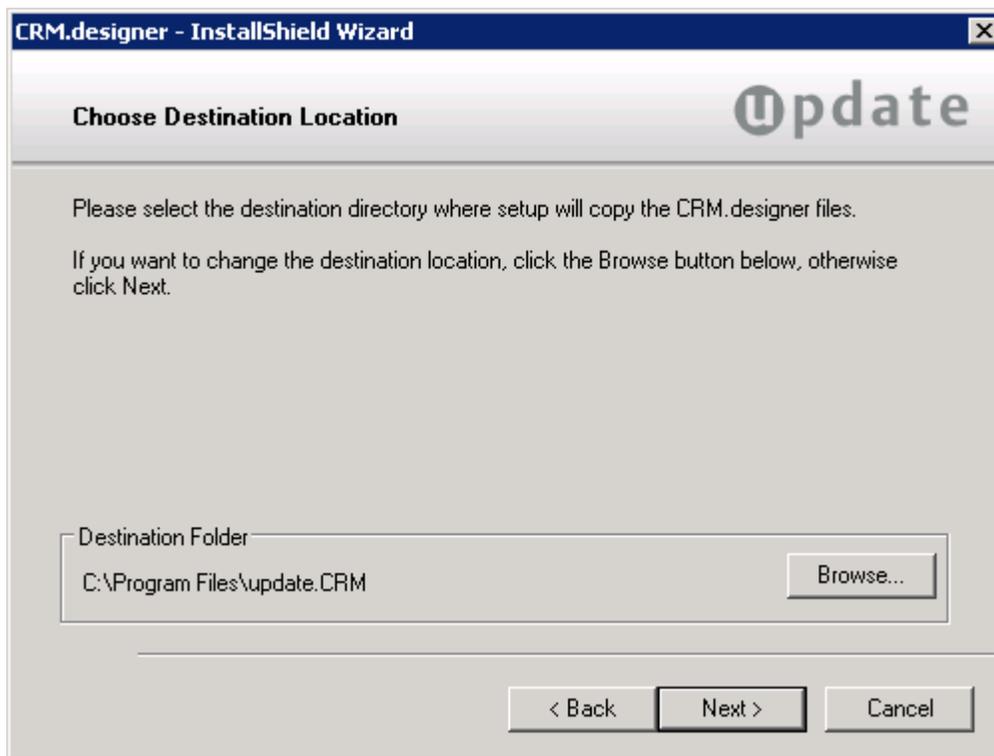
The connection string is written to the `settings.xml` file (`<designerDsn>`), see [CRM.designer](#) on page 55.

IIS Virtual Directory and IIS Application Pool



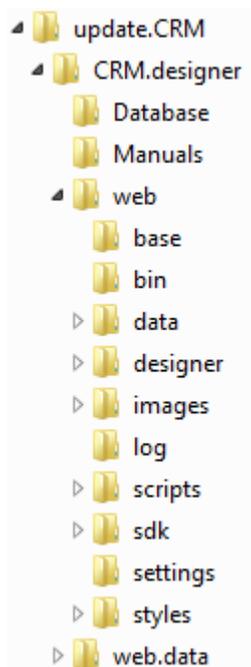
1. Enter the name of the Internet Information Services (IIS) Virtual Directory (and Application Pool) that is created during the setup process.
The virtual directory is the URL of the web application. If you use the default value, you can start CRM.designer using the URL `http://<server name>/CRMdesigner`.
2. Click **Next**.

Destination Folder



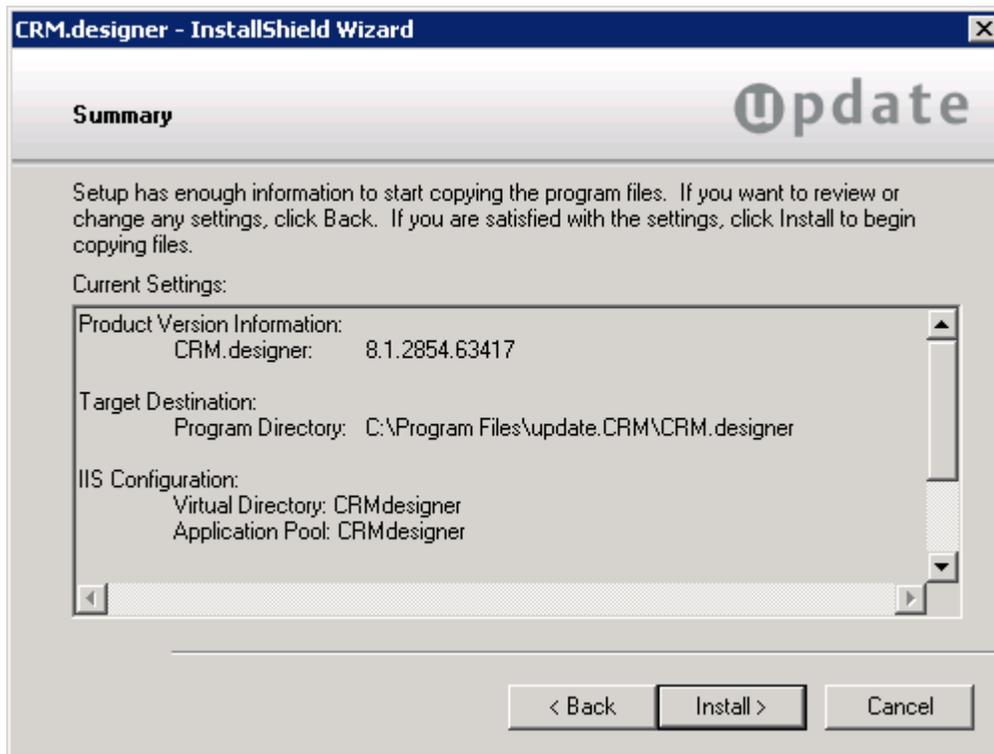
1. Choose the target directory.

This directory is the application root directory where setup copies the files. CRM.designer is installed in `\update.CRM` as root directory, and automatically creates a `\CRM.designer` directory with the following directory structure:



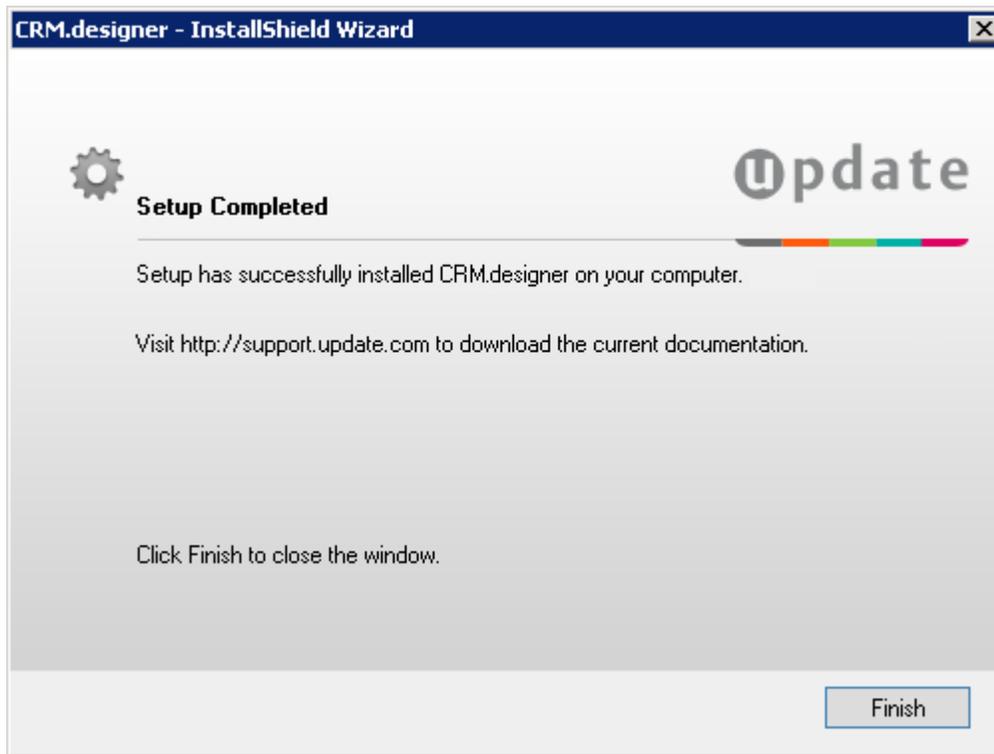
2. Click **Next**.

Installation Summary



1. Verify your settings.
2. Click **Back** to change your settings. Click **Install** to start the installation process. The CRM.designer files are copied to the destination directory, the IIS virtual directory is created, etc.

Setup Complete



Click **Finish** to end the setup process.

Upgrading CRM.designer Installation

Learn to upgrade CRM.designer.

To upgrade your CRM.designer installation to the latest version, perform the following steps:

1. Unzip the installation package (`designer_<version>_full.zip`) to a local drive.
2. In the unzipped folder, double click `setup.exe`. The **Upgrade setup** wizard displays.

Note: This setup requires administrator rights on Windows 8 and later versions.

3. Click **Next** to start the upgrade process. The **Setup Status** window displays upgrade installation.
4. When the upgrade installation is complete, the **Update Complete** window displays.
5. Click **Finish** to complete the upgrade installation.

Providing the Enterprise Serial Key to the CRM.designer

If you are upgrading Aurea CRM to an enterprise license then you should make the CRM.designer aware of the enterprise version by providing it with the enterprise serial key.

You can do that by using the CRM.designer maintenance setup. To provide the enterprise serial key perform the following steps:

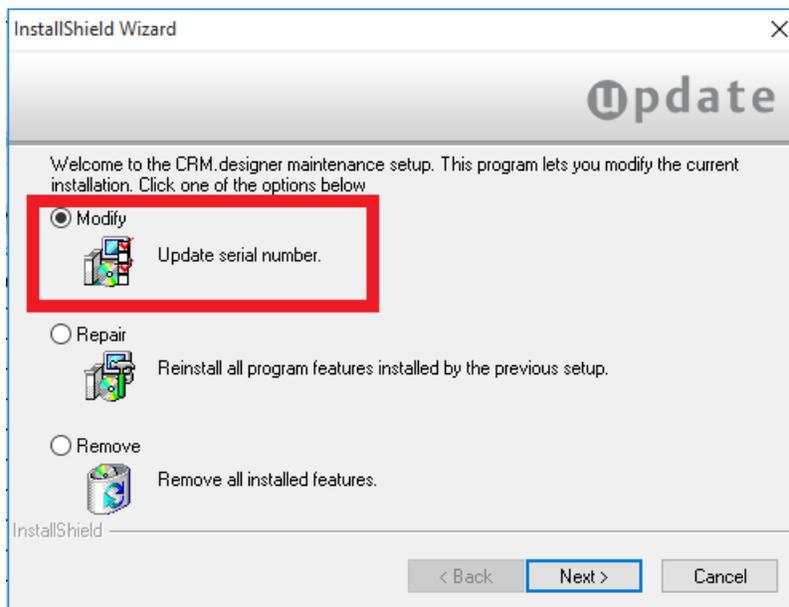
1. Upgrade the Aurea CRM to the latest version.

Note: Enterprise features are supported from CRM version 9.1.0 onwards.

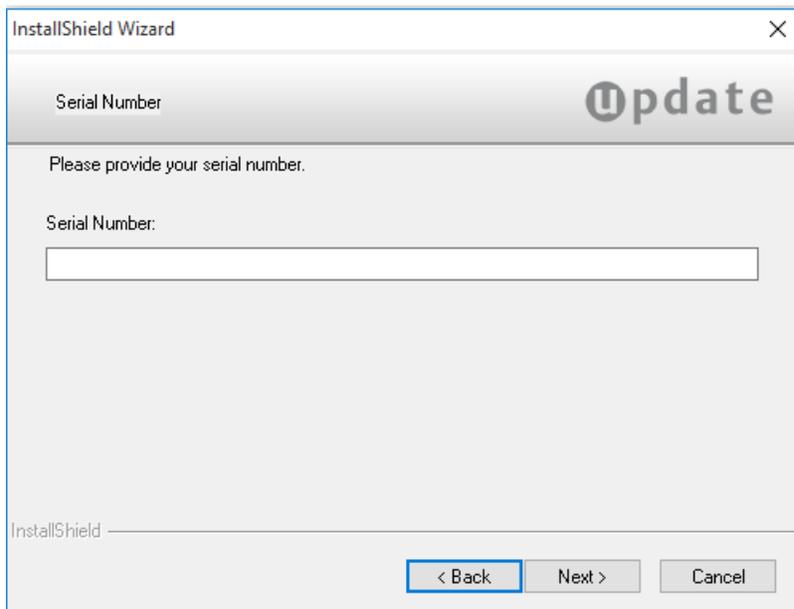
2. Replace the serial number that is saved in the update.CRM win installation directory in `...\system\sys\Serialnumber.txt` file.
3. Initiate CRM.designer to the new enterprise serial key using one of these methods CRM.designer maintenance setup or Update the settings.xml file for the CRM.designer described below:

CRM.designer maintenance setup

- a. Double click and open the **CRM.designer** program. The CRM.designer **Installshield Wizard** displays.



- b. Click Next. The Serial Number page displays.



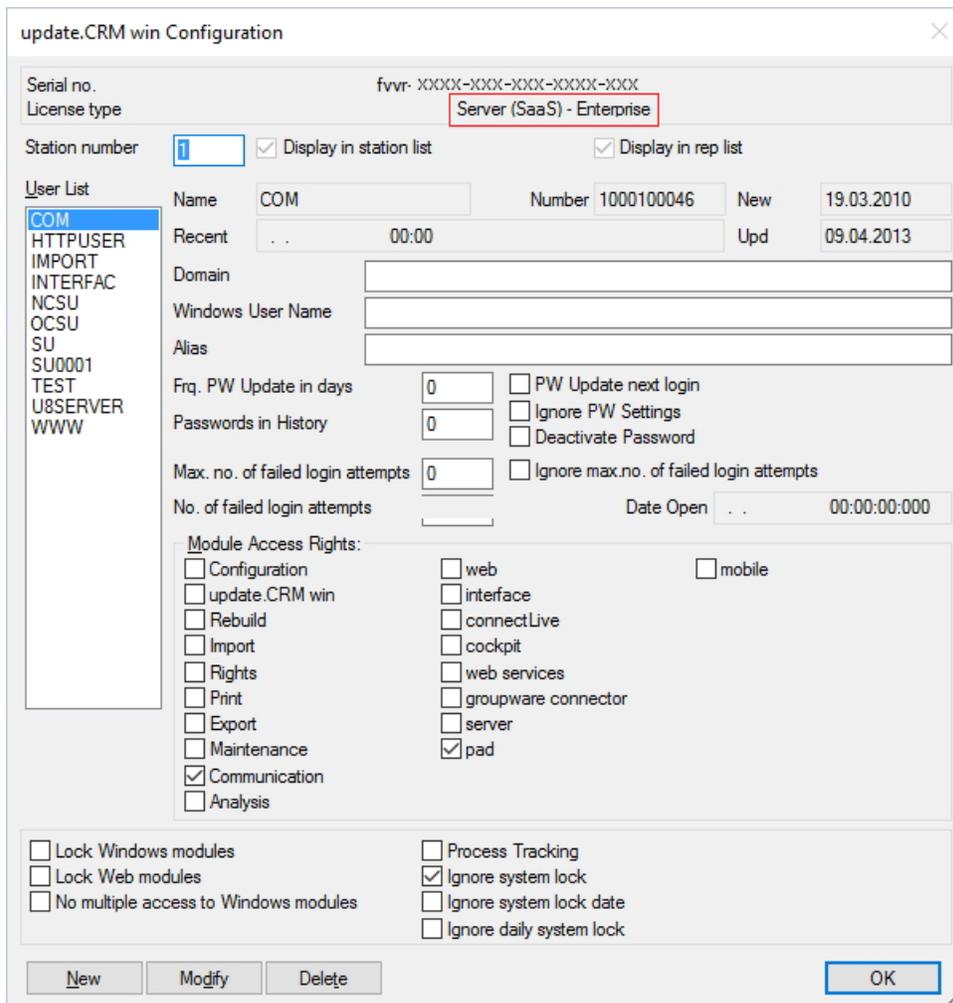
- c. Enter the Enterprise **Serial Number** and click **Next** to continue with the maintenance setup.

Update the `settings.xml` file for the CRM.designer

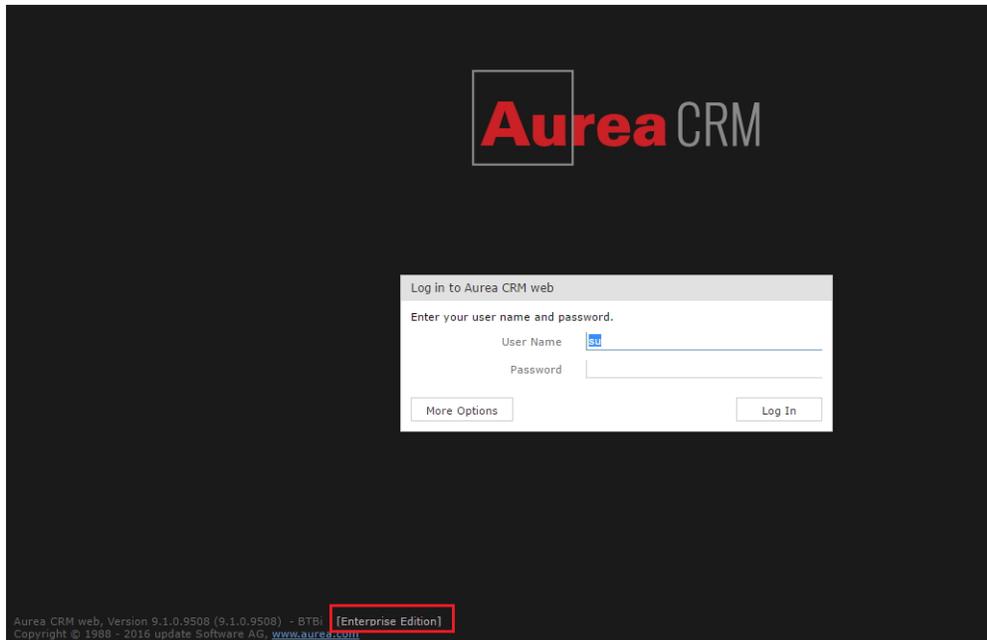
- a. Edit the `settings.xml` file located in the `runtime\designer\settings` folder.
- b. Configure the `<serial>` sub-element in the `<update.configuration>` element. It should look as shown below:

```
<update.configuration>
  <OleDbDsn>&designerDsn;</OleDbDsn>
  <VersionCheckOff>true</VersionCheckOff>
  <Serial>XXXX-XXXX-XXXX-XXXX-XXXX-XXXX-XXXX-XXXX</Serial>
</update.configuration>
```

4. Confirm the serial key change by performing the following steps:
 - a. Run `mmcfig.exe` located in the `\system\exe` directory. Confirm the message stating that the license rights have changed with 'Yes'.
 - b. The window should display the new serial key and the **License Type** field should show Enterprise. See the screenshot below, "Enterprise" is highlighted in red:



5. Restart the CRM server application pool.
6. Login to the CRM.web. The login page of the web now shows the mark [Enterprise Editon]. The screenshot below shows the mark highlighted in red.



Aurea CRM web Setup

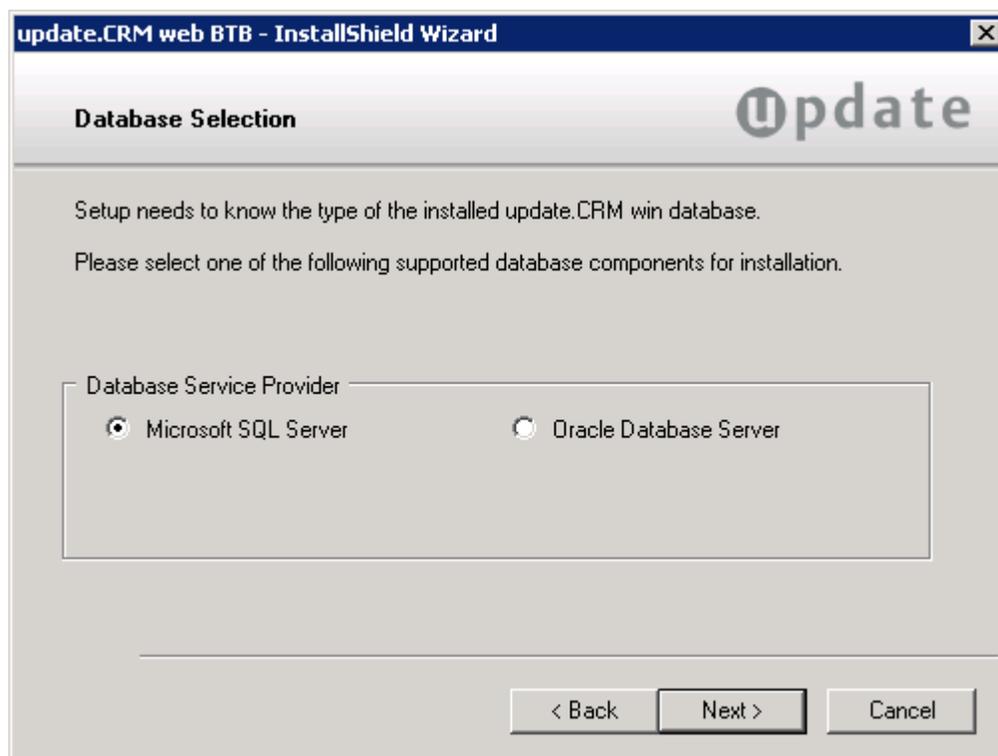
Learn about the aurea CRM web setup.

Starting the Installation

To start the installation of Aurea CRM web:

1. Copy the installation file (update.CRM_web_<vertical>_<version number>.exe) to a local drive.
2. Start update.CRM_web_<vertical>_<version number>.exe. Setup starts.

Database Type



1. Select the database type of your Aurea CRM database (**MS SQL Server** or **Oracle Database Server**).
2. Click **Next**.

Aurea CRM database Connection Settings

Setup searches for a Aurea CRM win installation. If no `mmdb.ini` file containing the connection to the Aurea CRM database is found, the following screen is displayed:

update.CRM Database Connection Info

Step 1: Enter the connection info for your update.CRM database and select the driver of the SQL Server Native Client.

update.CRM Database

Server:

Database:

Table Prefix

CRM

User

User:

Password:

Driver

SQL Server Native Client 11.0

< Back Next > Cancel

1. Enter the connection information:
 - **Server:** Enter the database server name.
 - **Database:** Enter the name of the Aurea CRM database.
 - **User/Password:** Enter the user name and password for the Aurea CRM database.
 - **Table Prefix:** Enter the table prefix.
2. **Driver:** Select the desired SQL driver in the **Driver** field:
 - **SQL Server Native Client 10.0** for MS SQL Server 2008 R2
 - **SQL Server Native Client 11.0** for MS SQL Server 2012 and 2014
3. Click **Next**.

CRM.designer Database Connection Settings

Both CRM.designer and Aurea CRM web need a connection to the CRM.designer database. Aurea CRM web and the CRM.designer database can be hosted on a different database server.

update.CRM web BTB - InstallShield Wizard

CRM.designer Database Connection Info

Step 2: Enter the connection info for your CRM.designer database and select the driver of the SQL Server Native Client.

Designer Database

Server:

Database:

User

User:

Password:

Driver

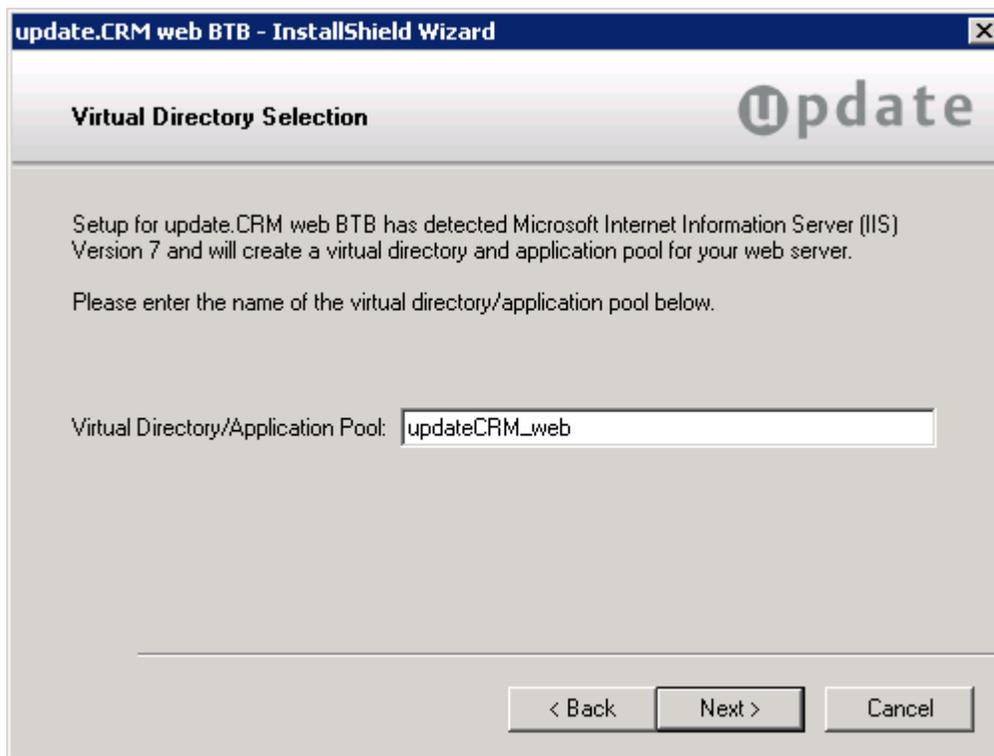
< Back Next > Cancel

1. Enter/verify the connection information:
 - **Server:** Enter the database server name.
 - **Database:** Enter the name of the CRM.designer database.
 - **User/Password:** Enter the user name and password for the CRM.designer database.
2. **Driver:** Select the desired SQL driver in the **Driver** field:
 - **SQL Server Native Client 10.0** for MS SQL Server 2008 R2
 - **SQL Server Native Client 11.0** for MS SQL Server 2012 and 2014
3. Click **Next**.

Setup does not verify your settings. The database must either exist already or you need to create it manually.

The connection string is written to Aurea CRM web's `settings.xml` file (`< designerDsn > entry`), see [Aurea CRM web](#) on page 56.

IIS Virtual Directory and IIS Application Pool

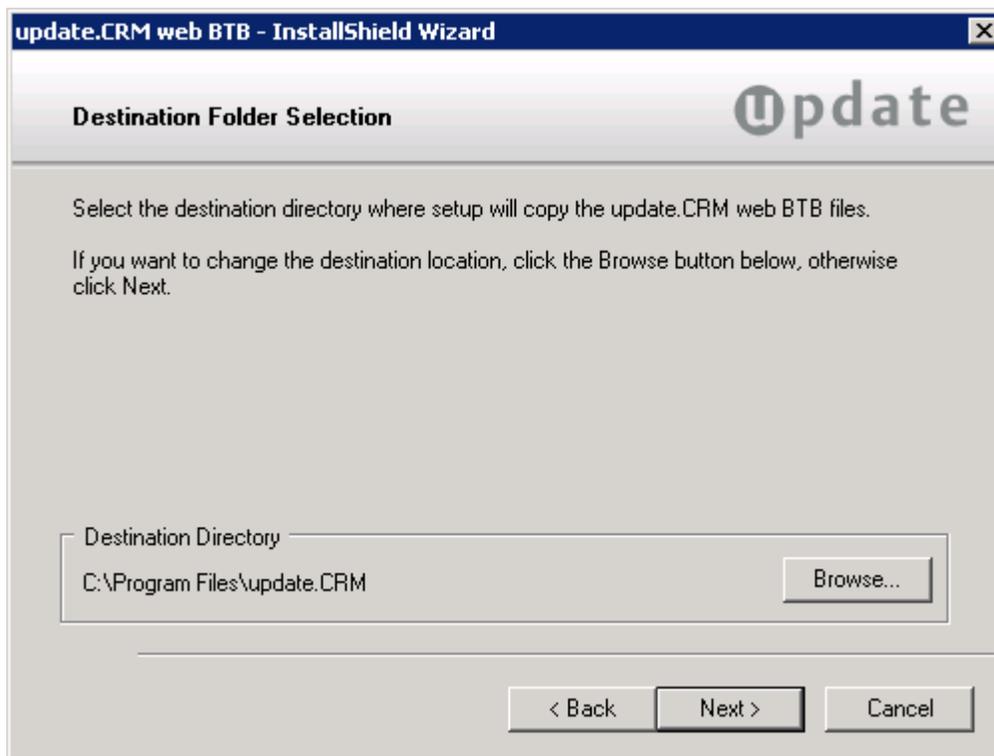


1. Enter the name of the Internet Information Services (IIS) Virtual Directory (and Application Pool) that is created during the setup process.

The virtual directory is the URL of the web application. If you use the default value, you can start Aurea CRM web using the URL `http://<server name>/updateCRM_web`.

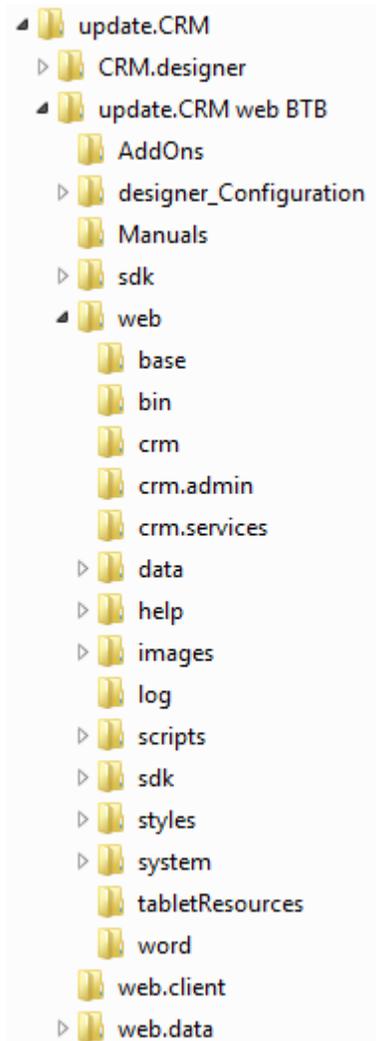
2. Click **Next**.

Destination Folder



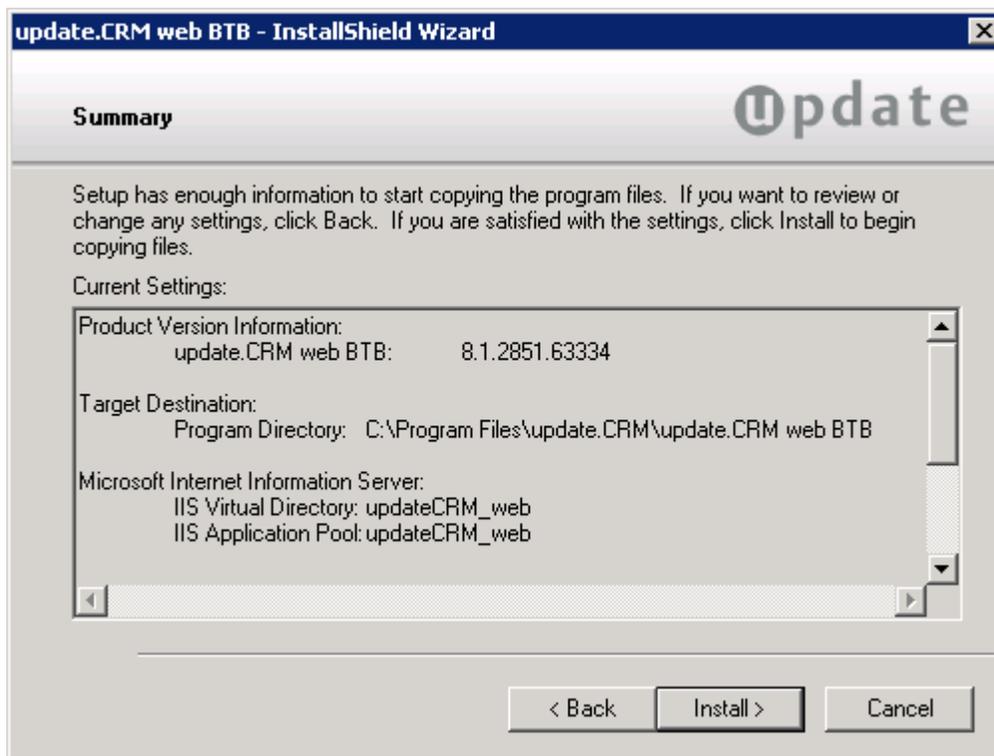
1. Choose the target directory.

This directory is the application root directory where setup copies the files. Aurea CRM web is installed in \ update.CRM as root directory, and automatically creates a \Aurea CRM web <vertical> directory with the following directory structure:



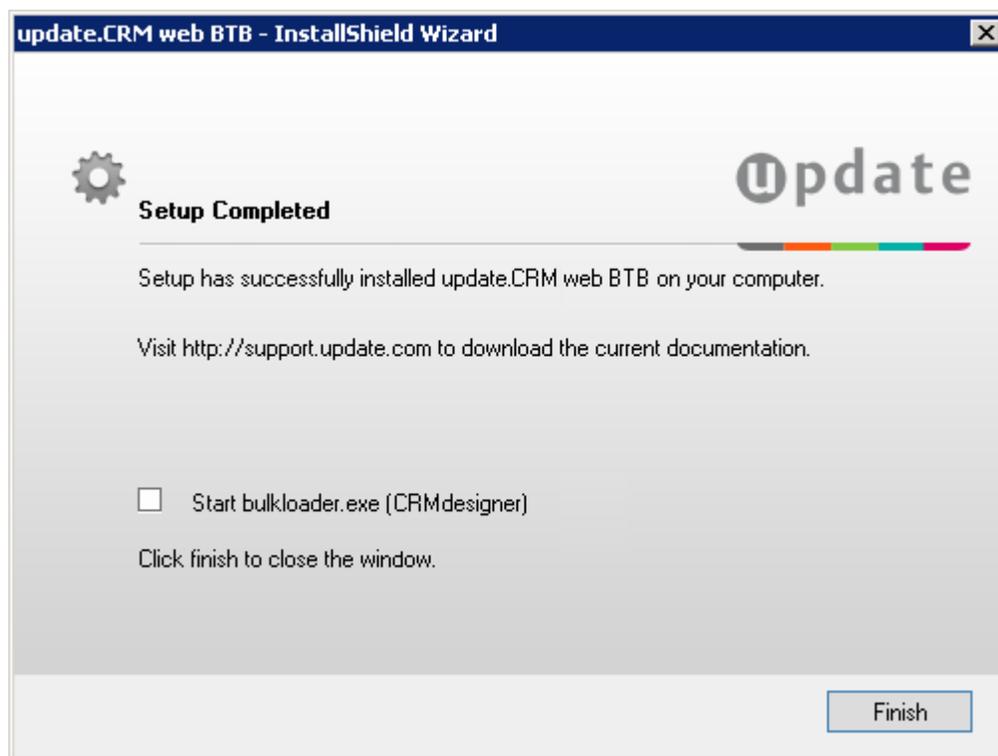
2. Click **Next**.

Installation Summary



1. Verify your settings.
2. Click **Back** to change your settings. Click **Install** to start the installation process. The Aurea CRM web files are copied to the destination directory, the IIS virtual directory is created, etc.

Setup Complete



1. Check **Start bulkloader.exe** to automatically start CRM.bulkloader and proceed with setting up the CRM.designer database.
2. Click **Finish** to end the setup process.

Download all documentation from <https://support.aurea.com> and make it available for your users. The online help (English and German) is automatically installed by the setup process.

Warning: Unable to Copy ..\system\sys

If Aurea CRM win is not installed on your server, a "file copy error" message is displayed.

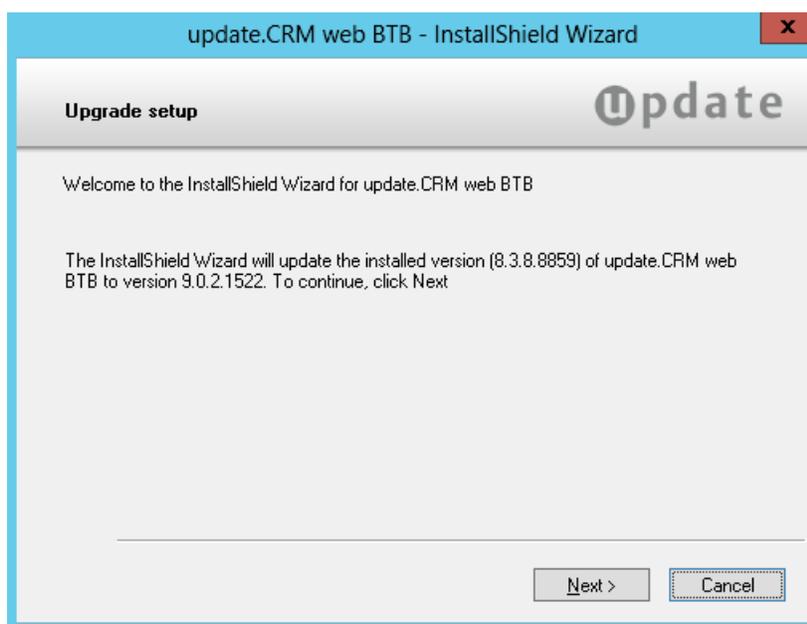
In this case, the setup process is unable to copy the `.. \system\sys` directory to the Aurea CRM web directory. To be able to run Aurea CRM web, you must manually copy the `.. \system\sys` directory from the server where Aurea CRM win is installed to the `.. \system\sys` directory of your Aurea CRM web installation.

Upgrading Aurea CRM web Installation

Learn to upgrade CRM web Installation.

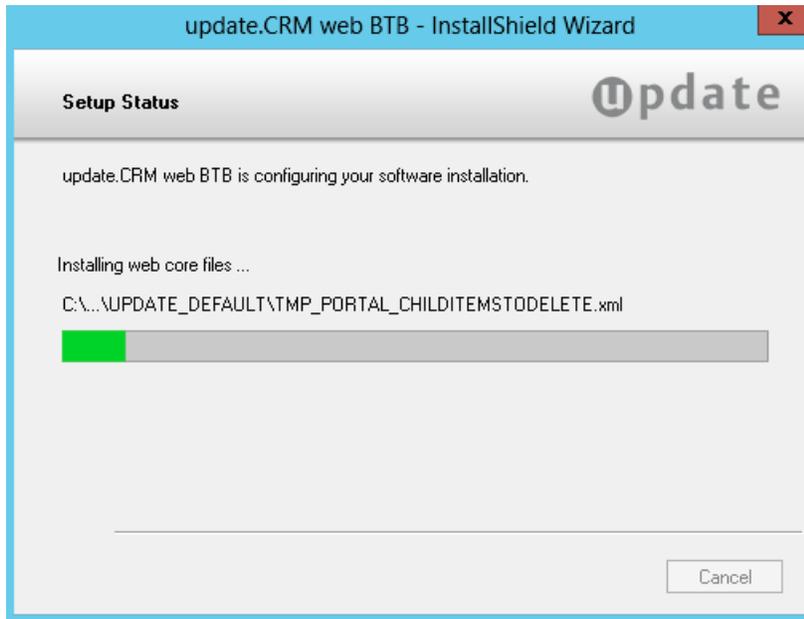
To upgrade your Aurea CRM web installation to the latest version, perform the following steps:

1. Unzip the installation package (<vertical>_web_<version number>.zip) to a local drive. <vertical> can be BTB, FS, or OTC.
2. In the unzipped folder, double click `setup.exe`. The **Upgrade setup** wizard displays.

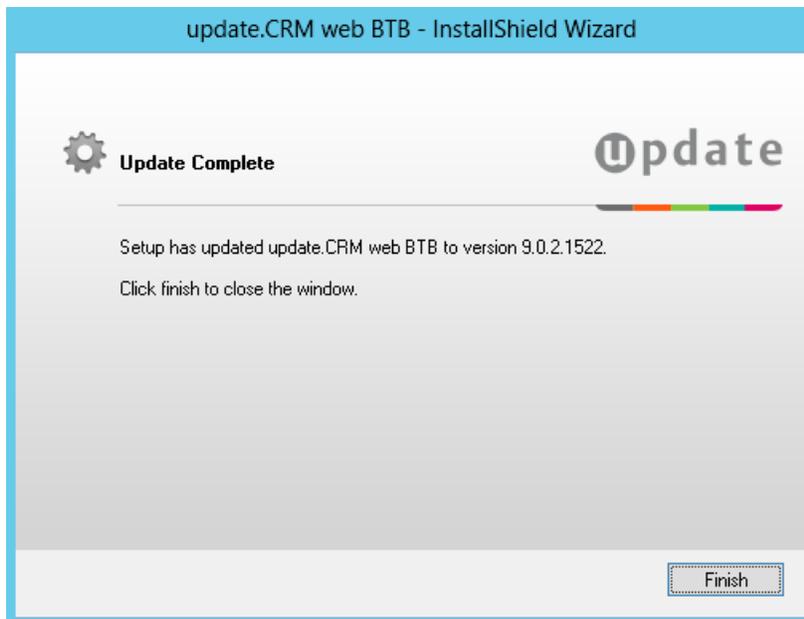


Note: This installation setup may require administrator rights.

3. Click **Next** to start the upgrade process. The **Setup Status** window displays upgrade installation.



4. When the upgrade installation is complete, the **Update Complete** window displays.



5. Click **Finish** to complete the upgrade installation.

Manual Adjustments

Learn about the manual adjustments.

Below are some of the manual adjustment for Aurea CRM Web installations:

Creating a Database Connection for Oracle

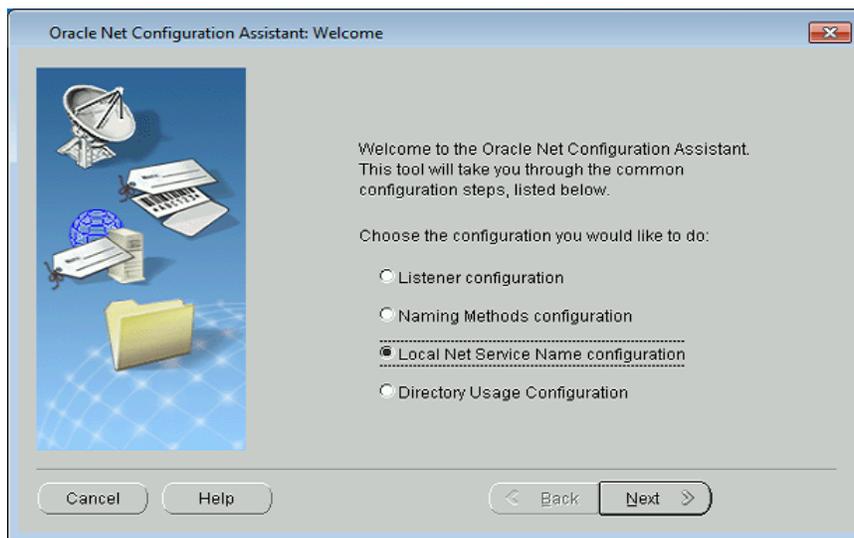
To use Aurea CRM web with an Oracle database, the Oracle Client and the Oracle Data Provider for .NET must be installed in the **same** Oracle Home on your web server.

Note: The Aurea CRM web identity account must have Modify, Read & Execute, List Folder Contents, Read and Write access to the Oracle Client directories and subdirectories, see [Determining the Web Application Identity Account](#) on page 70.

Define the connection with **Oracle Net Configuration Assistant**.

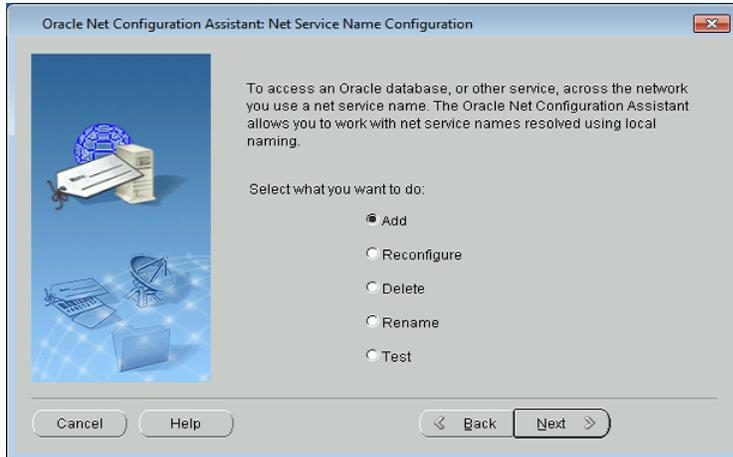
To configure Oracle Net:

1. Start the Net Configuration Assistant.



2. Select **Local Net Service Name configuration**.

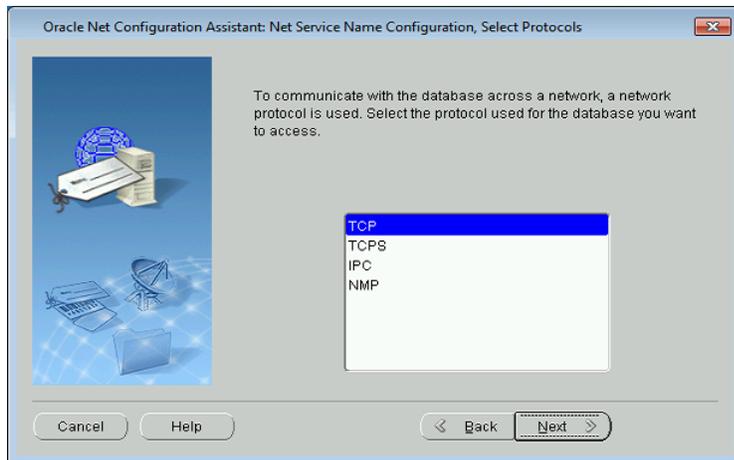
3. Click **Next**.



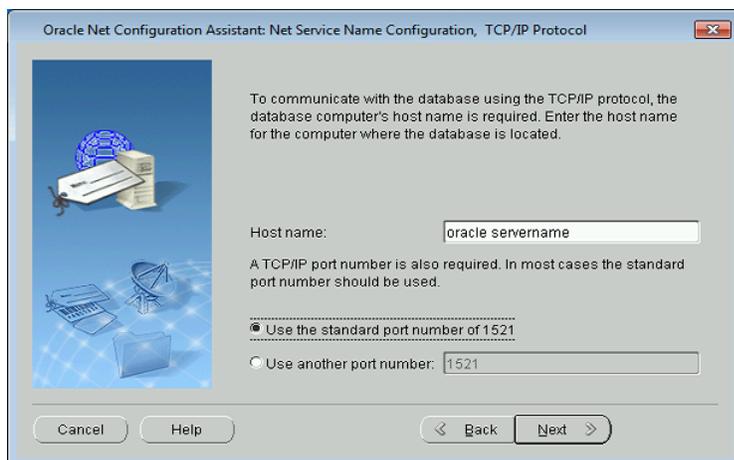
4. Select **Add** to define a new net service name.
5. Click **Next**.



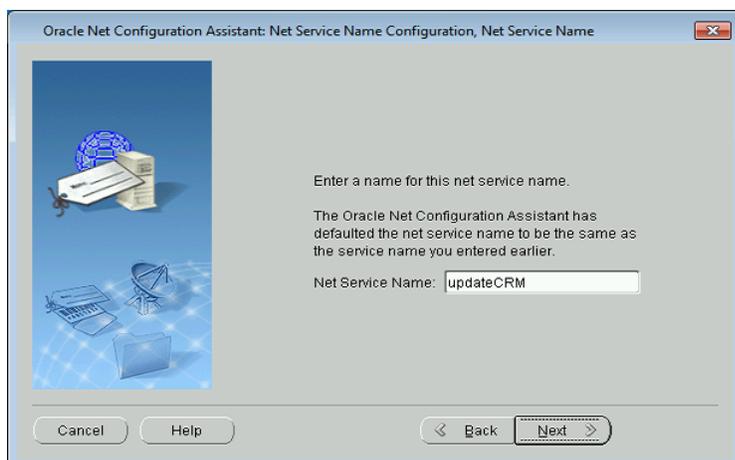
6. Enter the **Service Name**, usually the global database name. Contact your Oracle Database administrator for the service name.
7. Click **Next**.



8. Select the network protocol, usually TCP.
9. Click **Next**.



10. Enter the **Host Name**. The host name is the name or the IP address of the Oracle database server.
11. Select an IP port. Usually, you can use the standard port number.
12. Click **Next**.



13. Enter the **Net Service Name** (e.g. "AureaCRM"). The **Net Service Name** must be the same as the HOSTSTRING specified in the `mmdb.ini` file. For further details, see [mmdb.ini File for Oracle Databases](#) in the *CRM.core Administrator Guide*.
14. Click **Next** to finish the configuration.

Copy `..\system\sys`

Learn to use Copy `..\system\sys` for manual adjustments.

The `..\system\sys` directory of Aurea CRM win contains the `mmdb.ini` file where the connection to the Aurea CRM database is defined, see [mmdb.ini File for MS SQL/Oracle Databases](#) in the *CRM.core Administrator Guide*.

If Aurea CRM win is installed on the same computer where you are installing Aurea CRM web, setup has already copied the `..\sys` directory to the Aurea CRM web directory.

Otherwise you must copy the `..\sys` directory manually for Aurea CRM web to work.

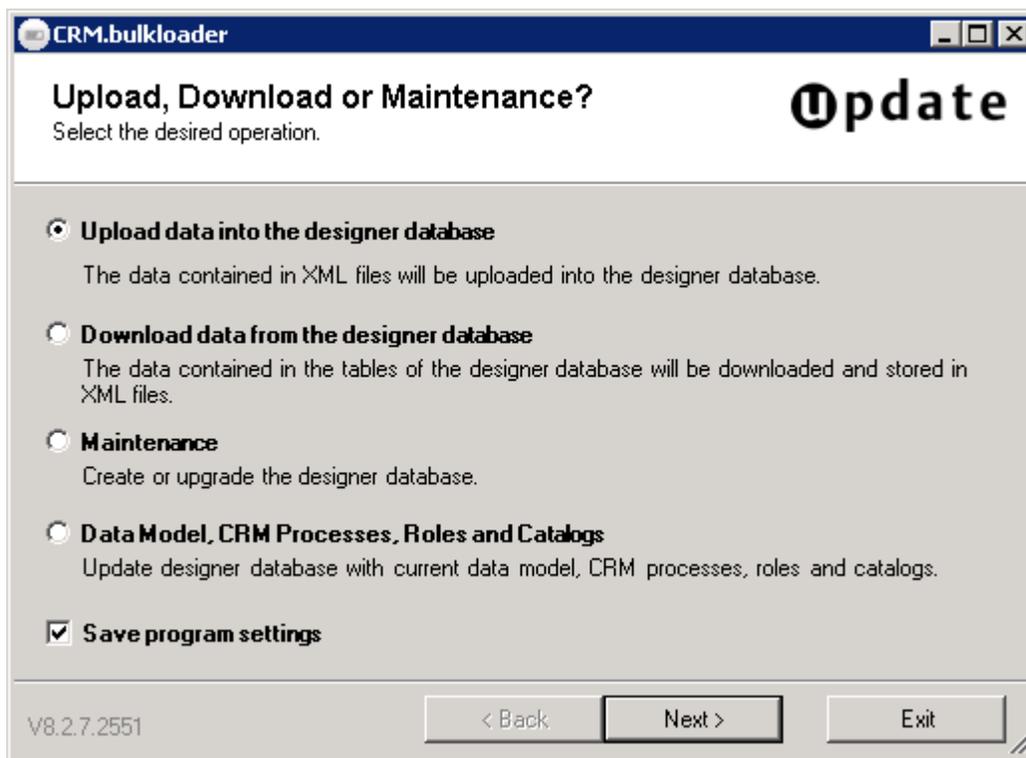
Copy the `..\system\sys` directory of your Aurea CRM win installation to the `..\system\sys` directory of Aurea CRM web. The default location is e.g. `C:\Program Files\update.CRM\Aurea CRM web BTB\web\system\sys` for the BTB version.

Setting Up the CRM.designer Database

Learn to Setup the CRM.designer Database.

Once you have installed both CRM.designer and Aurea CRM web and are connected to both the Aurea CRM and CRM.designer databases, you need to set up the CRM.designer database using CRM.bulkloader (`..\designer\database\update.BulkLoader.exe`).

If you checked **Start bulkloader.exe** at the end of the Aurea CRM web setup, CRM.bulkloader is started automatically.



For details on CRM.bulkloader (functionality and command line parameters), >> *CRM.bulkloader* in the Aurea CRM web Administrator Guide.

To set up the CRM.designer database:

- Create the database structure/upgrade the database, see [Maintenance](#).
- Upload the UPDATE_DEFAULT configuration, see [Uploading UPDATE_DEFAULT](#).
- Upload the current Aurea CRM data model, catalogs, roles and CRM processes to the CRM.designer database, see [Aurea CRM Data Model, CRM Processes, Roles, Catalogs](#).

Maintenance

Use the CRM.bulkloader maintenance mode to create or upgrade your CRM.designer database.

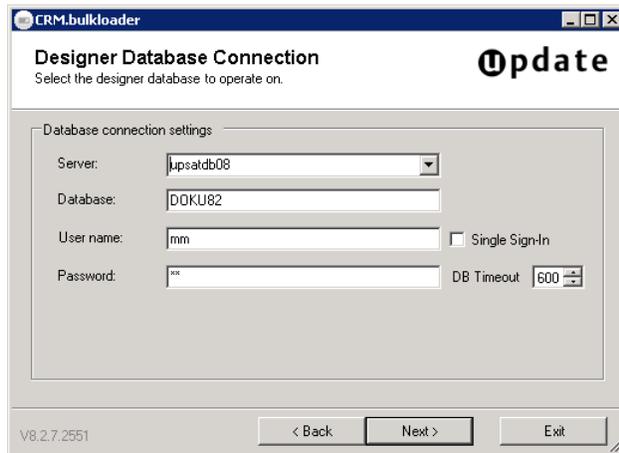
Note: Creating or upgrading a database changes the structure of the selected database. Therefore, it is strongly recommended to back up the CRM.designer database before upgrading it.

Before upgrading the CRM.designer database you need to restart the web application (iisreset).

Concerning packages: After upgrading the CRM.designer database you need to re-generate all packages (i.e. download them again), otherwise changes done by CRM.bulkloader is lost in the target database.

When upgrading from an update.seven designer database, CRM.bulkloader performs a few "clean-up" operations; for details, see Migration Guide from Version 7 to Version 8 available from <https://support.aurea.com> (core (win) section).

1. On the CRM.bulkloader main page select **Maintenance**.
2. Click **Next**.



CRM.bulkloader

Designer Database Connection Update

Select the designer database to operate on.

Database connection settings

Server: lpsatdb08

Database: DOKU82

User name: mm Single Sign-In

Password: x DB Timeout: 600

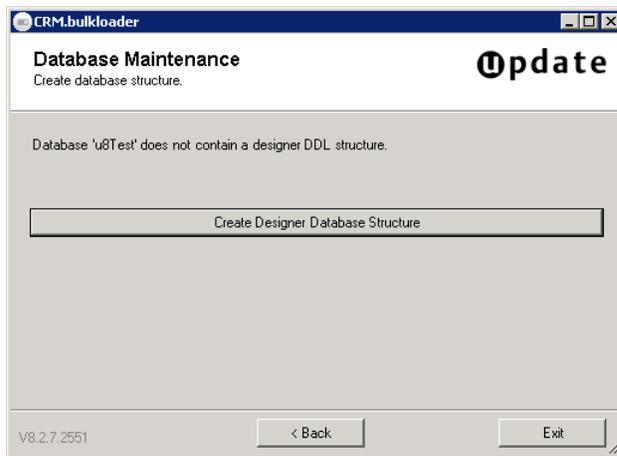
V8.2.7.2551

< Back Next > Exit

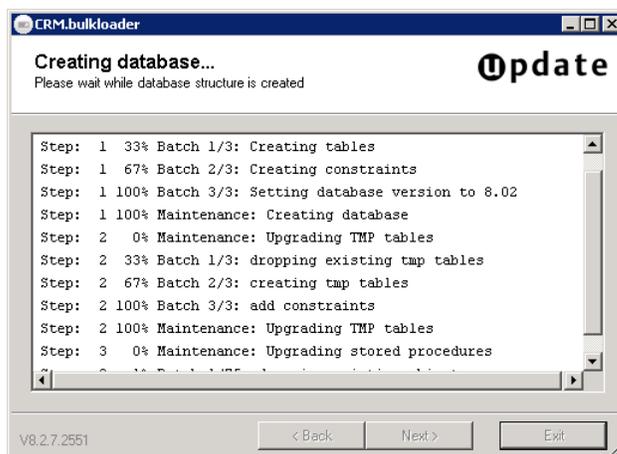
3. Enter the connection settings to your CRM.designer database:
 - **Server:** Name of the server where the CRM.designer database is located. Enter "localhost" or "(local)" if you operate on a local database.
 - **Database:** Name of the CRM.designer database
 - **User name/Password:** Account of the database owner, i.e. user with "db_owner" rights for the CRM.designer database
 - **DB Timeout:** The database timeout in seconds.
4. Click **Next**.

CRM.bulkloader analyses the database. Depending on the result, one of the following screens is displayed:

- The database is not a valid CRM.designer database:

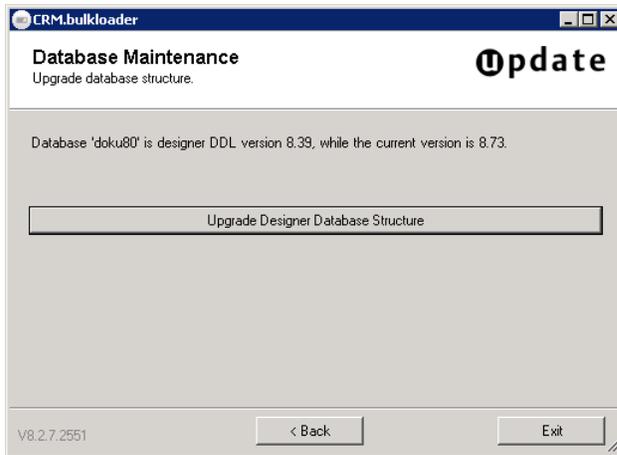


1. Click **Create Designer Database Structure**. CRM.bulkloader executes the built-in SQL scripts to create the database:



Once the database and database structure has been created, a message "The designer database has been created" is displayed.

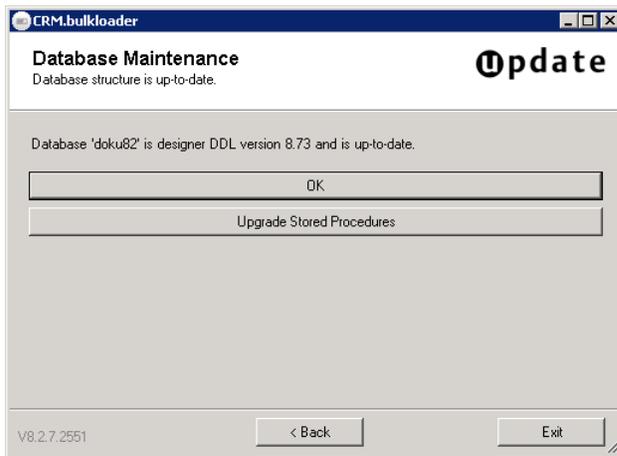
2. Click **OK**.
 3. Click **Next** to return to the CRM.bulkloader main page.
- The database is a valid CRM.designer database but from a previous version:



Note: It is strongly recommended to back up the CRM.designer database before upgrading it. Before upgrading the CRM.designer database you need to restart the web server (iisreset).

Click **Upgrade Designer Database Structure**. CRM.bulkloader upgrades the database.

- The database is up to date:



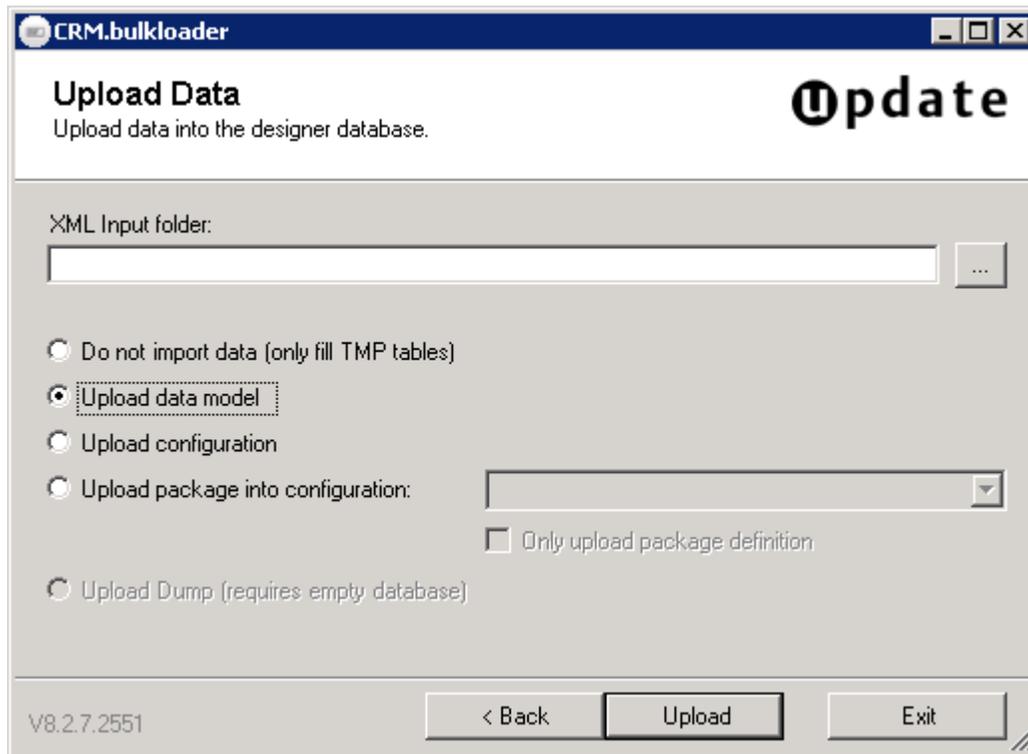
1. Click **OK** to return to the CRM.bulkloader main page.
2. Click **Upgrade Stored Procedures** to upgrade the stored procedures.

Uploading the Data Model

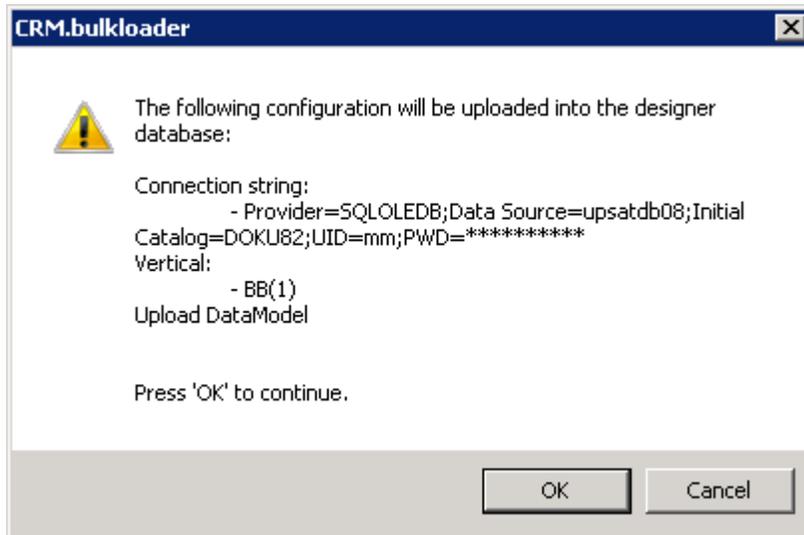
In order to use CRM.designer you need to upload the Aurea CRM data model into the CRM.designer database.

To upload the data model:

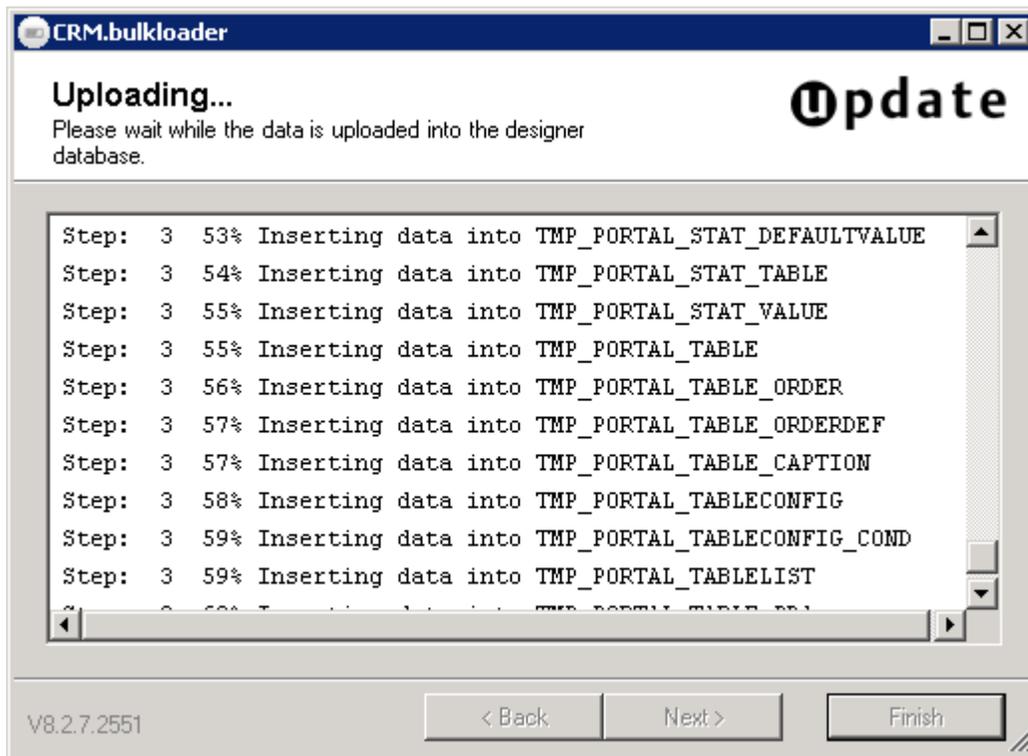
1. On the CRM.bulkloader main page select **Upload data into the designer database**.
2. Click **Next**.
3. Enter the connection settings to your CRM.designer database as described above.
4. Click **Next**.



5. Select **Upload data model**.
6. Specify the path to the **XML Input folder**. Example (default location for BTB):
`C:\Program Files\update.CRM\Aurea CRM web BTB\designer_Configuration\bb\datamodel`
7. Click **Upload**. A confirmation message displayed the database connection and the items that is uploaded.



8. Click **OK**. The upload process is launched. A dialog box displays the progress of the upload.



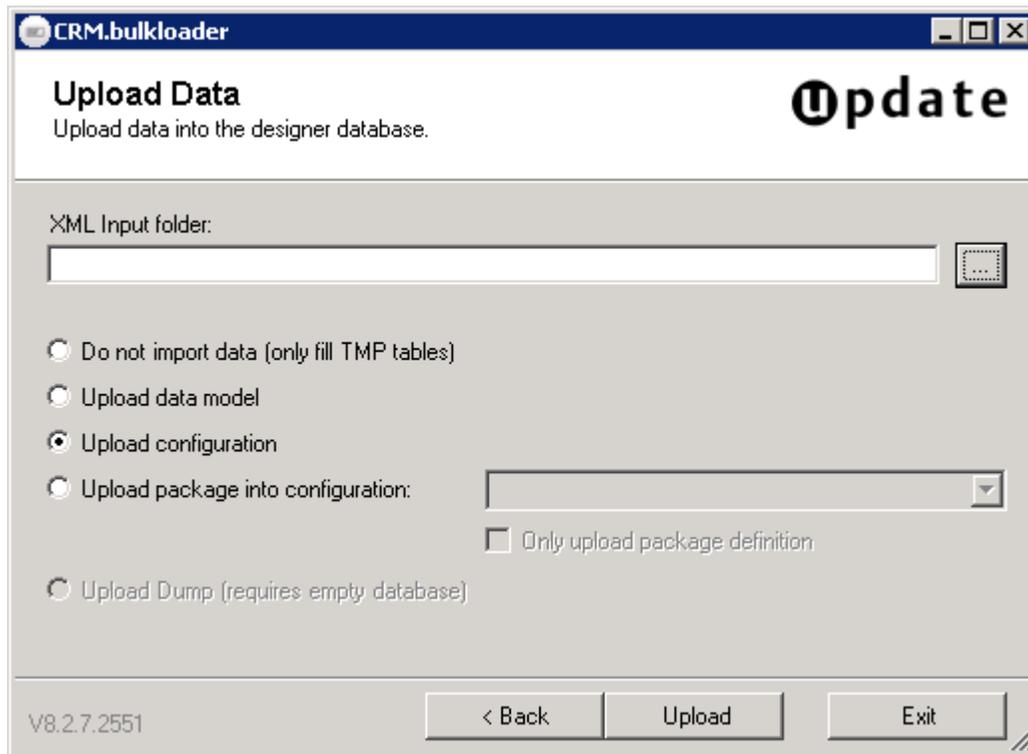
9. When the upload is completed, a message is displayed. Click **OK**.
10. Click **Finish**.

Uploading UPDATE_DEFAULT

In order to use Aurea CRM web you need to upload Aurea CRM web's standard configuration UPDATE_DEFAULT into the CRM.designer database, see [Configurations](#) in the Aurea CRM web Administrator Guide.

To upload configuration data to the CRM.designer database:

1. On the CRM.bulkloader main page select **Upload data into the designer database**.
2. Click **Next**.
3. Enter the connection settings to your CRM.designer database as described above.
4. Click **Next**.



5. Select **Upload configuration**.
6. Specify the path to the **XML Input folder**. Example (default location for BTB):
`C:\Program Files\update.CRM\Aurea CRM web BTB\designer_Configuration\bb\UPDATE_DEFAULT`
7. Click **Upload**.
8. The upload process is executed as described for the data model upload above.

Note: If you try to upload a configuration to an invalid or outdated CRM.designer database, you are automatically redirected to maintenance mode, see [Maintenance](#).

Aurea CRM Data Model, CRM Processes, Roles, Catalogs

Note: It is strongly recommended to back up the CRM.designer database before updating it.

All information depending on formats (data model, rights etc.) in Aurea CRM win are only applied to Aurea CRM web after refreshing the formats (default: 30 min). To apply these changes immediately, you need to restart your application pool.

To update the CRM.designer database with the current data model, CRM processes, roles and catalogs from the Aurea CRM database:

1. On the CRM.bulkloader main page select **Data Model, CRM Processes, Roles and Catalogs**.
2. Click **Next**.

The screenshot shows a Windows-style dialog box titled "CRM.bulkloader" with a sub-header "update.CRM Login" and the text "Login to update.CRM". In the top right corner, there is a logo that says "Update". The main area of the dialog is labeled "Login" and contains the following fields and controls:

- User name:** A text input field containing the text "su". To its right is a checkbox labeled "Single Sign-In".
- Password:** A password input field.
- Language:** A dropdown menu currently set to "eng".
- CRM.designer Web Service URL:** A text input field containing the URL "http://localhost/82_btb/crm.services/".

At the bottom left of the dialog, the version number "V8.2.7.6400" is displayed. At the bottom right, there are three buttons: "< Back", "Login", and "Exit".

3. Enter your Aurea CRM login data:

- **User name:** Enter your Aurea CRM login name.
- **Password:** Enter your password.
- **Single Sign-In:** If checked, you are logged on with the credentials of your current Windows login. (Neither **User name** nor **Password** have to be entered.)

Note: For CRM.bulkloader to work with single sign-on, change the configuration file `..\crm.services\web.config` as follows: Change the value of the `clientCredentialType` attribute from `None` to `Windows`.

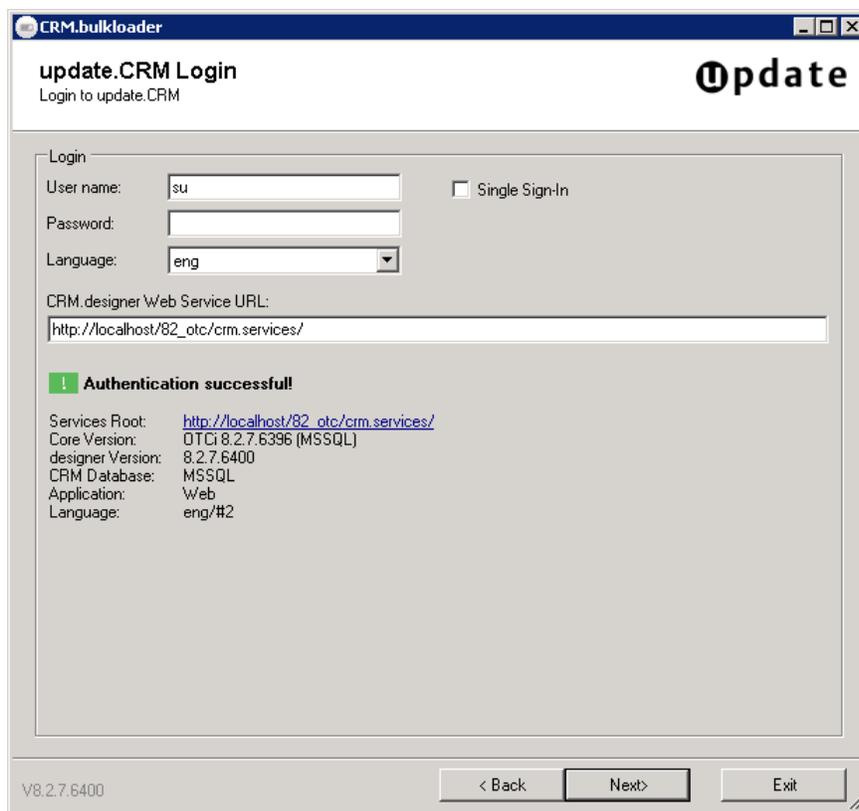
- **Language:** The language for the info area and field names of the data model. If you select "Users default language", the language entered in the user's rep record is used. (If undefined, "ger" is used as fallback.)

The data model is transferred to CRM.designer in the selected language. This setting does not apply to catalogs: Catalog values are transferred in the catalog base language.

Note: If a maintenance user is defined, the login is performed with this user's credentials (and language), see [Maintenance User](#).

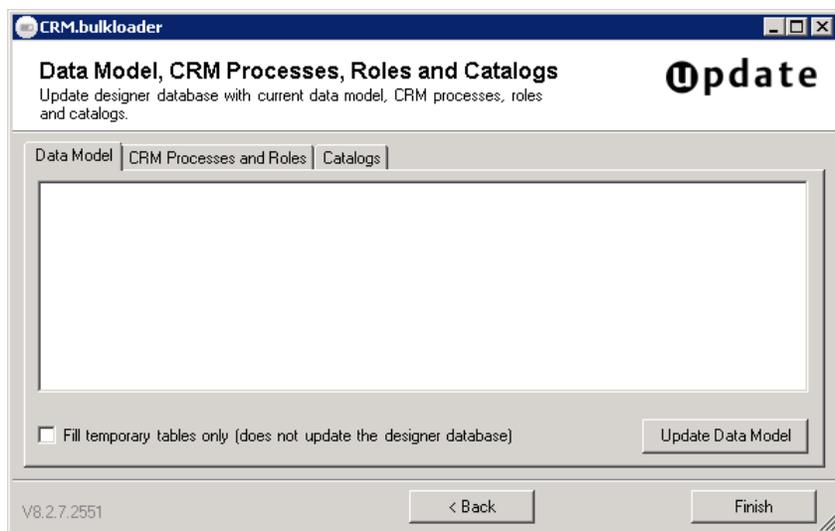
- **CRM.designer Web Service URL:** Enter the path to the Aurea CRM web web service. The web service is located at `<web url>/crm.services/`.

4. Click **Login**.



The screenshot shows a window titled "CRM.bulkloader" with a sub-header "update.CRM Login" and "Login to update.CRM". The "Update" logo is in the top right. The login form includes fields for "User name:" (su), "Password:" (empty), and "Language:" (eng). A "Single Sign-In" checkbox is present. The "CRM.designer Web Service URL:" field contains "http://localhost/82_otc/crm.services/". A green message box displays "Authentication successful!". Below this, system information is listed: Services Root (http://localhost/82_otc/crm.services/), Core Version (OTC: 8.2.7.6396 (MSSQL)), designer Version (8.2.7.6400), CRM Database (MSSQL), Application (Web), and Language (eng/#2). The bottom left shows "V8.2.7.6400" and the bottom right has "< Back", "Next>", and "Exit" buttons.

5. After successful authentication click **Next**.



6. Select the desired function:

- Data Model
- Processes and Roles
- Catalogs

For details on these functions, see [CRM.bulkloader](#) in the *Aurea CRM web Administrator Guide*.

Setting Up Directory Security

The Aurea CRM web setup process sets the appropriate file permissions for the ASP.NET process identity, thus this section is for trouble shooting purposes only.

Aurea CRM web reads and writes to the following directories, therefore, the ASP.NET process identity user must have full access to these directories (default: Application-PoolIdentity account in the IIS_IUSRS group).

CRM.designer:

- `\web.data`: by default the log files are saved here, can be customized via CRM.designer's `settings.xml`
- `\web\images\.sprites`: for "sprite" images created at runtime
- `\web\scripts\.compiled`: for compiled files created at runtime
- `\web\styles\.compiled`

Aurea CRM web:

- `\web.data` (s. below)
- `\web\images\.sprites`

- `\web\scripts\compiled`
- `\web\styles\compiled`

\web.data

Aurea CRM web uses the `\web.data` directory and its subdirectories as a temporary destination for storing files. `\web.data` contains temporary folders and files used for document or format upload/update and for logging.

`\web.data` is located outside the web application path to avoid that an application restart which ASP.NET 2.0 initiates upon a "directory rename change notification" (i.e. when sub-directories are deleted).

```
<!ENTITY dataPath "..\web.data">
```

The following temporary directories specified in the `settings.xml` are located in `\web.data` by default:

```
...
<update.lib>
...
<Logging>
...
<Writer filePath="&dataPath;\log\&logFile;"
...
<update.web>
...
<UploadPath>&dataPath;\upload</UploadPath>
<MailMergeUploadPath>&dataPath;\upload\mailmerge</MailMergeUploadPath>
<SessionTempPath>&dataPath;\temp\sessions</SessionTempPath>
<FormatUploadPath>&dataPath;\upload\formats</FormatUploadPath>
<MailMergeDownloadPath>&dataPath;\download\mailmerge</MailMergeDownloadPath>
```

Settings for Letters (Mail Merge)

Learn to create mail merge.

For information on creating mail merge letters in Aurea CRM web, see [Letters & Mail Merge](#) in the *Aurea CRM web Administrator Guide*.

Microsoft Word must be installed on the client computers to use this functionality. For information on the supported Microsoft Word versions, see *System Requirements* available from <https://support.aurea.com> (web section).

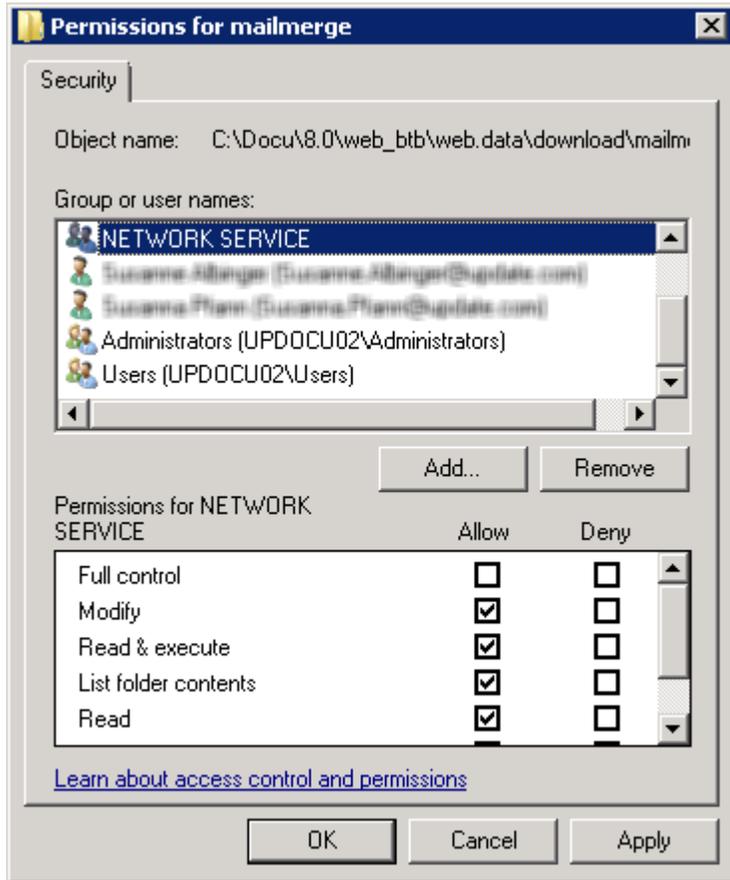
The mail merge is executed by `CRM.launcher`, which has to be downloaded and installed by the user, see [CRM.launcher](#).

The paths for up- and downloading mail merge documents need to be specified in the `settings.xml` file:

```
...
<update.web>
...
<MailMergeUploadPath>&dataPath;\upload\mailmerge</MailMergeUploadPath>
<MailMergeDownloadPath>&dataPath;\download\mailmerge</MailMergeDownloadPath>
```

The IIS_IUSRS (or NETWORK SERVICE) user needs at least Modify rights to be able to upload documents to the server.

1. Open the file explorer and navigate to the ..\mailmerge directory.
2. Right-click on the folder and select **Properties**. On the **Security** tab, click **Edit**, then **Add** to add the user and check the desired permissions (at least "Modify" rights are required).



3. Click **OK** to confirm.

Creating the Special Users for Aurea CRM web

Learn to create special user for Aurea CRM web

Aurea CRM web requires two dedicated users:

- WWW
- SPECIAL

You need to assign these special users to two different Aurea CRM users with the **User Configuration** tool, see [CRM.users tool](#).

WWW User

This account establishes a connection to Aurea CRM before a user actively logs on with his user name and password.

For security reasons, this is a "shadow account". You are not allowed to log on directly to Aurea CRM web using the shadow account's user name and password.

To enhance security even more, you can change the WWW user's name.

To run Aurea CRM web, create a rep and login record for the WWW user in the Aurea CRM win **Rights** module, see [Defining Reps](#) in the *CRM.core Administrator Guide*.

Assign the WWW user to his Aurea CRM user (login name and password) with the **User Configuration** tool, see [CRM.users tool](#) .

SPECIAL User

You must grant full access to all Aurea CRM info areas to this user. Aurea CRM web uses this user internally when the rights of the active users are not sufficient for a required task, e.g. for data model enumerations, etc.

The SPECIAL user is a "shadow account" as well. In order to enhance security even more, change the SPECIAL user's name (e.g. MY_SPECIAL) and map the user with the User Configuration Tool, see [CRM.users tool](#).

The SPECIAL user is used when changing the password at login. Make sure you enable the CRM process 1.5.2.2.1.6. "Manage Logins" (CRM process ID 70000310) for this user's rep record, otherwise Aurea CRM web users are not able to change their password.

Maintenance User

If defined, the maintenance user is used by Aurea CRM web functions that write to the CRM.designer database:

- Editing field names in Aurea CRM web, see [Data Model](#) in the *Aurea CRM web Administrator Guide*.
- Updating catalogs, data model and roles and CRM processes via Aurea CRM web and CRM.bulkloader, see [CRM.designer Maintenance](#) and [Data Model, CRM Processes, Roles and Catalogs](#) in the *Aurea CRM web Administrator Guide*.

To perform these actions using the maintenance user instead of the currently logged-in user:

1. Create a rep and login record for the maintenance user.
2. Assign the maintenance user to his Aurea CRM user (login name and password) with the **User Configuration** tool, >> .

Using a maintenance user is recommended in all cases where more than one person is allowed to modify the data model and/or the CRM.designer database.

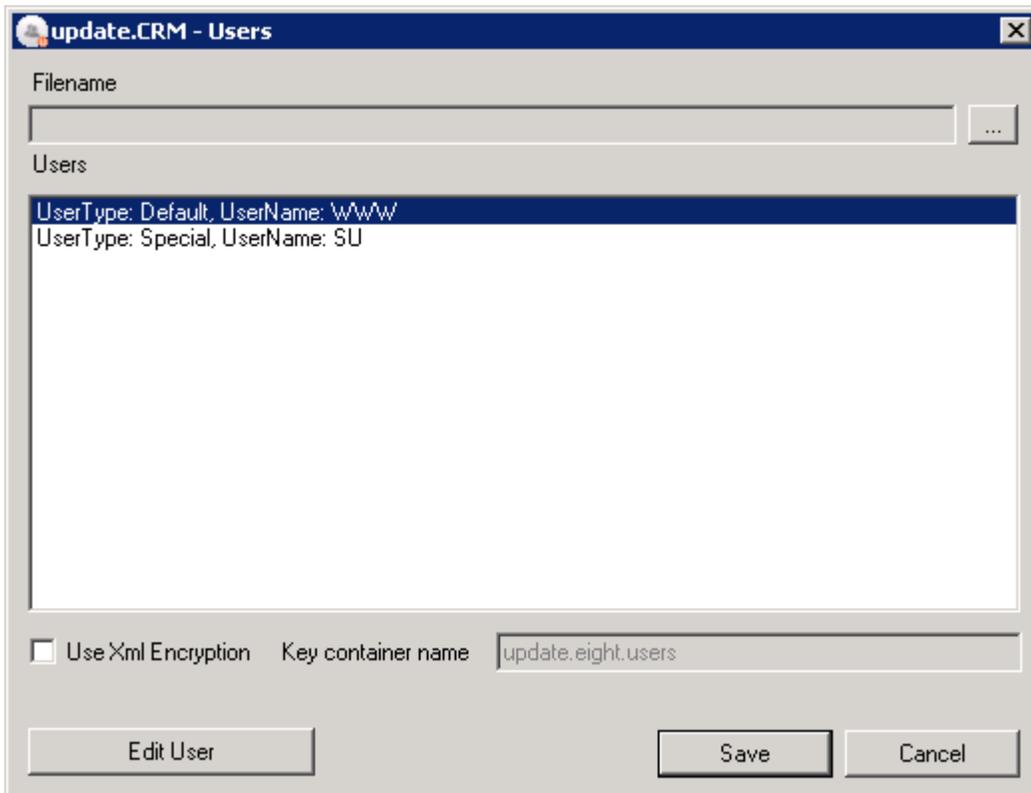
Note: Do not define the SU as maintenance user.

CRM.users tool

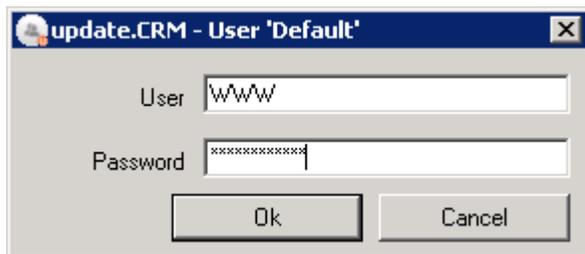
Map the special users (WWW, Special, Server and Maintenance users) and their passwords with the **CRM.users tool** (`..\bin\update.Users.exe`).

The encrypted credentials are stored in the `users.xml` file stored in `..\system\settings` directory.

You are prompted to enter the path to the `users.xml` file when starting CRM.users tool.



1. Select the user and click **Edit User**.



2. Assign an Aurea CRM user name and password to the special user.

Note: It is strongly recommend to change the default settings of Aurea CRM web. By default, WWW is assigned to the Default user and SPECIAL user is assigned to the SU, both with blank passwords.

For information on the command line parameters for available `update.Users.exe`, see [CRM.users tool](#) in the *CRM.core Administrator Guide*.

For more information on the `users.xml` file, see the article “How to use users.xml” at <https://support.aurea.com>

Linking Reps (Users) to Persons

Learn to link users to person (KP) records in the Aurea CRM database.

You need to link users to person (KP) records in the Aurea CRM database, otherwise the users cannot log on to Aurea CRM web.

To define a user, create a rep record (**Administration > Reps**) and a login (**Configure login** context menu entry).

To link the user to a person record, select the person in the **Person** field of the rep record.

Note: The special users (SU, WWW etc.) do not need to be linked to a person (KP) record.

Mail Server and E-Mail Authentication

Learn to configure SMTP connection on Aurea CRM web.

To use the **Send as E-Mail** function in Aurea CRM web, you need to configure an SMTP connection.

- For a company-internal exchange server using the default credentials (single sign-on):

Enter the mail server in the `settings.xml` file:

```
<update.crm>
...
<MailServer>
<!-- TODO! add your mail-server here -->
</MailServer>
```

- For an external mail server that doesn't accept the default credentials:

Leave the `<MailServer>` entry in the `settings.xml` empty.

1. Enter the mail server and connection settings in the `web.config` file or in the IIS.

In the `web.config` file use the `<mailSettings>` tag. For details, see <http://msdn2.microsoft.com/en-us/library/w355a94k.aspx>.

2. To enable SSL-Encoding, add `<MailServerSslEnabled>true</MailServerSslEnabled>` to the `settings.xml`.

Note: To send email in a language other than the default languages, you should use UTF-16 encoding for the template document. For example, to send a mail in Cyrillic, encode the HTML template document in UTF-16.

Sort Order for Variable Catalogs

Learn about variable catalog sorting.

By default, the values of variable catalogs are displayed in alphabetical order (when selecting them in catalog fields). Depending on the query type and the defined criteria, the alphabetic sort order may impact the performance. In such cases Aurea recommends to sort by catalog value code.

Enter the following parameter in the `settings.xml` file to sort the catalog values by code:

```
...  
<update.crm.core>  
...  
<CatalogSortType>ByCode</CatalogSortType>
```

In addition, variable catalogs can be sorted "manually" using the Aurea CRM win **Maintenance** module (see [Editing Variable Catalogs](#) in the *CRM.core Administrator Guide*). This sort order overrules the default sort order.

Installing Hotfixes

Learn to install hotfixes.

See the "Installing Hotfixes" document available from <https://support.aurea.com> for details on installing hotfixes.

Files included in the "no update" list are not updated (overwritten) by the hotfix installation process and, therefore, changed files are not discarded.

The "no update" list contains:

- For Aurea CRM web:
 - `customFields.xml`
 - `mimeType.xml`
 - `Offline.xml`
 - `users.xml`
 - `settings.xml`
 - `web.config`
- For CRM.designer:
 - `settings.xml`

These "no update" files are stored in the `\update_to_check\web` directory, which has the same subdirectory structure as the Aurea CRM web installation.

After the setup process, you must compare the files in the `\update_to_check\web` directory with the original files in the `\backup` directory. The comparison ensures that any new settings, parameters etc. introduced by update is transferred to the original files. Compare the files with an appropriate tool, e.g. WinDiff. New files or files with changed content must be manually copied to their destination, and, if necessary, you must apply the appropriate changes (e.g. add new parameters) to your files.

Users may need to delete the temporary internet files (browsing history) from their browsers, otherwise JavaScript errors may occur after a version upgrade.

Client-side Installation

Learn about the client-side installations for Aurea CRM web.

The Aurea CRM web default installation does not require any manual client-side installation. However, for some features the client has to reach out of the web browser's sandbox. For these features CRM.launcher has to be installed.

CRM.launcher

The following features of Aurea CRM web require plug-ins hosted by CRM.launcher:

- Document check-in/-out, editing, mail merge and quick campaigns
- Using CRM.phone with Aurea CRM web
- Aurea CRM web offline

The CRM.launcher setup is part of the Aurea CRM web installation (`..\data\plugins\CRM.launcher.exe`). If the user tries to use one of the features listed above, he is requested to download and install this file.

Alternatively you can pre-install CRM.launcher using the software distribution of your choice.

Note: The CRM.launcher setup requires .NET framework 4.5. If .NET framework 4.5 is already installed on the client, setup can be executed within the user context. Otherwise setup is installed .NET framework 4.5.

This installation requires administrator rights.

For information on CRM.launcher, see [CRM.launcher](#) in the *Aurea CRM web Administrator Guide*.

Browser Settings

The following browser settings must be enabled in order to use Aurea CRM web:

- Cookies
- JavaScript
- Allow popup windows

Browser Cache

To improve performance, modern web browsers implement sophisticated caching strategies. Sometimes this aggressive caching can lead to problems after installing an upgrade on the server. The problem is caused by clients using outdated JavaScript files, and often appears in the form of erratic JavaScript errors.

To fix this problem, clients have to explicitly delete the files cached by their browser. Please refer to the documentation of the browser vendor for details on how to do this.

Microsoft Office

Aurea CRM web comes with predefined reports for Microsoft Office. The report for Microsoft Excel requires Excel 2010 or higher, and the report for Microsoft Word requires Word 2010 or higher.

Configuring CRM.phone for Aurea CRM web

Learn to configure CRM.phone for Aurea CRM web.

CRM.phone must be installed on every client that should be able to use CRM.phone in combination with Aurea CRM web. For details, see [CRM.phone Installation Guide](#).

To enable the CRM.phone panel in Aurea CRM web, you need to assign a phone profile to your users (**Rep** info area).

If you have defined multiple phone profiles for your users and want them to be able to change their phone profile when logging in, set the `<ChangePhoneProfile>` entry in the `settings.xml` (`<update.portal>` section) file to `true`.

To integrate CRM.phone with Aurea CRM web, add the `A_CallNumberWiz` menu action to the context menus of your choice, see [Menus](#) in the Aurea CRM web Administrator Guide.

CRM.phone profiles for users are cached when the first call for a user profiles occurs. On receiving a phone search request, the handler checks the cache first, if the required phone profile record is not found in the cache, it reads users phone profile record and stores it in the cache. The number of CRM.phone profile records that can be stored in the cache is set in the `Phone.PhoneBook.CacheMaxRecord` web configuration parameter. Default value is 3000 and is also the maximum value. When the maximum value is exceeded then the oldest record in the cache is purged and the new record added. The cache behavior can be configured using the `Phone.PhoneBook.CacheSetting` web configuration parameter.

For more information on the parameters see, see [Web Configuration, Web Configuration Parameters, Phone Parameters](#) in the *CRM.Web Administrator Guide*.

Settings.xml

Settings.xml for Aurea CRM.designer and Aurea CRM.web.

CRM.designer

The `settings.xml` file is located in the `.. \web\settings\` folder of your CRM.designer installation.

Note: You need to reset the IIS after modifying the `settings.xml`.

Use CRM.cryptographic tool to encrypt (part of) the `settings.xml` file, e.g. to encrypt the connection string, see [CRM.cryptographic tool](#) in the *CRM.core Administrator Guide*.

The `settings.xml` file may contain the following entries:

designerDsn

```
<!ENTITY designerDsn "Provider=SQLOLEDB;Data Source=<db-servername>;Initial
Catalog=<databasename>;UID=<username>; PWD=<password>">
```

The connection string to the CRM.designer database. Automatically entered during setup.

<update.lib> section

<Logging>

```
<Logging>
...
  <Writer name="fileLogWriter"
    type="update.Lib.Logging.Writers.FileLogWriter,update.Lib"
    filePath="&dataPath;\log\&logFile;"
```

```
    />  
    ...  
</Logging>
```

Configures the logging of CRM.designer. For details, see [Server Log](#) on page 73.

<update.configuration.designer> section

<EnableVerticalBase />

Enable this tag to display the Base vertical in the **Vertical** drop-down list on the CRM.designer main page.

<FixedVertical>

```
<!--  
    FixedVertical:  
    Possible values: "Base", "BB", "BC", "FS"  
-->  
<!--  
<FixedVertical>BB</FixedVertical>  
-->
```

Use this entry to set the Vertical drop-down list to a fixed vertical.

<EnableAnonymousAccess />

Determines that CRM.designer is accessible without login. This setting is overruled by the **Enable Anonymous Access** check box on the **Settings** page, see [Settings](#) in the *Aurea CRM web Administrator Guide*.

DefaultCommandTimeout

This parameter controls the default timeout of a designer database query. If it is not specified a designer database connection query timeouts in 30 seconds. The following sample configuration illustrates the connection timeout setting for CRM Designer database query connection:

```
<!-- settings of update.configuration-->  
    <update.configuration>  
        <OleDbDsn>&designerDsn;</OleDbDsn>  
        <Vertical>&VERTICAL;</Vertical>  
        <VersionCheckOff>true</VersionCheckOff>  
        <DefaultCommandTimeout>120</DefaultCommandTimeout>  
    </update.configuration>
```

Aurea CRM web

The `settings.xml` file is located in the `..\system\settings\` folder of your Aurea CRM web installation.

Note: You need to reset the IIS after modifying the `settings.xml`.

Use CRM.cryptographic tool to encrypt (part of) the `settings.xml` file, e.g. to encrypt the connection string, see [CRM.cryptographic tool](#) in the *CRM.core Administrator Guide*.

The `settings.xml` file may contain the following entries:

designerDsn

```
<!ENTITY designerDsn "Provider=SQLOLEDB;Data Source=<db-servername>;Initial
Catalog=<databasename>;UID=<username>; PWD=<password>">
```

The connection string to the CRM.designer database. Automatically entered during setup.

<update.lib> section

<Logging>

```
<Logging>
...
  <Writer name="fileLogWriter"
    type="update.Lib.Logging.Writers.FileLogWriter,update.Lib"
    filePath="&dataPath;\log\&logFile;"
  />
...
</Logging>
```

Configures the logging of Aurea CRM web. For details, see [Server Log](#) on page 73.

<update.crm> section

<MailServer>[enter the name of your mail server here]</MailServer>

Specify the mail server used for Aurea CRM web' **Send as E-Mail** function, see [Mail Server and E-Mail Authentication](#) on page 51.

<SupportEmailAddress>support@mycompany.com</SupportEmailAddress>

Add this element to provide an e-mail address where users can request support. This address is displayed on the login screen if a login attempt fails, and on the **System Information** page.

The help text displayed on the login screen after a failed login attempt is text no. 13 from text group `login_text`. If `<SupportEmailAddress>` is not defined, no help text is displayed.

<update.crm.base> section

<DefaultLanguage>eng</DefaultLanguage>

Determines Aurea CRM web's default language (default = eng). Use the three-character language codes, see [Language IDs](#) in the *CRM.core Administrator Guide*.

<CoreSystemFolder>[path]</CoreSystemFolder>

Add this element if you run multiple customer instances on one Aurea CRM web installation (SaaS environment). Use `<CoreSystemFolder>` to specify the path to the customer's `.. \system\sys` directory. You can specify an absolute path or a path relative to the application's base directory. The path may contain environment variables.

<update.crm.core> section

<update.crm.core

type="update.Crm.Core.&Vertical;.Application,update.Crm.Core.&Vertical;">

Determines the path to the `update.Crm.Core.[Vertical].dll`

<DisableCoreApplicationLogging />

By default core log messages of Aurea CRM web are written to the log file of Aurea CRM web (`web.log`). Uncomment this entry to disable this behavior.

<CatalogSortType>

```
<CatalogSortType>ByCode</CatalogSortType>
<!-- or
<CatalogSortType>ByText</CatalogSortType>
-->
```

Determines the default sort order for values of variable catalogs in Aurea CRM web. If undefined, `ByText` (i.e. alphabetical sort order) is used as default.

In addition, variable catalogs can be sorted "manually" using the Aurea CRM win **Maintenance** module (see [Editing Variable Catalogs](#) in the *CRM.core Administrator Guide*). This sort order overrules the default sort order.

<update.web> section

<MailMergeDownloadPath>&dataPath;\download\mailmerge</MailMergeDownloadPath>

The path used to store template documents for mail merge letters enabling clients to download them.

<DocumentCacheDurationInSeconds>10</DocumentCacheDurationInSeconds>

The time (in seconds) browsers are allowed to cache downloaded documents.

Note: Setting `<DocumentCacheDurationInSeconds/>` to a value `<= 0` disables the cache. This has a serious impact on performance and might also facilitate a DoS (Denials of Service) attack. Disabling the cache is therefore **not** recommended for productive environments.

<CanChangeRoles>true</CanChangeRoles>

If set to `true`, users can select login roles when logging on to Aurea CRM web.

Default: `false`.

<CanChangePhoneProfile>true</CanChangePhoneProfile>

If set to `true`, users can select phone profiles when logging on to Aurea CRM web.

Default: `false`.

<CanChangeLanguage>true</CanChangeLanguage>

If set to `true`, users can select languages after login.

Default: `false`.

This only applies when using the URL parameter `language=*`, see [URL Parameters](#) in the *Aurea CRM web Administrator Guide*.

<NavigationSecurity />

Add this element to define a Black/White list for external web pages accessed by Aurea CRM web, see [Black/White List for External Pages](#).

<TerminateOnApplicationEnd />

Add this element to define exit reasons for for ending (and restarting) the IIS worker process, see [Process End on Application_End](#).

<update.configuration> section**<XMLFilePath>**

```
<XMLFilePath>C:\temp\xml</XMLFilePath>
```

Add this entry to specify the default path for XML up-/downloads.

3

Settings and Tuning

Learn about settings and tunings for Aurea CRM Web.

Below are some of the required settings:

IIS Application Settings

Content Expiration

To avoid that clients have to download the same static files every time they navigate to Aurea CRM web it is strongly recommended to enable a content expiration on all static content.

Setting the content expiration allows web browsers to cache the content for the specified time period before requesting it again from the server.

Note: You should adapt the value for content expiration to match your upgrade cycle, otherwise clients might be required to manually clear their caches in order to get the most recent scripts, images and CSS styles, see [Browser Cache](#).

If you have installed Aurea CRM web using the setup process, the content expiration is set to one day for the following directories: `\images`, `\scripts`, and `\styles`.

Use IIS Manager to change the content expiration of files or directories. Select the Aurea CRM web directory, open the **Properties** dialog box, and set the content expiration in the **HTTP Responses Headers** tab (**Set Common Headers** action).

Application Protection / Application Pool

If you have installed Aurea CRM web using the setup process, the following web application structure is created in IIS: A new application pool is created by the setup process. By default, the application pool is named "update_CRMweb". You can specify another name during the setup process, see [IIS Virtual Directory and IIS Application Pool](#).

If you want to run more than one Aurea CRM web application on one web server, you have to configure them to use different application pools. If you want to have multiple web applications using the same physical folder, you have to use environment variables `%APPLICATIONPOOL%` and `%PID%` (= Process ID) in all paths specified in `settings.xml`, to ensure that web applications won't block each other by locking files.

Session Timeout

After a certain period of inactivity, a user loses his session and must then log on again. To ensure that the user does not lose his session, you have to increase the default value for the session timeout. Adjust these settings using IIS Manager.

Note: Increasing the session timeout leads to a higher memory load on your server.

Aurea CRM web Settings

Jobs.PollingInterval Configuration Parameter

The `Jobs.PollingInterval` Web Configuration parameter defines how often Aurea CRM web clients contact the server for new data (e.g. Reminders or To-Dos). By default this setting can be changed by all users in Aurea CRM web (**User Configuration > Handling > Check for new records every min.**).

The default value of `Jobs.PollingInterval` checks for new records every 30 minutes. If this value is reduced for a significant number of users, performance decreases as database access rises. It is recommended to set a reasonable interval and to prevent users from changing it (by removing the corresponding option from the mask (`UserConfig` layout), see [Configuration Layouts](#) in the *Aurea CRM web Administrator Guide*.

Aurea CRM win Settings

Rights Settings

When a user logs on, a new **Internet Interest** record is created. Therefore, each Aurea CRM user must have "New", "Update" and "Read" rights for the **Internet Interest** (I1) table, otherwise the login fails.

Every Aurea CRM rep is assigned to an Internet Interest at login, therefore, this table must be fully accessible (without conditions). Every rep must have "Read" and "Write" rights for the I1 table. The same applies to the I9 table.

Number of Visible Reps

If a user has access to too many reps (approximately 300 or more), the rep picker in Aurea CRM web can become rather slow when opened for the first time in a session (this is a known issue).

You can limit the number of reps for a user. It is suggested that users only have access to the reps they really need. This can be accomplished using the Aurea CRM win **Rights** module.

Configuration Table (MC) Entries

The following entries of the **Configuration** table (MC) only work as a global setting in Aurea CRM web, but not when defined for a user or group:

- **General Settings > Start of Fiscal Year**
- **Country Table > Disconnect Field from Country Table**
- **General Settings > RepOff**

Configuring Single Sign-On

Aurea CRM web

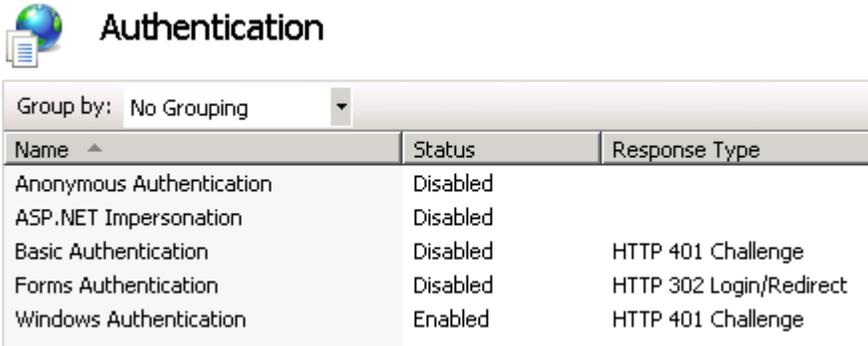
Aurea CRM web supports single sign-on with the Active Directory. You need to enable single sign-on per user in the **Login** (US) info area (s. below).

To enable single sign-on for Aurea CRM web:

- Configure single sign-on in the **Login** info area (US): For each user enter the appropriate values for **Domain** and **Windows User Name**, see [Configuring Logins](#) in the CRM.core Administrator Guide.

Note: You can access the **Login** info area from Aurea CRM web (**Administration > Logins**) or from the Aurea CRM win **Rights** module (**Rep > Configure Login**).

- In IIS Manager:
 1. Select the Aurea CRM web site.
 2. Select **Authentication**.
 3. Set "Anonymous Authentication" to "Disabled" and "Windows Authentication" to "Enabled".



The screenshot shows the IIS Manager 'Authentication' settings for a web site. At the top, there is a 'Group by' dropdown menu set to 'No Grouping'. Below this is a table with three columns: 'Name', 'Status', and 'Response Type'. The table lists five authentication methods: Anonymous Authentication, ASP.NET Impersonation, Basic Authentication, Forms Authentication, and Windows Authentication. The 'Status' column shows 'Disabled' for the first four and 'Enabled' for Windows Authentication. The 'Response Type' column shows 'HTTP 401 Challenge' for Basic and Windows Authentication, and 'HTTP 302 Login/Redirect' for Forms Authentication.

Name	Status	Response Type
Anonymous Authentication	Disabled	
ASP.NET Impersonation	Disabled	
Basic Authentication	Disabled	HTTP 401 Challenge
Forms Authentication	Disabled	HTTP 302 Login/Redirect
Windows Authentication	Enabled	HTTP 401 Challenge

Note: The IIS web server needs to be located in the same domain as the users. On Windows 2008 Server you need to deactivate the advanced security settings for single sign-on to Aurea CRM web to work.

For information on how to configure a browser for single sign-on, see the article "How to Configure browsers for single sign-on" at <https://support.aurea.com>.

CRM.bulkloader

For CRM.bulkloader to work with single sign-on, change the configuration file `..\crm.services\web.config` as follows:

- Change the value of the `clientCredentialType` attribute from `None` to `Windows`.

CRM.designer

For information on how to configure single sign-on for CRM.designer, see the article "How to Enable SSO in designer" at <https://support.aurea.com>.

Start Page Redirect

When using both Aurea CRM web and CRM.mobile, you can define rules for automatically redirecting your users to the appropriate application depending on the device they currently use, i.e. automatically start CRM.mobile if they access Aurea CRM web's URL on a smartphone. For details, see https://support.aurea.com/wiki/index.php?title=Start_Page_Redirect.

The conditions for redirecting to CRM.mobile are defined in the `startPageRedirect.xml` file (located at `..\system\settings`). `startPageRedirect.xml` is included in Aurea CRM web's `settings.xml`.

Note: This feature is deactivated by default.

The redirect logic only works if the root of the Aurea CRM website (i.e. `default.aspx`) is accessed; if the user directly accesses e.g. `http://<server name>/update-CRM_web/start.aspx`, Aurea CRM web is started regardless of the used device.

Security Settings

Black/White List for External Pages

To prevent phishing attacks when opening an external page, you can define a black/white list ensuring that a `RedirectPage` or URL action cannot be redirected to a harmful site.

In the `<update.web>` section of the `settings.xml` file, define a `<NavigationSecurity>` element containing black/white listed pages.

```
<NavigationSecurity unguardedNavigation="Warning">
  <RegexDictionaryEntry>
    <Key>www.my-good-website.com</Key>
    <Value>Allow</Value>
  </RegexDictionaryEntry>
  <RegexDictionaryEntry>
    <Key>www.areyousure.org</Key>
    <Value>Warning</Value>
  </RegexDictionaryEntry>
  <RegexDictionaryEntry>
    <Key>www.buy-me.com</Key>
    <Value>Deny</Value>
  </RegexDictionaryEntry>
</NavigationSecurity>
```

Available values:

- **Allow:** The page is opened (in a new tab).
- **Warning:** A prompt asks the user if the page should be opened.
- **Deny:** A message is displayed informing the user that the page can not be opened.

Use the `unguardedNavigation` attribute to define the default behavior for pages for which no entry exists.

Note: The black/white list is **not** applied to external links opened from within records.

Due to its security handling, Google Chrome displays pages flagged with 'Allow' and pages flagged with 'Warning' differently: If you have defined two URL actions both with target e.g. set to `_blank`, the URL flagged with 'Allow' is opened in a new window, the URL flagged with 'Warning' is opened in a new tab.

Process End on Application_End

You can define conditions for ending (and restarting) the IIS worker process, e.g. changed file in the `..\bin` directory.

In the `settings.xml` in the `<update.web>` section define a `<TerminateOnApplicationEnd/>` element containing the exit reasons.

Example:

```

<TerminateOnApplicationEnd>
<ExitOn>
<ExitReason>BinDirChangeOrDirectoryRename</ExitReason>
<ExitReason>BrowsersDirChangeOrDirectoryRename</ExitReason>
<ExitReason>ChangeInGlobalAsax</ExitReason>
<ExitReason>ChangeInSecurityPolicyFile</ExitReason>
<ExitReason>CodeDirChangeOrDirectoryRename</ExitReason>
<ExitReason>ConfigurationChange</ExitReason>
<ExitReason>HttpRuntimeClose</ExitReason>
<ExitReason>InitializationError</ExitReason>
<ExitReason>MaxRecompilationsReached</ExitReason>
<ExitReason>None</ExitReason>
<ExitReason>PhysicalApplicationPathChanged</ExitReason>
<ExitReason>ResourcesDirChangeOrDirectoryRename</ExitReason>
<ExitReason>UnloadAppDomainCalled</ExitReason>
<!-- No exit for the following-->
<!--ExitReason>BuildManagerChange</ExitReason-->
<!--ExitReason>HostingEnvironment</ExitReason-->
<!--ExitReason>IdleTimeout</ExitReason-->
</ExitOn>
</TerminateOnApplicationEnd>

```

For details on all available exit reasons, >> <http://msdn.microsoft.com/en-us/library/system.web.applicationshutdownreason.aspx>.

Including stack trace reports in Server Channels Exception messages

By default CRM.Web does not include stack trace information along with exception messages generated by a CRM application, in the reports sent to the clients. To enable stack trace reports to be included along with exception messages, you have to set `EnableStackTrace` option to `true` in the `settings.xml` file. The following sample shows the `ExceptionSettings` element with the `EnableStackTrace` option set to `true`.

```

<update.lib>
  <ExceptionSettings>
    <EnableStackTrace>TRUE</EnableStackTrace>
  </ExceptionSettings>
</update.lib>

```

Disabling HSTS (HTTP Strict Transport Security) Policy

HTTP Strict Transport Security (HSTS), a web security policy mechanism is enabled by default in Aurea CRM. HSTS protects Aurea CRM against protocol downgrade attacks and cookie hijacking. It is an IETF standards track protocol and is specified in RFC 6797. Once a client establishes a secure (HTTPS) connection with CRM.Web, the HSTS (HTTP Strict Transport Security) policy is enforced to ensure that the client continues to use SSL or TLS connections and does not switch to a non-secure connection.

If you do not want to enforce HSTS, you can disable it by setting the `DisableHSTS` parameter to `true` in the `settings.xml` file. See the sample code below:

```

<update.lib>
  <WebSecuritySettings>
    <DisableHSTS>TRUE</DisableHSTS>
  </WebSecuritySettings>
</update.lib>

```

Using HTTPS to Connect to Aurea CRM.Web Limits the Scope of the Cookies to Secure Channels

From v10.1.0 release of Aurea CRM.Web, when a client uses the https channel then Aurea CRM limits the scope of the cookie to the secure channel, HTTPS (HTTP over Transport Layer Security (TLS) [RFC2818]) in this case. Later, if the same client tries to use HTTP to connect to Aurea CRM.Web, the connection attempt fails until the client clears the cookies. This is because once the scope of an established cookie is restricted to a secure channel, then the cookie is not transmitted over an unsecured channel like HTTP.

Enabling Cross Site Request Forgery (CSRF) Protection

Aurea CRM.Web provides the element `<EnableCsrfProtection/>` in the `settings.xml` file that can be set to `true` to enable CSRF protection. Aurea CRM.Web uses the **Cookie-to-Header Token** method to prevent cross site forgery attacks. This method relies on the **same origin policy**, which ensures that JavaScript within the same origin can read the cookie's values.

This method uses a random header token that is generated by the server when a user logs in and is included by the client in all its request to the server for the duration of this session. JavaScript that belongs to the same origin on the client side can read this token value and include it in the custom header when it sends a transaction request. The assumption here is that the javascript running from a rogue file does not have the **X-Csrf-Token** header, because it cannot read the **Csrf-token** cookie, as it is not from the same origin. Consequently its transaction request is not honored by CRM.Web and the CSRF attack fails.

Important: This option is set to `false` by default. All customer side extension software (including client browsers) that send requests to CRM.Web must be adapted to use the **Cookie-to-Header Token** method before enabling this option.

For more information, see:

- [Cross-site request forgery](#) for the **Cookie-to-Header Token** method
- [Same-origin policy](#)

HTTP Post Method for Data Manipulations

Aurea CRM enforces HTTP POST requests for all channel methods to prevent CRSF (Cross Site Request Forgery) attacks that exploit the HTTP GET method. All HTTP GET requests are by default converted to a HTTP POST request. This prevents malicious users from posting HTTP GET requests on channels that manipulate data.

The HTTP POST method is not enforced on the following channel methods:

- `TypesChannel.GetTypes`
- `ApplicationChannel.GetStartupData`
- `ApplicationChannel.GetLoginSettings`
- `SettingsChannel.Find`
- `ConfigurationChannel.GetTexts`
- `AdministrationChannel.GetSystemInfo`

You can disable the HTTP POST request enforcement by setting the `DisableHttpMethodTypeProtection` option to `false` for a channel endpoint.

Note: Aurea strongly recommends that you do not disable HTTP POST request enforcement in production environments. Allowing the Http GET method, opens the door to CSRF attacks even when CSRF protection is enabled. For more information on enabling CSRF protection, see [Enabling Cross Site Request Forgery \(CSRF\) Protection](#).

A sample configuration disabling the HTTP POST enforcement in the `settings.xml` file is shown below:

```
<update.web.base>
  <ChannelEndpoint>
    <!--
      If DisableHttpMethodTypeProtection is enabled all Channels start to
      serve for any Http
      Method type,even it is configured to serve Http POST only. This option
      is not
      recommended for production usage.
    -->
    <DisableHttpMethodTypeProtection>
      false
    </DisableHttpMethodTypeProtection>
  </ChannelEndpoint>
</update.web.base>
```

Enabling X-Powered-By ASP.Net and Other version headers in HTTP response

The following headers are disabled by default in a HTTP response:

- **Server:** Details of the web server hosting Aurea CRM. For example, “Microsoft-IIS/7.5”.
- **X-Powered-By:** One or more application frameworks being run by site hosting Aurea CRM. For example, “ASP.NET”, “PHP/5.2.17” and “UrlRewriter.NET 2.0.0”.
- **X-AspNet-Version:** Header from an ASP.NET. For example, “2.0.50727”, “4.0.30319” and “1.1.4322”.

To enable one or more of the above headers, you can add the application settings key `DisableResponseHeaders` in the `Web.Config` file. Add the response headers you want to specifically disable to the key value separated by a “;”. See the examples below:

To enable all three headers:

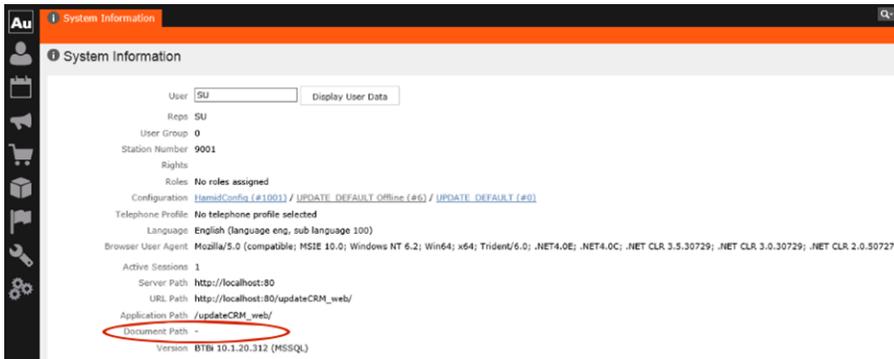
```
<add key="DisableResponseHeaders" value=""/>
```

To enable the Server header:

```
<add key="DisableResponseHeaders" value="X-AspNet-Version;X-Powered-By"/>
```

Displaying a Document's Path in System Information

As a security measure, by default, Aurea CRM.Web System Information page (**Settings**  > **System Information**) does not display the path on the server where the uploaded documents are kept. See the screenshot below:



To display the document path set the web configuration parameter `Security.Hide-PathInformation` to `False`.

Enabling Protection from Session Hijacking

To prevent a user's live session from being hijacked, you can ensure that all session requests are originating from the same IP address that the user logged in and the User-Agent String value remains the same during the session.

To enable this protection, set the `<SessionHijackingProtection>` element in the CRM.Web's `settings.xml` file, as shown below:

```
<update.web>
  <SessionHijackingProtection validateClientIpAddress="true"
  validateClientUserAgentString="true" />
</update.web>
```

Note: You can enable one or both of the validation checks for a user's session.

4

Aurea CRM web Install Checker

Aurea CRM web includes an install checker that detects the most common problems and provides hints for solutions.

Install Checker runs every time the web application starts. It remains silent unless it detects a problem that prevents Aurea CRM web from starting.

What is checked?

- Does the directory `..\system` exist?
- Does the directory `..\system\sys` exist?
- The vertical and type of database. The DLLs in the `..\system` directory are checked. One (and only one) of the following DLLs must exist in the `..\system` directory:

```
system\update.Crm.Core.Bb.dll
system\update.Crm.Core.Bc.dll
system\update.Crm.Core.Fs.dll
```

- Do the following DLLs exist?

```
system\dm[DBVERSION].dll
system\mmdb.dll
system\mmdm.dll
system\mminit.dll
system\mm[DBVERSION].dll
system\mmstring.dll
```

[DBVERSION] is replaced by "ora" or "mss".

- Does the `..\system\sys\mmdb.ini` file exist?
- Is the content of the `..\system\sys\mmdb.ini` file correct?
- Does the `..\bin` directory exist?
- Does the `..\system\settings` directory exist?
- Does the `..\system\settings\settings.xml` file exist?
- Is the `settings.xml` file a valid XML document?
- Does the upload directory defined in the `/update.web/UploadPath` XML element of the `settings.xml` file exist?
- Does the session upload directory defined in `/update.web/SessionTempPath` XML element of the `settings.xml` file exist?
- Does the format upload directory defined in the `/update.web/FormatUpload-Path` XML file exist?
- Does the XML attribute "type" of the `<update.crm.core>` XML element exist?

-
- Does the DLL defined by the XML attribute "type" of the `<update.crm.core>` XML element exist?
 - Does the `/update.configuration/OleDbDsn` XML element exist?

Depending on the database version, the install checker checks in the `mmdb.ini` file the entries from the `[MM ODBC MSS]` section for MS SQL or from the `[MM ORA]` section for Oracle, see [mmdb.ini File for MS SQL/Oracle Databases](#) in the *CRM.core Administrator Guide*.

The following settings are checked:

The `LOGINID` (`ID` for Oracle) entry must not be empty.

The `DATASOURCE` (`HOSTSTRING` for Oracle) entry must not be empty.

If the `PASSWORD` entry is empty, a warning is displayed.

For MS SQL these three entries may be replaced by a connection string:

```
CONNECTION=Driver=SQL Server;Server=[database server];Database=BTB80;UID=[user id];PWD=[password];
```

If the `TABLEPREFIX` entry is empty, a warning is displayed.

If the `CASE_SENSITIVE` entry is empty or is not set to "off", a performance warning is displayed.

Note:

Install checker does not test for a valid database connection, if it detects a `PWD_ENCRYPTED` value in the `mmdb.ini` file as password encryption is handled by the core component.

A database connection is established using the information of these entries.

5

Troubleshooting

Troubleshooting tips.

Aurea CRM web is an ASP.NET application. For general tips on how to troubleshoot ASP.NET applications, see <http://support.microsoft.com/kb/815166>.

Determining the Web Application Identity Account

This section explains how to determine the web application identity account.

By default IIS is configured to execute Aurea CRM web in worker processes using "ApplicationPoolIdentity" accounts. See <http://www.iis.net/learn/manage/configuring-security/application-pool-identities> for details on application pool identities.

The user name of the application pool identity matches the name of the application pool as configured in IIS manager.

You can use Task Manager to list all running processes. In order to see the IIS worker processes click **Show Processes from all users** (requires administrative access). All IIS worker processes share the same value "w3wp.exe" in column **Image Name**. The column **User Name** displays the name of the application pool identity user.

Troubleshooting Steps

This section describes the troubleshooting steps.

1. Turn on the client log for both Aurea CRM web and CRM.designer, see [Client Log](#) on page 71.
2. Click **Settings > System Information** to view version, path, patch and information etc.
3. Clear the **Show friendly HTTP error messages** check box in Internet Explorer (**Internet Options > Advanced** tab) to get more detailed error messages.
4. Check the `web.log` and/or `designer.log` file(s) (located at `.. \ web.data \log`) for further information, see [Server Log](#) on page 73.
5. If you cannot determine the reason for the problem, increase the log level in the `settings.xml` file (e.g. "Info" or "Debug") and restart the IIS Application in order to activate the new settings.

```
<Channel logLevel="Warning"
writerName="fileLogWriter"
```

```
formatterName="webLogFormatter"
/>
```

Note: For available log levels, see [Server Log](#) on page 73.

6. Check the `web.log` file again.

Note: Remember to reset the log level after solving the problem. An increased log level results in a performance penalty for Aurea CRM web.

7. If you encounter problems that might be related to a certain user configuration (e.g. problems with context menus, application menu, “Page not found” errors), try to reproduce the problem with a user to whom the UPDATE_DEFAULT configuration is assigned.

Client Log

Learn about the client log.

For a detailed description of the client log, see the article “The client log” at <https://support.aurea.com>.

Start Aurea CRM web or CRM.designer with the URL parameter `?debug` to display the client log.

Use CTRL+F to search the log.

Filtering the Client Log

You can filter entries in the client log by selecting **Log > Filter**.

Click **Apply Filter** to apply your filter. Click **Clear Filter** to reset.

Syntax:

`+<facility name>` or `-<facility name>` (separate multiple expressions by comma)

You can identify the available facilities via the tool tips that are displayed on mouse-over the time entry at the beginning of each line.

Examples:

```
+process
```

The client log displays only process-related entries.

```
-process
```

The client log displays everything except process-related entries.

```
+process,+notifications
```

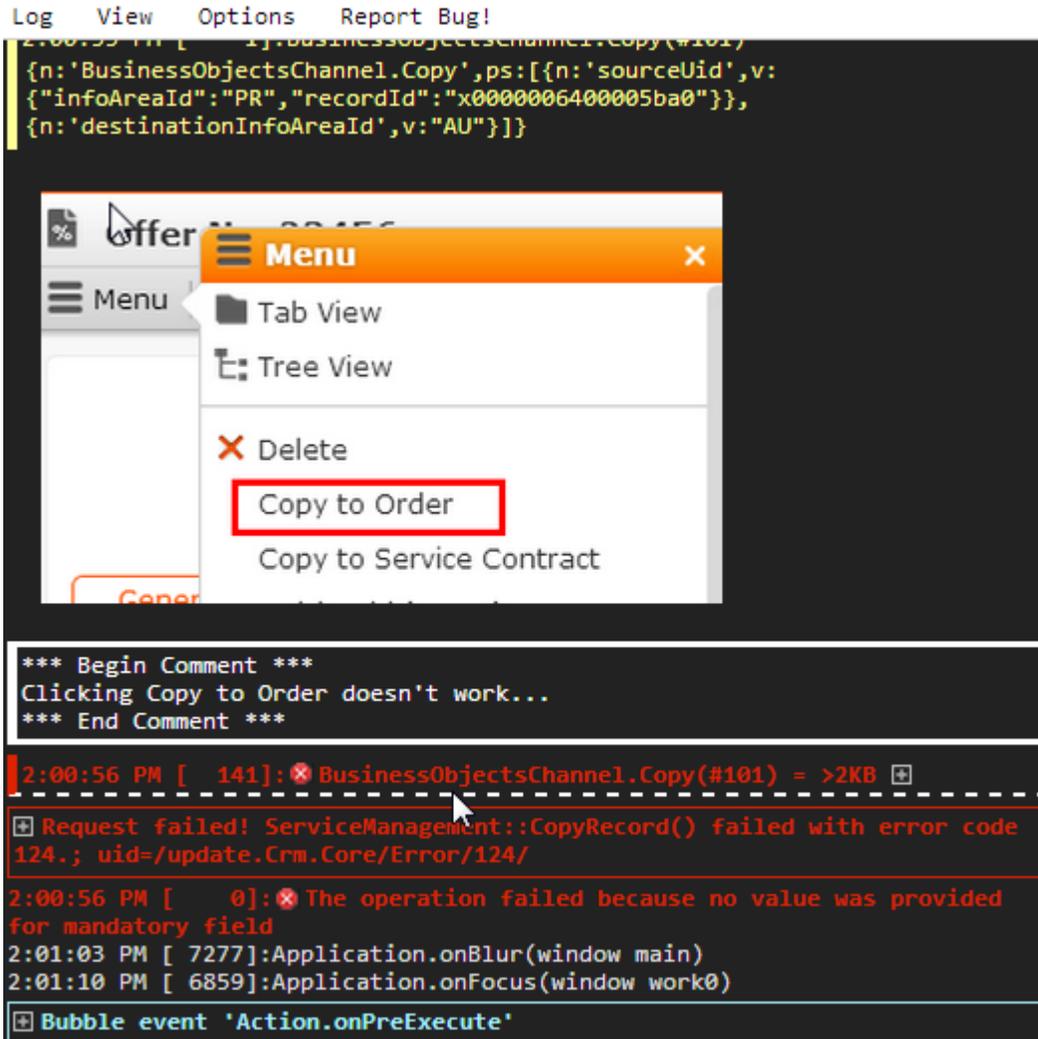
The client log displays process-related entries and notifications.

```
<300
```

Defines the log level: Only errors and warnings are visible in the client log. Use the following numeric values for log levels: error = 100, warning = 200, notice = 250, informational = 300.

Adding Screenshots and Comments

You can insert screenshots and comments into the client log. Click on the element for which you want to insert a screenshot or comment. A horizontal dashed line is displayed.



To insert screenshots:

1. Create screenshots and save them. Supported formats: PNG, JPG, BMP etc. - all formats supported by your browser.
2. Drag one (or more) screenshot(s) onto the client log window.

Alternatively, when using Google Chrome you can paste an image from the clipboard using Ctrl+V.

To add a comment:

1. Click **View > Comments**.
2. Enter the comment in the **Comment** field.
3. Click **Add Comment**.

The screenshot/comment is inserted at the dashed line. Comments are marked `*** Begin/End Comment ***`. If you did not select any element in the log, the screenshot/comment is inserted at the end of the client log.

To search for comments:

1. Enter `+comment` as filter expression.

To remove screenshots and comments:

1. Click the **✕ (Delete)** icon displayed for the element on mouse-over.

Creating a Bug Report

To include information from the client log when submitting **support calls**:

1. Click **Report Bug!** to create a bug report containing the log (with your screenshots and comments) as a download.

Attach this file to your support call.

Server Log

Learn about the server log.

By default, the server logs are written to the following files:

- CRM.designer: `..\web.data\log\designer.log`
- Aurea CRM web: `..\web.data\log\web.log`

For details on logging on the server, see the article “How to Configure Logging on the server” at <https://support.aurea.com>.

Logging is configured in the `settings.xml` file, stored in the `..\system\settings` directory. The XML element `<Logging />` contains the relevant settings.

```
<Logging>
...
<Writer filePath="..\web.data\log\web.log"
  name="fileLogWriter"
  maxSizeKB="8192"
  type="update.Lib.Logging.Writers.FileLogWriter,update.Lib" />
```

The log is written to the file specified by the `filePath` attribute. The log contains semicolon-separated output structured as follows:

```
Date;Time;Execution Span;Facility;Level;SessionID;Text
```

Adjust the `logLevel` attribute to increase/decrease the amount of information written to the log file:

```
<Logging>
...
<Channel logLevel="Info"
  fileLogWriter="fileLogWriter"
  formatterName="webLogFormatter" />
```

Possible values for `logLevel`: `NoLogging`, `Emergency`, `Alert`, `Critical`, `Error`, `Warning`, `Notice`, `Info`, `Debug`. Each level increases the amount of details logged.

Set the `facilityFilterExclude` attribute to a regular expression in order to filter which facilities are written to the log file.

Example: `<Logging facilityFilterExclude="(Configuration\.)">`

This excludes all output from facilities containing "Configuration."

Note: Using the Logging facility `Configuration.Unit` in debug mode logs (almost) all designer units requested by Aurea CRM web with their ID, configID and configuration name.

The core components of Aurea CRM can add additional information to the log (SQL statements, triggers, etc.). Check **Web Trace** in the **Station Configuration** (Aurea CRM win **Rights** module), to activate the statement log.

By default, session IDs are logged as unique random-generated numbers. Add `originalSessionId="true"` to the log formatter definition to get the real IDs from the session cookies. This setting is available only for the `webLogFormatter`.

In addition you can configure a **syslog** logger for central logging of multiple server (in an SaaS environment).

Example:

```
<Logging>
...
<Channel logLevel="Warning"
  logLevelDebug="Debug"
  writerName="sysLogWriter"
  formatterName="sysLogFormatter" />
<Writer name="sysLogWriter"
  host="127.0.0.1"
  port="514"
  protocol="udp"
  type="update.Lib.Logging.Writers.SysLogWriter,update.Lib" />
<Formatter name="sysLogFormatter"
  logException="true"
  logMemory="True"
  maxMessageLength="1024"
  type="update.Web.Logging.WebSysLogFormatter,update.Web" />
```

You can define a fallback log writer and timeout in the `<Channel>` node.

Example (syslog falling back to `web.log`):

```
...
<Channel writerName="sysLogWriter"
  fallbackWriterName="fileLogWriter"
  fallbackTimeout="0:05"
```

If an error occurs, logging automatically switches to the specified fallback writer. Logging periodically tries to reinitialize the original log writer. Default value for `fallbackTimeout` is 5 min.

Note: The value of `fallbackTimeout` is a .NET-compatible TimeSpan, e.g. for 5 minutes specify `0:05`, for 10 seconds specify `0:00:10`.

Hints

Troubleshooting hints.

Although IIS and .NET framework is installed, ASPX pages do not work.

The ISAPI for .NET is deactivated. This problem occurs when IIS was installed after installing the .NET framework.

To activate the .NET ISAPI, use `aspnet_regiis.exe`, by default located in `%WINDIR%\Microsoft.NET\Framework64\4.0.30319\aspnet_regiis.exe`.

Enter `aspnet_regiis.exe -i` in the command line.

Very unspecific HTTP error messages from IIS are displayed.

Clear the **Show friendly HTTP error messages** check box in Internet Explorer (Internet Options).

Error: Missing file settings.xml!

Check the following:

- In the `Web.config` file, whether the section `<settingsFile>system/settings/settings.xml</settingsFile>` contains the correct path to the `settings.xml` file.
- Whether the `settings.xml` file is valid XML.
- Whether the IIS worker process has sufficient rights to read the `settings.xml` file.

DB is NOT Open!! Error: -9, Cause: GlobalLogon: InitUser Failed - incorrect rights for user 'WWW'.

Reason: The WWW user has no rep assigned.

Solution: Assign a rep to the WWW user, see [WWW User](#).

System.Exception: Initial login failed with error -5, Standard-User ('WWW') does not exist in DB!

Possible reasons:

- the WWW user does not exist in in the database.
- the WWW user exists in the databse, but does not have a rep assigned or has a password assigned.

Solution: Reconfigure your Aurea CRM web installation. Start Aurea CRM win and try to log in with the WWW user.

System.Exception: Initial login failed with error -1, RRC_ALREADY_LOGGED_ON.

Possible reason: You are running multiple Aurea CRM web applications in the same application pool, which is not supported.

System.Exception: Initial login failed with error -6, check DSN configuration and security settings for Windows user!

Possible reasons:

- Invalid DSN configuration

Solution: Check the database connection and the content of the *.ini-files stored in ..\system\sys directory of Aurea CRM web.

- No TCP/IP connection to the SQL Server due to wrong or too restrictive firewall settings or wrong port configurations.
- The client configuration of the database connection is set to "Named Pipes".

Solution:

- Switch to TCP/IP.
- Check if user has sufficient rights to establish a named pipe connection to the SQL Server.

Login fails with "Login failed for '...!' No person is associated with user '....'"

In order to log on to Aurea CRM web, the login respectively the rep must be assigned to a person in the Aurea CRM database, see [Linking Reps \(Users\) to Persons](#) on page 51.

Login fails with "You are not allowed to access info area 'WWW Interest'"

The user you tried to log on with does not have sufficient access rights on info area **WWW Interest**. Grant the user access to info area **WWW Interest (II)**.

Login fails with "You are not allowed to access info area WWW Interest Configuration."

The user you tried to log on with does not have sufficient access rights on info area **WWW Interest Configuration**. Grant the users access to info area **WWW Interest Configuration (I9)**.

Login fails with "You may not edit "WWW Interest Configuration" in this manner"

Possible Reason: The user you tried to log on with does not have sufficient rights on info area **WWW Interest Configuration**. Grant the user update rights to info area **WWW Interest Configuration (I9)**.

If you are connecting to an Oracle database and this error message is displayed but the rights are set correctly for the II info area, check the `web.log` file in the `web.data\log` directory for Oracle errors similar to:

```
ORA-01401: inserted value too large for column
```

Failed to save format-XML with record-id '-1'.

Reason: MM_ImportFormat: Id = 6, RecId = -1, Type = 0, Local = True.

```
XMLImportFormat: MSXML2:IXMLDOMDocument2Ptr.CreateInstance: Error Code: 80040154
```

Possible Reason: Microsoft XML Core Services Version 6.0 or higher was not installed properly.

For information on how to determine the version of the XML Parser, see Microsoft Knowledge Base Article <http://support.microsoft.com/default.aspx?kbid=278674>.

CryptographicException: object already exists

Reason: This exception occurs if the user account under which the IIS worker process (W3WP.EXE) is running has no Read access for the key file containing the private keys required to encrypt/decrypt sensitive information used by Aurea CRM web.

Solution: Change the file system permissions for this key file using the `aspnet_regiis.exe` tool with the `-pa` switch to grant read access to the local user group `IIS_IUSRS`. If the application experiencing the problem is running under a different account, replace `IIS_USRS` with this account.

Examples:

If you use the application pool identity, execute `aspnet_regiis.exe -pa "update.eight.users" "IIS APPPOOL\update.crm_web"`.

If you use the network service identity, execute `aspnet_regiis.exe -pa "update.eight.users" "NT AUTHORITY\NETWORK SERVICE"`.

Note: `aspnet_regiis.exe` is located in the directory of your .NET Framework installation.

For more information, see [Granting Authority to Access an RSA Key Container](#).

To manually fix this problem:

1. Determine which of the key files is the key file of Aurea CRM web. (The key files are usually located in "MachineKeys" folder: `C:\Users\All Users\Microsoft\Crypto\RSA\MachineKeys`)

You have to open the binary key files with an editor and look for a file containing string "update.eight.users" (it should be in the first couple of bytes). Usually the file you are looking for is the one with the most recent creation date.

2. Change the file permissions for this key file.

ORA-12154: TNS: could not resolve service name

Possible reason: When saving the host string (e.g. `ORASERVER`) the host string is added to the full qualified node name (`ORASERVER.update.com`).

Solution: Check the host string with the Net Configuration Assistant.

**Wrong charset defined in the registry
HKEY_LOCAL_MACHINE/SOFTWARE/ORACLE/NLS_LANG**

Possible reason: Different values of the `MM_NLS_CHARSET` parameter in the `mmdb.ini` file and in the registry key

`My Computer/HKEY_LOCAL_MACHINE/SOFTWARE/Oracle/(Homex)/NLS_LANG`

Solution: Change the value in the `mmdb.ini` file accordingly.

Oracle: Aurea CRM web does not start. Install Checker: Login with username (user id) failed for (data source).

Aurea CRM web throws an access denied or unable to load exception regarding a `*or8*.dll` located in `..\system`.

Possible reasons:

- User ID / password not correct.
- The web application identity account has insufficient rights for the Oracle client directory (or for one the subdirectories).

Try to log on to Aurea CRM web using the same `..\sys` directory as Aurea CRM win.

Check the rights for the Oracle client subdirectories which are assigned to the web application identity account.

Filters on Decimal Fields require '.' as decimal separator.

This behavior is by design. If you define a filter, e.g. Value = 1.5, you must use the decimal point as decimal separator.

How to assign a specific language to a user?

You can assign a language to a user by assigning the appropriate language number to the user in the Aurea CRM win **Rights** module.

Downloaded files are associated with wrong application.

Note: This error should not occur for file types where the associated application is installed on the web server.

In order to download a certain file type correctly from the web server, the server must be able to map file extensions to MIME types and vice versa.

This mapping is usually created by installation the application associated with a certain file extension. However, on web servers this strategy is often not applicable.

To work around this problem you can either add the mapping to XML file `../settings/settings/mimetypes.xml`.

Or you can manually add the required registry entries:

The MIME type must be registered under `HKEY_CLASSES_ROOT\MIME\Database\ContentType`.

The file extension must be registered under `KEY_CLASSES_ROOT\` and unambiguously associated with the MIME-type.

For PDF files, for example, the registry settings are:

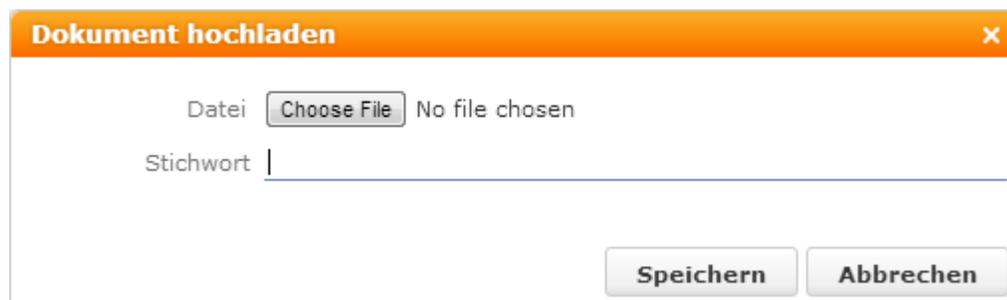
Key	Value
<code>HKEY_CLASSES_ROOT\MIME\Database\ContentType\application/pdf</code>	Extension (REG_SZ) = ".pdf"
<code>HKEY_CLASSES_ROOT\.pdf</code>	Default (REG_SZ) = "AcroExch.Document" Content Type (REG_SZ) = "application/pdf"

Note: You can set the (Default) to any string value unequal to an empty string.

For Word, the following registry entries should be sufficient:

Key	Value
<code>HKEY_CLASSES_ROOT\MIME\Database\Content Type\application/msword</code>	Extension (REG_SZ) = ".doc"
<code>HKEY_CLASSES_ROOT\.doc</code>	Default (REG_SZ) = "Word.Document.8" Content Type (REG_SZ) = "application/msword"

Browse Button in the Upload dialog is not in Aurea CRM web language.



The **Browse** button in the **Upload document** popup is owned by the web browser and, therefore, always in the language of the web browser (usually the language of the operating system).

Fixed catalogs are not refreshed

Fixed catalogs are not refreshed unless the web application is recycled. The same applies if catalog values are renamed (changed).

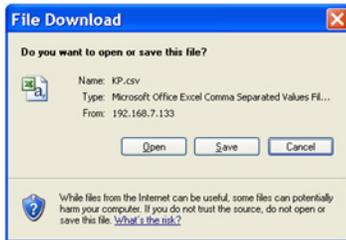
This behavior is by design. Fixed catalogs or catalog values are not refreshed until the application pool is recycled.

A popup blocker prevents opening popup windows (e.g. when generating reports etc.).

Some popup blockers do not block popups of web sites from the "trusted sites zone". Therefore adding Aurea CRM web to the list of trusted sites might solve the problem.

To disable the popup blocker, e.g. for generating reports, press <Ctrl> (<Strg>) when clicking the **Reports** button.

Aurea CRM web then offers to download the report instead of opening it in a popup.

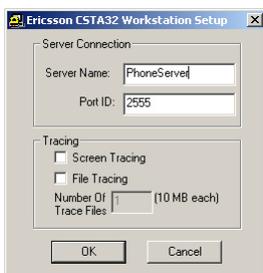


If you use CRM.phone, you must ensure that the communication port used by the TAPI server and client is open

See the documentation of your TAPI Service Provider for further details.

For example, try to make a call using Microsoft Phone Dialler (part of the Microsoft operating system).

The screenshot shows an Ericsson client where Port 2555 is configured as TAPI communication port.

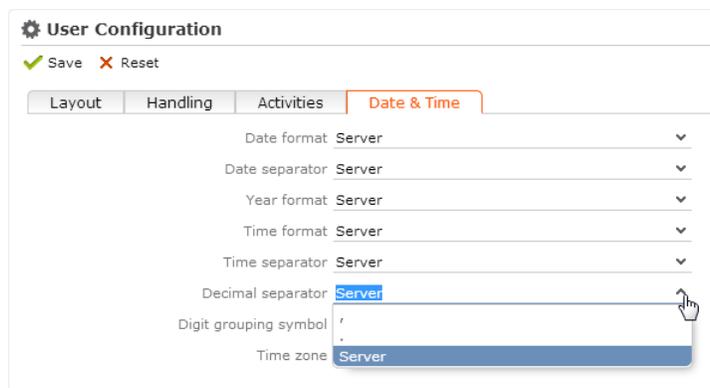


Appointments without a Time assigned are not displayed in the Resource view.

This behavior is by design.

Changing the date and time format for Aurea CRM web

In Aurea CRM web, each user can specify his preferred settings in the **User Configuration**. By default, the server settings are used.



For details about changing the server settings, >> Microsoft Knowledge Base Article <http://support.microsoft.com/default.aspx?scid=kb;en-us;867743>.

To change the date and time format for Aurea CRM web, you must change the regional settings of the web application identity account in the registry.

Note: Warning: If you use Registry Editor incorrectly, you can cause serious problems that could result in having to reinstall your operating system. Use Registry Editor at your own risk. See the Microsoft Knowledge Base Article <http://support.microsoft.com/default.aspx?kbid=256986>.

Basically, you must:

1. Determine the web application identity account, >> [Determining the Web Application Identity Account](#) on page 70.

2. Determine the SID of the web application identity account.

For example PsGetSid (SysInternals) maps SIDs and user names, >> <http://technet.microsoft.com/en-us/sysinternals/bb897417.aspx>.

For details on the SID values for Windows installations, >> Microsoft Knowledge Base Article <http://msdn.microsoft.com/en-us/library/cc980032.aspx>.

3. In the registry, change the appropriate values of `HKEY_USERS\{SID}\Control Panel\International`.

Hiding (system) Aurea CRM fields for Aurea CRM web.

With Aurea CRM web you can lock fields matching certain field attributes. Fields locked by this mechanism are treated by the user interface like fields, that were locked via the Aurea CRM win **Rights** module.

To hide Aurea CRM fields e.g. with the `Hidden` attribute (system fields), add the following entry in the `settings.xml` file:

```

...
< update.crm.base>
...
  <DataBase>
    <LockFieldAttributes>Hidden</LockFieldAttributes>
  </DataBase>
...
</update.crm.base>

```

Note: Specify more than one attribute using "+" as separator. See the `settings.xml` file for a list of possible field attributes.

"File or assembly name bx5fbkax.dll, or one of its dependencies, was not found."

Note: The name of the DLL is randomly generated by the Microsoft .NET framework and differs every time.

In the server log file a similar entry as listed below exists.

```
System.IO.FileNotFoundException: File or assembly name bx5fbkax.dll, or one of its dependencies, was not found ...
```

Reason: The Microsoft .NET framework creates temporary assemblies (DLLs) in `%WINDIR%\TEMP` when it de-serialises an XML document or when it applies a XSL transformation. Therefore, the web application identity account must have MODIFY rights on the `%WINDIR%\TEMP` directory.

Solution: Assign the Modify right to the web application identity account, see [Determining the Web Application Identity Account](#) on page 70.

Uploading large documents returns "Maximum request length exceeded".

By default, ASP.NET limits each request to 4096KB (or 4MB) and, therefore, this error occurs when an uploaded file is larger than 4 MB. This restricts possible Denial of Service attacks.

The request limit can be changed by setting the attribute `maxRequestLength` on element `<httpRuntime/>` in file `web.config`.

For details, see Microsoft Knowledge Base Article [httpRuntime Element \(ASP.NET Settings Schema\)](#).

Aurea CRM web does not work correctly when the host name contains underscores ("_").

According to Microsoft, "Cookies on ASP pages are blocked if the server name contains characters that are not supported by Domain Name System (DNS). For example, you cannot use underscore characters (_) in the server name. This behavior is by design."

As Aurea CRM web's session handling uses cookies, host names must not contain underscores.

For details, see <http://support.microsoft.com/default.aspx?scid=kb;en-us;325192>.

Uploading configurations to CRM.designer with CRM.bulkloader does not work for generic tables and fields.

Before uploading a sub-configuration, you must ensure that the data model in the CRM.designer database is identical to the Aurea CRM data model. Upgrade the data model in the CRM.designer database using the **Data Model, CRM Processes, Roles and Catalogs** option of CRM.bulkloader, see [Data Model, CRM Processes, Roles and Catalogs](#) in Aurea CRM web Administrator Guide.

No text groups and texts are created when uploading a configuration with bulkloader.

Depending on the number of languages included in the xml file, bulkloader uploads either a (sub-)configuration or a language pack:

- If only one language is included, the xml files are treated as a language pack.
- If more than one language is included, the xml files are treated as a configuration.

For language packs, no text groups and no texts are uploaded to the database. Therefore, always download at least two languages for sub-configurations even if you need only one. The additional language does not have significant impact on the size of the xml files and the software.

After upgrading the data model or after synchronizing a catalog, an error is displayed when accessing the new fields/catalogs.

Since CRM.designer caches its data model and catalog information, it is highly recommended to restart the application (IIS reset or application pool recycling) after upgrading the data model or synchronizing catalogs.

When sending activities as e-mail, Eastern European special characters are not displayed correctly.

For sending e-mails from the client, set the `EMail.ClientSide.MailEncoding` Web Configuration parameter to the number of the desired code page e.g. 1250 for Central European, 1252 for Western European (default).

The user cannot change his phone profile.

Add the following line to section `<update.web/>` of file `settings.xml`:

```
<CanChangePhoneProfile>true</CanChangePhoneProfile>
```

For details, see [Configuring CRM.phone for Aurea CRM web](#) on page 54.

The phone profile selection does not include the user's standard profile.

Add the rep's standard phone profile to the user's rep record, see [Configuring CRM.phone for Aurea CRM web](#) on page 54.

Access denied (via Rights module) to table Absences (A3) – how does that affect the Resource View and the Collision Check?

If the user has no access to absences, this info area is simply ignored for the resource view and for the appointment collision check.

When trying to send an email, the message "Error processing command line arguments" is displayed Or Notification: The length of the e-mail message exceeds the limit of the operating system and/or your e-mail client. The message is truncated...

This error occurs if emails are sent from the client where the text is too long. Client side e-mails are sent using the mailto: protocol. The length of a mailto: URL is limited to 2048 characters.

However, depending on the application handling the mailto: protocol (e.g. Outlook, Notes, ...) the limit might be even lower. The only solution, apart from using shorter texts, is sending the emails from the server instead of from the client.

For information on the Web Configuration parameters involved, see *E-Mail parameters* in the *Aurea CRM web Administrator Guide*.

After upgrading to a new service pack, users complain about script errors and are unable start Aurea CRM web.

Users need to delete the temporary internet files on their computers (Browsing History > Temporary Internet Files).

Changes made to format records are not visible in Aurea CRM web.

Formats are cached by Aurea CRM web. Therefore, to immediately apply changes you need to restart your application pool.

The button to search for a linked record is not displayed beside a link field.

If the field has the data model field attribute NOEDIT or the designer field attribute `Readonly`, the 🔍 icon is not displayed by default.

Nevertheless, if you want to select a record for such a field, you can override the default behavior by manually specifying a `Select-Function` in CRM.designer.

The search results are different depending on the number of records displayed. Paging through the search results always produces the same results.

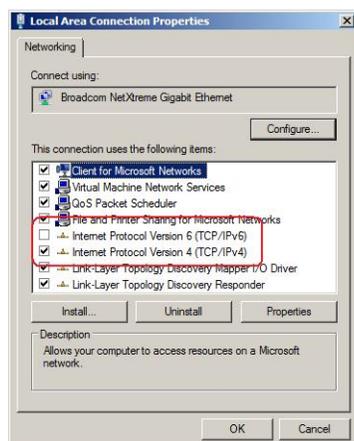
If no sort criteria are applied to the data in the list (or sort criteria that produce more results than rows in the list), the order in which data is returned from the database is ambiguous. i.e. if a lot of records that are "equal concerning the sort criterion" exist, the database returns these in an arbitrary manner.

A feasible workaround when such problems occur is to define (more specific) sort fields.

If IP-Blocking is enabled for a web installation on an IIS 7.x / Windows 2008 Server machine

An exception is displayed when starting Aurea CRM web directly on the server (but not problems when connecting from other computers).

You need to disable "Internet Protocol Version 6 (TCP/IPv6)" in the Network Settings on the server.



Instead of the Windows user name, the name of the IIS Application Identity is displayed for History, System Lock, Session Tracking and Process Tracking records.

The Windows user name is only displayed for these records, if single sign-in is active for a user (otherwise, the IIS Application Identity name is displayed), see [Configuring Single Sign-On](#).

Log level cannot be changed without restarting/recycling the IIS Application Pool.

The log level can be changed in the client log window without having to restart the IIS Application Pool. Select the desired log level from the "Log" menu.

In addition, you can download the server log file from the "Log" menu in the client log window. As log files can become very large, only the last 10 MB are downloaded and opened in your default text editor (e. g. Notepad).

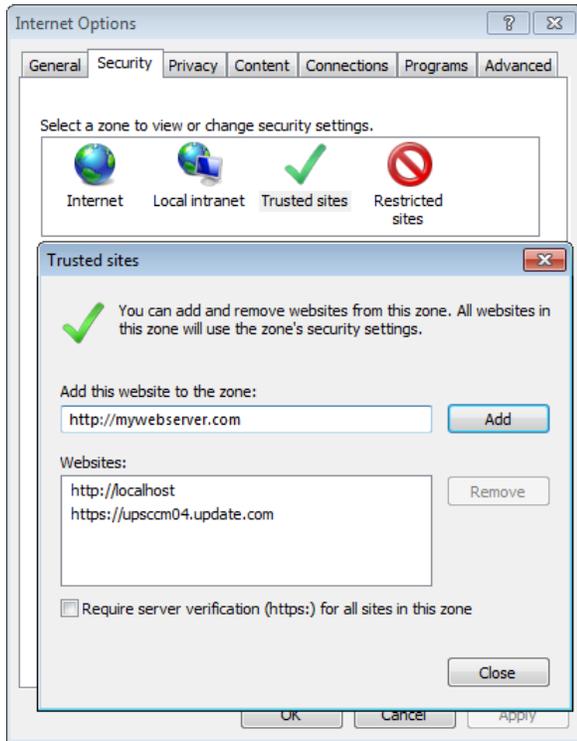
If you want to change the amount of the downloaded log data, you can make a JavaScript call using the console.

Example: If you want to download only the last 100 MB, enter `u8.debug.getLogFileTail(100*1024*1024);`.

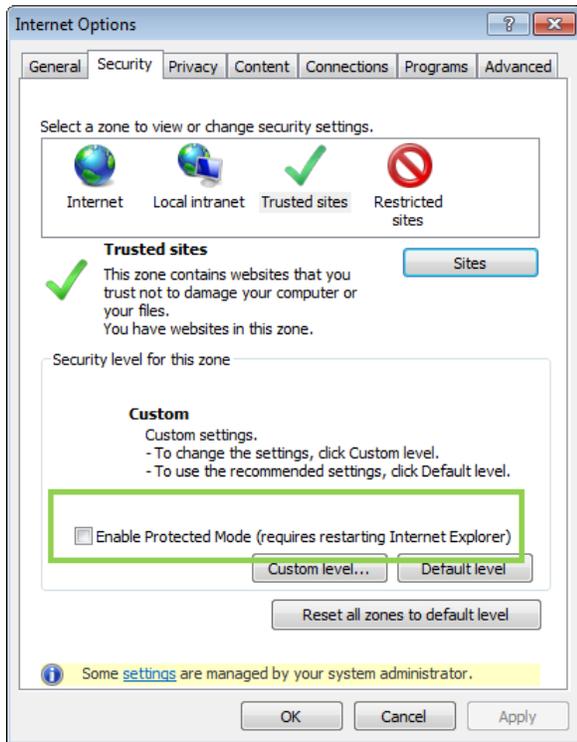
IE10: Drag&Drop Does Not Work in CRM.designer and Aurea CRM web

To enable drag&drop (as used e.g. in the Field Control Editor in CRM.designer or for rearranging Expand views in Aurea CRM web) to work with IE10:

1. Add the Aurea CRM web server to the trusted sites:



2. Disable protected mode:



Oracle: Linguistic sort is not applied to UPPER index

If linguistic sort is enabled (e.g. `MM_NLS_SORT=GERMAN`) and an UPPER index is defined for a text field (e.g. **Last Name** in KP), the linguistic sort is not taken into account.

Solution: Add `USE_NLSSORT=on` to Aurea CRM web's `mmdb.ini` file to enable linguistic sort in Aurea CRM web.

Oracle: ROWNUM is applied before ORDER BY

Oracle and MS SQL have different strategies on how to limit the amount of records returned by a query. With MS SQL a statement like "SELECT TOP xxx FROM ..." is executed, while in Oracle "SELECT ... FROM ... WHERE ... AND rownum < xx ORDER BY ..." is executed.

Reason: The ROWNUM filter in the WHERE clause in Oracle is applied **before** sorting (this is documented by Oracle): The query returns the result sorted correctly but it is not guaranteed that it returns **the first xx rows**. The result is similar to sorting weak columns – you may see some duplicate rows, some are missing, but with the big difference, that this is not only within same values in sort columns but in general.

Solution:

- Set the `Search.AlwaysReadNumRecords` Web Configuration parameter, >> *Search.AlwaysReadNumRecords* in the *Aurea CRM web Administrator Guide*.
- Influence the statement generation via the `mmdb.ini` file (up to not using the ROWNUM clause (by defining `ORACLE_NO_ROWNUM=1`) which may come with a huge performance penalty), >> *mmdb.ini File for Oracle Databases* in the *CRM.core Administrator Guide*.
- If this happens with sub-lists (and this behavior most likely occurs with link records), it might be an option to use the `cachedMode` sub-list parameter, see *ListParams* in the *Aurea CRM web Administrator Guide*.
- Try to force the database to use a different execution strategy by defining an index based on the sort columns.

Oracle: NO_DECODE and LOCAL INDEX exclude each other

If `[LOCAL INDEX]` settings have been configured, `ORACLE_NO_DECODE=1` is ignored.

Solution: Add `TUNE_STMT=7` to Aurea CRM web's `mmdb.ini` file to apply ROWNUM outside of the order statement.

For details, see [mmdb.ini File for Oracle Databases](#) in the *CRM.core Administrator Guide*.

Error when installing MSI package on the client

If an error occurs when installing an MSI package on a client machine (e.g. due to insufficient user rights), you need to edit the registry as follows:

1. Go to `HKEY_LOCAL_MACHINE\SOFTWARE\Policies\Microsoft\Windows\Installer`.
2. If you do not have an `Installer` key at this location, create a new one by right-clicking on the `Windows` key and select **New > Key**.
3. Right-click on the `Installer` key.
4. Select **New > DWORD (32-bit) Value**.
5. Enter "DisableMSI" as **Name**
6. Set Value to "0" (Hexadecimal).
7. Install the MSI package.

Improving Performance

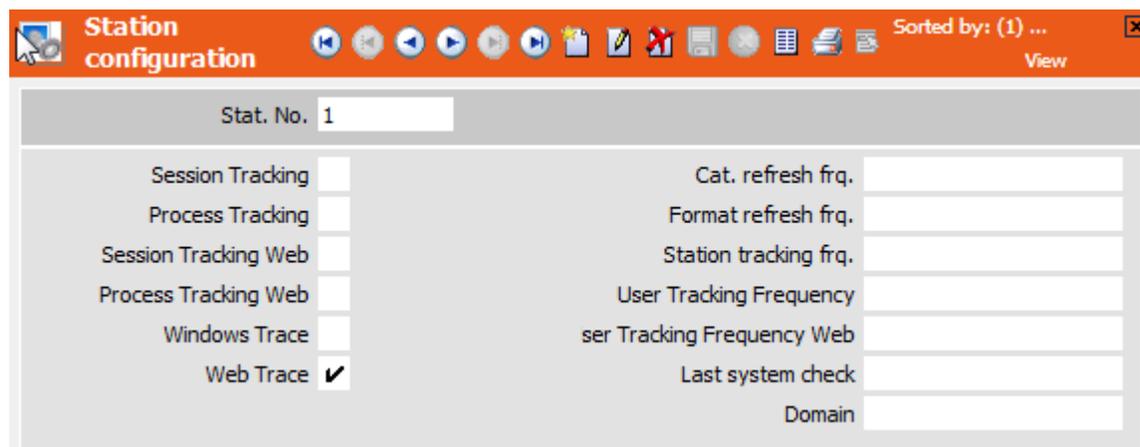
Learn to improve performance.

Check the content expiration of the following directories: `.. \images`, `.. \scripts`, and `.. \styles`, see [Content Expiration](#).

If you encounter performance problems with the Rep Picker, see [Number of Visible Reps](#).

If you encounter general performance issues, you can use the SQL Server Profiler for performance analyzing or appropriate Oracle Tools (server-sided traces or the Oracle Tuning and Option Pack).

Alternatively, you can enable the **Web Trace** in the Aurea CRM win **Rights** module.

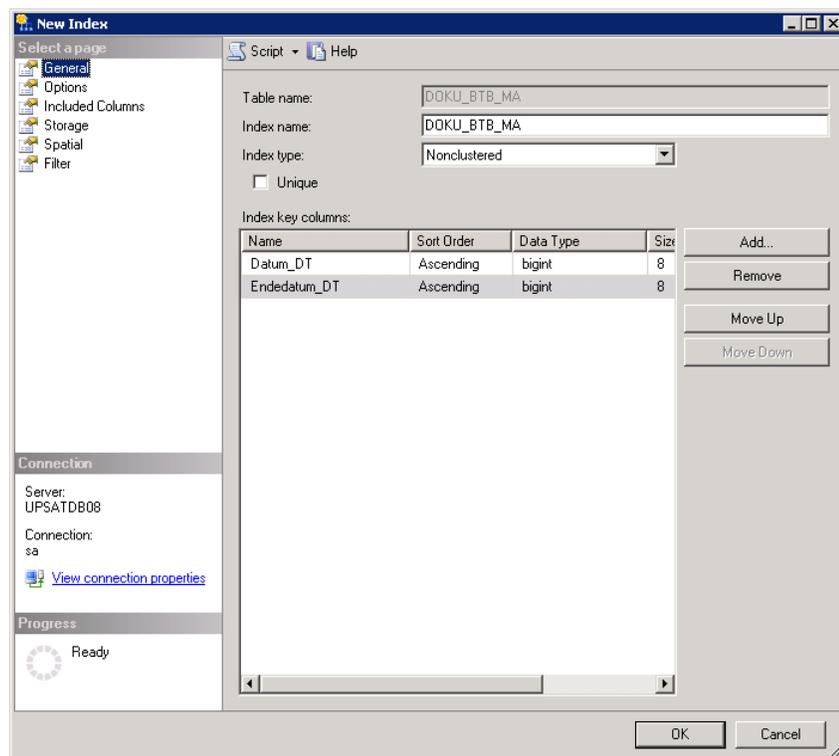


Aurea CRM web then writes additional log messages containing the database statements into the `web.log` file. Logging the database statements reduces the application's performance, therefore, clear the **Web Trace** option after the analyzing process.

Improving performance of the calendar

If for organizational reasons you cannot set the `Calendar.ActivitiesAlwaysHaveEnd` and `Calendar.AbsencesAlwaysHaveEnd` web configuration parameters to `true` create a combined index on the DB columns `Datum` and `Endedatum`.

```
CREATE INDEX {indexname}
  ON {tablename} (Datum, Endedatum)
```



See the documentation of your database for further details.

Running Aurea CRM web in a Windows Server Network Load Balancing Cluster

There are various hard- and software based means to build up web farms. If you are running the application on Windows Server, consider using the Windows Server Network Load Balancing, offered by Microsoft as part of the Windows Server operating system family.

For details on Network Load Balancing, see <http://technet.microsoft.com/en-us/library/hh831698.aspx>.

To run Aurea CRM web in a Windows Server Network Load Balancing Cluster, you must:

- Change the `machineKey` element in `machine.config` file
- Define a `StateServer` or `SQL Server` in the `web.config` file.

In the `machine.config` file, change the `validationKey` and the `decryptionKey` attributes of the `machineKey` element and provide keys for validation and encryption/decryption of the view state.

In a default installation of the Microsoft.NET Framework you find the `machine.config` file under `c:\%WINDIR%\Microsoft.NET\Framework\v4.0.30319\CONFIG`.

For further information, see [http://msdn.microsoft.com/en-us/library/w8h3skw9\(v=vs.100\).aspx](http://msdn.microsoft.com/en-us/library/w8h3skw9(v=vs.100).aspx).

The value of `validationKey` must be manually set to ensure a consistent configuration across a network of a web farm. `decryptionKey` is used for form authentication encryption and decryption and for view state encryption when validation is 3DES.

You can find a `<machineKey>` generator at <http://aspnetresources.com/tools/machineKey>. This is an online tool for creating keys for view state validation and encryption.

Example:

```
<machineKey
  validationKey="9441C18D5B8069B38180CA289B53FF6568AB5EEBB987A7F7
B88923127BD8BCCAC2DA174E86D2B9E6F9D4B89AA2E37BE0AB0482FBF6595B42A5516F45C9E6C7F0"

  decryptionKey="5352DD79A88B194B645F2E6B3099D2DEA20EF351C45A0F72"
  validation="SHA1"/>
```

If Aurea CRM web is running in a load balancing scenario you have to ensure that all requests of a session are handled by the same host in the cluster ("Session Affinity"). In other words: the load balancing server has to assure that all connections that are part of the same client session are handled by the same host in the cluster.

In a Windows Server Network Load Balancing Cluster you need to **enable client affinity** (in the Port Rules) by setting Affinity to "**Single**".

Note: Running Aurea CRM web in a web garden (multiple worker processes for one application pool) is not supported.

Improving Data Transfer Rate between IIS and the Web Browser

For further information, see [http://technet.microsoft.com/en-us/library/cc730629\(v=WS.10\).aspx](http://technet.microsoft.com/en-us/library/cc730629(v=WS.10).aspx).

IIS supports HTTP compression, allowing for faster data transfer to the browser by compressing the data before sending it. The browser automatically decompresses the data on reception. However, consider the following factors before implementing it on your web server.

- You can set compression for static or dynamic content.
 - Static content is considered to be text based files which are modified infrequently. These files are compressed once and stored on the server until requested. If they are modified, IIS compresses the new version and store it.
 - Dynamic content are script files that return varying content when they are requested. Dynamic content is compressed every time the file is generated and then sent to the browser. No copy is stored on server.

We recommend using HTTP compression for static files only, unless the clients are using a network connection with restricted bandwidth (e.g. a mobile network).

- CPU Usage

If CPU usage on client and server is already very high (approx 80% to 100%) during normal execution, compression is not recommended, as it is CPU intensive and is not improve performance.

If the server CPU is high, but the client CPU is low, compress static content, but test and monitor it to check its effectiveness.

For further details on HTTP compression and monitoring techniques, see [http://technet.microsoft.com/en-us/library/cc778828\(v=WS.10\).aspx](http://technet.microsoft.com/en-us/library/cc778828(v=WS.10).aspx).

- Compression is enabled for all web sites of a particular IIS installation.

If other websites are running on the IIS installation, it is possible that compression can cause performance problems. Check the impact of compression on these web sites before implementation.