



SERENA[®]
DIMENSIONS[®] CM 14.2.0.2

Installation Guide for Windows

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Welcome to Serena Dimensions CM

Thank you for choosing Serena® Dimensions® CM, a powerful process management and change control system. Dimensions CM helps you organize, manage, and protect your software development projects on every level—from storing and tracking changes to individual files, to managing and monitoring an entire development cycle.

Before you Begin

The Dimensions CM readme contains the following information:

- What's new
- Fixed issues
- Software compatibility requirements
- Installation notes
- Known issues

The readme is available online at:

http://help.serena.com/doc_center/doc_center.html#dcmDoc

Contacting Serena Technical Support

Serena provides technical support for all registered users of this product, including limited installation support for the first 30 days. If you need support after that time, contact Serena Support at the following web site and follow the instructions:

<http://www.serena.com/support>

Language-specific technical support is available during local business hours. For all other hours, technical support is provided in English.

You can use the Serena Support web page to:

- Report problems and ask questions.
- Obtain up-to-date technical support information, including that shared by our customers via the web, automatic email notification, newsgroups, and regional user groups.
- Access a knowledge base, which contains how-to information and allows you to search on keywords for technical bulletins.
- Download updates and fix releases for your Serena products.

Videos

Videos of Dimensions CM features can be viewed online at:

http://help.serena.com/doc_center/doc_center.html#dcmVid

License and Copyright Information for Third-Party Software

License and copyright information for third-party software included in this release can be found as part of the software download available at:

<http://www.serena.com/support>

Part 1

Introduction

This part contains the following chapters.

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Chapter 1

General Preparations

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Supported Platforms and Third Party Integrations

For details of supported platforms, databases, and third party integrations visit this Serena support web page and click **View** to see the complete Dimensions CM platform matrix:

<http://support.serena.com/roadmap/Product.aspx?sel=PVDIMENSIONS>

To to use your own Oracle Enterprise RDBMS, it must be a version that is compatible with Dimensions CM 14.2.0.2. Only the Oracle versions listed in the platform matrix have been tested by Serena for use with Dimensions CM 14.2.0.2.

- a Ensure you have adequate space available.
- b Extract the contents of the zip file to the sub-folder.

Licensing

You can perform the installation with an evaluation or full license.

Evaluation License

If you perform the installation without a full license, you can use the software immediately by specifying an evaluation license. The evaluation license allows you to run the software for a specified period of time.

At installation choose the **Install a 30 day evaluation license** option, you may enter a license server name or address any time during the evaluation period. Evaluation licenses are described in the *System Administration Guide*.



NOTE The evaluation license does not support Serena Dimensions Replicator.

Full License

If you perform the installation with a full license, the installation will automatically enable the Serena License Server for you. Otherwise, you have to manually enable the Serena License Server once you install a full license. See the *System Administration Guide*.

At installation choose the **Specify License Server** option, the **Host Name** field will be enabled and you will need to specify the host name or IP address of the local or remote machine running the Serena License Server. See the *System Administration Guide* for further details on the Serena License Server and Serena License Manager.

Licensing Prerequisites

If you intend to permanently install Dimensions CM rather than install it for just the 30-day evaluation period (or convert an evaluation copy into a fully licensed copy), you will need to:

- 1 Install the Serena License Manager (SLM).
- 2 Obtain and install a license (see the *System Administration Guide* for details).

If you have other Serena software products installed that use a compatible version of SLM, you can use that with your Dimensions CM license.

The Serena License Manager enables you to obtain license keys through the Web (Web fulfillment) for the Dimensions CM products you will be installing, and it also enables you to install those keys so that you can immediately start using your Dimensions CM products once you complete the post-installation activities.

To use Web fulfillment you need to:

- Install Dimensions CM on a computer with Web access. If this is not possible in your working environment, it is possible to perform licensing as a post-installation activity utilizing the SLM as explained in the *System Administration Guide*. You can also use that procedure to add new license keys at a later date.
- Know/determine the host-id and physical Ethernet address of the node to be used as the license server node. This information is displayed on the SLM tool, but can also be determined beforehand for

a Windows SLM by running either of the following operating-system commands and noting the physical address of the Ethernet adapter:

```
ipconfig /all
```

or

```
nbtstat -a <Server Name>
```

- Have the product serial numbers for your Dimensions CM products.
- Have a Serena Support user login and password. If you are not currently such a user, please contact Serena Support at:
<http://www.serena.com/support/>
- Decide whether you wish to have a:
 - Concurrent license (a pool of a number of un-named users that are distributed on first-come-first-used basis), or
 - Named users license (a pool of specifically named users).

Launching the Installer

This section details the considerations prior to and the launching of a Dimensions CM 14.2.0.2 fresh or update installation of the server, agent, or client.



IMPORTANT!

Before launching a Dimensions CM 14.2.0.2 installation you should ensure that you have met the appropriate prerequisites, for:

- A fresh installation - "[Pre-installation Tasks for a New Installation](#)" on page 123.
- An update installation - "[Pre-installation Tasks for an Upgrade](#)" on page 239.

Important Information for Windows Installations



IMPORTANT!

- If you are installing the Dimensions CM server and client binaries on the *same* Windows machine in separate sessions you *must* install the server binaries first. The Dimensions clients installer will detect that you have the Dimensions CM server installed on your machine.
- For Dimensions CM server on 64-bit Windows Server the Dimensions clients installer will set the target folder by default to:

`C:\Program Files (x86)\Serena\Dimensions 14.2.0.2\CM`
 because these clients are 32-bit.
- If you are going to install Dimensions CM Make, first install the Dimensions CM clients or server.



CAUTION! Ensure that all Windows programs are shut down before beginning the installation—this especially includes background programs such as virus checkers. If you do not shut down these programs, the installation may fail.

Obtaining the Installer Software

Depending on how you obtained the Dimensions CM installer software, you either launch the installer:

- From the HTML front end that comes with the Dimensions Software DVD. Proceed to ["Launching the Installer from the HTML Front End" on page 24](#).
- From the installer software extracted from the zip file that you downloaded from the Serena Support Web site. Proceed to ["Launching the Installer from the Extracted Downloaded Zip Files" on page 25](#).

Launching the Installer from the HTML Front End

- 1 Log in as a user with local Administrative privileges.
- 2 Insert the Dimensions Software DVD into your DVD drive (or navigate to and run the appropriate HTML installation front end file in the folder containing the copied contents of the DVD).
- 3 If the HTML installation front end does not automatically start when using the DVD, do one of the following:
 - From My Computer, right click the **DVD** icon and select **AutoPlay**.
 - Run the appropriate file from the DVD drive.



NOTES

- If running the Microsoft Internet Explorer 8 browser, please ensure that you are running in compatibility view:

Tools | Compatibility View Settings |
Display all Websites in Compatibility View
- Some Windows systems have high default security settings. If you are installing the Dimensions CM clients on a platform with such default settings, you may receive a warning to the effect that "Some files can harm your computer. ..." when you attempt to initiate the installation. Click the **Open** button to proceed in such circumstances.
- Depending on your browser and its settings, you may receive:
 - **File Download - Security Warning** message **Do you want to run or save this file?** If so, click **Run**.
 - **Internet Explorer - Security Warning** message **The publisher could not be verified ...** If so, click **Run**.

- 4 In the **If you are ready to install** region, click **Click here >>** to access the **Ready to install** page.

Alternatively, if you would like a high level review of the pre-installation requirements and a high level links to Serena e-Learning, Training, and Support, in the **If you require pre-installation information** region click **Click here >>**. From these pages, you can

access the **Ready to install** page by clicking **Start installation >** at the top right of the information pages.

- 5 Click on the appropriate component you wish to install, for example: **Dimensions CM 14.2.0.2 for Win32 Client**.



NOTE There is no 64-bit native Dimensions CM 14.2.0.2 client. For 64-bit Windows select the 32-bit client.

- 6 Proceed as detailed in the appropriate fresh or upgrade installation chapter or appendix:

[Chapter 5, "Running the Server Installer" on page 127.](#)

[Chapter 6, "Running the Agent Installer" on page 138](#)

[Chapter 7, "Running the Client Installer" on page 147](#)

[Chapter 15, "Running the Upgrade Server Installer" on page 251](#)

[Chapter 16, "Running the Upgrade Agent Installer" on page 258](#)

[Chapter 17, "Running the Upgrade Clients Installer" on page 263](#)

[Chapter A, "Choosing the Type of Windows Server Installation" on page 297](#)

Launching the Installer from the Extracted Downloaded Zip Files

- 1 Log in as a user with local Administrative privileges.
- 2 Navigate to and run the appropriate extracted downloaded file:

`Dimensions_CM_Server_14.2.0.2.0_win64.exe`

`Dimensions_CM_Agents_14.2.0.2.0.exe`

`Dimensions_CM_Clients_14.2.0.2.0.exe`



CAUTION! Ensure that the folder "common" was extracted to be alongside the Dimensions CM 14.2.0.2 executable, as the installer also makes use of executables within "common" and expects them to be in that location.



NOTES

- Some versions of Windows have high default security settings. You will receive a warning to the effect that "Program needs your permission to continue" when you attempt to initiate the installation. Click the **Continue** button to proceed.
- Some Windows systems have high default security settings. If you are installing the Dimensions CM components on a platform with such default settings, you may receive a warning to the effect that "Some files can harm your computer. ..." when you attempt to initiate the installation. Click the **Open** button to proceed in such circumstances.

- 3 Proceed as detailed in the appropriate fresh or upgrade installation chapter or appendix:

[Chapter 5, "Running the Server Installer" on page 127.](#)

[Chapter 6, "Running the Agent Installer" on page 138](#)

[Chapter 7, "Running the Client Installer" on page 147](#)

[Chapter 15, "Running the Upgrade Server Installer" on page 251](#)

[Chapter 16, "Running the Upgrade Agent Installer" on page 258](#)

[Chapter 17, "Running the Upgrade Clients Installer" on page 263](#)

[Chapter A, "Choosing the Type of Windows Server Installation" on page 297](#)

Dimensions CM Log In Example

To login to Dimensions complete the following dialog box.

The screenshot shows a dialog box titled "Log in to Dimensions" with the SERENA logo. The dialog is divided into several sections:

- Profile:** A dropdown menu showing "dmsys_localhost" with a red 'X' icon and a "Save settings" checkbox.
- System:** Contains "User ID:" with the text "dmsys" and "Password:" with masked characters "*****".
- Dimensions:** Contains "Server:" with "IDDW2003", "DB Name:" with "cm_typical", and "DB Connection:" which is empty.

Buttons on the right include "OK", "Cancel", and "Help". At the bottom, there is an unchecked checkbox labeled "Enable automatic log in".

- A** Select a login profile, or enter the name of a new profile that you want to create. To save your login data, check **Save Settings**.
Default: The dialog displays the profile used for your last successful log in, see the *Command-Line Reference* and the *User's Guide*.
- B** Enter your user ID.
- C** Enter your password.
- D** Enter the name of the Dimensions CM server that you want to connect to, as specified to TCP/IP (ask your Dimensions CM administrator for the correct name). Following a local installation of the server, this can be set to the special name `localhost`.
- E** Enter the base database name of the product with which you will be working. For the "**Typical, Stream Development**" and "**Typical, Non-Stream Development**" process model, this will be `cm_typical`.
- F** Enter a connection string that enables you to connect to the Dimensions CM database required. By default, this will be `DIM14`.

Registry Edits

In certain places in this guide, the use of the Windows `regedit` utility is included in the instructions. It is important that you remember to back up your Windows registry by, for example, selecting

Registry | Export Registry File

before making changes to the registry

For more information refer to:

- The *Introduction to Dimensions CM* manual for a description of the Dimensions CM documentation set, a summary of the ways to work with Dimensions CM, and instructions for accessing the online help.
- The *Dimensions CM User's Guide* for a description of the client tools and how to work with them.
- The *Dimensions CM System Administration Guide* for detailed administrative information.

Chapter 2

New Installation Roadmap

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Introduction

These checklists will assist you in freshly installing your chosen Dimensions CM components while maintaining a record of your installation options for future reference (for example, if you have to contact Serena Support). These checklists are based on the content found throughout this guide. Failure to complete these checklist items may compromise the success of your installation.

Follow the checklists in sequence, ticking the appropriate checklist box and proceeding as indicated:

- 1** Determining which Dimensions CM components you wish to install, see ["Determining Which Components to Install" on page 31](#).
- 2** Checking that your operating-system platform and RDBMS (for Dimensions CM server plus schema components only) are supported by Dimensions CM 14.2.0.2, see ["System Requirements" on page 35](#).
- 3** For a Dimensions CM server plus schema installation, installing the Serena-Supplied Runtime RDBMS if you do not have a supported RDBMS of your own, see ["Installing the Serena-Supplied Runtime RDBMS" on page 35](#).
- 4** For a Dimensions CM server plus schema installation, preparing your RDBMS for installing the Dimensions CM schema, see ["Preparing Your RDBMS" on page 37](#).
- 5** Checking and satisfying the Dimensions CM prerequisites for the components that you will be installing, see ["Checking Prerequisites" on page 40](#).
- 6** Installing the Serena License Manager and obtaining a license, see ["Prerequisites For Licensing Your Server" on page 46](#).
- 7** Installing the Dimensions CM components you identified earlier, including quick post-installation checks, see ["Installing Components" on page 47](#).
- 8** Performing detailed post-installation procedures and checks to ensure correct functioning of your installation, see ["Performing Post-installation Activities" on page 57](#).
- 9** Installing additional miscellaneous Dimensions CM components, see ["Installing Additional Miscellaneous Components" on page 58](#).

- 10** Uninstalling Dimensions CM components, see ["Uninstalling Components" on page 60](#).

Determining Which Components to Install

1 Choosing Server, Agent, or Client Components:

Review ["Introduction" on page 30](#) to decide if you will be installing a Dimensions CM server, server plus clients, agent, or clients only:

	Checklist Item
<input type="checkbox"/>	Do you need to install Windows server components?
<input type="checkbox"/>	Do you need to install Windows client components on the same host as a server?
n/a to this guide	Do you need to install UNIX server components? see <i>Installation Guide for UNIX</i> .
<input type="checkbox"/>	Do you need to install Windows agent components? The agent components will need to talk to a Dimensions CM for Windows or UNIX server on another network node.
<input type="checkbox"/>	Do you need to install UNIX agent components? See the <i>Installation Guide for UNIX</i> . The agent components will need to talk to a Dimensions CM for Windows or UNIX server on another network node.
<input type="checkbox"/>	Do you need to install Windows client components? The client components will need to talk to a Dimensions CM for Windows or UNIX server on another network node (however Dimensions CM for Windows server plus clients installations on the same Windows node are generally supported—see the earlier checklist item entry).
<input type="checkbox"/>	Do you need to install UNIX client components? See the <i>Installation Guide for UNIX</i> . The UNIX client components will need to talk to a Dimensions CM for Windows or UNIX server on another network node.

2 Choosing Server Installer Sub-Components:

If you will be installing Dimensions CM for Windows server components, decide which of the sub-components listed below (presented to you as installer options) you will be installing.

Checklist Item		
<input type="checkbox"/>	A default installation, which has the following installer options pre-selected: <ul style="list-style-type: none"> ■ Dimensions Server components (including schema). ■ Migration Console. 	
<input type="checkbox"/>	A custom setup installation with various options selected or deselected.	
Custom Setup Options	Selected	Deselected
Dimensions Server <i>(always selected).</i> You will have an option later in the installer wizard to select Dimensions Server components and schema or Dimensions Server components only , see the later entries in this table for details.		Not deselectable
Migration Console <i>(selected by default).</i> Used to migrate operating system files or PVCS VM, CVS, Subversion, ChangMan DS, or ClearCase assets into Dimensions CM.	<input type="checkbox"/>	<input type="checkbox"/>
Serena Single Sign On (SSO) authentication <i>(deselected by default).</i> Used to enable single sign on of various Serena tools/clients.	<input type="checkbox"/>	<input type="checkbox"/>

Checklist Item		
<p>SSO authentication plus Common Access Card (CAC) Smart Card Setup (both deselected by default). (Note CAC cannot be chosen independently from SSO.) Used in secure environments where only CAC access to tools is allowed.</p>	<input type="checkbox"/>	<input type="checkbox"/>
Custom Setup Options	Selected	Deselected
<p>Dimensions Server components and schema (selected by default). (Note Dimensions Server components and schema and Dimensions Server components only are mutually exclusive.)</p>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Dimensions Server components only (deselected by default). (Note Dimensions Server components and schema and Dimensions Server components only are mutually exclusive.)</p>	<input type="checkbox"/>	<input type="checkbox"/>

3 Choosing Client Installer Sub-Components:

If you will be installing Dimensions CM for Windows client components, decide which of the sub-components listed below (presented to you as installer options) you will be installing:

Checklist Item		
<input type="checkbox"/>	A Typical installation (which installs all the default sub-components of a Custom installation detailed below).	
<input type="checkbox"/>	A Custom installation with all default selections selected: <ul style="list-style-type: none"> ■ Desktop Client. ■ Developer's Toolkit. ■ SCC Integration. ■ Administration Command Line Interface. ■ Windows Explorer Shell Extension. ■ Visual Studio Integration (only present if Visual Studio 2008-2013 is installed). ■ Visual Studio Migration tool. ■ Merge Tools 	
<input type="checkbox"/>	A Custom installation with various options selected or deselected.	
Custom Subcomponent	Selected	Deselected
Desktop Client.	<input type="checkbox"/>	<input type="checkbox"/>
Developer's Toolkit.	<input type="checkbox"/>	<input type="checkbox"/>
SCC Integration.	<input type="checkbox"/>	<input type="checkbox"/>
Administration Command Line Interface.	<input type="checkbox"/>	<input type="checkbox"/>
Windows Explorer Shell Extension.	<input type="checkbox"/>	<input type="checkbox"/>
Visual Studio Integration (only present if Visual Studio 008-2013 is installed).	<input type="checkbox"/>	<input type="checkbox"/>
Visual Studio Migration tool.	<input type="checkbox"/>	<input type="checkbox"/>

Checklist Item			
	Merge Tools	<input type="checkbox"/>	<input type="checkbox"/>

System Requirements

For details of client compatibility, supported platforms and databases, and third party integrations go to the following Serena support web page and click **View** to see the complete platform matrix:

<http://support.serena.com/roadmap/Product.aspx?sel=PVDIMENSIONS>

For details about hardware requirements see the General Scalability and Performance Guidelines in the *Dimensions CM Scaling and Optimization Guide*.

Installing the Serena-Supplied Runtime RDBMS



NOTE If you will not be installing a Dimensions CM server plus schema or you are installing a server plus schema but already have your own Dimensions CM supported RDBMS, you can skip this section.

For a Dimensions CM server plus schema installation, if you do not have a supported RDBMS of your own you can install the Serena-Supplied Runtime RDBMS provided your operating-system supports it as described in *Introduction* in the companion guide *Installing the Serena-Supplied Runtime RDBMS*.

1 Firstly check the status of you operating-system:

Checklist Item	
<input type="checkbox"/>	My operating-system is supported by the Serena-Supplied Runtime RDBMS. Proceed to install the Serena-Supplied Runtime RDBMS, see the companion guide <i>Installing the Serena-Supplied Runtime RDBMS</i> .
<input type="checkbox"/>	My operating-system is not supported by the Serena-Supplied Runtime RDBMS. Contact Serena Software to see if future support is planned for your operating-system or if some workaround can be devised; if the latter, bring your operating-system up to the minimum specification and then proceed as above.

2 Provided your operating-system supports the Serena-Supplied Runtime RDBMS:

a On Windows systems that support DHCP network addressing:

Checklist Item	
<input type="checkbox"/>	I have a Microsoft loopback adapter already installed (see the companion guide <i>Installing the Serena-Supplied Runtime RDBMS</i>). This is a pre-requisite for installing the Serena-Supplied Runtime RDBMS.
<input type="checkbox"/>	I do not have a Microsoft loopback adapter already installed (confirmed as described in the companion guide <i>Installing the Serena-Supplied Runtime RDBMS</i>). Install it, see the companion guide <i>Installing the Serena-Supplied Runtime RDBMS</i> .

b Record the RDBMS installation parameters you specify during installation of a local or remote Windows Serena-Supplied Runtime RDBMS. You are advised to use the default values if possible, but the values you specify will be required during installation of the Dimensions CM server plus schema:

Checklist Item	
<input type="checkbox"/>	<i>Record the Installation folder for the Serena-Supplied Runtime RDBMS:</i>

	Checklist Item
<input type="checkbox"/>	Record the Oracle Home Name for the Serena-Supplied Runtime RDBMS:
<input type="checkbox"/>	Record the Oracle SID/DSN to be used by the Dimensions CM schema:
<input type="checkbox"/>	Record the Installation folder for the Serena-Supplied Runtime RDBMS database files:
<input type="checkbox"/>	Record the Serena-Supplied Runtime RDBMS database character set that will be used when creating the Dimensions database: You are strongly advised to use the default Unicode UTF-8 AL32UTF8 character set. If you plan to use another character set, you should consult Serena Support before proceeding.

- c If you will be installing a remote UNIX Serena-Supplied Runtime RDBMS, please see the checklists in the *Installation Guide for UNIX* for the RDBMS installation parameters you specify and record during its installation.

Preparing Your RDBMS



NOTE If you will not be installing a Dimensions CM server plus schema, you can skip this section.

For a Dimensions CM server plus schema installation, you need to prepare your local or remote RDBMS for installing the Dimensions CM schema.

	Checklist Item
<input type="checkbox"/>	If you will be using a local Windows Serena-Supplied Runtime RDBMS , see " Preparing a Local Windows Serena-Supplied Runtime RDBMS " on page 63

Checklist Item	
<input type="checkbox"/>	<p>If you will be using your own local Windows Oracle Enterprise 11g or 12c, see "Preparing Your Own Local Windows Oracle Enterprise" on page 65. You should especially implement one of the following:</p>
<input type="checkbox"/>	<p>If creating a fresh Oracle instance for use by Dimensions CM (see "Creating a Fresh Oracle Instance" on page 66).</p> <p><i>Record the Global Database Name for the new instance:</i></p> <p><i>Record the Oracle SID for the new instance:</i></p>
<input type="checkbox"/>	<p>If using an existing Oracle instance for use by Dimensions CM (see "Using an Existing Oracle Instance" on page 69).</p> <p><i>Record the Global Database Name of the existing instance:</i></p> <p><i>Record the Oracle SID of the existing instance:</i></p>
<input type="checkbox"/>	<p>If creating a system Oracle ODBC Data Source Name (DSN) for use by Dimensions CM (see "Creating a System Oracle ODBC DSN" on page 71). Note, the Oracle Call Interface (OCI), rather than ODBC, is the default interface for communicating with Dimensions CM.</p> <p><i>Record the TNS Service Name:</i></p> <p><i>Record the DSN:</i></p>
<input type="checkbox"/>	<p>If you will be using a local Windows SQL Server RDBMS, see "Preparing your Local Microsoft SQL Server" on page 72.</p>

	Checklist Item
<input type="checkbox"/>	<p>If you will be using a remote Windows Serena-Supplied Runtime RDBMS, see "Using a Remote Serena-Supplied Runtime RDBMS" on page 75, "Preparing a Remote Serena-Supplied Runtime RDBMS" on page 75, and "Setting Up a Local Oracle Net Service Name" on page 78.</p> <p><i>Record the Oracle Net Service Name for the Remote Database:</i></p>
<input type="checkbox"/>	<p>If you will be using a remote UNIX Serena-Supplied Runtime RDBMS, see "Using a Remote Serena-Supplied Runtime RDBMS" on page 75, "Preparing a Remote Serena-Supplied Runtime RDBMS" on page 75, and "Setting Up a Local Oracle Net Service Name" on page 78.</p> <p><i>Record the Oracle Net Service Name for the Remote Database:</i></p>
<input type="checkbox"/>	<p>If you will be using a remote Windows Oracle Enterprise RDBMS, see "Using a Remote Oracle Enterprise" on page 77, "Preparing Your Own Local Windows Oracle Enterprise" on page 65, and "Setting Up a Local Oracle Net Service Name" on page 78.</p> <p><i>Record the Oracle Net Service Name for the Remote Database:</i></p>
<input type="checkbox"/>	<p>If you will be using a remote UNIX Oracle Enterprise RDBMS, see "Using a Remote Oracle Enterprise" on page 77, "Preparing your Remote UNIX Oracle Enterprise" on page 78, and "Setting Up a Local Oracle Net Service Name" on page 78.</p> <p><i>Record the Oracle Net Service Name for the Remote Database:</i></p>

	Checklist Item
<input type="checkbox"/>	<p>If you will be using a remote Windows SQL Server RDBMS, see "Using a Remote SQL Server RDBMS" on page 80 and "Preparing Local and Remote Nodes for SQL Server Installations" on page 81.</p> <p><i>Record the local client ODBC Name:</i></p>

Checking Prerequisites

Windows Server Components

1 All Windows Server Components:

	Checklist Item
<input type="checkbox"/>	<p>Mandatory pre-installation tasks and considerations—see "Mandatory Pre-installation Tasks for a Server" on page 129.</p> <p><i>Record the database passwords for SYSTEM (Serena-Supplied Runtime RDBMS or Oracle Enterprise):</i></p> <p><i>Record the database passwords for PCMS_SYS (SQL Server):</i></p> <p><i>Record the operating-system username you create to be used for the Dimensions System Administrator (by convention <i>dmsys</i>):</i></p> <p><i>Record the name of the process model that you will install (server plus schema installations only):</i></p>
<input type="checkbox"/>	<p>Check that Microsoft .NET Framework V1.1. or later is installed (required for the Migration Console)—see "Migration Console Prerequisites" on page 100. This will normally be the case.</p>

	Checklist Item
<input type="checkbox"/>	If you have access to more than one physical disk, review "Networking Considerations" on page 145 and specifically "Network Disk Utilization" on page 146 for recommendations on how to help increase performance by utilizing separate disks for various installation components.
<input type="checkbox"/>	Optional pre-installation tasks and considerations—see "Optional Pre-installation Checks for Windows Servers" on page 149 .

2 Optional Single Sign On Server (SSO) Components:

If you will be installing the Dimensions CM for Windows Single Sign On (SSO) server components, see ["SSO Authentication or SSO and Smart Card Authentication Prerequisites" on page 135](#) and ["SSO Authentication Prerequisites" on page 137](#).

	Checklist Item
<input type="checkbox"/>	<p>I will be using an existing SSO server—see "Local or Remote Windows Server Prerequisites for an Existing SSO Server" on page 137.</p> <p>For the existing SSO server:</p> <p><i>Record the hostname:</i></p> <p><i>Record the SSO port:</i></p> <p><i>Record whether secure (https) connection will be required:</i></p>

	Checklist Item
<input type="checkbox"/>	<p>I wish the Dimensions CM installer to create a new SSO server— see "Local or Remote Windows Server Prerequisites For a New SSO Server" on page 138.</p> <p>For the new SSO server, record the LDAP parameters to be used:</p> <p><i>Record the hostname to be used:</i></p> <p><i>Record the port to be used:</i></p> <p><i>Record the base DN to be used:</i></p> <p><i>Record the search filter:</i></p> <p><i>Record the bind user DN:</i></p> <p><i>Record the LDAP password for the bind user DN:</i></p>

3 Optional Single Sign On Server (SSO) plus Common Access Card (CAC) Components:

If you will be installing the Dimensions CM for Windows Single Sign On (SSO) server plus Common Access Card (CAC) components, see ["SSO Authentication or SSO and Smart Card Authentication Prerequisites"](#) on page 135 and ["SSO and CAC Reader Authentication Prerequisites"](#) on page 140.

	Checklist Item
<input type="checkbox"/>	<p>I will be using an existing SSO server plus CAC reader— see "Local or Remote Windows Server Prerequisites for an Existing SSO Server and CAC Reader" on page 141.</p> <p>For the existing SSO server:</p> <p><i>Record the hostname:</i></p> <p><i>Record the SSO port:</i></p> <p><i>Record whether secure (https) connection will be required:</i></p>

	Checklist Item
<input type="checkbox"/>	<p>I wish the Dimensions CM installer to create a new SSO server and configure the CAC software—see "Local or Remote Windows Server Prerequisites For a New SSO Server and CAC Reader" on page 142.</p> <p>For the CAC reader, record the LDAP Parameters to be used:</p> <p><i>Record the hostname:</i></p> <p><i>Record the SSO port:</i></p> <p><i>Record the bind user DN:</i></p> <p><i>Record the LDAP password for the bind user DN:</i></p> <p>For the new SSO server, record the LDAP parameters to be used:</p> <p><i>Record the hostname to be used (by default same as for CAC reader):</i></p> <p><i>Record the port to be used (by default same as for CAC reader):</i></p> <p><i>Record the base DN to be used:</i></p> <p><i>Record the search filter:</i></p> <p><i>Record the bind user DN (by default same as for CAC reader):</i></p> <p><i>Record the LDAP password for the bind user DN (by default same as for CAC reader):</i></p>

Agent Components

1 Local or Remote Windows Agent:

	Checklist Item
<input type="checkbox"/>	Pre-installation tasks and considerations—see " Pre-installation Checks for a Windows Agent " on page 150.

2 Remote UNIX Agent:

	Checklist Item
<input type="checkbox"/>	Pre-installation tasks and considerations—see " Pre-installation Checks for a Remote UNIX Agent " on page 150.

Client Components

1 Local or Remote Windows Clients:

	Checklist Item
<input type="checkbox"/>	Pre-installation tasks and considerations—see " Pre-installation Checks for Windows Clients " on page 152.

2 Remote UNIX Client:

	Checklist Item
<input type="checkbox"/>	Pre-installation tasks and considerations—see " Pre-installation Checks for a Remote UNIX Client " on page 154.

Prerequisites For Licensing Your Server

For a Dimensions CM server or server plus schema installation, licensing prerequisite need to be taken into consideration. Tick the appropriate checklist boxes and proceed as indicated:

	Checklist Item
<input type="checkbox"/>	If you will be installing Dimensions CM for just the 30-day evaluation period, no licensing prerequisites are required.
<input type="checkbox"/>	If you will be permanently installing Dimensions CM (or converting an evaluation copy into a fully licensed copy), see "Licensing Prerequisites" on page 133 . and proceed as below:
<input type="checkbox"/>	Install the Serena License Manager (SLM). You then need to obtain a license as per the next checklist.
<input type="checkbox"/>	Obtain a license via SLM using Web fulfillment (see the <i>System Administration Guide</i> for details). To do this you will need to (see "Licensing Prerequisites" on page 133): <ol style="list-style-type: none"> 1 Know/determine the host-id and physical Ethernet address of your machine. <i>Record the host-id:</i> <i>Record the physical Ethernet address:</i> 2 Have a Serena Support user login and password. <i>Record your Serena Support user login:</i> <i>Record your Serena Support user password:</i> 3 Decide whether you wish to use concurrent or named licenses. <i>Record your choice of concurrent or named:</i>

Installing Components

Installing Windows Server Components

1 Server and Schema on the Same PC as a Windows Serena-Supplied Runtime RDBMS or Oracle RDBMS:

If you will be installing the Dimensions CM server and schema on the same network node as a Windows Serena-Supplied Runtime RDBMS or your own Oracle RDBMS, see ["Installing a New Windows Server" on page 125](#).

Checklist Item	
<input type="checkbox"/>	Obtain the installation software, see page 23 .
<input type="checkbox"/>	Will you be launching the installer from the HTML front end or from the extracted downloaded zip file content? See "Launching the Installer" on page 22 .
<input type="checkbox"/>	<input type="checkbox"/> Launching from the HTML front end, see "Launching the Installer from the HTML Front End" on page 24 .
<input type="checkbox"/>	<input type="checkbox"/> Launching from the extracted zip file, see "Launching the Installer from the Extracted Downloaded Zip Files" on page 25 .
<input type="checkbox"/>	Run the server installer. See "Running the Server Installer" on page 127 and the installer options and values that you recorded in earlier planning checklists in this chapter.
<input type="checkbox"/>	<i>Record the PCMS_SYS schema password:</i>
<input type="checkbox"/>	<i>Record the port number to be used by the common tools Tomcat server (8080 by default):</i>
<input type="checkbox"/>	Perform quick post-installation checks (see "Checking the Server Installation" on page 132) and then proceed to the detailed post-installation checklist (see "Performing Post-installation Activities" on page 57).

2 Server and Schema on One PC and Windows or UNIX Serena-Supplied Runtime RDBMS or Oracle RDBMS on Another Networked PC:

If you will be installing the Dimensions CM server and schema on one network node with the Windows or UNIX Serena-Supplied Runtime RDBMS or your own Windows or UNIX Oracle RDBMS on a remote networked node, see ["Installing Windows Server: Other Scenarios" on page 295](#).

Checklist Item	
<input type="checkbox"/>	Obtain the installation software, see page 23 .
<input type="checkbox"/>	Will you be launching the installer from the HTML front end or from the extracted downloaded zip file content? See "Launching the Installer" on page 22 .
<input type="checkbox"/>	Launching from the HTML front end, see "Launching the Installer from the HTML Front End" on page 24 .
<input type="checkbox"/>	Launching from the extracted zip file, see "Launching the Installer from the Extracted Downloaded Zip Files" on page 25 .
<input type="checkbox"/>	Run the server installer. Review the installer options and values that you recorded in earlier planning checklists in this chapter.
<input type="checkbox"/>	<i>Record the PCMS_SYS schema password:</i>
<input type="checkbox"/>	<i>Record the port number to be used by the common tools Tomcat server (8080 by default):</i>
<input type="checkbox"/>	Perform quick post-installation checks (see "Checking a Server with a Remote RDBMS" on page 322) and then proceed to the detailed post-installation checklist (see "Performing Post-installation Activities" on page 57).

3 Server and Schema on the Same PC as a SQL Server RDBMS:

If you will be installing the Dimensions CM server and schema on the same network node as a Windows SQL Server RDBMS, see ["Installing Windows Server: Other Scenarios"](#) on page 295.

Checklist Item	
<input type="checkbox"/>	Obtain the installation software, see page 23 .
<input type="checkbox"/>	Will you be launching the installer from the HTML front end or from the extracted downloaded zip file content? See "Launching the Installer" on page 22.
<input type="checkbox"/>	Launching from the HTML front end, see "Launching the Installer from the HTML Front End" on page 24.
<input type="checkbox"/>	Launching from the extracted zip file, see "Launching the Installer from the Extracted Downloaded Zip Files" on page 25.
<input type="checkbox"/>	Run the server installer. Review the installer options and values that you recorded in earlier planning checklists in this chapter.
<input type="checkbox"/>	<i>Record the PCMS_SYS schema password:</i>
<input type="checkbox"/>	<i>Record the port number to be used by the common tools Tomcat server (8080 by default):</i>
<input type="checkbox"/>	Perform quick post-installation checks (see "Checking a Server with a Local SQL Server RDBMS" on page 315) and then proceed to the detailed post-installation checklist (see "Performing Post-installation Activities" on page 57).

4 Server and Schema on One PC and SQL Server RDBMS on Another Networked PC

If you will be installing the Dimensions CM server and schema on one network node with your own SQL Server RDBMS on a remote networked node, see ["Installing Windows Server: Other Scenarios"](#) on page 295.

Checklist Item	
<input type="checkbox"/>	Obtain the installation software, see page 23 .

Checklist Item	
<input type="checkbox"/>	Will you be launching the installer from the HTML front end or from the extracted downloaded zip file content? See "Launching the Installer" on page 22 to decide.
<input type="checkbox"/>	Launching from the HTML front end, see "Launching the Installer from the HTML Front End" on page 24 .
<input type="checkbox"/>	Launching from the extracted zip file, see "Launching the Installer from the Extracted Downloaded Zip Files" on page 25 .
<input type="checkbox"/>	Run the server installer. Review the installer options and values that you recorded in earlier planning checklists in this chapter.
<input type="checkbox"/>	<i>Record the PCMS_SYS schema password:</i>
<input type="checkbox"/>	<i>Record the port number to be used by the common tools Tomcat server (8080 by default):</i>
<input type="checkbox"/>	Perform quick post-installation checks (see "Checking a Server with a Remote RDBMS" on page 322) and then proceed to the detailed post-installation checklist (see "Performing Post-installation Activities" on page 57).

5 Server (Without Schema) on the Same PC as a Windows Serena-Supplied Runtime RDBMS or Oracle RDBMS:

If you will be installing the Dimensions CM server (without schema) on the same network node as a Windows Serena-Supplied Runtime RDBMS or your own Oracle RDBMS, see ["Installing a New Windows Server" on page 125](#).

Checklist Item	
<input type="checkbox"/>	Obtain the installation software, see page 23 .
<input type="checkbox"/>	Will you be launching the installer from the HTML front end or from the extracted downloaded zip file content? See "Launching the Installer" on page 22 .
<input type="checkbox"/>	Launching from the HTML front end, see "Launching the Installer from the HTML Front End" on page 24 .

Checklist Item	
<input type="checkbox"/>	Launching from the extracted zip file, see "Launching the Installer from the Extracted Downloaded Zip Files" on page 25.
<input type="checkbox"/>	Run the server installer. Review the installer options and values that you recorded in earlier planning checklists in this chapter.
<input type="checkbox"/>	<i>Record the port number to be used by the common tools Tomcat server (8080 by default):</i>
<input type="checkbox"/>	Perform quick post-installation checks (see "Checking a Server without Oracle Dimensions Schema Included Installation" on page 303) and then proceed to the detailed post-installation checklist (see "Performing Post-installation Activities" on page 57).

6 Server (Without Schema) on One PC and Windows or UNIX Serena-Supplied Runtime RDBMS or Oracle RDBMS on Another Networked PC:

If you will be installing the Dimensions CM server (without schema) on one network node with the Windows or UNIX Serena-Supplied Runtime RDBMS or your own Windows or UNIX Oracle RDBMS on a remote networked node, see ["Installing Windows Server: Other Scenarios"](#) on page 295.

Checklist Item	
<input type="checkbox"/>	Obtain the installation software, see "Obtaining the Installer Software" on page 23.
<input type="checkbox"/>	Will you be launching the installer from the HTML front end or from the extracted downloaded zip file content? See "Launching the Installer" on page 22.
<input type="checkbox"/>	Launching from the HTML front end, see "Launching the Installer from the HTML Front End" on page 24.
<input type="checkbox"/>	Launching from the extracted zip file, see "Launching the Installer from the Extracted Downloaded Zip Files" on page 25.
<input type="checkbox"/>	Run the server installer. Review the installer options and values that you recorded in earlier planning checklists in this chapter.

Checklist Item	
<input type="checkbox"/>	Record the port number to be used by the common tools Tomcat server (8080 by default):
<input type="checkbox"/>	Perform quick post-installation checks (see " Checking a Server with a Remote RDBMS " on page 322) and then proceed to the detailed post-installation checklist (see " Performing Post-installation Activities " on page 57).

7 Server (Without Schema) on the Same PC as a SQL Server RDBMS:

If you will be installing the Dimensions CM server (without schema) on the same network node as a Windows SQL Server RDBMS, see "[Installing Windows Server: Other Scenarios](#)" on page 295.

Checklist Item	
<input type="checkbox"/>	Obtain the installation software, see page 23 .
<input type="checkbox"/>	Will you be launching the installer from the HTML front end or from the extracted downloaded zip file content? See " Launching the Installer " on page 22.
<input type="checkbox"/>	Launching from the HTML front end, see " Launching the Installer from the HTML Front End " on page 24.
<input type="checkbox"/>	Launching from the extracted zip file, see " Launching the Installer from the Extracted Downloaded Zip Files " on page 25.
<input type="checkbox"/>	Run the server installer. Review the installer options and values that you recorded in earlier planning checklists in this chapter.
<input type="checkbox"/>	Record the port number to be used by the common tools Tomcat server (8080 by default):
<input type="checkbox"/>	Perform quick post-installation checks (see " Checking a Server without SQL Server Dimensions Schema Included Installation " on page 319) and then proceed to the detailed post-installation checklist (see " Performing Post-installation Activities " on page 57).

8 Server (Without Schema) on One PC and SQL Server RDBMS on Another Networked PC

If you will be installing the Dimensions CM server (without schema) on one network node with your own SQL Server RDBMS on a remote networked node, see ["Installing Windows Server: Other Scenarios" on page 295](#).

Checklist Item	
<input type="checkbox"/>	Obtain the installation software, see page 23 .
<input type="checkbox"/>	Will you be launching the installer from the HTML front end or from the extracted downloaded zip file content? See "Launching the Installer" on page 22 .
<input type="checkbox"/>	Launching from the HTML front end, see "Launching the Installer from the HTML Front End" on page 24 .
<input type="checkbox"/>	Launching from the extracted zip file, see "Launching the Installer from the Extracted Downloaded Zip Files" on page 25 .
<input type="checkbox"/>	Run the server installer. Review the installer options and values that you recorded in earlier planning checklists in this chapter.
<input type="checkbox"/>	<i>Record the port number to be used by the common tools Tomcat server (8080 by default):</i>
<input type="checkbox"/>	Perform quick post-installation checks (see "Checking a Server with a Remote RDBMS" on page 322) and then proceed to the detailed post-installation checklist (see "Performing Post-installation Activities" on page 57).

9 Single Sign On Server (Installed at the Same Time as a Dimensions CM Server)

Checklist Item	
<input type="checkbox"/>	If you will be installing or configuring a Single Sign On server (SSO), see "Installing or Configuring an SSO Server" on page 323 .
<input type="checkbox"/>	Run the installer. Review the installer options and values that you recorded in earlier planning checklists in this chapter.

	Checklist Item
<input type="checkbox"/>	Perform the SSO additional post-installation checks (see "Configuring Trusted Certificate Authorities for SSO and CAC Installations" on page 175 and "Establishing a Certificate Revocation List" on page 180).

10 Single Sign On Server plus Smart Card (Installed at the Same Time as a Dimensions CM Server)

	Checklist Item
<input type="checkbox"/>	If you will be installing or configuring a Single Sign On server (SSO) plus configuring a Common Access Card (CAC) smart card, see "Installing or Configuring an SSO Server and a Smart Card" on page 324.
<input type="checkbox"/>	Run the installer. Review the installer options and values that you recorded in earlier planning checklists in this chapter.
<input type="checkbox"/>	Perform the SSO additional post-installation checks (see "Configuring Trusted Certificate Authorities for SSO and CAC Installations" on page 175, "Dual Username/Password and CAC Authentication" on page 180, and "Establishing a Certificate Revocation List" on page 180).

11 Single Sign On Server (Installed Subsequently to a Dimensions CM Server)

	Checklist Item
<input type="checkbox"/>	If you will be installing or configuring a Single Sign On server (SSO), see "Subsequently Installing or Configuring an SSO Server" on page 325.
<input type="checkbox"/>	Run the installer. Review the installer options and values that you recorded in earlier planning checklists in this chapter.
<input type="checkbox"/>	Perform the SSO additional post-installation checks (see "Configuring Trusted Certificate Authorities for SSO and CAC Installations" on page 175 and "Establishing a Certificate Revocation List" on page 180).

12 Single Sign On Server plus Smart Card (Installed Subsequently to a Dimensions CM Server)

	Checklist Item
<input type="checkbox"/>	If you will be installing or configuring a Single Sign On server (SSO) plus configuring a Common Access Card (CAC) smart card, see page 328 .
<input type="checkbox"/>	Run the installer. Review the installer options and values that you recorded in earlier planning checklists in this chapter.
<input type="checkbox"/>	Perform the SSO additional post-installation checks (see "Configuring Trusted Certificate Authorities for SSO and CAC Installations" on page 175 , "Dual Username/Password and CAC Authentication" on page 180 , and "Establishing a Certificate Revocation List" on page 180).

Installing Dimensions CM for Windows Agent Components

If you will be installing the Dimensions CM for Windows agent components, see "Installing a New Windows Agent" on [page 137](#).

	Checklist Item				
<input type="checkbox"/>	Obtain the installation software, see page 23 .				
<input type="checkbox"/>	Will you be launching the installer from the HTML front end or from the extracted downloaded zip file content? See "Running the Agent Installer" on page 138 to decide.				
<input type="checkbox"/>	<table border="1"> <tr> <td><input type="checkbox"/></td> <td>Launching from the HTML front end, see "Launching the Installer from the HTML Front End" on page 24.</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Launching from the extracted zip file, see "Launching the Installer from the Extracted Downloaded Zip Files" on page 25.</td> </tr> </table>	<input type="checkbox"/>	Launching from the HTML front end, see "Launching the Installer from the HTML Front End" on page 24 .	<input type="checkbox"/>	Launching from the extracted zip file, see "Launching the Installer from the Extracted Downloaded Zip Files" on page 25 .
<input type="checkbox"/>	Launching from the HTML front end, see "Launching the Installer from the HTML Front End" on page 24 .				
<input type="checkbox"/>	Launching from the extracted zip file, see "Launching the Installer from the Extracted Downloaded Zip Files" on page 25 .				
<input type="checkbox"/>	Run the agent installer. See "Running the Agent Installer" on page 138 and the installer options and values that you recorded in earlier planning checklists in this chapter.				

	Checklist Item
<input type="checkbox"/>	Perform quick post-installation checks (see "Checking the Agent Installation" on page 140) and then proceed to the detailed post-installation checklist (see "Performing Post-installation Activities" on page 57).

Installing UNIX Agent and Client Components

If you will be remotely installing the Dimensions CM for UNIX agent and client components, see the *Installation Guide for UNIX*.

Installing Windows Client Components

If you will be installing the Dimensions CM for Windows client components, see either ["Installing a New Windows Client" on page 145](#) or ["Silently Installing Windows Agent or Clients" on page 153](#).

	Checklist Item
<input type="checkbox"/>	Will you be installing the client components using the installer wizard or silently?
<input type="checkbox"/>	Using the installer wizard, see "Installing a New Windows Client" on page 145 .
<input type="checkbox"/>	Silently, see "Silently Installing Windows Agent or Clients" on page 153 .
<input type="checkbox"/>	Obtain the installation software.
<input type="checkbox"/>	Will you be launching the installer from the HTML front end or from the extracted downloaded zip file content? See "Running the Client Installer" on page 147 to decide. For a silent installation you will only be interested in the downloadable zip file.
<input type="checkbox"/>	Launching from the HTML front end, see "Launching the Installer from the HTML Front End" on page 24 .

Checklist Item	
<input type="checkbox"/>	Launching from the extracted zip file, see "Launching the Installer from the Extracted Downloaded Zip Files" on page 25.
<input type="checkbox"/>	Run the clients installer using installer options and values that you recorded in earlier planning checklists in this chapter. See: <ul style="list-style-type: none"> ▪ "Running the Client Installer" on page 147, or ▪ "Silently Installing Fresh Clients" on page 155.
<input type="checkbox"/>	Perform quick post-installation checks (see "Checking the Client Installation" on page 150) and then proceed to the detailed post-installation checklist (see "Performing Post-installation Activities" on page 57).

Performing Post-installation Activities

Checking the Installation

Checklist Item	
<input type="checkbox"/>	Check that the installation completes successfully, see "Checking for Successful Completion" on page 164.

Checking for Latest Updates

Checklist Item	
<input type="checkbox"/>	Check for latest updates, see "Checking for Latest Updates" on page 165.

Windows Server Post-installation Activities

	Checklist Item
<input type="checkbox"/>	Perform applicable post-installation activities and checks from those detailed in "Windows Server Post-installation Activities" on page 166.

Windows Agent Post-installation Activities

	Checklist Item
<input type="checkbox"/>	Perform applicable post-installation activities and checks, see "Windows Agent Post-installation Activities" on page 184.

Windows Clients Post-installation Activities

	Checklist Item
<input type="checkbox"/>	Perform applicable post-installation activities and checks, see "Windows Clients Post-installation Activities" on page 185.

Installing Additional Miscellaneous Components

Installing Dimensions CM Make

If you will be installing Dimensions CM Make for Windows, see ["Installing Dimensions CM Make for Windows"](#) on page 205.

	Checklist Item
<input type="checkbox"/>	Obtain the installation software, see "Obtaining the Make Executables" on page 206.
<input type="checkbox"/>	Run the Dimensions CM Make for Windows installer, see "Installing" on page 207

Installing Windows Integrations

Installing the Eclipse Integration

	Checklist Item	
<input type="checkbox"/>	Will you be installing the Eclipse integration from a server, the installer wizard or silently?	
	<input type="checkbox"/>	Installing from a server, "Installing the Eclipse Integration from a Server" on page 210.
	<input type="checkbox"/>	Using the installer wizard, see "Manually Installing the Eclipse Integration" on page 210.
	<input type="checkbox"/>	Silently, see "Silently Installing the Eclipse Integration" on page 212.
<input type="checkbox"/>	Obtain the installation software, see "Manually Installing the Eclipse Integration" on page 210.	
<input type="checkbox"/>	Will you be launching the installer from the HTML front end or from the extracted downloaded zip file content? See "Launching the Eclipse Integration Installer" on page 211 to decide. For a silent installation you will only be interested in the downloadable zip file	
	<input type="checkbox"/>	Launching from the HTML front end.
	<input type="checkbox"/>	Launching from the extracted zip file.
<input type="checkbox"/>	Run the Eclipse integration installer.	
<input type="checkbox"/>	Proceed to the <i>Dimensions for Eclipse User's Guide</i> for general configuration and connection information.	

Installing the Other Integrations

	Checklist Item
<input type="checkbox"/>	Obtain the appropriate installation software, see "Manually Installing the Eclipse Integration" on page 210.
<input type="checkbox"/>	Will you be launching the integration installer from the HTML front end or from the extracted downloaded zip file content? See "Launching the Eclipse Integration Installer" on page 211 to decide. For a silent installation you will only be interested in the downloadable zip file.
<input type="checkbox"/>	Launching from the HTML front end, see page 213 .
<input type="checkbox"/>	Launching from the extracted zip file, see page 213 .
<input type="checkbox"/>	Run the appropriate integration installer, see page 213 .
<input type="checkbox"/>	Proceed to, as appropriate: <ul style="list-style-type: none">▪ <i>Dimension CM Connect for Serena Business Manager.</i>▪ <i>IDE User's Guide.</i>

Uninstalling Components

	Checklist Item
<input type="checkbox"/>	Will you be uninstalling Dimensions CM 14.2.0.2 components or earlier Dimensions CM upgraded components?
<input type="checkbox"/>	Uninstalling the Dimensions CM 14.2.0.2 components, see "Uninstalling Components" on page 197.
<input type="checkbox"/>	Uninstalling earlier Dimensions CM upgraded components, see "Manually Uninstalling Windows Clients" on page 200.

Chapter 3

Preparing Your Database

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Introduction

A Serena® Dimensions® CM 14.2.0.2 server for Windows requires local node (Windows) or remote network node (Windows or UNIX) access to one of the RDBMS detailed in the table below.

Each RDBMS must be prepared ready for a Dimensions CM 14.2.0.2 server installation—as explained in this chapter:

Database Node Location	Database Type	Operating System	See...
Local or remote.	Serena-Supplied Runtime RDBMS.	Windows	"Preparing a Local Windows Serena-Supplied Runtime RDBMS" on page 63 or "Preparing a Remote Windows Serena-Supplied Runtime RDBMS" on page 76.
Local or remote.	Your own Oracle Enterprise.	Windows	"Preparing Your Own Local Windows Oracle Enterprise" on page 65 or "Preparing your Remote Windows Oracle Enterprise" on page 78.
Local or remote.	Your own SQL Server Enterprise.	Windows	"Preparing your Local Microsoft SQL Server" on page 72 or "Preparing Local and Remote Nodes for SQL Server Installations" on page 81.
Remote.	Serena-Supplied Runtime RDBMS.	UNIX	<i>Installation Guide for UNIX.</i>
Remote.	Your own Oracle.	UNIX	<i>Installation Guide for UNIX.</i>

Database Connectivity Mechanisms

Dimensions CM for Windows, by default and as standard, supports the following two access methods:

- For use in conjunction with a Serena-Supplied Runtime RDBMS or an Oracle RDBMS: connection through OCI.
- For use in conjunction with a Microsoft SQL Server RDBMS: connection through ODBC.

Preparing a Local Windows Serena-Supplied Runtime RDBMS



NOTES *(continued on next page)*

- If you do not intend to use the Serena-Supplied Runtime RDBMS supplied with Dimensions CM 14.2.0.2, you can skip this section.
- To support the installation of a Dimensions CM 14.2.0.2 server with a remote Serena-Supplied Runtime RDBMS (see "[Preparing a Remote Windows Serena-Supplied Runtime RDBMS](#)" on page 76), the Oracle tables PCMS_DATA, PCMS_IDX, PCMS_TEMP, and PCMS_RBS are no longer installed during the installation of a Dimensions CM 14.2.0.2 server with *either a local or remote Oracle database*. If you install the Serena-Supplied Runtime RDBMS with the default **Create Oracle Instance** option these tablespaces will be created automatically for you.
- The following considerations should be borne in mind if you plan to use separate instances in the same Serena-Supplied Runtime RDBMS for the ALM integration between Dimensions CM and Dimensions RM:



NOTES (continued)

- The minimum supported level of Oracle 11g for use with Dimensions RM is 11.1.0x. The 11gR2.0.3 version of the Serena-Supplied Runtime RDBMS is based on Oracle 11.2.0.x and thus automatically satisfies this requirement.
- Although Dimensions RM also supports the Oracle AL32UTF8 character set, all data entered in such a database must be ASCII characters for Dimensions RM to display it correctly. Therefore, if you also intend to use Dimensions RM to access data entered in a Dimensions CM AL32UTF8 database, that Dimensions CM data must also be entered as ASCII. This is particularly important with for Dimensions CM project/stream and product names.

If you will be installing the Dimensions CM 14.2.0.2 server on the same node as the pre-installed Serena-Supplied Runtime RDBMS (a "local" installation), then no further preparation is required prior to installing the Dimensions CM 14.2.0.2 server provided:

- You installed the Serena-Supplied Runtime RDBMS with the default **Create Oracle Instance** option.
- You made a note of the **Oracle Home** and **SID/DSN** as these will be needed during the installation of the Dimensions CM 14.2.0.2 server.

(See the companion manual *Installing the Serena-Supplied Runtime RDBMS* for further details, if required.)

Proceed to [Chapter 5, "Installing a New Windows Server" on page 125](#) or [Chapter A, "Installing Windows Server: Other Scenarios" on page 295](#).

Preparing Your Own Local Windows Oracle Enterprise



NOTES

- If you do not intend to use your own Oracle Enterprise for Dimensions CM 14.2.0.2, you can skip this section.
- To support the installation of a Dimensions CM 14.2.0.2 server with a remote Oracle database (see ["Preparing your Remote Windows Oracle Enterprise" on page 78](#)), the Oracle tables PCMS_DATA, PCMS_IDX, PCMS_TEMP, and PCMS_RBS are no longer installed during the installation of a Dimensions CM 14.2.0.2 server with *either a local or remote Oracle database*. If you plan to use your own Oracle, you will need to consider the scenarios and checks described in this section.
- The following considerations should be borne in mind if you plan to use separate instances in the same Oracle Enterprise RDBMS for the ALM integration between Dimensions CM and Dimensions RM:
 - The minimum supported level of Oracle 11g for use with Dimensions RM is 11.1.0x.
 - Although Dimensions RM also supports the Oracle AL32UTF8 character set, all data entered in such a database must be ASCII characters for Dimensions RM to display it correctly. Therefore, if you also intend to use Dimensions RM to access data entered in a Dimensions CM AL32UTF8 database, that Dimensions CM data must also be entered as ASCII. This is particularly important with for Dimensions CM project/stream and product names.

If you will be installing the Dimensions CM 14.2.0.2 server on the same node as your own pre-installed a Oracle Enterprise (a "local" installation), then you must ensure that you prepare and check it as described below prior to installing the Dimensions CM 14.2.0.2 server. Once you have done this, proceed to [Chapter 5, "Installing a New Windows Server" on page 125](#) or [Chapter A, "Installing Windows Server: Other Scenarios" on page 295](#).

Upgrading an Oracle Instance

If your Oracle Enterprise database already contains an Oracle instance into which an earlier Dimensions CM schema has been installed, then the Dimensions CM 14.2.0.2 server installation will detect and automatically upgrade that schema and install the requisite Oracle tables.

Creating a Fresh Oracle Instance

To create a fresh instance in your Oracle Enterprise database for use with the Dimensions CM 14.2.0.2 server installation, you need to install the Serena-supplied template file as described below.

Assuming that the version of your own Oracle Enterprise is compatible, as discussed above, you will first need to obtain the relevant database template file from the `db_preinstall\oracle` folder located on the Dimensions CM software DVD (either directly or its copied contents) or the equivalent folder in the extracted contents of the file downloadable from Serena Support.

The template files are:

- 11gR2.0.3: `SerenaOracle11g.dbt`
- 12c: `SerenaOracle12c.dbt`

If for any reason this template file is not present on your software medium, you can obtain it from Serena Support:

<http://www.serena.com/support/>

Once you have obtained the template, you will then need to run the Oracle Database Configuration Assistant (DBCA) using the template file as input to create an instance.



IMPORTANT! If you are not familiar with the operation of DBCA, consult your Oracle RDBMS Database Administrator (DBA) or vendor documentation.

The procedure is as follows:

- 1 Copy the appropriate template file to the folder
`%ORACLE_HOME%\assistants\dbca\templates`

2 Invoke DBCA as follows:

All Programs | Oracle-<oracle_home_name> | Configuration and Migration Tools | Database Configuration Assistant

3 Progress to Step 1 of the DBCA and check **Create a Database**.

4 Progress to Step 2 of the DBCA and check the radio button for the appropriate template file.

- Oracle 11gR2.0.3
 - SerenaOracle11g.dbt
 - your own template.
- Oracle 12c
 - SerenaOracle12c.dbt
 - your own template.

5 Progress to Step 3 of the DBCA and type in the **Global Database Name** and the **Oracle SID**. The former is limited to eight characters the first of which must be alphabetic. Provided your Oracle SID (default DIM14) is eight characters or less, you can assign the same name to both fields. As you type in the Global Database Name your entry will be echoed in the Oracle SID field.

6 Progress to Step 4 of the DBCA: verify

Select the Automatic Maintenance Tasks tab and accept the default **Enable automatic maintenance tasks**.

7 Progress to Step 5 of the DBCA. When prompted to specify passwords for your user accounts, set the passwords in accordance with your site policies.



CAUTION! Make a note of these passwords. Serena Support will be unable to help you with database queries if you do not know these passwords.

8 Progress to Step 6 of the DBCA:

- a Select the storage type and locations for database files, by selecting **File System** from the Storage Type drop down menu. Normally you should accept the values reported in the **File Location Variables** dialog that appears.

- b** Accept the defaults for the **Storage Locations** unless your site DBA is going to provide the support for other methods.
- 9** Progress to Step 7 of the DBCA. When prompted to choose the recovery options for the database, deselect the **Specify Flash Recovery Area** checkbox unless your site DBA is going to provide the support.
- 10** Progress to Step 8 of the DBCA. When prompted to include sample schemas or custom scripts, accept the default options.
- 11** Progress to Step 9 of the DBCA.
 - a** On the Memory tab:

The defaults will normally suffice to get started with. Consult your DBA.
 - b** On the Sizing tab:

The defaults will normally suffice to get started with. Consult your DBA.
 - c** On the Character Sets tab:

The defaults will normally suffice to get started with. Consult your DBA.
 - d** On the Connection Mode tab:

Accept the default **Dedicated Server Mode** selection.
- 12** Progress to Step 11 of the DBCA via intermediate steps by repeatedly clicking **Next**. Ensure that Create Database is pre-selected, and then Click **Finish** to launch the database instance creation.
- 13** Click **OK** on the **Confirmation** dialog box. The database instance will now be created.
- 14** Click **Exit** on the screen summarizing the created database instance.
- 15** Verify that you can connect to the newly created Oracle instance:
 - a** Open a Windows Command Prompt.
 - b** Type:

```
sqlplus system/<password>@<ora_instance>
```

- c Check that the output confirms that you have successfully established a connection.
- d To exit from SQL Plus, type:

exit

Using an Existing Oracle Instance

To use an existing instance in your Oracle Enterprise database that is not based on a Serena-supplied database template, you need to manually install the following Oracle tablespaces:

```
PCMS_DATA
PCMS_IDX
PCMS_TEMP
PCMS_RBS
USERS
```

into your Oracle database. To do this, proceed as follows:



NOTE The Oracle database will also require the creation of either an UNDO tablespace or a table space dedicated to rollback segments (for example, PCMS_RBS).

- 1 Connect to the Oracle instance into which you will be installing the Dimensions CM 14.2.0.2 schema by entering the following command:

```
$ sqlplus system/<system_password>@<dsn_name>
```

This should connect you to the instance that will be used by Dimensions CM and will result in the SQL> prompt.

- 2 Create the Oracle tables with minimum sizes indicated using the following sqlplus commands (substituting the folder pathnames appropriate to your system and sizes appropriate to PCMS_TEMP on your system):

```
SQL> CREATE TABLESPACE "PCMS_DATA" DATAFILE
      'D:\Oracle\Database\PCMS_DATA.DBF' SIZE 1000M
      REUSE;
SQL> CREATE TABLESPACE "PCMS_IDX" DATAFILE
      'D:\Oracle\Database\PCMS_IDX.DBF' SIZE 1000M REUSE;
SQL> CREATE TABLESPACE "USERS" DATAFILE
```

```
'D:\Oracle\Database\USERS.DBF' SIZE 100M REUSE;  
SQL> CREATE TEMPORARY TABLESPACE "PCMS_TEMP" TEMPFILE  
      'D:\Oracle\Database\PCMS_TEMP.DBF' SIZE 200M  
      AUTOEXTEND ON NEXT 160M MAXSIZE 2048M EXTENT  
      MANAGEMENT LOCAL;
```



IMPORTANT! The command below and those in the following step are only applicable if you are using rollback segments rather than automatically managed UNDO tablespaces.

```
SQL> CREATE TABLESPACE "PCMS_RBS" DATAFILE  
      'D:\Oracle\Database\PCMS_RBS.DBF' SIZE 160M REUSE;
```

3 Create the following rollback segments:

```
SQL >CREATE ROLLBACK SEGMENT "R0" TABLESPACE "SYSTEM"  
      STORAGE ( INITIAL 20K NEXT 20K OPTIMAL NULL  
      MINEXTENTS 2 MAXEXTENTS 20);
```

```
SQL> ALTER ROLLBACK SEGMENT "R0" ONLINE;
```

```
SQL> CREATE ROLLBACK SEGMENT "R01" TABLESPACE  
      "PCMS_RBS" STORAGE ( INITIAL 1024K NEXT 1024K  
      OPTIMAL 2048K MINEXTENTS 2 MAXEXTENTS 121);
```

```
SQL> ALTER ROLLBACK SEGMENT "R01" ONLINE;
```

```
SQL> CREATE ROLLBACK SEGMENT "R02" TABLESPACE  
      "PCMS_RBS" STORAGE ( INITIAL 1024K NEXT 1024K  
      OPTIMAL 2048K MINEXTENTS 2 MAXEXTENTS 121);
```

```
SQL> ALTER ROLLBACK SEGMENT "R02" ONLINE;
```

```
SQL> CREATE ROLLBACK SEGMENT "R03" TABLESPACE  
      "PCMS_RBS" STORAGE ( INITIAL 1024K NEXT 1024K  
      OPTIMAL 2048K MINEXTENTS 2 MAXEXTENTS 121);
```

```
SQL> ALTER ROLLBACK SEGMENT "R03" ONLINE;
```

```
SQL> CREATE ROLLBACK SEGMENT "R04" TABLESPACE  
      "PCMS_RBS" STORAGE ( INITIAL 1024K NEXT 1024K  
      OPTIMAL 2048K MINEXTENTS 2 MAXEXTENTS 121);
```

```
SQL> ALTER ROLLBACK SEGMENT "R04" ONLINE;
```

4 Exit sqlplus, type:

```
SQL> exit
```

Creating a System Oracle ODBC DSN

By default, and for optimum performance, Dimensions CM utilizes the Oracle Call Interface (OCI) to access the Oracle Database Server. If you use the alternative ODBC interface, you will need to create a system Oracle ODBC Data Source Name (DSN). This can be done through the Windows Control Panel **Data Sources (ODBC)** option (on some versions of Windows this option is located in the **Administrative Tools** option of the Control Panel).



NOTE You need to be logged in as a user with local Windows Administration rights to be able to perform this procedure.

- 1 Invoke the Windows **Data Sources (ODBC)** option as described above.
- 2 Click the System DSN tab.
- 3 Click **Add**.
- 4 From the **Create New Data Source** dialog box, select **Microsoft ODBC for Oracle** from the list of drivers and click **Finish**.
- 5 In the **Microsoft ODBC for Oracle Setup** dialog box, type entries in the following data fields, check the check box detailed, and then click **OK**.



IMPORTANT! The data fields described may differ dependent on your version of Windows. Click the **Microsoft ODBC for Oracle Setup** dialog box **Help** button if you require further information.

- a **TNS Service Name:** This is the Oracle database from which the ODBC driver will retrieve data. If you do not know this use the Windows Control Panel **Services** option (on some versions of Windows this option is located in the **Administrative Tools** option of the Control Panel) and look for the following service:

OracleService<ora_service_name>

Where <ora_service_name> is the Service Name of your Oracle Enterprise database.

- b **Data Source Name:** This is the DSN that Dimensions CM 14.2.0.2 will use with your Oracle RDBMS. The DSN name must be the same as the Oracle service name. During installation, the

Dimensions CM installer will, by default, offer a DSN of DIM14—make sure you replace that by whatever DSN you have specified here.

- c Description:** A description for the DSN, for, example, Oracle in Dimensions CM.
- d** In the **Workaround Options**, if present, check **Force Retrieval of Long Columns**.

6 Click **OK**.

Preparing your Local Microsoft SQL Server



NOTE If you do not intend to use your own SQL Server RDBMS for Dimensions CM 14.2.0.2, you can skip this section.

If you have your own recipient SQL Server Enterprise RDBMS installed on the same node upon which you will be installing the Dimensions CM 14.2.0.2 server (your own "local" installation), then it is assumed that an instance has been installed and is set up for access through ODBC using a Microsoft ODBC driver. Dimensions CM for SQL Server Enterprise does not ship with any SQL Server Enterprise related modules or software and relies solely on the installed ODBC driver for managing and accessing its base databases.

The Dimensions CM for SQL Server Enterprise installer offers you the option of using an existing ODBC connection or creating a new one on your behalf.

You must prepare and check your local SQL Server Enterprise RDBMS as described below prior to installing the Dimensions CM 14.2.0.2 server. Once you have done this, proceed to [Chapter 5, "Installing a New Windows Server" on page 125](#) or [Chapter A, "Installing Windows Server: Other Scenarios" on page 295](#).

Checking the SQL Server RDBMS Version

To be able to use your own SQL Server RDBMS, it must be a version that is compatible with Dimensions CM for SQL Server. Please see:

- the Serena public Dimensions CM Supported Platforms Web site at:

<http://support.serena.com/roadmap/Product.aspx?sel=PVDIMENSIONS>

- the readme

for the exact SQL Server versions required. Only those versions that have been tested by Serena for use with Dimensions CM 14.2.0.2.

SQL Server Collation Restrictions

The physical storage of character strings in Microsoft SQL Server Enterprise is controlled by *collations*. A collation specifies the bit patterns that represent each character and the rules by which characters are sorted and compared.

For a Dimensions CM 14.2.0.2 for SQL Server Enterprise installation to succeed, the following restrictions apply to collations:

- The SQL Server instance for use with Dimensions CM must be configured to use mixed authentication mode.
- The default collation of the SQL Server instance *must* be case-insensitive (for example, `Latin1_General_CI_AS`). The Dimensions CM 14.2.0.2 for SQL Server server installer will display an error message and exit if the default collation of the SQL Server instance is case-sensitive.
- The Dimensions CM 14.2.0.2 for SQL Server Enterprise server installer will create a database for use with Dimensions CM in the specified SQL Server instance. By default, the collation of the created database will be the same as the default collation of the SQL Server instance. Before the Dimensions CM database is created, it is possible to specify a non-default collation to be used. Note that in Dimensions CM 14.2.0.2 for SQL Server Enterprise, both the SQL Server instance and the Dimensions CM database *must* use case-insensitive collations. The Dimensions CM server installer will not proceed if you specify a case-sensitive collation. If you intend to use a SQL Server database collation name with collation designator other than `Latin1_General`, Serena strongly advises you to consult the Support Center before proceeding.

Trustworthy Mode

Successful installation of the Dimensions CM schema into an SQL Server Enterprise database requires the database to be in "trustworthy mode". For a local SQL Server Enterprise database, the Dimensions CM installer automatically sets trustworthy mode to be on.

For an upgrade installation or installation with a remote SQL Server Enterprise database there is no installer support for setting trustworthy mode to be on. Consequently, you should check the status of database trustworthy mode in such circumstances and set it to be on if that is not already the case—please see "[Trustworthy Mode](#)" on [page 81](#) for instructions.

Roles Required for SQL Server Enterprise

The following SQL Server roles need to be allocated to the user performing the installation with SQL Server Enterprise:

- public
- sysadmin

Due to enhanced security on SQL Server Enterprise, this allocation will also have to be done for local administrator accounts as SQL Server Enterprise no longer has a BUILTIN\Administrators Login to automatically give you administrative rights.

Oracle Installation on Servers with SQL Server

If you are installing Dimensions CM with SQL Server Enterprise on Windows, and Oracle was installed on the system at the time of the original Dimensions installation, you will need to remove a registry key before running the installation. To do so, run `regedit` and remove as appropriate the key:

```
HKEY_LOCAL_MACHINE\SOFTWARE\Serena\Dimensions\  
14.2.0.2\Install\INSTALL_OracleSid
```



NOTE Make sure that you back up your registry before making any changes using Registry | Export Registry File or another appropriate registry backup mechanism.

Preparing a Remote Serena-Supplied Runtime RDBMS

Using a Remote Serena-Supplied Runtime RDBMS

The Dimensions CM 14.2.0.2 installer supports installing the server on the local node while installing the schema on a remote Serena-Supplied Runtime RDBMS (rather than one located on the local node). For such installations, Dimensions CM subsequently performs all database operations with that remote Dimensions CM schema.

One such scenario is that in which Dimensions CM users on a local node want to use a remote Serena-Supplied Runtime RDBMS. This remote RDBMS can be a Windows or UNIX Serena-Supplied Runtime RDBMS.

To be able to use a remote Serena-Supplied Runtime RDBMS, an Oracle "client" must first be set up on the local node to perform database service operations between the local Dimensions CM server and the remote database. The "client" can be, for example:

- An installation of the Windows Serena-Supplied Runtime RDBMS, without database instance creation, that is, the **Create Oracle Instance** option deselected. See the companion guide *Installing the Serena-Supplied Runtime RDBMS* for details.
- An installation of the Windows Serena-Supplied Runtime RDBMS, with database instance creation, that is, the **Create Oracle Instance** option selected. This is more than is required to set up this scenario. See the companion guide *Installing the Serena-Supplied Runtime RDBMS* for details.

Performing
Remote Database
Installations
Between Windows
and UNIX

Oracle runtime instances are installed and configured differently on a Windows Serena-Supplied Runtime RDBMS compared to a UNIX Serena-Supplied Runtime RDBMS. If you plan to install Dimensions CM on a Windows system and create an Oracle instance on a remote UNIX Serena-Supplied Runtime RDBMS, then you must perform the following manual check—and take appropriate action if necessary—before beginning the installation:

Make sure that a `pcms_sys` Oracle user *does not* exist on the Windows "client" Oracle RDBMS, that is, that the "client" is not an Oracle RDBMS upon which Dimensions CM has been installed in the past.

Once you have set up your client Serena-Supplied Runtime RDBMS installation you need to:

- 1 Prepare the remote Serena-Supplied Runtime RDBMS. See:
 - ["Preparing a Remote Windows Serena-Supplied Runtime RDBMS" on page 76.](#)
 - For a remote UNIX Serena-Supplied Runtime RDBMS, see the *Installation Guide for UNIX*.
- 2 Set up a local Oracle Net Service Name of the remote Serena-Supplied Runtime RDBMS that you want the Dimensions CM server to communicate with. See ["Setting Up a Local Oracle Net Service Name" on page 78.](#)

Preparing a Remote Windows Serena-Supplied Runtime RDBMS

The preparations required for a remote Windows Serena-Supplied Runtime RDBMS are the same as those required for a local runtime (see ["Preparing a Local Windows Serena-Supplied Runtime RDBMS" on page 63](#)) apart from setting up a local Oracle Net Service Name for the remote database—see ["Setting Up a Local Oracle Net Service Name" on page 78.](#)

Once you have set up a local Oracle Net Service Name, proceed to [Appendix A, "Installing Windows Server: Other Scenarios" on page 295.](#)

Preparing a Remote UNIX Serena-Supplied Runtime RDBMS

The preparations required for a remote UNIX Serena-Supplied Runtime RDBMS are the same as those required for a local runtime (see *Installation Guide for UNIX*) apart from setting up a local Oracle Net Service Name for the remote database—see "[Setting Up a Local Oracle Net Service Name](#)" on page 78.

Once you have set up a local Oracle Net Service Name, see the *Installation Guide for UNIX*.

Preparing a Remote Oracle Enterprise

Using a Remote Oracle Enterprise

The Dimensions CM 14.2.0.2 installer supports installing the server on the local node while installing the schema on a remote Oracle Enterprise. For such installations, Dimensions CM subsequently performs all database operations with that remote Dimensions CM schema.

One such scenario is that in which Dimensions CM users on a local node want to use a remotely administered Oracle Enterprise. This remote Oracle RDBMS can, in certain circumstances as explained below, be a Windows or UNIX Oracle RDBMS.

To be able to use a remote Oracle, an Oracle "client" must first be set up on the local node to perform database service operations between the local Dimensions CM server and the remote database. The Oracle "client" RDBMS can be, for example:

- An Oracle-supplied Windows client installation.
- An Oracle-supplied Windows instant client installation.
- A full Oracle-supplied Windows installation. This is more than is required to set up this scenario.

Once you have set up your client Oracle installation you need to:

- 1 Prepare the remote Oracle RDBMS. See as appropriate:

- ["Preparing your Remote Windows Oracle Enterprise" on page 78.](#)
 - For a remote UNIX Serena-Supplied Runtime RDBMS, see the *Installation Guide for UNIX*.
- 2 Set up a local Oracle Net Service Name of the remote Oracle database that you want the Dimensions CM server to communicate with. See ["Setting Up a Local Oracle Net Service Name" on page 78.](#)

Preparing your Remote Windows Oracle Enterprise

The preparations required for your own remote Windows Oracle Enterprise are the same as those required for a local own Oracle (see ["Preparing Your Own Local Windows Oracle Enterprise" on page 65](#)) apart from setting up a local Oracle Net Service Name for the remote Oracle database.—see ["Setting Up a Local Oracle Net Service Name" on page 78.](#)

Once you have set up a local Oracle Net Service Name, proceed to [Appendix A, "Installing Windows Server: Other Scenarios" on page 295.](#)

Preparing your Remote UNIX Oracle Enterprise

The preparations required for your own remote UNIX Oracle Enterprise are the same as those required for a local own Oracle (see *Installation Guide for UNIX*) apart from setting up a local Oracle Net Service Name for the remote database—see ["Setting Up a Local Oracle Net Service Name" on page 78.](#)

Once you have set up a local Oracle Net Service Name, proceed to [Appendix A, "Installing Windows Server: Other Scenarios" on page 295.](#)

Setting Up a Local Oracle Net Service Name

In a Dimensions CM for Windows server installation with a remote networked Serena-Supplied Runtime RDBMS or Oracle Enterprise database, you will be prompted for the Oracle Net Service Name. This is the name that the local Serena-Supplied Runtime RDBMS client or Oracle

client networking software uses to identify particular remote Oracle databases for network operations.

On your local Windows node you need to define the Net Service Name of the remote Oracle database that you want the Dimensions CM server to communicate with.

1 Start the Oracle Net Configuration Assistant.

- For the Serena-Supplied Runtime RDBMS:

```
Start | All Programs | Oracle-<oracle_home> |  
Configuration and Migration Tools |  
Net Configuration Assistant
```

For a default Serena-Supplied Runtime RDBMS installation, <oracle_home> will be Dimensions or DimOra11.

- For your own Oracle Enterprise database consult your vendor documentation.

2 Select **Local Net Service Name configuration** and click **Next**.

3 Select **Add** and click **Next**.

4 Each Oracle database or service has a service name. Normally this will be its SID. Enter the SID of the *remote* database you want the *local* Serena-Supplied Runtime RDBMS client or Oracle client to communicate with. Click **Next**.

5 Select **TCP** and click **Next**.

6 To be able to communicate with the remote database, the local database needs to know the remote database's hostname. Enter the remote database's hostname. (In most cases you should also accept the standard port number of 1521.) Click **Next**.

7 Select **Yes, perform a test** to verify that the remote database can be reached using the information already provided. Click **Next**.

8 If the test was successful, you will get the message:

```
Connecting... Test successful.
```

If the test fails, you need to repeatedly click **Back** to check that the information you provide and correct it as necessary until this test is successful.

Click **Next**.

- 9 Having tested that your local Serena-Supplied Runtime RDBMS client or Oracle client database can simply communicate through TCP/IP with the remote database whose service name (SID) you provided in [Step 4 on page 79](#), you now need to assign an Oracle Net Service Name. This net service name is the name that your *local client* database will use to identify the *remote* database when performing locally initiated Oracle services with the *remote* database.

By default, the net service name will be the same as the service name you provided in [Step 4 on page 79](#) and the **Net Service Name** field will be pre-populated with that name. However, if that name is not unique—for example, say both the local and remote databases have an Oracle SID of DIM14—then you would enter a unique net service name for the local database to use when communicating with the remote database (for example, DIM14R).

Click **Next**.

- 10 Unless you want to configure another net service name, accept the default **No** and click **Next**.
- 11 Click **Next**.
- 12 Click **Finish**.

Preparing a Remote Microsoft SQL Server Enterprise

Using a Remote SQL Server RDBMS

The Dimensions CM 14.2.0.2 installer supports installing the server on the local Windows node while installing the schema on a remote Windows SQL Server Enterprise RDBMS (rather than one located on the local node). For such installations, Dimensions CM subsequently performs all database operations with that remote Dimensions CM schema utilizing ODBC connectivity using a Microsoft ODBC driver.



IMPORTANT! Dimensions CM for SQL Server Enterprise does not ship with any SQL Server Enterprise-related modules or software and relies solely on the installed ODBC driver for managing and accessing its base databases.

One such scenario is that in which Dimensions CM for Windows users on a local node want to use a remotely administered SQL Server Enterprise RDBMS.

To be able to use a remote SQL Server Enterprise, a SQL Server "client" must first be set up on the local node to perform database service operations between the local Dimensions CM server and the remote SQL Server Enterprise RDBMS. The Windows SQL Server "client" RDBMS can be, for example:

- A SQL Server client installation.
- A full SQL Server Enterprise installation. This is more than is required to set up this scenario.

Once you have set up your client SQL Server installation, you need to prepare your local and remote software environments as explained in ["Preparing Local and Remote Nodes for SQL Server Installations" on page 81](#).

When you complete this preparation, proceed to [Appendix A, "Installing Windows Server: Other Scenarios" on page 295](#).

Preparing Local and Remote Nodes for SQL Server Installations

Checking the Local and Remote SQL Server RDBMS Version

See ["Checking the SQL Server RDBMS Version" on page 72](#).

SQL Server Collation Restrictions

See ["SQL Server Collation Restrictions" on page 73](#).

Trustworthy Mode

Successful installation of the Dimensions CM schema into a SQL Server Enterprise database requires the database to be in "trustworthy mode". For a local SQL Server Enterprise database, the Dimensions CM installer automatically sets trustworthy mode to be 'on'.

For an upgrade installation or installation with a remote SQL Server Enterprise database there is no installer support for setting trustworthy

mode to be on. Consequently, you should check the status of database trustworthy mode in such circumstances and set it to be 'on' if that is not already the case.

To set the SQL Server Enterprise database that is to be used by the Dimensions CM schema to have a trustworthy mode of 'on':

- 1 Ensure that there are no connections to the database.
- 2 Open the SQL Server Management Studio:

```
Start | All Programs | Microsoft SQL Server year | SQL Server Management Studio
```
- 3 Connect to the appropriate SQL Server database instance.
- 4 In the left hand **Object Explorer** tree, click **Databases**, and select the database that you will be using, for example, DIM14.
- 5 Right-click and select **New Query**.
- 6 Enter the following text in the right hand query window:

```
alter database <dbname> set trustworthy on
```

where <dbname> is the name of the database (for example, DIM14).
- 7 Click the **Execute** toolbar button.
- 8 Exit SQL Server Management Studio:

The database trustworthy mode will now be 'on' ready for use with Dimensions CM.



CAUTION! If after completing the above steps, you ever perform a subsequent SQL Server Enterprise backup of your Dimensions CM 14.2.0.2 SQL Server Enterprise database followed by a restore of that backup file into the same or another SQL Server Enterprise RDBMS, the trustworthy mode will be set to 'off'. In such circumstances you will need to reset the trustworthy mode to 'on' again.

Local and Remote Node Operating System Prerequisites

Make sure that both machines are in the same Windows domain and that there is a network user-id available that can be assigned to be the

Dimensions System Administrator (referred to here as <DOMAIN\DSA>). This user *will* need to be an operating system administrator user on the Dimensions CM Server Machine (the local node) but does *not* need to be an operating system administrator on the SQL Server Database Machine (the remote node).

Remote SQL Server Database Machine Only Prerequisites

Assuming that a SQL Server RDBMS is already installed on the remote database machine, the following additional pre-requisites/tasks need to be satisfied or performed on the remote node:

- 1 From the appropriate Dimensions CM DVD or downloadable files obtained from the Serena Support Web site, copy the following three files:

```
db_preinstall\mssql\win32\SerenaDimensionsEmulation.dll
db_preinstall\mssql\win32\enable_sequece_emulation.cmd
db_preinstall\mssql\win32\mssql_pre_install.cmd
```

to the <SQL Server Home>\binn folder on the remote Database Server machine, for an example:

```
C:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\binn
```



NOTE SerenaDimensionsEmulation.dll requires Microsoft .NET Framework 1.1 or later to be installed on that machine.

- 2 From a DOS prompt run:

```
mssql_pre_install.cmd <SQL Server instance> <Dimensions Database Name To Create> <database files directory to create> <DOMAIN\DSA> <PCMS_SYS SQL username> <database filesize to allocate (MB)> <logfile size to allocate (MB)> <Collation of the database> <Language of the database account>
```

For example:

- For a named instance NWB-VADYMK\DMSQL2K:

```
mssql_pre_install NWB-VADYMK\DMSQL2K dim14 \
C:\mssql\datafiles NWB-VADYMK\DMSYS pcms_sys \
30 15 Latin1_General_CI_AS us_english
```

- For the default instance (local):

```
mssql_pre_install (local) dim14 \
```

```
C:\mssql\datafiles NWB-VADYMK\DMSYS pcms_sys \  
30 15 Latin1_General_CI_AS us_english
```

- 3 From the appropriate Dimensions CM DVD or the downloadable files obtained from the Serena Support Web site, copy the following file:

```
db_preinstall\mssql\win32\enable_sequence_emulation.cmd
```

to any convenient folder on the Database Server machine, and then run it with the following parameters:

```
enable_sequence_emulation.cmd SERVER_NAME DATABASE_NAME DATABASE_OWNER  
"DLL_PATH"
```



NOTE "DLL_PATH" must be terminated with a trailing backslash.

- 4 Run the SQL Server Management Studio and make the <DOMAIN\DSA> in [Step 2](#) a SQL Server System Administrator. This can be done by expanding the left hand tree structure as follows:

```
Security | Server Roles | sysadmin | Right click Properties | Add |  
Select <DOMAIN\DSA> from the list.
```

Local Dimensions CM Server Machine Prerequisites

- 1 As stated earlier, a SQL Server "client" must be set up on the local node to perform database service operations between the local Dimensions CM server and the remote RDBMS. Please refer to your SQL Server documentation or your DBA administrator for details.
- 2 Create a local ODBC DSN called the same as the remote <Dimensions Database> in [Step 2 on page 83](#) (for example, DIM14R) as follows:

- a Navigate to:

```
Start | Control Panel | Administration Tools | Data Sources (ODBC) |  
System DSN | Add | Select 'SQL Native Client' | Finish
```

- b On the **Create New Data Source** dialog box enter:

```
Name: <Dimensions Database>
```

```
for example, DIM14R
```

```
Server: <SQL Server year Database Machine>
```

If you have other SQL Server installations on the same machine (for example, SQL Server 2000), make sure you type in the <Dimensions Database Machine> appropriate to your SQL Server 2008 or 2012 and not your SQL Server 2000. For example, for the SQL Server 2000 name acme-win2008 in the drop down list you might type a name such acme-win2008\SQL_2008.

All other options on.

- c** Click **Next** and **Next** again (do not change any options on the intermediate dialog box)
 - d** Check **Change the default database to:** check box.
 - e** Select the <Dimensions Database> name from the drop-down list (for example, DIM14).
 - f** Click **Next** and **Finish**, accepting the default options.
 - g** Click **Test Data Source ...** to check the new connection. If the connection is successful, click **OK**; otherwise, review the steps you took and try again.
 - h** Assuming the connection tested successfully, click **OK**.
- 3** Perform the Dimensions CM installation as user <DOMAIN\DSA> (for example NWB-VADYMK\DMSQL2K).

Oracle System Global Area Memory Allocation

Allocate at least 1GB of memory as the Oracle System Global Area (SGA) target size. Oracle recommends allocating 40-50% of available memory for the SGA.

Part 2

Installing Dimensions CM for Windows

This part contains the following chapters.

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Chapter 4

Pre-installation Tasks for a New Installation

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Before You Install



NOTE For pre-installation tasks and considerations for an upgrade installation, see ["Pre-installation Tasks for an Upgrade" on page 239](#).

Before you begin installing Serena[®] Dimensions[®] CM:

- Follow the checks and considerations in ["Mandatory Pre-installation Tasks for a Local RDBMS" on page 91](#) or ["Mandatory Pre-installation Tasks for a Remote RDBMS" on page 92](#). Some of these checks and considerations are only applicable for certain environments (for example, if you use your own Oracle Enterprise or Microsoft SQL Server Enterprise RDBMS).
- Study the checks and considerations in ["Unicode UTF-8 Multi-Byte Character Set Considerations" on page 93](#).
- Follow the checks and considerations in ["Mandatory Pre-installation Tasks for a Server" on page 95](#). Some of these checks and considerations are only applicable for certain environments (for example, if you use your own Oracle Enterprise or Microsoft SQL Server Enterprise RDBMS).
- Study the checks and considerations in ["Optional Pre-installation Checks for Windows Servers" on page 113](#). These are checks and considerations that can be addressed now, during, or after installation, or are specific to special cases.
- Study the checks and considerations in ["Pre-installation Checks for a Windows Agent" on page 114](#) or ["Pre-installation Checks for a Remote UNIX Agent" on page 114](#). These are checks and considerations that can be addressed now, during, or after installation, or are specific to special cases.
- Study the checks and considerations in ["Pre-installation Checks for Windows Clients" on page 116](#) or ["Pre-installation Checks for a Remote UNIX Client" on page 118](#). These are items that can be addressed now, during, or after installation, or are considerations specific to special cases.

Mandatory Pre-installation Tasks for a Local RDBMS



IMPORTANT! It is mandatory to complete, where applicable, the following pre-installation procedures or checks if you want to complete a successful Dimensions CM installation.

Preparing a Local Windows Serena-Supplied Runtime RDBMS

See ["Preparing a Local Windows Serena-Supplied Runtime RDBMS"](#) on page 63.

Preparing your Local Windows Oracle Enterprise

See ["Preparing Your Own Local Windows Oracle Enterprise"](#) on page 65.

Preparing your Local Microsoft SQL Server RDBMS

See ["Preparing your Local Microsoft SQL Server"](#) on page 72.

Mandatory Pre-installation Tasks for a Remote RDBMS



IMPORTANT! It is mandatory to complete, where applicable, the following pre-installation procedures or checks if you want to complete a successful Dimensions CM installation.

Preparing a Remote Windows Serena-Supplied Runtime RDBMS

See ["Preparing a Remote Serena-Supplied Runtime RDBMS"](#) on page 75.

Preparing a Remote UNIX Serena-Supplied Runtime RDBMS

See the *Installation Guide for UNIX*.

Preparing your Remote Windows Oracle Enterprise

See ["Preparing a Remote Oracle Enterprise"](#) on page 77.

Preparing your Remote UNIX Oracle Enterprise

See ["Preparing your Remote UNIX Oracle Enterprise"](#) on page 78.

Preparing your Remote Microsoft SQL Server RDBMS

See ["Preparing a Remote Microsoft SQL Server Enterprise"](#) on page 80.

AIX Oracle Runtime Directory Permissions

If you use the AIX version of the Serena-Supplied Runtime RDBMS as a remote RDBMS for use with the Dimensions CM, you will need to change the permissions on the Oracle admin directory to "world readable" if they are not already set to those values.

Unicode UTF-8 Multi-Byte Character Set Considerations

Choosing your Oracle Database Character Set

When setting up an Oracle database for Dimensions CM, it is strongly recommended that the AL32UTF8 Unicode UTF-8 multi-byte character set (MBCS) is chosen. Dimensions CM is, by preference, designed to work with the AL32UTF8 character set, and for best performance that character set should be used; however, Dimensions CM is also automatically able to work with Oracle databases used with earlier versions of Dimensions that have MBCS/ASCII character sets. Dimensions CM automatically detects the type of the character set upon connecting to the database and processes the data appropriately.

If you plan to use a character set for an Oracle installation other than AL32UTF8, Serena strongly advises you to consult Serena Support before proceeding.



IMPORTANT! If you plan to use separate instances in the same Serena-Supplied Runtime RDBMS or Oracle Enterprise RDBMS for the ALM integration between Dimensions CM and Dimensions RM, consider the following:

- The minimum supported level of Oracle 11g for use with Dimensions RM is 11.1.0.x. The 11g version of the Serena-Supplied Runtime RDBMS is based on Oracle 11.2.0.x and thus automatically satisfies this requirement.
- Although Dimensions RM also supports the Oracle AL32UTF8 character set, all data entered in such a database must be ASCII characters for Dimensions RM to display it correctly. Therefore, if you also intend to use Dimensions RM to access data entered in a Dimensions CM AL32UTF8 database, that Dimensions CM data must also be entered as ASCII. This is particularly important for Dimensions CM project/stream and product names.

Homogeneous Server-Client Environment



NOTE This section only applies to those cases where you continue to use an Oracle database with an US7ASCII character set (for example, one used with earlier releases of Dimensions that has been upgraded with each new release of Dimensions). This character set supports multi-byte character sets, but only in the circumstances detailed as follows.

It is essential that a homogeneous environment is present for MBCS use. This means that if the Dimensions CM desktop client and either the Dimensions CM web client or Administration Console are to be used, then the Web tools server (Tomcat) must run on a Windows machine with the same locale as all of the client machines.

In addition all machines that access this database (using any client) must use the same locale. If this is not followed then data that is entered on one machine with a given client will be readable by that client. If, however, it is read from a different client or from a machine with a different locale, the data will appear corrupt.

Temporary Space Requirements

The fresh installation installer will require temporary space on the C:\ drive (typically approximately 3.0 GB for a server installation) for unpacking installation files and other tasks. This space will be mostly relinquished at the end of the installation.

Doors Integration Installation Restriction

The Dimensions CM Doors 9.3 integration can only be installed on the same machine as that on which a Dimensions CM clients only installation has been made.

If you attempt to install this integration on a machine on which a Dimensions CM server or agent has been installed, the installer will not allow it. This is to avoid DLL issues.

Mandatory Pre-installation Tasks for a Server



CAUTION! Please read and implement, where appropriate, the pre-installation tasks and considerations documented in this chapter. Failure to do this may result in a Dimensions CM 14.2.0.2 fresh installation failing.

Installing Server and Client on the Same Machine

- 64-bit Windows 7, 8, 8.1, and 10, and 32-bit Windows XP and 7, are clients only platforms.
- If you are installing the server and client binaries on the *same* Windows machine in separate sessions, you *must* install the server binaries first. The client installer will detect that you have the server installed on your machine.

- For all supported Windows platforms apart from 64-bit Windows Server the client installer will set the target folder to the existing Dimensions CM server home folder.
- For server on 64-bit Windows Server the Dimensions client installer will set the target folder by default to (the clients are 32-bit):

C:\Program Files (x86)\Serena\Dimensions 14.2\CM

Active Database

Before running a server installation, ensure that the local or remote RDBMS database to be used by Dimensions CM is active ("up") by establishing that you can connect to it using standard RDBMS database utilities.

You should also confirm, using standard RDBMS database utilities, that you know the correct database passwords for SYSTEM (Serena-Supplied Runtime RDBMS or Oracle Enterprise) or PCMS_SYS (SQL Server), as you will be prompted for this during a Dimensions CM server installation for that RDBMS.

Creating Operating System User Accounts

Before you install Dimensions CM, you must create an operating-system user account for the Dimensions System Administrator (the person responsible for all Dimensions CM database and maintenance operations). Normally this user account will be dmsys, and this will be the assumption for the remainder of this guide; however, an alternative

user account can be assigned. During the Dimensions CM installation, you will be prompted for this account and its associated password.



NOTES

- The Dimensions System Administrator is the Windows user (`dmsys` by default) who will own the Dimensions CM files and will also start the Dimensions CM `appserver` and `libserver` processes. By default, Dimensions CM works with a `dmsys` user who is a regular Windows user, that is, one without administration privileges. However, company-specific security protocols excepting, there is nothing to stop `dmsys` being a member of the Windows Administrator group, and this may, indeed, be necessary in certain logging scenarios—for example, obtaining command audit logging that has been set in the `dm.cfg` file.
- For the Serena-Supplied Runtime RDBMS or Oracle Enterprise, the primary group-id for `dmsys` must be the same group-id as the Oracle instance owner's group-id (for example, `dba`).
- Please see the *System Administration Guide* for the duties and privileges of the Dimensions System Administrator.

Depending on which process model you plan to chose during installation (see ["Choosing a Process Model During a Fresh Installation" on page 97](#)), it may be convenient for you to also set up the additional operating-system user account names that process model utilizes (for various defined users in the associated demonstration product).

Choosing a Process Model During a Fresh Installation

During a fresh installation of a Dimensions CM 14.2.0.2 server with schema you will be prompted to select one of the following process models:

- Typical, Stream Development
Deploys the "Typical, Stream Development" process model and an associated sample Dimensions CM product called "Qlarius" containing stream development features. This is the default selection when installing Dimensions CM.

This model is a "copy, modify, merge" methodology intended for managing modern, agile parallel development, or if migrating from a tool like Subversion.

- Typical, Non-Stream Development

Deploys the "Typical, Non-Stream Development" process model and an associated sample Dimensions CM product called "Qlarius" containing non-stream development features.

This model is a "lock, modify, unlock" methodology intended for managing more traditional development, or if migrating from a tool like CVS or Serena PVCS Version Manager.

- Custom

This process model has no pre-defined roles and no associated sample product.

This model is intended for use by:

- Serena Consultants and experienced Dimensions CM users to facilitate the definition of their own workflow model, without the overhead of having to delete definitions from pre-loaded process models.
- Existing users of Dimensions CM who have created their own process model export file that they wish to import during Dimensions CM base database creation.

This model is also available by choosing the import option when using the Dimensions CM `dmdba crdb` function, see the *System Administration Guide* for details.



CAUTION! You are also strongly advised to check with Serena Support regarding the validity of the process model before attempting to import it.



NOTE There is an additional legacy option: Intermediate

This legacy option deploys the "Intermediate" process model and an associated sample Dimensions CM product called "Payroll". The configuring of this option is not covered in this guide.

Adding an Additional Database Process Model

Starting with Dimensions CM 12.1, it is possible post installation to install an additional process model (you still, however, have to choose one of the other process models during installation). Additional process models are installed by running a standalone Java application, please see ["Adding Additional Database Process Models" on page 513](#).

Licensing Prerequisites

For licensing prerequisites refer to [Chapter 1, "Licensing Prerequisites" on page 21](#).

TCP/IP Port Usage

Web Tools Port

During Dimensions CM Server installation, the installer assigns TCP/IP port 8080 to the various Dimensions CM Web Tools. Verify that this port is not already being used by other software. Some software is hard coded to port 8080 and cannot be reassigned. If port 8080 is not available, you can specify an alternative port during installation.

IMPORTANT! If a server is behind a firewall the port must allow traffic in both directions.

Dimensions CM Listener Port

By default the Dimensions CM listener port is set to 671.

Secure Sockets Layer Ports

The Dimensions CM Web Tools also configures two Secure Sockets Layer (SSL) ports:

- 8443: a general port for HTTPS/SSL connections and the sample Dimensions CM SSL certificate.
- 8543: a port for HTTPS/SSL connections that are used to perform Common Access Card (CAC)/"Smart Card" authentication.

Using NTFS File System for Server Binaries

The Windows Server NTFS file system is the recommended choice for disk file system upon which the server binaries are to be installed. NTFS has the great advantage of allowing all levels of security to be applied on files and directories. See [Appendix B, "Item Library Security on Windows NTFS Server"](#).

Migration Tool Prerequisites

Migration Console Prerequisites

The Migration Console, normally installed by default as part of a Dimensions CM for Windows server, is a GUI that provides a central place to manage and execute migration of assets from Serena Version Manager, CVS, Subversion, or ClearCase to Dimensions CM.

This tool requires the Microsoft .NET Framework V1.1 or later to be pre-installed on the Windows node. This is normally the default on Windows nodes that have current Microsoft update patches installed. You can most easily confirm this by checking the list of installed programs in Control Panel | Add or Remove Programs. If the framework is not installed, you can download it from the Microsoft Web site.

On Windows Server 2012 the Migration Console requires .NET 3.5.

On Windows XP the Visual Studio migration tool requires .NET version 3.0 or above.

Dimensions CM Import Prerequisites

Both a Dimensions CM for Windows server and the Dimensions CM desktop client must be installed on the Windows node to perform the Import step of a migration. The latter will be automatically be installed by default if you perform a Dimensions CM for Windows clients installation.

Version Manager, CVS, or Subversion Migration Prerequisites

The Version Manager, CVS, or Subversion export components require certain releases of Version Manager, CVS, or Subversion to be installed on the Windows node. Please see the readme file for details.



NOTE The export command makes use of the PCLI command `ExportPDB`.

SSO and Smart Card Authentication Prerequisites

Support for Single Sign On (SSO) authentication is optionally available on certain Dimensions CM platforms by editing various Dimensions CM configuration files as a post-installation activity, see the *System Administration Guide*.

For those platforms that have SSO support (see the readme), the installer offers you the optional choice of:

- Installing an SSO server along with the Dimensions CM server.
- Using an existing SSO server—for example, an SSO-enabled SBM server installation.

In both cases, the Dimensions CM installer will perform most of the necessary configuring of Dimensions CM for SSO. However, to be able to do this the installer will require you to provide certain prerequisite information, *some of which will require advance administrator knowledge*. See "[SSO Authentication Prerequisites](#)" on page 102.

The installer also offers you the optional further choice of configuring smart card reader server-side software. Currently the only smart card client reader supported is the Common Access Card (CAC), a United States Department of Defense (DoD) smart card issued as standard identification for logging in to DoD hosted software.

The Dimensions CM installer will perform most of the necessary configuring of Dimensions CM to enable it to work with SSO or SSO plus CAC, with the exception that the trusted certificate authorities must be manually configured as a post-installation activity (see "[Configuring](#)

Trusted Certificate Authorities for SSO and CAC Installations" on page 175). However, again, to be able to do this the installer will require you to provide certain prerequisite information, *some of which will require advance administrator knowledge*. See "SSO and CAC Reader Authentication Prerequisites" on page 106.



NOTE It is recommended that if you wish to install an SSO server or install an SSO server plus CAC configuration that you do this at the same time as you install the Dimensions CM server, to take full advantage of the automatic configuration performed by the installer.

Alternative scenarios as described in this manual include:

- Installing SSO subsequent to installing the Dimensions CM server. This is supported by a "Modify" version of the standard installer.
- Configuring CAC subsequent to installing the Dimensions CM server plus SSO (that initial installation being either the Dimensions CM server plus SSO at the same time or the Dimensions CM server followed by SSO). This requires manual editing of various configuration files.

For a discussion of the Dimensions CM SSO and SSO plus CAC architecture, see *Appendix A: Configuring Centralized Network Authentication* in the *System Administration Guide*.

SSO Authentication Prerequisites

Local or Remote Windows Client Prerequisites

The Dimensions CM SSO software is all server side, so there are no client prerequisites.

Local or Remote Windows Server Prerequisites for an Existing SSO Server

The following information is requested by the Dimensions CM installer if you choose to use an existing local or remote Windows SSO server (for

example, an SSO-enabled Serena Business Manager (SBM) server installation):

Existing SSO Parameter Required	Description
Hostname	Hostname of the existing SSO Server.
SSO Port	HTTP or HTTPS TCP port used by the existing SSO server. If the port is not an HTTPS port, then the Secure (https) Connection check box parameter (see below) <i>must</i> remain in its default unchecked state.
Secure (https) Connection	Check box (clear by default) to be checked to let the installer know that Secure Socket Layer (SSL) communication is required.

The SBM software and documentation, if required, can be downloaded from the Serena web site. For enabling an installed SBM server for SSO, see the *SBM Administrator Guide*.

Local or Remote Windows Server Prerequisites For a New SSO Server

The following information is requested by the Dimensions CM installer if you choose to create a new local or remote Windows SSO server:

Base Authentication Method	SSO Parameter Required	Description
Native Windows Authentication (NTLM)	Hostname	Hostname on which to install the new SSO Server.
	Domain	The Windows server domain in which all the Windows users reside.

Base Authentication Method	SSO Parameter Required	Description
Lightweight Directory Access Protocol (LDAP)	Hostname	Either the hostname of the Domain Controller (Active Directory) or the machine that serves LDAP requests. It is usually the former.
	Port	TCP port (by default 389) to be used by the new SSO server.
	Base DN	The LDAP base DN to be used by the new SSO server. The base DN is the top level within the LDAP directory tree below which the search for the user should be performed—it should look like: CN=Users ,DC=your ,DC=domain ,DC=com

Base Authentication Method	SSO Parameter Required	Description
Light Directory Access Protocol (LDAP) (continued)	Search Filter	<p>The LDAP search filter to be used by the new SSO server. The installer will pre-populate this with a default search filter.</p> <p>LDAP search filters function within a framework. The framework includes what attributes you are searching on and the value or range of values that you are trying to match. Each search filter involves at a minimum of three components:</p> <ul style="list-style-type: none"> ■ The attributes to search for, called the attribute data type. ■ The search filter operator that will determine what to match—sometimes called the match operator. ■ The actual value of the attribute you are searching for. <p>Each search needs to have a minimum of one of each of the components. You can create compound search filters by connecting two or more search filters modules. They are enclosed in parentheses to clarify filter content and will include one or more of three compound search filter operators (AND, OR, NOT). You can add as many compound and wildcard filters as needed—as long as you have the correct number of matching parentheses.</p> <p>The actual search filter in the case of Microsoft Active Directory (Domain Controller) should look like:</p> <pre>(&(objectClass=user)(sAMAccountName={0}))</pre> <p>where {0} will be substituted by the actual user name that is logging in.</p>

Base Authentication Method	SSO Parameter Required	Description
Light Directory Access Protocol (LDAP) (continued)	Search Filter (continued)	Please see LDAP RFC 4515 https://opends.dev.java.net/public/standards/rfc4515.txt for more information about LDAP search filters and a mechanism for representing them as strings.
	Bind User DN	The LDAP bind user DN to be used by the new SSO server. The bind user DN is the user on the external LDAP server permitted to search the LDAP directory within the defined search base. Most of the time, the bind DN will be permitted to search the entire directory. The role of the bind DN is to query the directory using the LDAP query filter and search base for the DN (distinguished name) for authenticating users. When the DN is returned, the DN and password are used for authentication.
	Password	The LDAP password to be used in conjunction with the bind user DN by the new SSO server.

SSO and CAC Reader Authentication Prerequisites

Local or Remote Windows Client Prerequisites

The client side prerequisites are:

- The installation of Common Access Card (CAC) ActivClient 6.1 or later software. All configuring of the ActivClient client, if necessary, should be performed as described in the vendor documentation. For how to log in using CAC and your PIN in the various Dimensions CM clients see the *Dimensions CM User's Guide*.



IMPORTANT! If you have Version 6.2 of ActivClient installed, to be able to use a CAC with the Eclipse integration you will need to change the location of the SmartCard Library in the general preferences for the Serena Dimensions Eclipse—see "[Manually Installing the Eclipse Integration](#)" on page 210.

- That each user has a personal CAC.
- That a CAC Reader is attached to the client machine (either as a standalone reader or an integrated keyboard reader).

Local or Remote Windows Server Prerequisites for an Existing SSO Server and CAC Reader

The following information is requested by the Dimensions CM installer if you choose to use an existing local or remote Serena SSO server plus CAC reader (for example, an SSO-enabled Serena Business Manager (SBM) server installation):

Existing SSO Parameter Required	Description
Hostname	Hostname of the existing SSO Server.
SSO Port	HTTP or HTTPS TCP port used by the existing SSO server. If the port is not an HTTPS port, then the Secure (https) Connection check box parameter (see below) <i>must</i> remain in its default clear state.
Secure (https) Connection	Check box (clear by default) to be checked to let the installer know that Secure Socket Layer (SSL) communication is required.

The SBM software and documentation, if required, can be downloaded from the Serena web site. For enabling an installed SBM server for SSO, see the *SBM Administrator Guide*.

Local or Remote Windows Server Prerequisites For a New SSO Server and CAC Reader

The following CAC and SSO information (in that order) is requested by the Dimensions CM installer if you choose to create a new local or remote Windows SSO server plus CAC reader configuration:

Base Authentication Method	CAC Parameter Required	Description
Light Directory Access Protocol (LDAP)	Hostname	Either the hostname of the Domain Controller (Active Directory) or the machine that serves LDAP requests. It is usually the former.
	Port	TCP port (by default 389) to be used by the new SSO server.
	Bind User DN	The LDAP bind user DN to be used for CAC configuration. The bind user DN is the user on the external LDAP server permitted to search the LDAP directory within the defined search base. Most of the time, the bind DN will be permitted to search the entire directory. The role of the bind DN is to query the directory using the LDAP query filter and search base for the DN (distinguished name) for authenticating users. When the DN is returned, the DN and password are used for authentication.
	Password	The LDAP password to be used in conjunction with the bind user DN by the new CAC setup software.

Base Authentication Method	SSO Parameter Required	Description
Native Windows Authentication (NTLM)	Hostname	Hostname on which to install the new SSO Server.
Native Windows Authentication (NTLM) (continued)	Domain	The Windows server domain in which all the Windows users reside.

Base Authentication Method	SSO Parameter Required	Description
Light Directory Access Protocol (LDAP)	Hostname	<p>Either the hostname of the Domain Controller (Active Directory) or the machine that serves LDAP requests. It is usually the former.</p> <p>By default, the installer will pre-populate this parameter field with the same LDAP value it was given earlier for the CAC setup software.</p>
Light Directory Access Protocol (LDAP) (continued)	Port	<p>TCP port (by default 389) to be used by the new SSO server. By default, the installer will pre-populate this parameter field with the same LDAP value it was given earlier for the CAC setup software.</p>

Base Authentication Method	SSO Parameter Required	Description
	Base DN	<p>The LDAP base DN to be used by the new SSO server. The base DN is the top level within the LDAP directory tree below which the search for the user should be performed—it should look like:</p> <p>CN=Users,DC=your,DC=domain,DC=com</p>
	Search Filter	<p>The LDAP search filter to be used by the new SSO server. The installer will pre-populate this with a default search filter.</p> <p>LDAP search filters function within a framework. The framework includes what attributes you are searching on and the value or range of values that you are trying to match. Each search filter involves at a minimum of three components:</p> <ul style="list-style-type: none"> ■ The attributes to search for, called the attribute data type ■ The search filter operator that will determine what to match—sometimes called the match operator. ■ The actual value of the attribute you are searching for. <p>Each search needs to have a minimum of one of each of the components. You can create compound search filters by connecting two or more search filters modules. They are enclosed in parentheses to clarify filter content and will include one or more of three compound search filter operators (AND, OR, NOT). You can add as many compound and wildcard filters as needed—as long as you have the correct number of matching parentheses.</p>

Base Authentication Method	SSO Parameter Required	Description
Light Directory Access Protocol (LDAP) (continued)	Search Filter (continued)	<p>The actual search filter in the case of Microsoft Active Directory (Domain Controller) should look like:</p> <pre>(&(objectClass=user)(sAMAccountName={0}))</pre> <p>where {0} will be substituted by the actual user name that is logging in.</p> <p>Please see LDAP RFC 4515</p> <p>https://opends.dev.java.net/public/standards/rfc4515.txt</p> <p>for more information about LDAP search filters and a mechanism for representing them as strings.</p>
	Bind User DN	The LDAP bind user DN to be used by the new SSO server. By default, the installer will pre-populate this parameter field with same LDAP value it was given earlier for the CAC setup software.
	Password	The LDAP password to be used to be used in conjunction with the bind user DN by the new SSO server. By default, the installer will pre-populate this parameter field with same LDAP value it was given earlier for the CAC setup software.

Networking Considerations

Dimensions CM Network Nodes

There are three types of Dimensions CM network node:

- 1** A server node: which hosts the Dimensions CM database, has access to all the Dimensions CM functionality, and can host item libraries.
- 2** A listener node: which has access to all the Dimensions CM functionality, can host item libraries, and can take part in Dimensions CM builds.

This type of node also supports the optional "library cache areas" feature. The purpose of a library cache area is to improve Dimensions CM file "get" performance. It does this by caching a file's contents onto a network node that is "closer" (in networking terms) to the "work" node (the node upon which your operating system file is physically located) than the "work" node is to a more "distant" Dimensions CM item library node (the centralized node upon which the Dimensions CM item libraries are stored). This avoids having to repeatedly transfer a file between your work node and the item library node through a potentially slow connection. See the *Command-Line Reference*, *System Administration Guide*, and *Scaling and Optimization Guide* for details.

- 3** A client node: which has the same functionality as a node of type 2 but cannot host item libraries.

Installed as part of the Dimensions CM server, the Network Administration Command-Line Interface and the Network Administration tool (itself part of the Administration Console) provide interfaces for setting up Dimensions CM network data. These interfaces are invoked as described in the *System Administration Guide*.

The library access process `dmllibsrv` is started automatically whenever the Dimensions CM network is started.

The Dimensions CM network must be stopped and restarted (as described in the *System Administration Guide*) whenever changes to the network configuration affect the current machine.

For further network restrictions (if any), see the readme file.

Optimizing Dimensions CM Network Performance

A Dimensions CM network can consist of the node types above, and you should configure the network to take advantage of the computing resources available. In addition to providing networking facilities to permit operations across both a homogeneous and heterogeneous environment, the Dimensions CM network is able to spread the processing load. See the chapter *Using and Configuring Library Cache Areas* in the *System Administration Guide*.



IMPORTANT! The RDBMS processes should execute on the fastest node in the network and, if possible, the node should have no Dimensions CM logins on it. Also, the operating system parameters should be optimized with as much RAM as possible for each Dimensions CM network node in the network. If a single user workstation is used on the network, appropriate resources may need to be significantly increased to reduce paging/swapping.



NOTE To optimize your network refer to the *Dimensions CM Scaling and Optimization Guide*.

Optional Pre-installation Checks for Windows Servers

SMTP Server Details

If you have a Simple Mail Transfer (SMTP) email system (for example, *sendmail*) on your network, ensure that you have available the server details as you will be prompted for optional entry of these during the installation. See the *System Administration Guide* if, after installation, you wish to tailor the Dimensions CM symbol `DM_MAILS` to specify your own particular mailing software.

Working with Multiple Oracle Homes

The Oracle RDBMS supports multiple Oracle homes. When an existing Oracle server is detected during installation, you will be prompted to select from a pick list an existing Oracle server as the home for Dimensions CM.

This Oracle server could be:

- Your company's existing Oracle Enterprise, in which case it most likely is also already used for other existing third-party software.
- The Serena-Supplied Runtime RDBMS, which is used as the exclusive home for Dimensions CM. See [Chapter 3, "Preparing Your Database"](#).

If you have any doubts, refer to your RDBMS Database Administrator.

Pre-installation Checks for a Windows Agent

A Dimensions CM Windows Agent is a sub-set of a Dimensions CM server. Consequently, the pre-installation requirements for a local or remote Windows agent are the non-RDBMS and non-SSO (or SSO plus CAC) server requirements mentioned earlier in this chapter.

Pre-installation Checks for a Remote UNIX Agent

Open Motif Package on Linux Dimensions Agent

On Redhat Linux, SuSE Linux, and SuSE zLinux the Dimensions client and the Dimensions agent are dependent on the Open Motif package (for example, `openmotif-devel-XXX.rpm`) having been installed as a prerequisite. This can normally be achieved by using the `Yast2` utility or an equivalent Linux tool.

Security Consideration on Red Hat Enterprise Linux

For Red Hat Enterprise Linux 5.5 and 6.x, as user root run the Red Hat System Level Configuration Tool

```
# system-config-securitylevel
```

and check the status of following settings:

- Disable Firewall
- SE Linux

If these settings are not currently set to a disabled state, ensure that you set them to that state.

If the above setting are not set to a disabled state, you will encounter the following error message when you try to run dmcli after a Dimensions CM installation (even though the Dimensions listener runs correctly):

```
$ dmcli
License Server: createJob failed: -2
License Server: createJob failed: -2
ACL4500017E Error: Cannot open
```

The licence server is running.

Pre-installation Checks for Windows Clients/Remote UNIX Client

Network Software Prerequisites

TCP/IP must be pre-installed on the recipient node. If this is not the case, Dimensions CM will not function.

Java Plug-In for Web Browser Client

The Dimensions CM Web tools—for example, the administration console and Web client—include a Java runtime that is silently installed as part of the Dimensions CM installation. However, to access the Dimensions CM Web tools from a Web browser client, you must ensure that the Web browser client also has an installed Java plug-in. Java 6u22 or later is required, but Java 8 or later is recommended.

You can download a Java plug-in from the Java Web site at:

<http://java.com/>



NOTE The Microsoft JVM is no longer supported as a browser Java Plug-in for accessing the Dimensions web tools.

Pre-installation Checks for Windows Clients

General Considerations



IMPORTANT! During installation of the Dimensions CM Windows clients you will normally be prompted for an installation folder. Note that this folder must *not* be a root-level file system area (e.g. C:\)—it must be at a lower level (for example, C:\Program Files\Serena\Dimensions 14.2.0.2\CM).

Installing Server and Clients on the Same Machine

See "Installing Server and Client on the Same Machine" on page 95.

Windows Version of the UNIX "tar" Utility

To be able to use the Dimensions CM ART or folder item functionality on Windows, you will need to install a Windows version of the UNIX tar utility on the Windows Dimensions clients machine.

You can download a freeware version—with associated source—from the following Web address:

<http://www.cygwin.com/>

The required packages should be copied to %DM_ROOT\prog after installation of Dimensions CM.

Microsoft Windows Compatibility Layer Settings

Microsoft provides compatibility layer technology to enable a program built to run in an earlier version of Windows to run in a later version of Windows without encountering any issues because of changes in the later version of Windows. Setting up such compatibility layers is done by setting up the `__COMPAT_LAYER` environment variable appropriately as advised by Microsoft.

If the following setting is made either within the registry or as a separate variable:

```
__COMPAT_LAYER=DisableNXShowUI
```

then the Dimensions CM desktop client (`pcwin.exe`) CM logon or splash screen will not appear.

To determine if this is the issue on your Windows machine, go to a command prompt and type 'set'. Review the list. The `__COMPAT_LAYER` variable is usually at the bottom of the list.

If `__COMPAT_LAYER` is set as above, you can resolve the problem with desktop client either post-installation—see "[Microsoft Windows Compatibility Layer Settings](#)" on page 192—or by setting up your Windows system prior to installing the desktop client, in one of the ways explained below:

- **Change the environment variable:**

Set `__COMPAT_LAYER` to either:

```
set __COMPAT_LAYER=EnableNXShowUI
```

or

```
set __COMPAT_LAYER=
```

- **Change registry settings:**

Consult with your system administrator to change your Windows Registry setting based on the Microsoft's KB article (written for SQL Server issues involving similar compatibility issues) at

<http://support.microsoft.com/kb/913395I>



CAUTION! It is recommended that a backup of your Registry be taken before making changes.

Pre-installation Checks for a Remote UNIX Client

Open Motif Package on Linux Dimensions Client

On Redhat Linux, SuSE Linux, and SuSE zLinux the Dimensions client and the Dimensions agent are dependent on the Open Motif package (for example, `openmotif-devel-XXX.rpm`) having been installed as a prerequisite. This can normally be achieved by using the Yast2 utility or an equivalent Linux tool.

Security Consideration on Red Hat Enterprise Linux

See "[Security Consideration on Red Hat Enterprise Linux](#)" on page 118.

Dimensions CM Windows Integrations Prerequisites



NOTE The Serena Dimensions integration for Visual Studio is optionally installed as part of the Windows clients installation. Other Windows integrations are installed either:

- Directly from a specific setup link from within the HTML front end launched from the appropriately labeled DVD.
- By downloading the appropriate zip file from the Serena Support Web site, extracting the contents, and running the installer.

Except where specifically mentioned in this guide, the prerequisites required for Windows integrations (if any) are discussed in the *Integrated Product Guide* and other specific integration guides in the Dimensions CM documentation set.

Eclipse Integration

To install the Eclipse integration of Dimensions CM, Eclipse *must* be installed on the target platform.

Microsoft Visual Studio Integration

To install the Serena Dimensions integration for Visual Studio, version 2008-2013 *must* be installed on the target platform. This integration is not compatible with Visual Studio .NET 2003. To continue using that version use the earlier Dimensions SCC integration with a Dimensions CM 12.2.2 client.



CAUTION! All Visual Studio integrations destroy existing Visual Studio customizations. Being able to restore such customizations depends on the version of Visual Studio that you have installed.

Visual Studio 2008-2013:

You can export your current customizations prior to installing the Serena Dimensions Visual Studio integration as follows:

- 1 Tools | Import and Export Settings
- 2 Follow the instructions of the **Microsoft Import and Export Wizard** to import your customizations.

Visual Studio 2008-13 normally automatically exports customizations, but it may be prudent to run the wizard as described above.

Once the Serena Dimensions Visual Studio integration has been installed, re-use the **Microsoft Import and Export Wizard** to import your customizations.

You will also need to migrate your Visual Studio solutions controlled by Dimensions SCC into solutions compatible to the new Visual Studio Integration by using the Serena migration tool. This tool requires Microsoft .NET Framework 1.1 or later to be pre-installed.

Serena Connect for Serena Business Manager Integration

To continue to use the Serena Connect for Serena Business Manager (SBM) synchronization integration rather than the Web services integration, certain Windows registry keys are set to the last synchronization time every time a synchronization occurs. Consequently, these keys should be maintained for the Dimensions CM 14.2.0.2 versions of the integrations as described below; otherwise, the updated integrations will restart from the "epoch" (1970-01-01).



IMPORTANT! Back up your Windows registry (for example, by using the registry export command or third party tools) before making changes to it.

1 Run

Start | Run | regedit

2 Navigate to the following registry hive:

HKEY_LOCAL_MACHINE\SOFTWARE\Serena\Dimensions Connect
for Business Mashups\<link_no>

3 Either manually note the values of the keys detailed below or export the parent hive to a file using the registry export command for re-import following the installation of the Dimensions CM 14.2.0.2 version of the integration:

- DM Last Timestamp
- TT Last Timestamp

Changing the Location for Temporary Files

Running the SBM-to-Dimensions connector produces numerous temporary files. These include temporary attachment files created during transfer from SBM to Dimensions of detailed descriptions (DM_ATTR_DD), file attachments (TS_ATTACHATTRIB_FILE and TS_ATTACHATTRIB_SHOWIMAGE), notes (TS_ATTACHATTRIB_NOTE), and URLs (TS_ATTACHATTRIB_URL).

The default location for temporary attachment files is the Attach.Tmp folder within the installation folder. You can use the Windows registry to change the location for these files.

The HKLM\SOFTWARE\Serena\Dimensions Connect for Business Mashups\TmpAttachmentsDir registry key explicitly defines a folder for temporary attachment files. If the specified folder does not exist, it will be created and registered in the current log file; however, the parent folder must exist. You can create a subkey in the registry that looks like this:

HKEY_LOCAL_MACHINE\SOFTWARE\Serena\Dimensions Connect for
Business Mashups\TmpAttachmentsDir="C:\TTDM.Temp"

Note that the TTDmSyncService.exe program normally deletes temporary files for new and updated SBM issues when current SBM issue transfer is complete.

The TTDmSyncService.exe program writes the names of successfully created temporary files to a separate log file. The default location is

TmpFile.log in the installation directory. You can change this location using the HKLM\SOFTWARE\Serena\Dimensions Connect for Business Mashups\TmpFileLog registry key by creating a subkey that looks like this:

```
HKKEY_LOCAL_MACHINE\SOFTWARE\Serena\Dimensions Connect for  
Business Mashups\TmpFileLog="C:\Program  
Files\Serena\Dimensions 14.2.0.2  
\CM\Integrations\Business Mashups\SBMAttachments.log"
```

To disable the temporary-file log, set the HKLM\SOFTWARE\Serena\Dimensions Connect for Business Mashups\TmpFileLog registry key to the empty string.

To simplify diagnosis of temp-file-related issues, the current log file contains file system error descriptions together with file names and attachment types.

NOTE There are other temporary files that, by default, are placed in the folder specified by the system's TEMP or TMP environment variable. These temp files are not automatically deleted and may need to be cleaned up from time to time. To change the location for these files, edit the DM_TMP variable within the dm.cfg file and then restart your services. Stop the Sync Service first, before stopping the Serena Dimensions Listener service.

Dimensions CM Remote UNIX Integrations Prerequisites



NOTE The Eclipse integration is optionally installed by downloading the appropriate zip file from the Serena Support Web site, extracting the contents, and running the installer.

Except where specifically mentioned in this guide, the prerequisites required for UNIX integrations (if any) are discussed in the specific integration guides in the Dimensions CM documentation set.

Eclipse Integration

To install the Eclipse integration of Dimensions CM, Eclipse *must* be installed on the target platform beforehand.

General Operating System Requirements

Support for files up to 4GB in size is available—see the `pcms_item_data` published view in the *Reports Guide* for details.

Chapter 5

Installing a New Windows Server

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Overview



IMPORTANT!

This chapter describes:

- An "out-of-the-box", quick start, new installation of a Serena[®] Dimensions[®] CM 14.2.0.2 for Windows server with reference to a pre-existing, local version of the Serena-Supplied Runtime RDBMS. [Chapter 3, "Preparing Your Database"](#) and [Chapter 5, "Pre-installation Tasks for a New Installation"](#) describe in full the pre-installation requirements for the Serena-Supplied Runtime RDBMS plus other necessary pre-installation requirements.
- A quick start, new installation of a Dimensions CM 14.2.0.2 for Windows server with reference to a pre-existing, Dimensions-supported local version of Oracle Enterprise RDBMS. [Chapter 3, "Preparing Your Database"](#) and [Chapter 5, "Pre-installation Tasks for a New Installation"](#) describe in full the pre-installation requirements for Oracle Enterprise plus other necessary installation requirements.

NOTE The procedures for the above two scenarios, once the associated RDBMS has been prepared, are essentially the same. Any differences will be noted at the appropriate points.

To perform other types of Dimensions CM 14.2.0.2 for Windows server installations (for example, a Dimensions CM for Windows server installation with: a remote Serena-Supplied Runtime RDBMS; a remote Oracle Enterprise RDBMS; or a local or remote SQL Server Enterprise RDBMS), see [Appendix A, "Installing Windows Server: Other Scenarios" on page 295](#).

This chapter covers:

- Installation of a Dimensions CM for Windows server with either a local Serena-Supplied Runtime RDBMS or a local Oracle Enterprise RDBMS.
- Quick post-installation instructions enabling you to preliminarily confirm that you have a working Dimensions CM server. More detailed post-installation instructions are in [Chapter 9, "Post-installation Activities"](#).

New Server Installation Process

The tasks performed by server installer include:

- 1 Checking status.
- 2 Installing the Dimensions CM 14.2.0.2 server and associated components.
- 3 Installing the Dimensions CM 14.2.0.2 schema into the RDBMS to be used by the Dimensions CM 14.2.0.2 server.
- 4 Registering components.
- 5 Validating the Dimensions CM 14.2.0.2 server installation and then removing temporary backup files.
- 6 Configuring the Web Tools.

Running the Server Installer

For details about how to launch the Dimensions CM 14.2.0.2 installer see [page 22](#).

- 1 As a user with local Administrative privileges run the installer executable.
- 2 On the first installer screen click **Next**.
- 3 From the initial **End User License Agreement** screen read the license agreement and click **I accept the terms of the End User License Agreement** to accept the terms. Click **Next**.
- 4 From the **Dimensions Server Database Selection** screen select:
 - **Oracle** to install the Dimensions CM server with a Serena-Supplied Runtime RDBMS or an Oracle RDBMS.
 - **SQL Server** to install the Dimensions CM server with your own SQL Server Enterprise RDBMS, see [page 295](#) for details.

Click **Next**.

- 5** From the **Database Location** screen click **Local** to install the Dimensions CM server with a Serena-Supplied Runtime RDBMS or an Oracle RDBMS.

Remote is used to install the Dimensions CM server with a Serena-Supplied Runtime RDBMS or an Oracle RDBMS, see [page 295](#) for details. Click **Next**.

- 6** On the **Custom Setup** screen check that **Dimensions Server** and **Migration Console** are selected. The Migration Console allows you to migrate PVCS Version Manager, CVS, Subversion (SVN), or ClearCase assets into Dimensions CM. Optionally select the following components:

- **Serena Single Sign On (SSO)**

Used to install or configure connections to a Dimensions CM SSO server. Only required when using other Serena products in collaboration with Dimensions CM.

- **Smart Card Setup**

Enables you to configure your smart card authentication details with SSO. Currently the only smart card supported is the DoD Common Access Card (CAC). See [page 295](#) for details.

- **Deployment Automation**

(Selected by default) Installs Serena Deployment Automation, which enables you to automate the deployment of application changes.

- 7** Accept the default installation folder or click **Change** to specify a different one. Click **Next**.

- 8** From the **Dimensions Schema Options** screen select one of the following:

- **Dimensions Server components and schema** to install all Dimensions CM 14.2.0.2 server components including schema creation.
- **Dimensions Server components only** is used to install the Dimensions CM 14.2.0.2 server (binaries) only where a Dimensions CM schema has already been created in the RDBMS database.

To perform a server only installation see [page 300](#).

Click **Next**.

9 From the **Choose License Server** screen do one of the following:

- (Default) Accept the **Install a 30 day evaluation license** option.
- Select **Specify License Server**. In the **Host Name** field enter the host name or IP address of the server running the Serena License Server.

Click **Next**.

10 From the **Select Oracle Installation** screen select the Serena-Supplied Runtime RDBMS or your own Oracle RDBMS to use with Dimensions CM by selecting its Oracle home name from a presented drop down list. For the Serena-Supplied Runtime RDBMS this will be Dimensions or DimOra11 by default. The Oracle **SID** and **Oracle Home** operating-system folder fields will be pre-populated for you and shouldn't need changing. If they do, however, need changing, click **Manual Entry...** and enter the relevant Oracle SID and Oracle home in the dialog presented.

Click **Next**.

11 From the **Oracle Administrator Account** screen confirm the existing Oracle Administrator user and password for your Serena-Supplied Runtime RDBMS or your Oracle Enterprise RDBMS installation. For a Serena-Supplied Runtime RDBMS these will be by default SYSTEM and MANAGER respectively.

Click **Next**.

12 From the **Dimensions Server PCMS_SYS Password** screen enter the password for the PCMS_SYS schema that will be created for your Serena-Supplied Runtime RDBMS instance or your Oracle RDBMS instance. For a Serena-Supplied Runtime RDBMS, this is normally set to PCMS_SYS.

Make a note of this password. You will need it for RDBMS database operations and future upgrades of Dimensions CM.

Click **Next**.

13 From the **Select a Demo Process Model** screen select a process model. Click **Next**.

- 14** The process models create a demonstration product QLARIUS that registers a suite of users corresponding to various use cases.

The Dimensions Tool Manager (also used for the "**Custom**" process model) is the base database manager. By default this is the same user, *dmsys*, as the Dimensions System Administrator. Accept the default or replace the entry with the actual Dimensions CM login ID of the Dimensions Tool Manager. See the *System Administration Guide* for details of these two users.

Provide the following entries for the work and deployment areas:

- The **Area Owner ID**. Accept the default *dmsys* or replace the entry with the actual Dimensions CM login ID of the team member you wish to assign. *Note that this entry will assigned by default to the Dimension System Administrator in the **Dimensions System Administrator Login ID** installer screen.*
- The **Password** for the Area Owner ID. *Note that this entry will assigned by default to the Dimension System Administrator in the **Dimensions System Administrator Login ID** installer screen.*
- Accept the default folder, *C:\Serena_Workareas*, or click **Change** to browse to an alternative folder.

To use the demonstration product fully assign operating system accounts to the Qlarius Dimensions CM users, see [page 130](#).

See [page 131](#) for details of the process models that can be installed from the installer.

Click **Next**.

- 15** In the **Dimension System Administrator Login ID** the operating system Login account name and Password entries for the Dimensions System Administrator will be populated by default with the entries you made in the previous step. Accept the default entries or enter the appropriate values for the Dimensions System Administrator.

The installer validates the Dimensions System Administrator username and password. If this validation fails you are prompted to ignore the error and continue with the installation. If you continue check the user exists before attempting to start the listener service and connecting to the database.

Click **Next**.

- 16** If you are installing Serena Deployment Automation, on the **Deployment Automation Agent** screen do the following:
- Specify the name of the Agent.
 - Optionally use Mutual Authentication with SSL to communicate with the Deployment Automation server.
 - Optionally connect to an Agent Relay instead of directly to the Deployment Automation server. Default: no
- Specify the following parameters for the Agent Relay:
- Host name or address
 - Communication port
 - HTTP proxy port
- Click **Next**.
- 17** If you are installing Serena Deployment Automation, on the **Deployment Automation** screen enter the user ID and password of the database account that will be created. Click **Next**.
- 18** The Dimensions CM server utilizes a mail host for sending mail to users when, for example, items or requests are actioned. You can specify this mail host now, or specify it later by modifying the `dm.cfg` file. See the *System Administration Guide*. Click **Next**.
- 19** From the **Dimensions Web Server Options** screen enter the port number to be used by the common tools Tomcat Server. This is used for the Dimensions CM web tools.
- Accept the default value of 8080 or enter an alternative value. Accept the default value unless it is being used by third-party software or that you plan to install such software in the future. Some software is hard coded to port 8080 and cannot be reassigned. See [page 134](#) for details.
- Click **Next**.
- 20** From the **Install Serena Dimensions CM Server** screen click **Install**.
- 21** When the installation is complete click **Finish**. For details about post-installation checks see below.

Checking the Server Installation

This section describes some quick checks to establish that your server installation is functioning correctly. Full post-installation activities are in ["Post-installation Activities" on page 163](#).

Installation Logs

Check the installation logs before running any of the other tests. These logs are located in the %DM_ROOT%\InstallTemp folder.

Server Acceptance Tests



IMPORTANT! To perform these tests you need to have either chosen an evaluation license during installation or have fully licensed Dimensions CM, see the *System Administration Guide*.

- 1 Log in as a user with local Windows administrative rights. Access Services by

Start | Control Panel | Services

or

Start | Control Panel | Administrative Tools | Services

This will display the status of the services for your particular Windows PC.

Check that the following database and Dimensions CM services have Status Started and Startup Automatic.

- Dimensions CM services:

Serena Common Tomcat
Serena Dimensions Listener Service(*)
Serena License Server(**)

- Serena-Supplied Runtime RDBMS or Oracle Enterprise only services

Oracle<oracle_service_name>TNSListener(***)
OracleService<oracle_service>(****)

(*) If the Serena Dimensions Listener Service fails to auto start on reboot, start it manually once the RDBMS database service has started.

(**) This service may be absent if you are using Serena License Manager on another server. If the service should be present and is not running, see the *System Administration Guide* for instructions on setting it up using the Serena License Manager.

(***) By default, this will be OracleDimensionsTNSListener.

(****) By default, this will be OracleServiceDIM14.

- 2 Open the Windows task manager and check for the following database and Dimensions CM processes:

Dimensions CM processes (note that there will be several dmappsrv.exe processes for a default installation):

```
dimensions_service.exe
dmappsrv.exe
dmemail.exe
dmlsnr.exe
dmpool.exe
```

Serena-Supplied Runtime RDBMS or Oracle Enterprise only processes:

```
oracle.exe
TNSLSNR.EXE
```

- 3 Open a DOS command prompt, and type `dmcli`. Enter the appropriate data in the Dimensions CM Login dialog box. To see an illustration showing example parameters for a default **"Typical, Stream Development"** process model, see [Chapter 1, "Dimensions CM Log In Example" on page 27](#).

The output should be a Dimensions CM 14.2.0.2 banner and copyright message followed by a `Dimensions>` prompt.

- 4 Type `exit` to return to the DOS prompt.

The Dimensions CM server installation checks are now complete. If there are any problems, see ["Post-installation Activities" on page 163](#).

Starting the Server (Restricted Mode)

By default, the Dimensions CM server's Windows service (Serena Dimensions Listener) is owned by the user with local administrative rights who installed Dimensions CM. It is possible, however, to change the owner of the Serena Dimensions Listener to the Dimensions System Administrator (by default, user dmsys). To do this:

- 1 Log in as a user with local Windows administrative rights. Access Services by
`Start | Control Panel | Services`
or
`Start | Control Panel | Administrative Tools | Services`
- 2 Shut down the Serena Dimensions Listener Service service.
- 3 Log out as the user with local Windows administrative rights and log back in as the Dimensions System Administrator (by default user dmsys).
- 4 Navigate to:
`%DM_ROOT%\dfs`
- 5 Edit the file `listener.dat` to add the following two entries:
`-user <DSA_username>`
`-restricted_mode`
where `<DSA_Username>` is the Dimensions System Administrator non-local-administrative user that will be running the Dimensions listener on the Dimensions server. Typically, this user would be dmsys.

6 Start the Serena Dimensions Listener Service service.



IMPORTANT!

- When running a server in restricted mode, area/remote node authentication credentials are *not* used— that is, in restricted mode files in a remote area are owned by the user running the `dmpool` process (by default `dmsys`), regardless of which user-id is set for the area or userid specified in Remote Node Authentication.
- You must additionally ensure that the service that is specified by the `listener.dat -service` parameter (which is `pcms_sdp` by default) utilizes a port number of 1025 or higher rather than the default of 671. You do this as follows:

Edit the symbol `DM_SERVICE_PCMS_SDP_TCP` (see the *System Administration Guide*) to specify the port number to be used.

Note:

Edit the Serena Dimensions Listener service so that it starts as the chosen non-administrator user.

Chapter 6

Installing a New Windows Agent

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Running the Agent Installer



IMPORTANT! Before launching a Dimensions CM 14.2.0.2 fresh agent installation check that you have met the prerequisites, see [page 123](#).

For details about how to launch a Dimensions CM 14.2.0.2 installer see [page 22](#).

- 1** As a user with local Administrative privileges run the installer executable.
 - 2** On the first installer screen click **Next**.
 - 3** From the **End User License Agreement** screen read the license agreement and click **I accept the terms of the End User License Agreement** to accept the terms. Click **Next**.
 - 4** On the **Feature selection** screen optionally select **Deployment Automation agent**, which enables you to automate the deployment of application changes. Click **Next**.
 - 5** Enter the hostname and port number of the server that will provide auto update install packages. Click **Next**.
 - 6** From the **Destination Folder** screen accept the default installation folder, or click **Change** to specify a different folder. Click **Next**.
 - 7** If you are installing Serena Deployment Automation, on the **Deployment Automation Agent** screen do the following:
 - Specify the name of the Agent.
 - Optionally use Mutual Authentication with SSL to communicate with the Deployment Automation server.
 - Optionally connect to an Agent Relay instead of directly to the Deployment Automation server. Specify the following parameters for the Agent Relay:
 - Host name or address
 - Communication port
 - HTTP proxy port
- Click **Next**.

8 If you are installing Serena Deployment Automation, on the **Deployment Automation Server Details** screen specify:

- The host name or address of the Dimensions CM server
- The JMS communication port

Click **Next**.

9 From the **Install Dimensions Agent** screen click **Install**.

The installer performs various checks and operations, including:

- Checking status.
- Installing the Dimensions CM 14.2.0.2 agent.
- Registering components.

10 Click **Finish**.

11 Perform the following post-installation checks described in ["Checking the Agent Installation"](#) on page 140.

Checking the Agent Installation

This section describes some quick checks that you can perform to establish that your agent installation is functioning. Full post-installation activities are described in ["Post-installation Activities" on page 163](#).

Installation Logs

Check the installation logs for any problems encountered before running any of the other tests. These logs are located in the %DM_ROOT%\InstallTemp folder.

Agent Acceptance Tests



IMPORTANT! To be able to perform these tests you need to have access to a Dimensions CM server.

- 1 Log in as a user with Windows administrative rights. Access Services by
Start | Control Panel | Services
or
Start | Control Panel | Administrative Tools | Services
This will display the status of the services for your Windows PC.
- 2 Check that the following Dimensions CM services have Status Started and Startup Automatic.
Dimensions CM services:
Serena Dimensions Listener Service(*)
(*) If the Serena Dimensions Listener Service fails to auto start on reboot, start it manually once the RDBMS database service has started.

- 3 Open the Windows task manager and check for the following Dimensions CM processes:

```
dimensions_service.exe  
dm1snr.exe  
dmpool.exe
```

- 4 Open a DOS command prompt, and type `dmcli`. Enter the following data in the fields in the Dimensions CM Login dialog box where not already populated, see [Chapter 1, "Dimensions CM Log In Example" on page 27](#).



NOTE If you installed or configured an SSO server or additionally configured a Common Access Card (CAC), the login dialog box will differ to that described below—please see the *User's Guide* or online help for details.

The output should be a Dimensions CM 14.2.0.2 banner and copyright message followed by a `Dimensions>` prompt.

- 5 Type `exit` to return to the DOS prompt.

The Dimensions CM agent installation checks are now complete. If there are any problems, refer to the more comprehensive ["Post-installation Activities" on page 163](#).

Starting the Listener as the System Administrator User

By default, the Dimensions CM agent's Windows service (Serena Dimensions Listener) is owned by the user with local administrative rights who installed Dimensions CM. It is possible, however, to change the owner of the Serena Dimensions Listener to the Dimensions System Administrator (by default, user `dmsys`).

- 1 Log in as a user with local Windows administrative rights. Access Services by
`Start | Control Panel | Services`
or
`Start | Control Panel | Administrative Tools | Services`
- 2 Shut down the Serena Dimensions Listener Service Windows service.
- 3 Log out as the user with local Windows administrative rights and log back in as the Dimensions System Administrator (by default, user `dmsys`).
- 4 Navigate to:
`%DM_ROOT%\dfs`
- 5 Edit the file `listener.dat` to add the following two entries:
`-user <DSA_username>`
`-restricted_mode`
where `<DSA_username>` is the Dimensions System Administrator non-local-administrative user that will be running the Dimensions listener on the Dimensions agent. Typically, this user would be `dmsys`.
- 6 Using Windows Services, start the Serena Dimensions Listener Service service.



IMPORTANT!

- When running an agent in restricted mode, area/remote node authentication credentials are *not* used— that is, in restricted mode files in a remote area are owned by the user running the `dmpool` process (by default `dmsys`), regardless of which user-id is set for the area or `userid` specified in Remote Node Authentication.
- You must additionally ensure that the service that is specified by the `listener.dat -service` parameter (which is `pcms_sdp` by default) utilizes a port number of 1025 or higher rather than the default of 671. You do this as follows:

Edit the symbol `DM_SERVICE_PCMS_SDP_TCP` (see the *System Administration Guide*) to specify the port number to be used.

Note:

- This port number must also be used on the server node.
- Edit the Serena Dimensions Listener service so that it starts as the chosen non-administrator user.

Chapter 7

Installing a New Windows Client

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Overview

The Serena® Dimensions® CM Windows client components can be installed in one of the following ways:

- On a network-connected Windows PC that communicates with a Windows or UNIX Dimensions CM server located on elsewhere on the network. Proceed as described in this chapter.
- On the same Windows node as the Dimensions CM server products—a server plus clients installation. Proceed as described in this chapter, but be aware of the following points:
 - The server *must* be Dimensions CM 14.2.0.2.
 - You *must* have the Dimensions CM server installed before installing the Dimensions CM client components. The Dimensions clients installer will then detect that you have the Dimensions CM server installed on your machine.
 - For all supported Windows platforms apart from 64-bit Windows, the Dimensions clients installer will then set the target folder to the existing Dimensions CM server home folder.
 - For 64-bit Windows, however, the Dimensions clients installer will set the target folder by default to:

C:\Program Files (x86)\Serena\Dimensions 14.2.0.2\CM
because the clients are 32-bit.

This chapter covers:

- Installation of all integrated Dimensions CM for Windows clients, including the Serena Dimensions for Visual Studio integration.



NOTES

- 1** The Serena Dimensions for Visual Studio integration is integrated into the clients installation.
- 2** The Eclipse integration is installed from a Dimensions CM server or by running a standalone installer, see [page 209](#) for details.

- Quick post-installation instructions enabling you to preliminarily confirm that you have a working Dimensions CM clients installation. More detailed post-installation instructions are described in [Chapter 9, "Post-installation Activities"](#).

Running the Client Installer

For details on launching a Dimensions CM 14.2.0.2 installer refer to [Chapter 1, "Launching the Installer" on page 22](#).

- 1 As a user with local Administrative privileges, depending on how you obtained the Dimensions CM installer software, you either run:
 - `index.html`
 - `Dimensions_CM_Clients_14.2.0.2.exe`.



NOTE

There is no 64-bit native Dimensions CM 14.2.0.2 client. For 64-bit Windows, you should select the 32-bit client.

- 2 From the initial **Serena Dimensions CM Clients Installshield Wizard** screen click **Next**.
- 3 From the **License Agreement** screen read the license agreement and click **I accept the terms of the End User License Agreement** to accept the terms.
Click **Next**.
- 4 From the **Destination Folder** screen, either accept the default installation folder, or click **Change...** to specify an alternative folder.
If **Change...** is grayed out, the installer has automatically detected the existence of the Dimensions CM server software into which it overlays the clients software.
Click **Next**.
- 5 From the **Setup Type** screen choose:
 - **Typical** to install all the Dimensions CM clients. Click **Next** and proceed to [Step 7 on page 148](#).

- **Custom** to be able to decide which of Dimensions CM clients you wish to install (all by default). Click **Next** and proceed to [Step 6 on page 148](#).
- 6** From the **Custom Setup** screen review the icon states (install state selected by default) and decide if there are any you wish to not install by clicking the appropriate icon and changing its install state.
- For a clients-only installation, you will also have the opportunity to click **Change ...** should you wish to re-specify your previous choice of destination folder. (For a server plus client installation, this option is not available.)



NOTE

- If you deselect Desktop Client, pcwin.exe will not be installed on your system under DM_ROOT\prog.
- If you have Microsoft Visual Studio 2008-2013 installed on your PC, you will be offered the additional choice of the Serena Dimensions for Visual Studio integration.
- The Visual Studio Migration tool component will always be present as it does not depend on Visual Studio being pre-installed (although it does require Microsoft .NET Framework 1.1 or later to be present—this is the case on most Windows systems and can be checked through Windows Add/Remove or Programs and Features Software). By being present without Visual Studio being required, administrators can migrate Visual Studio 2008-2013 solutions in all Windows environments.

Click **Next**.

- 7 Note:** This screen is skipped for a Dimensions CM server plus clients installation (except when the server is on 64-bit Windows Server 2008 R2 or later).

From the **Please enter the server connection information for Dimensions CM** screen enter the Dimensions CM 14.2.0.2 desktop client and web client connection information that will be used for the Dimensions 14.2.0.2 program group and desktop shortcuts out-of-the box, namely:

- **Server Hostname:** If known, specify the hostname of the remote Dimensions CM 14.2.0.2 server that you will be using. If

you leave this entry at its default blank state you will need to explicitly enter the server hostname each time you invoke the desktop or web client.

- **Database Name:** If known, specify the database name on the remote Dimensions CM 14.2.0.2 server that you will be using. If you leave this entry at its default blank state you will need to explicitly enter the database name each time you invoke the desktop or web client.
- **Database Connection:** If known, specify the database connection that you will be using to connect to the remote Dimensions CM 14.2.0.2 server database. If you leave this entry at its default blank state you will need to explicitly enter the database connection each time you invoke the desktop or web client.
- **Port Number:** Either accept the default value of 8080 or enter an alternative value. It is recommended that you accept the default value unless it (8080) is already being used by some other third-party software or that you plan to install such software in the future. Some software—for example, the TestDirector and Quality Center integration products—is hard coded to port 8080 and cannot be reassigned.

Click **Next**.

8 From the **Ready to Install the Program** screen click **Install**.

9 The installer performs various checks and operations, including:

- Checking status.
- Installing the Dimensions CM 14.2.0.2 clients.
- Installing Dimensions Common Tools (unless this a server plus clients installation).
- Registering components.

10 Click **Finish**.

On 64-bit Windows, a 64-bit "Dimensions CM Shell Explorer" component will now be additionally installed. No user input is required.

11 Restart Windows, as prompted. This is required to register certain DLLs—for example, those for the Windows Explorer Shell Extension component.

- 12 Perform the following post-installation checks described in "[Checking the Client Installation](#)" on page 150 and then download the PDFs and readme as described in "[Licensing](#)" on page 20.
- 13 If you wish to install the Windows rich integrations for Eclipse, proceed to "[Installing Dimensions for Windows Integrations](#)" on page 209.

Checking the Client Installation



IMPORTANT! To be able to perform these tests you need to have access to a Dimensions CM server.

This section describes some quick checks that you can perform to establish that your clients installation is functioning. Full post-installation activities are described in "[Post-installation Activities](#)" on page 163.

Checking that the Command Client Executes

- 1 Open a DOS command prompt, and type `dmcli`.
- 2 Enter the appropriate data in the fields in the Dimensions CM Login dialog box where not already populated, see [Chapter 1, "Dimensions CM Log In Example"](#) on page 27.

NOTE If your Dimensions CM server has an installed or configured SSO server or is additionally configured for a Common Access Card (CAC), the login dialog box will differ to that described below—please see the *User's Guide* or online help for details.

Checking that Desktop Client Executes

To log in to the Dimensions CM desktop client, choose

Start | All Programs | Serena | Dimensions 14.2.0.2 | Desktop Client

You will be presented with a Dimensions CM Login dialog box the same as that for the `dmcli` command described in the "[Checking that the](#)

[Command Client Executes" on page 150](#). Fill in the data fields appropriately where not already populated. The Dimensions CM desktop client will automatically open.

If you have an existing earlier version of the Dimensions CM desktop client installed, when the new version loads it will first detect your old configuration data (which include your preferences) and offer to migrate compatible data to the new client.

The illustration below shows the Dimensions CM desktop client and the Qlarius Product (automatically created when the "**Typical, Stream Development**" or "**Typical, Non-Stream Development**" process model process model is chosen at installation). For further details concerning the Dimensions CM desktop client, see the *Introduction to Dimensions CM* and the *User's Guide*.

Chapter 8

Silently Installing Windows Agent or Clients

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Introduction

It is possible to invoke the Serena® Dimensions® CM agent or clients Windows installer with specific command-line parameters. These command-line parameters can then be used on other Windows nodes to perform unattended cloned Dimensions CM Windows agent or clients installations. Such unattended installations are often referred to as "silent installations".



NOTE A silent installation of the Dimensions CM clients will *not* install the Eclipse plug-in. If you wish to install this plug-in, see ["Silently Installing the Eclipse Integration" on page 212](#).

Installing the Serena Common Tools

As a prerequisite, the client installer requires a Java Runtime Environment (JRE) to be installed in order to support the Dimensions CM command-line interface (`dmccli`). Silently installing the Serena Common Tools, as follows, will provide the necessary JRE:

- 1 Log in as a user with local Administrative privileges.
- 2 From the Dimensions CM Software DVD (if provided), the contents of that DVD copied to a local disk maintaining the hierarchical structure, or the extracted contents of the downloadable Dimensions CM clients files obtained from the Serena Web site, navigate to the folder:

 `common`
- 3 Create a sub-folder "common" in the folder you will be using for the Dimensions CM clients silent installer files and copy the contents of "common" there.
- 4 Navigate in a Windows Command Prompt window to the folder where you placed the above Serena Common Tools files.

5 Run the single-line command:

```
setupSerenaCommonTools_win32.exe -silent -P installLocation="<Common Tools  
install location>" -V IS_DESTINATION="<Common Tools install destination>" -V  
JRE_ONLY=TRUE
```

for example,

```
setupSerenaCommonTools_win32.exe -silent -P installLocation="C:\Program  
Files\Serena\Dimensions 14.2\Common Tools" -V IS_DESTINATION="C:\Program  
Files\Serena\Dimensions 14.2\Common Tools" -V JRE_ONLY=TRUE
```



IMPORTANT! The installation folder names in the preceding command must not include a trailing backslash (\). If they do, the double-quote will be "escaped" and -V IS_DESTINATION="C:\Program will be appended to the folder name that the installer will attempt to use, causing the installation to fail.

Silently Installing Fresh Clients



IMPORTANT! Before launching a Dimensions CM 14.2.0.2 fresh clients silent installation you should ensure that you have met the prerequisites detailed in "[Pre-installation Tasks for a New Installation](#)" on page 123.



CAUTION! Ensure that all Windows programs are shut down before beginning the installation—this especially includes background programs such as virus checkers. If you do not shut down these programs, the installation may fail.

Once the Serena Common Tools have been installed, the Dimensions CM clients can be silently installed as follows:

- 1** Log in as a user with local Administrative privileges.
- 2** From the Dimensions CM Software DVD (if provided), the contents of that DVD copied to a local disk maintaining the hierarchical structure, or the extracted contents of the downloadable Dimensions CM clients files obtained from the Serena Web site, navigate to the file:

Dimensions_CM_Clients_14.2.0.2.exe

This will be at the same level in the software hierarchy as the "common" folder mentioned in [Step 2 on page 154](#).

- 3 Copy Dimensions_CM_Clients_14.2.0.2.0.exe to the folder you will be using for the Dimensions CM clients silent installer files (along side the "common" folder you created in [Step 3 on page 154](#)).
- 4 Navigate in a Windows Command Prompt window to the folder where you placed the above Dimensions CM clients file.
- 5 Run the appropriate single-line command as detailed below:
 - **For a fresh full installation with default settings (all components, but with Serena Visual Studio for Dimensions only being installed if Visual Studio 2008-13 is present):**

```
"Dimensions_CM_Clients_14.2.0.exe" /s /v" /qn /log <log_dir>  
INSTALLDIR=<installation_dir>"
```

for example:

```
"Dimensions_CM_Clients_14.2.0.2.0.exe" /s /v" /qn /log  
\"C:\temp\install.log\" INSTALLDIR=\"C:\Program Files\Serena\Dimensions  
14.2\CM\""
```



NOTE The Dimensions CM clients silent installation will automatically restart Windows to register certain DLLs. If you wish to restart Windows at a time of your own choosing, add the REBOOT parameter shown in the following examples:

```
"Dimensions_CM_Clients_14.2" /s /v" /qn /log \"C:\temp\install.log\"  
INSTALLDIR=\"C:\Program Files\Serena\Dimensions 14.2\CM\"  
REBOOT=ReallySuppress"
```

- **For a fresh full installation with custom settings (enables you to specify all or specific clients, but note that the Serena Visual Studio for Dimensions client—VSIP—must be specified last):**

```
"Dimensions_CM_Clients_14.2.0.exe" /s /v"/qn /log <log_dir>  
INSTALLDIR=<installation_dir> DM_COMPUTER_NAME=<local_host_id>  
DM_SERVER_HOST_NAME=<Dimensions CM_server_host_id> DM_DB_NAME=<database_name  
on_Dimensions CM_server> DM_DB_CONN=<database_connection_to  
_Dimensions CM_server_database> PORTNUMBER=<port_no> ADDLOCAL=<clients_spec>  
REBOOT=<reboot_param>"
```

for example:

```
"Dimensions_CM_Clients_14.2.0.exe" /s /v"/qn /log \"C:\temp\install.log\"
INSTALLDIR=\"C:\Program Files\Serena\Dimensions 14.2\CM\"
DM_COMPUTER_NAME=\"idd-vmbigxp2\" DM_SERVER_HOSTNAME=\"prod-server\"
DM_DBNAME=\"cm_typical\" DM_DB_CONN=\"dim14\" PORTNUMBER=\"8080\"
ADDLOCAL=AdminTools,CMShellExtension,Configuration_Files,DesktopClient"
```



NOTE

- See below for a full list of the silent installation parameters.
- In any of the above single-line commands, if you do not specify an installation folder, the default folder

C:\Program Files\Serena\Dimensions 14.2\CM
will be used.

- DM_COMPUTER_NAME specifies the host-id of the local client machine; whereas, DM_SERVER_HOSTNAME specifies the host-id of the Dimensions CM server, which apart from a server+clients installation will be different.
- DM_SERVER_HOSTNAME, DM_DB_NAME, and DM_DB_CONN are used to pre-populate the client login dialog boxes.

The installation will take several minutes. You can periodically view the log file to check progress.

- 6 Check the log file you specify above to confirm that the clients have successfully installed and then proceed to ["Post-installation Activities" on page 163](#).

The silent installation parameters are:

/s	Specifies that silent mode will be used during the installation.
/v	Allows the exe files described above to pass the parameters listed here to the embedded ms i fie
/qn	Specifies that silent mode will be used during the installation. You may wish to initially run the command without this parameter to check for any mistakes in your command.
/log	Specifies the log file to be created. Any folder specified must already exist. You should inspect this log after installation to confirm that the Dimensions CM Clients installed successfully.

INSTALLDIR Specifies the folder where you wish to install the Dimensions CM clients. This should end with the sub-folder CM\.

NOTES

- 1** Unlike the installation of the Serena Common Tools, this folder specification should include a trailing backslash (\).
- 2** For upgrades, you *must* specify the existing installation folder.

DM_COMPUTERNAME Specifies the host-id of the computer on which the Dimensions CM Clients will be installed.

DM_SERVER_HOSTNAME Specifies the host-id of the computer on which the Dimensions CM server is located.

DM_DB_NAME Specifies the server database to be used by the clients (for example cm_typical)

DM_DB_CONN Specifies the database connection-id to be used by the clients (for example dim14).

PORTNUMBER Specifies the port number to be used by the Serena Common Tools. By default, this 8080.

ADDLOCAL

Specifies the particular fresh Dimensions CM clients to be installed. If you trim down the ADDLOCAL list to install limited functionality only, you may receive an error indicating that some required DLLs are not found (such as `projectmerge_api10m.dll`). To resolve this modify the ADDLOCAL to include the required components; for example:

```
ADDLOCAL="Configuration_Files,PC_Client,DesktopClient,Project_Merge"
```

The full list of Dimensions CM clients that can be specified is:

- AdminTools—the parent feature of SCC_Integration, VsMigration, and Dmpmcli. This parameter, and each child feature that you want to install, must be specified. For example:

```
ADDLOCAL=\ "AdminTools,  
SCC_Integration,VsMigration,Dmpmcli\"
```

- CMShellExtension—Dimensions CM Windows Explorer shell extension.
- Configuration_Files—various configuration files required by the ADDLOCAL components. Always required.
- Data_Migration_Utility_Files—Files required for the legacy upload and download utilities.
- DesktopClient—The Dimensions desktop client (`pcwin.exe`).
- DesktopShortcuts—places shortcuts for the desktop client and web client on the Windows desktop.
- Developers_Toolkit—The Developer's Toolkit.
- Dmpmcli—Dimensions CM process modeling scripting interface.
- ISScript—An ADDLOCAL parameter.
- Make—Dimensions CM Make.
- Merge_Tool—Serena file merge tools.
- Mover—Dimensions Mover.

(continued...)

ADDLOCAL
(continued)

- PCClientServerFiles—Server files that need to be copied to the client for use by Dimensions desktop client.
- Project_Merge—Dimensions CM Project Merge Tool.
- SCC_Integration—The Dimensions SCC integration.
- VSIP—Dimensions CM for Visual Studio integration. This must be specified last in the ADDLOCAL list.
- VsMigration—Dimensions CM for Visual Studio Migration Tool.

The following ADDLOCAL parameters are also required:

- Required
- Toolkit_Shared_Lockable
- Transfer_Common_Files

REINSTALL

For upgrade installations, specifies the particular existing Dimensions CM clients to be upgraded. Additional new, fresh components can be added during the upgrade using ADDLOCAL.

REBOOT

"REBOOT=ReallySuppress" prevents an automatic Windows restart at the end of the installation. (For correct registering of DLLs, however, this restart must take place before using the clients.)

Silently Installing Shell Extension on 64-Bit Windows

The CMShellExtension on Win64 is a separate installer that must be run at the end of the client installation. For silent installations, this is a manual procedure.

Adding CMShellExtension_64Bit to the ADDLOCAL property copies the necessary files to the DMR00T\cmShell64 folder. You can launch the extension installer silently after the client installation has successfully completed. Use the following command:

```
msiexec /qb! /i  
  "[DMROOT]\cmShell64\Serena_Dimensions_Shell_Explorer_  
  64-bit.msi" INSTALLDIR="[DMROOT]"
```

If you are upgrading the client, uninstall the currently installed cmshell64 before installing the new one:

```
msiexec.exe /qa/uninstall {3482B690-0462-4B12-9E3E-  
  32317C7FD5FA}
```

Silently Upgrading Clients

To silently upgrade Dimensions CM clients, see "[Silently Installing Fresh Clients](#)" on page 155, but:

- Replace all command references of ADDLOCAL with REINSTALL.
- The INSTALLDIR *must* specify the existing installation folder.
- If the existing clients were themselves silently installed (rather than manually installed), the full forms of the commands must be used. Otherwise certain DLLs will be lost during the upgrade.

If you wish to add clients that are new to Dimensions CM 14.2.0.2 compared to your earlier installation, you can use ADDLOCAL for those clients.

Silently Installing an Agent



IMPORTANT! Ensure that you have met the prerequisites detailed in "[Pre-installation Tasks for a New Installation](#)" on page 123.



CAUTION! Ensure that all Windows programs are shut down before beginning the installation—this especially includes background programs such as virus checkers. If you do not shut down these programs, the installation may fail.

You do not need to install the Common Tools beforehand.

- 1 Log in as a user with local Administrative privileges.
- 2 From the Dimensions CM Software DVD (if provided), the contents of that DVD copied to a local disk maintaining the hierarchical structure, or the extracted contents of the downloadable Dimensions CM clients files obtained from the Serena Web site, navigate to the file:

Dimensions_CM_Agents_14.2.0.2.exe

- 3 Copy Dimensions_CM_Agents_14.2.0.2.exe to the folder you will be using for the Dimensions CM agent silent installer files.
- 4 Navigate in a Windows Command Prompt window to the folder where you placed the above agent file.
- 5 Run the single-line command:



NOTE The only portion that is available during an Agent installation is the installation destination folder.

```
Dimensions_CM_Agents_14.2.0.2.0.exe" /s /v" /qn /log <log_dir>  
INSTALLDIR=<installation_dir>" for example:
```

```
"Dimensions_CM_Agents_14.2.0.2.0.exe" /s /v" /qn /log  
\"C:\temp\install.log\" INSTALLDIR=\"C:\Program Files\Serena\Dimensions  
14.2.0.2\CM\""
```

Silently Upgrading an Existing Agent

To silently upgrade a Dimensions CM agent proceed as described in ["Silently Installing an Agent" on page 161](#), but INSTALLDIR *must* specify the existing installation folder.

Chapter 9

Post-installation Activities

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Chapter Overview

This chapter discusses the post-installation procedures and checks that are required following the fresh installation of a Serena® Dimensions® CM 14.2.0.2 server, agent, or clients. These procedures and checks follow on from the quick checks documented previously at:

- ["Checking the Server Installation" on page 132.](#)
- ["Checking a Server without Oracle Dimensions Schema Included Installation" on page 303.](#)
- ["Checking a Server with a Remote RDBMS" on page 309.](#)
- ["Checking a Server with a Local SQL Server RDBMS" on page 315.](#)
- ["Checking a Server with a Remote RDBMS" on page 322.](#)
- ["Checking the Agent Installation" on page 140.](#)
- ["Checking the Client Installation" on page 150.](#)

For post-installation procedures and checks specifically for upgrade installations, see ["Post-upgrade Activities" on page 267.](#)

Checking for Successful Completion

There is a possibility that the installation may not have completed successfully even though it may have appeared to have done so. It is recommended that you check that the expected software is listed in:

- Windows versions other than Windows Server 2008 or later and Windows 7 or later
 - a Invoke Add or Remove Programs
Control Panel | Add or Remove Programs
 - b Select the appropriate entry (for example, **Serena Dimensions CM Server**).
 - c Click the **Click here for support information** link to check the version number.

- Windows Server 2008 or later and Windows 7 or later
 - a Invoke Programs and Features
Control Panel | Programs and Features
 - b Select the appropriate entry (for example, **Serena Dimensions CM Server**).
 - c In the **Version Number Column**, check the version number.
If the **Version Number** column is not present you will need to enable it. For example, on Windows Server 2008:
View (menu item) | Chose Details | Version

Checking for Latest Updates

After installing Dimensions CM 14.2.0.2, periodically ensure that you visit the Serena support Web site at

<http://www.serena.com/support/>

to determine the latest patch updates for Dimensions CM 14.2.0.2 for Windows, if any. This site requires first time users to register for a user name and password.

Once logged into the support site, under Support | My Downloads you will find an option to download patches (select **Dimensions CM** from the **Please Select Product** dropdown list and then click the **Click here for Patches** link next to the dropdown list). Search the list of patches to see if there are any maintenance patches appropriate to Dimensions CM 14.2.0.2 for Windows. If there are any such patches, it is normally recommended that you download them together with the associated patch readme and apply them. Each patch download normally includes the patch binary, an integral patch installer, and the associated patch readme that includes instructions for running the patch installer.

Windows Server Post-installation Activities

After a successful installation of a Dimensions CM 14.2.0.2 server you may need to perform the following activities or be aware of certain considerations:

- Check the status of certain Windows services.
- Install a full license (if you haven't already).
- Register base databases for Dimensions CM connectivity.
- Perform database administration acceptance tests.
- Perform command-line acceptance tests.
- Modify the configuration file if using Dimensions CM Make and a multi-homed server.
- Install Published Views.
- Define Dimensions CM configuration variables.
- Test the Dimensions web client and Administration Console web browser shortcuts.
- Edit the Dimensions web client and Administration Console web browser shortcuts.
- Perform web client acceptance tests.
- Perform Administration Console acceptance tests.
- File system considerations for the server binaries.
- Microsoft SQL Server memory usage increase considerations.
- If you wish to use the Dimensions CM folder item functionality you will need to install a Windows version of the UNIX tar utility if you did not do this earlier, see ["Using the Directory Item Functionality" on page 175](#).
- Check the existence of area definition directories for process model demonstration products.
- Configuring trusted certificate authorities for Single Sign On (SSO) and SSO plus Common Access Card (CAC) installations.
- If you plan to install the Dimensions CM SSO server component without CAC to access an existing SSO server setup on a Serena

Business Manager (SBM) system, you need to add various symbols to server dm.cfg file and restart the Dimensions CM listener.

- If you plan to use the ALM integration between Dimensions CM and Dimensions RM, you need to edit the Dimensions RM rmc.xml file to provide the Dimensions CM server URL.



IMPORTANT! You must log out and log in again as a user with Administrator privileges before performing any post-installation activities.

Checking Windows Services

See:

- ["Checking the Server Installation" on page 132.](#)
- ["Checking a Server without Oracle Dimensions Schema Included Installation" on page 303.](#)
- ["Checking a Server with a Remote RDBMS" on page 309.](#)
- ["Checking a Server with a Local SQL Server RDBMS" on page 315.](#)
- ["Checking a Server with a Remote RDBMS" on page 322.](#)

Licensing Dimensions CM Products

See the *System Administration Guide* for details about installing the Serenal License Manager and licensing Dimensions CM components.

Registering Base Databases for Dimensions CM Connectivity

For the purposes of security, every base database that is to connect with Dimensions CM must be registered using the dmpasswd utility.

This will be done *automatically* on your behalf with reference to the base database you nominate during installation and a default password will be assigned. The default passwords is cm_typical for the **"Qlarius"** demonstration product installed with the **"Typical, Stream**

Development" or "Typical, Non-Stream Development" process models.

To register other base databases to give them Dimensions CM connectivity, issue the following command for each base database concerned:

```
dmpasswd <basedb>@<connect_string> -add -pwd <password>
```

To change the default password assigned to the base database you nominated during installation or any other registered base database, issue the following command for each base database concerned:

```
dmpasswd <basedb>@<connect_string> -mod
```

this will then prompt you for the current and new passwords.

If you need information concerning the running of dmdba, see the *System Administration Guide*.

Database Administration Acceptance Tests

These tests require that you are using Dimensions CM through an authorized DBA user and are familiar with using the Dimensions CM DBA utilities. For more information on the following commands, please refer to the *System Administration Guide*.

- 1 Run the `dmdba spac` command (available for the Serena-Supplied Runtime RDBMS and Oracle Enterprise only) and verify that the output is correct.
- 2 Run the `dmdba lsdb` command and verify that the output is correct.
- 3 Run the Dimensions CM UREG and XREG commands to verify that you can create and drop users.

Command-Line Acceptance Tests

These tests must be run from a valid Dimensions CM user's account (with its Dimensions CM environment set up) and assumes that you are familiar with Dimensions CM commands.

- 1 Run `dmcli` to access the command prompt as explained in "[Checking the Server Installation](#)" on page 132:

```
% dmcli  
Dimensions>
```

- 2 Run the command LWS and verify that a list of projects is returned.
- 3 Run the command SCWS and verify that the correct project details are displayed.
- 4 Run the command LWSD /RECURSIVE and verify that a list of project directories and items is displayed.
- 5 Exit from the command prompt.

Using Dimensions CM on a Multi-Homed Server



NOTE The term "multi-homed" used here for server platforms should not be confused with Oracle-multiple-home installations.

Certain types of server platform (usually called "multi-homed") have more than one network adapter card, and therefore have more than one TCP/IP address.

Dimensions CM Make requires a TCP/IP address to enable communication between the Dimensions CM client and server processes. For Dimensions CM Make to work on a client accessing a Dimensions CM server on a multi-homed server, you must specify the appropriate TCP/IP address on the server. Do this by setting the MCX_LISTEN symbol in the %DM_ROOT\dm.cfg command file.

Installing Dimensions Published Views

Published Views (PVs) may transparently be installed in a base database if you chose to create a Dimensions CM database during installation.

If you selected the "**Typical, Stream Development**" or "**Typical, Non-Stream Development**" process model, PVs will be automatically installed.

If you need to re-install and re-grant publish views to report users, for *each database*:

- 1** Log in to dmdba as the Dimensions CM RDBMS Administrator (for the Serena-Supplied Runtime RDBMS or Oracle Enterprise this will be `system`; whereas for Microsoft SQL Server Enterprise this will be `pcms_sys`). If you are uncertain how to do this, please refer to the *System Administration Guide*.

- 2** Enter the following commands:

```
delv <basedb>
insv <basedb>
grtv <basedb> <basedb_report_user_name>
```

For example:

```
grtv intermediate intermediate_rept
```

or

```
grtv cm_typical_rept
```

This initial invocation of `grtv` sometimes results in an error stream starting with:

```
SQL-1E36-40(00B0FE60) ORA-00955: name is already used by an existing object
You can safely ignore these errors.
```

- 3** Enter the following command:

```
rekv <basedb> <basedb_report_user_name>
```

After a short period, the following message should return:

```
Report views have been successfully revoked.
```

- 4** Enter the following command:

```
grtv <basedb> <basedb_report_user_name>
```

The following message should return:

```
Report views have been successfully granted.
```

- 5** Repeat this procedure for all report users in every base database on your Dimensions CM server running Dimensions CM 14.2.0.2.

For more information on installing published views, see the *System Administration Guide* and the *Reports Guide*.

Setting Up Dimensions Configuration Variables

All Dimensions CM configuration variables are specified in the `dm.cfg` server file, which resides in the `%DM_ROOT%` folder. Typically, you will not need to modify this file unless you want to further specify details on your working environment. For example, you may want to specify which printer you want to use. If you need to modify this file, please refer to the *System Administration Guide* for more details.

Testing the Web Client and Administration Console Shortcuts

Before you can test the Dimensions web client and Administration Console browser shortcuts, the Serena Common Tomcat Windows service `Serena Common Tomcat` needs to be running. By default, this will automatically be the case once Windows is started or restarted.

To check or start the `Serena Common Tomcat` service:

- 1 Go to
Start | Control Panel | Administrative Tools | Services
on the Dimensions CM server machine.
- 2 Locate the `Serena Common Tomcat` service in the list of services and check that it has started.
- 3 To manually start the service (if for any reason it has not started automatically), right click on the service name and select `Start`.



NOTE The first time the Common Tomcat Tools are started after a Dimensions CM installation, various post-installation tasks are executed in the background and these may take quite some time to complete. Please be patient. Subsequent start ups of the Common Tomcat Tools, when required, will not need to repeat these post-installation tasks and will, therefore, be much faster.

Once the Tomcat services are running, the Dimensions web client and Administration Console browser shortcuts can be accessed as follows:

Serena | Dimensions 14.2.0.2 | Web Client

Serena | Dimensions 14.2.0.2 | Administration Tools | Administration Console

Provided the correct hostname and port information were entered during installation, in both cases a login dialog will be displayed. Once this is correctly filled in, connection is established.

Please refer to the *Introduction to Dimensions CM, User's Guide*, and the Administration Console or Dimensions web client online help for further details.

If you accepted the default values of hostname and port number during installation, you can edit them as described next.

Editing the Shortcuts

During installation of the Dimensions CM Windows server components you are prompted to supply the hostname and TCP/IP port number that will be used by the Dimensions web client and Administration Console or accept the default values of localhost and 8080 respectively. These values are used to construct URLs for the Dimensions web client and Administration Console browser shortcuts accessible from the Serena program group. By default, these will be:

```
http:// localhost:8080/dimensions
http:// localhost:8080/adminconsole
```

To edit the Dimensions web client shortcut:

```
Right click Start button | Open All Users | Programs
| Serena | Dimensions CM 14.2.0.2 | (Right click) Web
Client | Properties | Web Document tab
```

and edit the URL field appropriately.

To edit the Dimensions CM server web client shortcut, proceed as above but select the Dimensions web client program group entry instead.

To edit the Administration Console shortcut, proceed as follows:

Right click Start button | Open All Users | Programs
| Serena | Dimensions CM 14.2.0.2 | Administration
Tools
| (Right click) Administration Console | Properties |
Web Document tab

and edit the URL field appropriately.

Web Client Acceptance Tests

These tests require that you are using Dimensions CM through a valid account and are familiar with the Dimensions web client.

- 1 Launch the Dimensions web client.
Verify that the Login window is displayed.
- 2 Click the **Items** tab and ensure that you can navigate around the project folder structure.
- 3 Ensure that you are able to browse a number of items.
- 4 Ensure that the item history for a number of items can be displayed.
- 5 Close down the Dimensions web client.

Administration Console Acceptance Tests

These tests must be run from a valid Dimensions CM user's account and assume that you are familiar with the Administration Console.

- 1 Launch the Administration Console and verify that it starts successfully.
- 2 Select a valid product and navigate to the **Object Type Definitions** section.
- 3 Verify that each of the lists of items and baselines are shown and are correct.
- 4 Select the **Lifecycles** section for a specified item type and verify that the details shown are correct and can be navigated.
- 5 Close down the Administration Console.

File System Considerations for the Server Binaries

NTFS File Security Considerations

We recommend the server binaries are installed on a Windows Server NTFS file system. NTFS has the great advantage of allowing all levels of security to be applied on files and directories. See also [Appendix B, "Item Library Security on Windows NTFS Server"](#).

After the installation of the binaries, it is the responsibility of the site security administrator to make secure all Dimensions CM server components and to ensure that all Dimensions CM data files have the required access privileges—specifically that they cannot be deleted by ordinary users. In particular the following require protecting:

- Dimensions CM repository
 - Database files
 - Product item libraries
- Executables and DLLs

All files in the folder

`%DM_ROOT%\prog`

Also, the Windows registry must be protected.



NOTE The administrator must be familiar with the workings of Dimensions CM and Windows server security policies. They must also guarantee that all changes to the access privileges are noted and tested to ensure that Dimensions CM continues to function correctly.

Increase in SQL Server Enterprise Memory Usage

When you start SQL Server Enterprise for a Dimensions CM server, SQL Server memory usage may continue to steadily increase and not decrease, even when activity on the server is low. This behavior does not indicate a memory leak, it is a normal and intended behavior of the SQL

Server buffer pool. For more details, see Microsoft Knowledge Base Article 321363:

<http://support.microsoft.com/default.aspx?scid=kb:en-us:321363>

Using the Directory Item Functionality

If you did not install a Windows version of the UNIX `tar` utility to be able to use the Dimensions CM ART or directory item functionality as explained in the pre-installation activities, proceed to "[Windows Version of the UNIX "tar" Utility](#)" on page 152.

Area Definition Directories for Process Model Demonstration Products



NOTE The "**Custom**" process model demonstration product does not include support for area definitions.

Check that the installer has created the following top-level deployment directories (which themselves contain further sub-directories) for the Qlarius demonstration product associated with the process model that you selected during installation; if they are not present, manually create them:

```
C:\Serena_Workarea\cm_typical\DEV  
C:\Serena_Workarea\cm_typical\LIVE  
C:\Serena_Workarea\cm_typical\PREPOD  
C:\Serena_Workarea\cm_typical\QA  
C:\Serena_Workarea\cm_typical\SIT  
C:\Serena_Workarea\cm_typical\WORK
```

Configuring Trusted Certificate Authorities for SSO and CAC Installations

For Single Sign On (SSO) and SSO plus Common Access Card (CAC) installations, the most important part of authentication by certificate is checking that the certificate for user, services, and other (different) purposes was issued by a trusted Certificate Authority (CA). For an

introduction to CA and public key infrastructure (PKI), please refer to the Wikipedia articles at the URLs below:

http://en.wikipedia.org/wiki/Certificate_authority

[http://en.wikipedia.org/wiki/
Public_key_infrastructure](http://en.wikipedia.org/wiki/Public_key_infrastructure)

To configure CAs correctly you should have certificate of your certificate authority (it can be CA on a Microsoft Domain Controller or externally based on OpenSSL).

Storing/Adding a Certificate (*.CER, *.PEM, *.CRT) into a Java Key Store (*.JKS):

The standard Java tool "keytool" can be used to perform various operations with Java Key Store (*.JKS).

To create a new keystore or add a new certificate to existing keystore, the following command can be used:

```
"%JAVA_HOME%\bin\keytool" -import -keystore  
    <your_keystore_file_name> -storepass  
    <your_keystore_password> -file <cert_to_import> -alias  
    <your_cert_alias>
```

where:

<your_keystore_file_name>	is the existing or new keystore file name to which the certificate should be added.
<your_keystore_password>	is the password for the keystore.
<cert_to_import>	is the certificate that should be added to the keystore. It can be *.PEM, *.CER (Base64 or DER encoded), or *.CRT.
<your_cert_alias>	is the alias of the certificate in the keystore. Each such certificate in the keystore has an unique alias/name.

Configuring Truststore in the Security Server Identity Provider (IDP)

Specify one or more keystore and certificate aliases from the keystores in the X509-LDAP (or X509-BASE) authenticators of the IDP. Edit (as explained below) the main IDP configuration file located at:

```
<TOMCAT_HOME>\webapps\idp\  
WEB-INF\conf\Configuration.xml
```

The following sample and template shows how to configure trusted CAs—pay special attention to the "CertificateIssuerTrustMatcher" section.

```

<Setting Name="serena-ldap-authenticator" Type="htf:map">
  <Setting Name="Provider" Type="xsd:string">X509-LDAP</Setting>
  <Setting Name="CertificateMustExistInLDAP" Type="xsd:boolean">>false
  </Setting>
  <Setting Name="CertificateAttributeName" Type="xsd:string"></Setting>
  <Setting Name="SearchFilter" Type="xsd:string">(objectclass=*)</Setting>
  <Setting Name="CompatibleRequestMatchers" Type="htf:namedlist">
    <Setting Name="CredentialsTypeMatcher" Type="xsd:string">X509
    </Setting>
    <Setting Name="AuthenticationTypeMatcher" Type="xsd:string">*
    </Setting>
    <Setting Name="CertificateIssuerDNMatcher" Type="xsd:string">*
    </Setting>
    <Setting Name="CertificateIssuerTrustMatcher" Type="htf:map">
      <!-- Sample Entry -->
      <Setting Name="serena-truststore" Type="htf:keystore">
        <Setting Name="Type" Type="xsd:string">JKS</Setting>
        <Setting Name="File" Type="htf:file">serenaca.jks</Setting>
        <Setting Name="Password" Type="xsd:string">changeit</Setting>
      </Setting>
      <Setting Name="serenaca" Type="htf:certificate">
        <Setting Name="KeyStoreName" Type="xsd:string">serena-truststore
      </Setting>
      <Setting Name="Alias" Type="xsd:string">serenaca</Setting>
    </Setting>
    <!-- Template Entry -->
    <Setting Name="[your_keystore_alias]" Type="htf:keystore">
      <Setting Name="Type" Type="xsd:string">JKS</Setting>
      <Setting Name="File" Type="htf:file">[your_keystore_file_name]
      </Setting>
      <Setting Name="Password" Type="xsd:string">[your_keystore_password]
    </Setting>
    </Setting>
    <Setting Name="[your_certificate_alias(2)]"
    Type="htf:certificate">
      <Setting Name="KeyStoreName"
    Type="xsd:string">[your_keystore_alias]
    </Setting>
      <Setting Name="Alias" Type="xsd:string">[your_certificate_alias]
    </Setting>
    </Setting>
  </Setting>

```

```

</Setting>
</Setting>
<Setting Name="JNDI.Environment" Type="htf:map">
  <Setting Name="java.naming.factory.initial"
    Type="xsd:string">com.sun.jndi.ldap.LdapCtxFactory</Setting>
  <Setting Name="java.naming.provider.url" Type="xsd:string">
    ldap://serena.com:389</Setting>
  <Setting Name="java.naming.security.authentication"
    Type="xsd:string">simple</Setting>
  <Setting Name="java.naming.security.principal"
    Type="xsd:string">ldapuser</Setting>
  <Setting Name="java.naming.security.credentials"
    Type="xsd:string">changeit</Setting>
</Setting>
</Setting>

```

where:

[your_keystore_alias]	is any unique keystore name/alias; for example: my_company_ca_store.
[your_keystore_file_name]	is the existing keystore filename, full path, or relative path to the folder where Configuration.xml is located.
[your_keystore_password]	is the keystore password.
[your_certificate_alias]	is the existing certificate alias from [your_keystore_file_name] .
[your_certificate_alias(2)]	is any unique certificate name/alias; for example: my_company_ca-01. It can be the same as [your_certificate_alias] .

IMPORTANT! After upgrading to 14.2.0.2: if you use custom certificates with passwords that are not the default (*changeit*) you will need to update the configuration file shown above. The pre-14.x file is saved in the Tomcat 8.0 folder as:

backup_config.pre<current CM version number>

Dual Username/Password and CAC Authentication

Dimensions CM supports dual username/password and CAC authentication for certain power users—for example, administrators and those who require the running of unattended batch jobs.

For all other CAC users, it is often company best practice or mandated policy to ensure that such users do not have optional access to username/password authentication. In such circumstances, the operating system administrator should either:

- never assign such users username/password authentication in the first place (the recommended option); or
- ensure that username/password authentication is removed from all normal CAC users who happen to have such authentication (for example, users with usernames that existed before CAC authentication was introduced).

Establishing a Certificate Revocation List

A Certificate Revocation List (CRL) is one of two common methods when using a public key infrastructure for maintaining user access to servers in a network. The other, newer method, which has superseded CRL in some cases, is Online Certificate Status Protocol (OCSP).

The CRL is exactly what its name implies: a list of subscribers paired with digital certificate status. The list enumerates revoked certificates along with the reasons for revocation. The dates of certificate issue, and the entities that issued them, are also included. In addition, each list contains a proposed date for the next release. When a potential user attempts to access a server, the server allows or denies access based on the CRL entry for that particular user. As part of CAC authentication, you have the option of comparing user certificates against one or more CRLs.

The main limitation of a CRL is the fact that updates must be frequently downloaded to keep the list current. OCSP overcomes this limitation by checking certificate status in real time.

Please see the following Wikipedia article for an introduction to CRLs:

http://en.wikipedia.org/wiki/Revocation_list

For details on how to configure the Dimensions CM Security Server see the *System Administration Guide*.

Implementing CAC Support After Installing a Server and SSO

If you wish to implement Common Access Card (CAC) authentication support after installing Dimensions CM with SSO (Single Sign On) support, you must complete the steps in this section. Once you have completed these steps, you can log into Dimensions CM using CAC.

1 Open

```
<TOMCAT_HOME>\webapps\idp\WEB-INF\conf\  
  fedsvr-core-config.xml
```

in an XML or text editor.

2 Locate the `AllowedPrincipalAuthenticationTypes` parameter and add `CLIENT_CERT` to it. This enables the **Smart Card Login** button. The resulting parameter looks like the following:

```
<parameter name="AllowedPrincipalAuthenticationTypes"  
  Type="xsd:string">CLIENT_CERT</parameter>
```

3 Save the `fedsvr-core-config.xml` file.

4 Open:

```
<TOMCAT_HOME>\webapps\idp\  
  WEB-INF\conf\Configuration.xml file
```

in an XML or text editor.

5 Uncomment the required X.509 authenticators by removing the `<!--X509-NAME` and `X509-NAME-->` markup from them. For example, remove the following markup to uncomment the `X509-BASE`, `X509-LDAP`, or `X509-CRL` authenticator, respectively.

```
<!--X509-BASE ... X509-BASE-->  
<!--X509-LDAP ... X509-LDAP-->  
<!--X509-CRL ... X509-CRL-->
```

- 6** Configure the Certificate Authorities (CA) in the X509-BASE and X509-LDAP authenticators as described in "[Configuring Trusted Certificate Authorities for SSO and CAC Installations](#)" on page 175
- 7** Note that for the X509-LDAP authenticator, the following parameters must be substituted:

 \$X509_LDAP_HOST
 \$X509_LDAP_USER
 \$X509_LDAP_PASSWORD

 Note that by default, the installer configures the X509-LDAP authenticator when the CAC option is selected.
- 8** The X509-CRL authenticator can be used in addition to X509-BASE or X509-LDAP. In this case, the \$X509_CRL_PATH parameter must be substituted and the specified folder must contain *.CRL files.
- 9** Save the Configuration.xml file.
- 10** Restart the Serena Common Tomcat Service.

The Configuration.xml file contains the following commented out example of an authenticator. If you wish to use it you must remove the comments and substitute the variables appropriate to your set up:

```
<!-- ===== -->
<!-- CRL validator against file based Certificate Revocation List -->
<!-- ===== -->
<!--X509-CRL
    <!--Setting Name="serena-crl-validator" Type="htf:map">
    <!--Setting Name="Provider" Type="xsd:string">X509-CRL</Setting>
    <!--Setting Name="CompatibleRequestMatchers" Type="htf:namedlist">
        <!--Setting Name="CredentialsTypeMatcher"
Type="xsd:string">X509</Setting>
        <!--Setting Name="AuthenticationTypeMatcher"
Type="xsd:string">*</Setting>
        <!--Setting Name="CertificateIssuerDNMatcher"
Type="xsd:string">*</Setting>
        </Setting>
    <!--Setting Name="CRLDir" Type="xsd:string">$X509_CRL_PATH
</Setting>
    <!--Setting Name="CacheFileName"
Type="xsd:string">cr1_cache.xml</Setting>
    <!--Setting Name="RefreshPeriod" Type="xsd:string">1200
    </Setting>
</Setting>
X509-CRL-->
```

CAC Configuration Symbols Required for SBM

If you install only the Dimensions CM SSO component to work in conjunction with SSO and CAC located on a Serena Business Manager (SBM) installation, then the following SSO entries will need to be manually added to the Dimensions CM server dm.cfg file and the Dimensions CM listener restarted.



NOTE If you chose to configure Common Access Card (CAC) smart card setup at the same time as installing the Dimensions CM SSO server (CAC is dependent on SSO), the configuration symbols will automatically be added by the installer to the dm.cfg file and assigned values (some of which will depend on your answers to the installer prompts):

- SSO_SERVER_CERTIFICATE
- SSO_SERVER_PRIVATE_KEY
- SSO_SERVER_PRIVATE_KEY_PASSWORD

Please see Appendix A of the *System Administration Guide* for more details.

ALM Integration with Dimensions RM

To use the ALM integration between Dimensions CM and Dimensions RM, you need to first edit the Dimensions RM server `rmcm.xml` file to provide the Dimensions CM server URL.

- 1 On the Dimensions RM web server machine, navigate to:

```
<RM-Install-Directory>\conf
```

- 2 Open the following configuration file in a text editor:

```
rmcm.xml
```

This file has the following lines:

```
<project>
  <!-- CMServer url="http://localhost:8080" -->
  <CMServer url="" />
</project>
```

- 3 Update the Dimensions CM URL with the correct information for the Dimensions CM server. If Dimensions CM is installed on the same machine as the Dimensions RM web server and was installed with the default port number 8080, then the commented out URL on the preceding line will be the appropriate URL.

Windows Agent Post-installation Activities

After a successful installation of a Dimensions CM 14.2.0.2 agent, you may need to perform the following activities or be aware of certain considerations:

- Check the status of certain Windows services.
- Suppress error messages in the Windows Server Event Viewer.



IMPORTANT! You must log out and log in again as a user with Administrator privileges before performing any post-installation activities.

Checking Windows Services

See ["Checking the Agent Installation"](#) on page 140.

Error Messages in Windows Server Event Viewer

When starting an agent, several error messages may be reported in the Windows event viewer. On a Dimensions CM agent installation, the %DM_ROOT%\dfs\listener.dat file is not required; but if the file is present, add the following line to the file, before restarting the Serena Dimensions Listener Service, to identify it as an agent installation:

```
-agent
```

Windows Clients Post-installation Activities

After a successful installation of Dimensions CM 14.2.0.2 clients, you may need to perform the following activities or be aware of certain considerations:

- Check the Windows PATH environment variable.
- Test the command client shortcut.
- Instal Java plug-in for Web browser.
- Test the web client and Administration Console browser shortcuts.
- Edit the web client and Administration Console browser shortcuts.
- Set up aliases for desktop client access to remote databases.

- Test the desktop client shortcut.
- Set up desktop client to access item libraries on a remote host.
- Visual Studio post-installation checks and configuration.
- Import Visual Studio customizations.
- Set up the SCC interface.
- Set up Dimensions CM configuration variables.
- PowerBuilder issues on Windows server node.
- Visual Basic 6.0 issues.



IMPORTANT! You must log out and log in again as a user with Administrator privileges before performing any post-installation activities.

Checking the Windows PATH Environment Variable

Check that the prog subfolder of the installation folder has been added to the PATH environment variable. Type the following command in a Windows Command Prompt window

```
set path
```

and check that it includes an entry such as

```
C:\Program Files\Serena\Dimensions 14.2.0.2\CM\prog
```

If such an entry is missing, you can add one by using the same mechanism as described in "[Clearing Up Your PATH Environment Variable](#)" on page 200.

Testing the Command Client Shortcut

The Command Client Windows shortcut in the Serena | Dimensions 14.2.0.2 program group invokes the Dimensions CM Command-Line Interface (DMCLI). A Command Prompt window and a GUI login dialog will be displayed. Once the latter is correctly filled in, connection will be established—this will be denoted by a `Dimensions>` prompt in the Command Prompt window.

Please refer to ["Checking the Server Installation" on page 132](#) and the *Command-Line Reference* for further details.

Java Plug-In for Web Browser Client

If you did not install a Java plug-in for your Web browser client as explained in the pre-installation activities, proceed to ["Java Plug-In for Web Browser Client" on page 151](#).

Configuring Internet Explorer to Permit File Operations

If you are using Internet Explorer on Windows 7 or 8 to access Dimensions web client, the enhanced security features of that browser may prevent the web client from reading or writing files to local disks. If this occurs you will probably see a message similar to

```
java.io.FileNotFoundException: <full pathname>(Access Denied)
```

This is because Internet Explorer on Windows 7 and 8 has Protected Mode enabled by default, and this prevents software running in the web browser from accessing the disk.

Currently, the recommended workaround for this issue is to add the Dimensions CM web server's address to the list of Trusted sites in the Trusted sites security zone. To do this, proceed as follows:

- 1 If the Internet Explorer status bar is not visible at the bottom of the Internet Explorer window, then show it by selecting Toolbars | Status Bar from the **Tools** dropdown toolbar button, or View | Status Bar from the menus.
- 2 The status bar, at the bottom of the Internet Explorer window, shows the security zone and whether Protected Mode is on or off.

Assuming it is on, double click on the text **Protected Mode On** and a window titled **Internet Security Properties** will appear.

- 3 On the **Internet Security Properties** window:
 - a Select the **Trusted sites** zone (identifiable by a large green tick icon) in the zone selector. This will enable you to change that zone's security properties.

- b** Ensure that the **Enable Protected Mode** checkbox is not selected for the Trusted sites zone.
 - c** Click the **Sites** button to add to the list of Trusted sites.
 - d** In the **Trusted sites** window, add the Dimensions CM web server's address to the list (you may need to unselect the **Require server verification** checkbox if your Dimensions CM web server is not configured for HTTPS).
- 4** Once you have added the Dimensions CM web server's address to the list of Trusted sites, close and restart the Internet Explorer window. File operations in the Dimensions web client should now be permitted by the browser.



NOTE If you use the Firefox web browser these configuration steps are not currently necessary.

Setting Up Aliases to Access to Remote Databases

Before any user on a client node can connect to a remote Dimensions CM database from the desktop client, a database connection string (Data Source Name) for the remote database must be defined on the *remote machine*. You will need to obtain this information from whoever is responsible for administering the remote Dimensions CM database. Please refer to the *System Administration Guide* for information on how these services are set up.

Setting Up Access to Item Libraries on Remote Hosts

If your Dimensions CM item libraries do not reside on this platform you have to use the Network Administration component of the Administration Console (Serena | Dimensions 14.2.0.2 | Administration Tools | Administration Console) to set up the connection between the

local node and the library node. This is detailed in the related document *Process Configuration Guide*.



NOTE If you are setting up the desktop client on a Windows platform hosting a Dimensions server, Dimensions client binaries, and the item libraries, use of the Administration Console is not required.

Visual Studio Integration Post-installation Checks

Please refer to the *Dimensions CM for Visual Studio User's Guide* for general configuration and connection information.

Importing Microsoft Visual Studio Customizations

All Visual Studio plugins destroy existing Visual Studio customizations. Being able to restore such customizations depends on the version of Visual Studio that you have installed.

Visual Studio 2008-2013:

After installing the Dimensions Visual Studio integration, you can import your pre-installation customizations as follows:

- 1 Tools | Import and Export Settings
- 2 Follow the instructions of the **Microsoft Import and Export Wizard** to import your customizations.

You will need to migrate your Visual Studio solutions controlled by Dimensions SCC into solutions compatible to the new Visual Studio Integration by using the Serena migration tool. This tool requires Microsoft .NET Framework 1.1 or later to be pre-installed.

Setting Up the Dimensions SCC Interface



NOTE The following information is included here as the SCC Integration client is installed by default.

You can check the Dimensions SCC Integration component by running the SCC Diagnostics program. Select *Serena | Dimensions 14.2.0.2 | Administration Tools | SCC DIagnostics* and click **Test** to initiate the diagnostic test.

If there are any problems with the installation of this Dimensions SCC Integration, please read the appropriate chapter in the *IDE User's Guide*.



NOTE An installation of the SCC Integration Windows client component must also be performed locally on the Windows Dimensions CM server node even if the integration component is not used on the server. This will ensure that the Dimensions CM server "message files" are up to date (these "message files" contain, for example, error messages and SQL scripts used both by the Dimensions CM server and Windows client components).

Setting Up Dimensions Configuration Variables

All Dimensions CM client configuration symbols/variables are specified in the client file `dm.cfg` that resides in the client `%DM_ROOT%` folder. This file can most easily be accessed by using the convenience Windows shortcut *Serena | Dimensions 14.2.0.2 | Administration Tools | Configuration Parameters*—this will by default load into Windows Notepad.

Please refer to the *System Administration Guide* for more details.

PowerBuilder Issues on a Windows Server Node

Certain users on a Windows Server node may receive the following error message when connecting to Dimensions CM SCC Interface:

Unable to Read Registry Value:

Software\Serena\Dimensions\14.2.0.2\PcmsScC\SCCServerName



NOTE The term Server in this context is a reference to a specific sub-type of Windows platform. This should not be confused with a Dimensions CM server installed on any of the supported Windows platforms.

The registry value in HKEY_LOCAL_MACHINE is present and can be read through the registry editor. This is a generic problem for all PowerBuilder SCC interfaces. In order to access Dimensions SCC Interface, either of the following solutions can be employed:

- Make the users that receive this error members of the Administrators Group using the Windows **User Manager**.
- Ensure that the permissions on the registry key

HKEY_LOCAL_MACHINE | SOFTWARE | Serena | Dimensions |
14.2.0.2 | PcmsScC

for **Everyone** includes all of the following permissions:

Create Link	Write DAC
Write Owner	Read Control

- This can be accomplished by selecting the key using `regedit`⁽¹⁾ and then using the **Security** pull-down menu to modify the permissions for this key.

1. Remember to back up your registry before changing values using `regedit` via Registry | Export Registry File.

Microsoft Windows Compatibility Layer Settings

Microsoft provides compatibility layer technology to enable a program built to run in an earlier version of Windows to run in a later version of Windows without encountering any issues because of changes in the later version of Windows. Setting up such compatibility layers is done by setting up the `_COMPAT_LAYER` environment variable appropriately as advised by Microsoft.

If the following setting is made either within the registry or as a separate variable:

```
__COMPAT_LAYER=DisableNXShowUI
```

then the Dimensions CM desktop client (`pcwin.exe`) CM logon or splash screen will not appear.

To determine if this is the issue on your Windows machine, go to a command prompt and type 'set'. Review the list. The `_COMPAT_LAYER` variable is usually at the bottom of the list.

If `_COMPAT_LAYER` is set as above, you can resolve the problem with desktop client by either setting up your Windows system prior to installing the Desktop client, as explained in ["Problems Caused by Microsoft Windows Compatibility Layer Settings"](#) on page 153, or post-installation as explained below:

- 1 Create a Windows command or batch file to replace your existing shortcut for the Desktop client; for example, create a `pcwin.cmd` file with the following content:

```
set Completer=  
start pcwin.exe
```

- 2 Change you desktop client shortcut to use the `pcwin.cmd` file instead of `pcwin.exe`.



NOTE You may need to replace 'start pcwin.exe' with:

```
'start C:\Program Files\Serena\Dimensions 14.2.0.2  
\CM\Prog\pcwin.exe'
```

when the home folder shortcut is not set to:

```
C:\Program Files\Serena\Dimensions 14.2.0.2\Champarty
```


Chapter 10

Uninstalling Windows Components

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Introduction

To uninstall Serena® Dimensions® CM 14.2.0.2 server, client, or agent components after a fresh installation, proceed as described in ["Uninstalling Components" on page 197](#).

To uninstall Dimensions CM 2009 R1.01, 2009 R2.x, or 12.x server, client, or agent components after an upgrade installation, proceed as described in ["Manually Uninstalling Windows Clients" on page 200](#).

You must have Windows Administrator privileges to perform the uninstallation.



CAUTIONS!

- Before initiating the procedures, ensure that you are not running any Dimensions or RDBMS applications and that you do not have a Windows Explorer or DOS Window open on any of the Dimensions or RDBMS directories.
- If you currently have the Dimensions server components installed on the *same* node as the Dimensions Windows clients and you wish to uninstall *both* the server and client binaries, ensure that you uninstall the client components *first*.
- If you wish to remove a client installation from a client-server installation, you will not be able to continue using the server installation unless you re-install Dimensions CM 14.2.0.2.
- There are files that are included in more than one of the Dimensions CM server, agent, or client components. When the last component that uses a file is removed during the uninstallation procedure, you will be asked whether or not to remove the file. It is not recommended that any Dimensions file be shared with another product. As long as this is the case, it is safe to answer *Yes To All* and remove all the shared files.

Uninstalling Components

You can automatically uninstall Dimensions CM 14.2.0.2 server, agent, or client components as described in the following subsections.

Stopping Server and RDBMS Services

1 Invoke

Start | Control Panel | Administrative Tools | Services

2 Stop the following services if present and listed as Started.

Dimensions CM services:

- Serena Common Tomcat
- Dimensions Listener Service
- Serena License Server

Serena-Supplied Runtime RDBMS and Oracle Enterprise only services:

- Oracle<oracle_service_name>TNSListener
- OracleService<oracle_service_name>

SQL Server Enterprise-only services:

- SQL Service <instance_name>

By default, Oracle<oracle_home_name> and Oracle<oracle_service_name> will be Dimensions or DimOra11 and DIM14 respectively.

By default, SQL Service <instance_name> will be SQL Server (MSSQLSERVER).

Care should be taken stopping the license service if it was already present before Dimensions CM was installed.

Removing Programs

- 1 Depending on your version of Windows, invoke;
 - Windows other than Windows Server 2008 R2 or later and Windows 7 or later
Start | Control Panel | Add/Remove Programs
 - Windows Server 2008 R2 or later and Windows 7 or later
Start | Control Panel | Programs and Features
- 2 Remove/uninstall, where present/installed:
 - Dimensions CM Web Client Native Components
 - Serena Common Tools⁽¹⁾
 - Serena Dimensions Agents
 - Serena Dimensions Clients⁽²⁾
 - Serena Dimensions for Eclipse <version>⁽¹⁾
 - Serena Dimensions Make <version>
 - Serena Dimensions Server
 - Serena License Manager⁽³⁾
- 3 When prompted to remove all shared files select Yes To All.



IMPORTANT! If you have installed the Serena-Supplied Runtime RDBMS, and you also wish to uninstall it, you must use the Oracle Universal Installer (OUI) invoked by Start | Programs | Oracle - <oracle-home> | Oracle Installation Products | Universal Installer. If you have your own Oracle Enterprise or SQL Server Enterprise database you should consult you DBA or the vendor documentation.

Undeleted Files

Certain files may not get deleted in the Dimensions CM home folder; for example:

- Activity logs.
-
1. Also invokes a simple Java-based uninstaller.
 2. Only if you have installed the clients on the same node as the server and you wish to uninstall them as well.
 3. If not used to license other Serena software. Also invokes an Install-Shield-based uninstaller.

- Some configuration files.
- Database files.
- License files.
- Files that were active or being accessed by an active process.

If you do not need to keep the above files, then they can be deleted.

Undeleted Registry Keys

Some Dimensions CM installation-specific information is retained in the registry for reuse in subsequent installations. If you have removed all Dimensions CM products from your system, you may also remove this registry information. To do so, run `regedit`⁽¹⁾ and remove the key

`HKEY_LOCAL_MACHINE\SOFTWARE\Serena\Dimensions\14.2.0.2`

and its contents.

1. Remember to back up your registry before changing values using `regedit` via Registry | Export Registry File.

Manually Uninstalling Windows Clients

If the automatic uninstallation procedure fails for some reason, you can manually uninstall the Windows clients as follows.

Clearing Up Left Over Files

A failed automatic uninstallation procedure will probably not remove all updated files in the folder structures previously discussed. If these updated files *do not* contain data that you wish to retain *and you do not* have a Dimensions CM server installation on the same machine, complete the clearing up process by deleting the Dimensions CM folder %DM_ROOT% or %PCMS_ROOT% as appropriate.

Clearing Up Your *PATH* Environment Variable

Update your PATH environment variable to remove the appropriate pathname element (delimited by semicolons ';') depending on the version of the clients being uninstalled—the full pathname will depend on the choices you specified during installation, but by default is:

```
C:\Program Files\Serena\Dimensions\14.2\CM\prog
```



CAUTION! If you have any other Serena products installed—for example, Version Manager—be careful about the Path elements you delete.

To perform the edit in:

- Windows Server 2008 R2 or later, or Windows 7 or later (clients only)

Proceed as follows:

- a Access the Windows Control Panel **System** dialog box.
 - b Click the **Advanced system settings** link.
 - c Click the **Environment Variables** tab.
 - d Edit the **Path** entry.
- Windows Server 2003

Proceed as follows:

- a** Access the Windows Control Panel **System** dialog box.
- b** Click the **Environment** tab.
- c** Edit the PATH entry **Value** text field.
- Windows XP Professional (clients only)
 - a** Access the Windows Control Panel **System** dialog box.
 - b** Click the **Advanced** tab.
 - c** Click the **Environment Variables** tab.
 - d** Edit the **Path** entry.

Tidying Up the Start Menu

You may find it necessary to tidy up the Start | Programs menu. Please consult your Microsoft Windows documentation or get help from your System Administrator.

Completing the Uninstallation Procedure



IMPORTANT! To complete the uninstallation procedure, reboot the Windows node. This is especially important if you intend to reinstall any of the Windows client components that you have just uninstalled.

Part 3

Installing Miscellaneous Components

This part contains the following chapters.

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Chapter 11

Installing Dimensions CM Make for Windows

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Introduction

Legal Considerations

Some of the Dimensions CM and ADG executables and associated libraries, namely:

File	UNIX and Windows	UNIX Only	Windows Only
adg	Y		
dm_make	Y		
dm_nmake			Y
libmcx.so		Y	
mcx.dll			Y

are derived from source code covered by the GNU GENERAL PUBLIC LICENSE and the GNU LIBRARY GENERAL PUBLIC LICENSE.

To have a working Dimensions CM Make and ADG system (which also enables you to use the legacy download and upload standalone utilities), you will first need to download the executables, libraries, "mini" installation scripts, and documentation (see below).

As a condition of the GNU GENERAL PUBLIC LICENSE and the GNU LIBRARY GENERAL PUBLIC LICENSE, source code for the above discussed executable and library files is also available, see downloadable *Dimensions CM Make User's Guide* for details.

Obtaining the Make Executables

These Dimensions CM Make executables and user guide are available to download free from the following public web site:

<http://www.serena.com/products/dimensions/dimensions-make.html>

Download the version of Dimensions CM Make 14.2.0.2 appropriate to your operating system.

IMPORTANT! If your machine only has a 32-bit client, install the 32-bit version of dm_make and not the 64-bit version. The 64-bit version should only be used with the 64-bit server software.

Pre-installation Requirements

You must have a Dimensions CM for Windows server or client installation present on your PC before installing Dimensions CM Make. On Windows 64-bit Dimensions CM, Make requires a Dimensions CM client installation to be present.

Installing



NOTE Some versions of Windows have high default security settings. If you are installing Dimensions CM Make on such a platform with default settings, you may receive a warning to the effect that "Some files can harm your computer. ..." when you attempt to run setup.exe. Click the **Open** button to proceed in such circumstances.



CAUTION! It is recommended that all unnecessary Windows programs are **shut down** before you start in case they interfere with the installation.

- 1 Log in as a user with local or domain Administrative privileges.
- 2 Download and extract the contents of the Windows zip version of the Dimensions CM Make files as described in "[Obtaining the Make Executables](#)" on page 206.
- 3 Double click the Serena Dimensions CM Make 14.2.msi file to initiate the installation.
- 4 From the initial **Installshield Wizard** screen click **Next**.
- 5 From the **Master License Agreement** screen, if you agree to be bound by the software license, click **I accept the terms of the Master License Agreement** and then click **Next**.
- 6 The **Ready to Install the Program** screen will confirm the folder into which it will install Dimensions CM Make. This will be %DM_ROOT% (for example, C:\Program Files\Serena\Dimensions 14.2.0.2\CM) by default in most cases.

On 64-bit Windows the default for a 32-bit version will be, for example:

C:\Program Files (x86)\Serena\Dimensions 14.2.0.2\CM

Click **Install**.

- 7 Click **Finish**.



NOTE The Dimensions CM Make documentation is not installed. Extract it from the contents of the Windows zip version of the Dimensions CM Make files. It is also available as a separate download from the same web page as the software.

Chapter 12

Installing Dimensions for Windows Integrations

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Installing the Eclipse Integration from a Server

NOTE Dimensions CM clients are not required to install the Eclipse integration.

You can install the Eclipse integration from an update site hosted by the Dimensions CM server. The Tomcat `eclipse.war` file is added as part of the CM server install.

You can use the same method to install *Appcelerator Titanium Studio* into Eclipse.

To install the Dimensions CM Eclipse integration from the Update site:

- 1** In Eclipse, from the Help menu select **Install New Software**. The Install wizard is displayed.
- 2** On the Available Software screen, in the **work with** box enter:
`http://<HOST>:<PORT>/eclipse`
where `<HOST>` and `<PORT>` point to the Serena Tomcat installation.
- 3** Select **Serena Dimensions Eclipse Interface** and click **Next**.
NOTE: You may need to de-select the Group by Category option to display the Dimensions Eclipse integration.
- 4** On the Install Details screen click **Next**.
- 5** On the Review Licences screen click **Accept** to accept the terms of the licence agreement and click **Finish**.
- 6** After the software has been installed you are prompted to restart Eclipse.

Manually Installing the Eclipse Integration

Pre-installation Tasks

NOTE Dimensions CM clients are not required to install the Eclipse integration.

The following installation sequence must be followed:

- 1** Manually uninstall the previous version of the integration:
 - a** Use the Windows Control Panel Add/Remove or Programs and Features utility to uninstall/remove the existing integration. This will launch a simple uninstall wizard to enable you to specify the exact Eclipse plug-in to uninstall.
 - b** Follow the uninstaller wizard instructions to remove the existing Eclipse integration.



CAUTION! To ensure that earlier versions of the Eclipse integration uninstalls successfully, you must ensure that the Eclipse IDE is shut down.

- c** Delete the following folder:

`%DM_ROOT%\integrations\richeclipse3.x`

- 2** Install the 14.2.0.2 version of the integration as explained below.

Use of the Visual Studio Experimental Instance

Because of changes made in Visual Studio 2010 (or later), the Eclipse integration is installed in the Visual Studio experimental instance. This may affect your ability to debug your own plugin development.

Launching the Eclipse Integration Installer



CAUTION! Ensure that all Windows programs are shut down before beginning the installation—this especially includes background programs such as virus checkers. If you do not shut down these programs, the installation may fail.

Depending on how you obtained the Eclipse integration installer software, you either launch the installer:

- From the HTML front end that comes with the Dimensions Software DVD.
- From the installer software extracted from the zip file that you downloaded from the Serena Support Web site.

Please refer to the *Dimensions CM for Eclipse User's Guide* for general configuration and connection information.

Post-installation Considerations

If you are using Version 6.2 of ActivClient for Common Access Card (CAC) Single Sign On (SSO) log ins, you will need to change the location of the SmartCard Library in the general preferences for the Eclipse integration in the Eclipse IDE to point to the correct DLL. Proceed as follows:

- 1 Navigate to the following Eclipse IDE menu item:

Window | Preferences | Team | Serena Dimensions

- 2 Change the location that appears there to be the actual ActivClient 6.2 library location. On a default installation, this will be:

C:\Program Files\ActivIdentity\ActivClient\acpkcs211.dll

You can use the file system browser or enter the path directly.

If after reconfiguration, the CAC login option does not become available, you may need to reboot the machine to make the CAC login option available in the Eclipse IDE.

Silently Installing the Eclipse Integration



CAUTION! Ensure that all Windows programs are shut down before beginning the installation—this especially includes background programs such as virus checkers. If you do not shut down these programs, the installation may fail.

You can also silently install the Dimensions 14.2.0.2 Eclipse integration. A silent installation is an installation where no user interaction is required.

- 1 Log in as a user with local administrative privileges.
- 2 From the Dimensions CM Software DVD (if provided), the contents of that DVD copied to a local disk maintaining the hierarchical structure,

or the extracted contents of the downloadable Dimensions CM clients files obtained from the Serena Web site, navigate to the executable file for the Eclipse integration: `setup-windows.exe`.



CAUTION! Ensure that the files accompanying the executable were extracted to be alongside the executable, as the installer also makes use of these other files and expects them to be in that location.

- 3 Copy the executable and associated files to the folder that you will be using for the Eclipse integration silent installer files.
- 4 Navigate in a terminal window to the folder where you copied the above files.
- 5 Run a command such as the following:

```
setup-windows.exe -i silent
```

You can optionally specify a response file from which the installer will retrieve the values for various variables used to control the installation. To record your responses, specify `-r fileName`; to actually use the response file, specify `-f fileName`.



NOTE The uninstaller is `uninstaller.jar` in the Serena Dimensions for Eclipse installation folder.

Installing Other Integrations

The other Dimensions CM for Windows integrations are launched in the same manner as described in "[Launching the Eclipse Integration Installer](#)" on page 211:

- If launching an integration from the DVD (if provided) or its copied contents, select the appropriate integration once you get to the **Integration Components** page.
 - If launching an integration from a downloaded zip file, replace references to the Eclipse installer `setupwin32.exe` with the appropriate executable (normally `setup.exe`).
- 1 Follow the installation wizard instructions unto completion.

2 Restart Windows.



IMPORTANT! This is particularly important in the following scenario:

- You have a Dimensions CM 14.2.0.2 server installation that also has a Dimensions CM Serena Business Manager (SBM) to Dimensions CM synchronization installed.
- You perform a Dimensions CM 14.2.0.2 client upgrade for the synchronizer.

This will generate an error message regarding the loss of `sync_api10m.dll` that suggests a re-installation. This is not actually required as restarting Windows will solve the problem.

3 Please refer to the following Serena Dimensions CM guides for configuration and connection information:

- *IDE User's Guide*
- *Dimensions CM Connect for Serena Business Manager User's Guide*

To use the Serena Connect for SBM synchronization integration rather than the Web services integration you will also need to either manually reset the registry keys discussed in "[Serena Connect for Serena Business Manager Integration](#)" on page 156 or import the registry hive if you exported it beforehand.

Part 4

Upgrading an Earlier Version of Dimensions CM

This part contains the following chapters.

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Chapter 13

Upgrade Installation Roadmap

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Introduction

Upgrading to Dimensions CM 14.x is a two stage process:

- 1 Upgrade your CM installations. For details see this chapter and chapters 14-17.
- 2 Upgrade the data in your RDBMS to use the new Versioned Repository Schema (VRS). For details see [page 268](#).

CAUTION! Deliver all changes to your repository before starting an upgrading.

The checklists are designed to assist you in upgrading earlier Dimensions CM components in a successful manner while maintaining a record of your upgrade options for future reference (for example, if you have to contact Serena Support for any reason). These checklists are based on the content found throughout this guide. Failure to complete these checklist items may compromise the success of your upgrade installation.

You should address the checklists in the following sequence, ticking the appropriate checklist box and proceeding as indicated:

- 1 Determining which Dimensions CM components you wish to upgrade. See ["Determining Which Components to Upgrade" on page 219](#).
- 2 Checking that your operating-system platform and RDBMS (for Dimensions CM server plus schema components only) are supported by Dimensions CM 14.2.0.2. See ["Checking Operating-System and RDBMS Support" on page 223](#).
- 3 For a Dimensions CM server plus schema installation, upgrading the Serena-Supplied Runtime RDBMS if applicable and appropriate. See ["Upgrading the Serena-Supplied Runtime RDBMS" on page 226](#).
- 4 Checking and satisfying the Dimensions CM prerequisites for the particular components that you will be upgrading. See ["Checking Dimensions CM Prerequisites" on page 227](#).
- 5 Upgrading the Dimensions CM components you identified earlier, including quick post-installation checks. See ["Upgrading Your Dimensions CM Components" on page 231](#).

- 6 Performing detailed post-upgrade procedures and checks to ensure correct functioning of your upgrade. See "[Performing Post-upgrade Procedures and Checks](#)" on page 236.

Determining Which Components to Upgrade

1 Choosing Server, Agent, or Client Components:

?	Checklist Item
<input type="checkbox"/>	Determine whether you need to upgrade Windows server components.
<input type="checkbox"/>	Determine whether you need to upgrade Windows client components on the same host as a server, refer to. The client components will talk to the Dimensions CM server.
n/a to this guide	Determine whether you need to upgrade UNIX server components (see <i>Installation Guide for UNIX</i>).
<input type="checkbox"/>	Determine whether you need to upgrade Windows agent components. The agent components will need to talk to a Dimensions CM for Windows or UNIX server on another network node.
<input type="checkbox"/>	Determine whether you need to upgrade UNIX agent components, refer to the <i>Installation Guide for UNIX</i> . The agent components will need to talk to a Dimensions CM for Windows or UNIX server on another network node.
<input type="checkbox"/>	Determine whether you need to upgrade Windows client components. The client components will need to talk to a Dimensions CM for Windows or UNIX server on another network node (however Dimensions CM for Windows server plus clients installations on the same Windows node are generally supported—see the earlier checklist item entry).
<input type="checkbox"/>	Determine whether you need to upgrade UNIX client components, refer to the <i>Installation Guide for UNIX</i> . The UNIX client components will need to talk to a Dimensions CM for Windows or UNIX server on another network node.

2 Choosing Server Installer Sub-Components:

If you will be upgrading Dimensions CM for Windows server components, decide which of the sub-components listed below (presented to you as installer options) you will be installing:

?	Checklist Item		
<input type="checkbox"/>	A default upgrade, which has the following installer options pre-selected: <ul style="list-style-type: none"> ■ Dimensions Server components (including schema). ■ Migration Console. 		
<input type="checkbox"/>	A custom setup installation with various options selected or deselected.		
	Custom Setup Options	Selected	Deselected
	Dimensions Server <i>(always selected).</i> You will have an option later in the installer wizard to select Dimensions Server components and schema or Dimensions Server components only , see the later entries in this table for details.	?	Not deselectable
	Custom Setup Options	Selected	Deselected
	Migration Console <i>(selected by default).</i> Used to migrate operating system files or PVCS VM, CVS, Subversion, ChangMan DS, or ClearCase assets into Dimensions CM.	<input type="checkbox"/>	<input type="checkbox"/>
	Serena Single Sign On (SSO) authentication <i>(deselected by default).</i> Used to enable single sign on of various Serena tools/clients	<input type="checkbox"/>	<input type="checkbox"/>

?	Checklist Item	
	<p>SSO authentication plus Common Access Card (CAC) Smart Card Setup (both deselected by default). (Note CAC cannot be chosen independently from SSO.) Used in secure environments where only CAC access to tools is allowed.</p>	<input type="checkbox"/> <input type="checkbox"/>
	<p>Dimensions Server components and schema (selected by default). (Note Dimensions Server components and schema and Dimensions Server components only are mutually exclusive.)</p>	<input type="checkbox"/> <input type="checkbox"/>
	<p>Dimensions Server components only (deselected by default). (Note Dimensions Server components and schema and Dimensions Server components only are mutually exclusive.)</p>	<input type="checkbox"/> <input type="checkbox"/>

3 Choosing Client Installer Sub-Components:

If you will be upgrading Dimensions CM for Windows client components, decide which of the sub-components listed below (presented to you as installer options) you will be installing:

?	Checklist Item		
<input type="checkbox"/>	A Typical installation (which installs all the default sub-components of a Custom installation detailed below).		
<input type="checkbox"/>	A Custom installation with all default selections selected: <ul style="list-style-type: none"> ■ Desktop Client. ■ Developer's Toolkit. ■ SCC Integration. ■ Administration Command Line Interface. ■ Windows Explorer Shell Extension. ■ Visual Studio Integration (only present if Visual Studio 2008-2013 is installed). ■ Visual Studio Migration tool. ■ Desktop shortcuts. 		
<input type="checkbox"/>	A Custom installation with various options selected or deselected.		
	Custom Subcomponent	Selected	Deselected
	Desktop Client.	<input type="checkbox"/>	<input type="checkbox"/>
	Developer's Toolkit.	<input type="checkbox"/>	<input type="checkbox"/>
	SCC Integration.	<input type="checkbox"/>	<input type="checkbox"/>
	Administration Command Line Interface.	<input type="checkbox"/>	<input type="checkbox"/>
	Windows Explorer Shell Extension.	<input type="checkbox"/>	<input type="checkbox"/>
	Visual Studio Integration (only present if Visual Studio 2008-2013 is installed).	<input type="checkbox"/>	<input type="checkbox"/>
	Custom Subcomponent	Selected	Deselected

?	Checklist Item		
	Visual Studio Migration tool.	<input type="checkbox"/>	<input type="checkbox"/>
	Desktop shortcuts.	<input type="checkbox"/>	<input type="checkbox"/>

Checking Operating-System and RDBMS Support

1 System requirements

For details of client compatibility, supported platforms and databases, and third party integrations go to the following Serena support web page and click **View** to see the complete platform matrix:

<http://support.serena.com/roadmap/Product.aspx?sel=PVDIMENSIONS>

For details about hardware requirements see the General Scalability and Performance Guidelines in the *Dimensions CM Scaling and Optimization Guide*.

2 Installations Not Requiring a RDBMS

For Windows Dimensions CM clients, agents, and server without schema (server only) upgrades, tick the appropriate checklist box and proceed as indicated:

?	Checklist Item	
<input type="checkbox"/>	<p>My operating-system is supported by Dimensions CM for Windows and satisfies the minimum hardware and software requirements.</p> <p><i>[Record your Operating-System:]</i></p>	

?	Checklist Item
<input type="checkbox"/>	<p>My operating-system is not supported by Dimensions CM for Windows or does not satisfies the minimum hardware and software requirements.</p> <p>If the former, contact Serena Software to see if future support is planned for your operating-system or if some workaround can be devised; if the latter, bring your operating-system up to the minimum specification and then proceed as above.</p>

3 Installations Requiring a RDBMS

For Windows Dimensions CM server plus schema installations, check firstly that the server operating-system is supported and then that your Windows local RDBMS or Windows or UNIX remote RDBMS is supported.

a Firstly check the status of you operating-system:

?	Checklist Item
<input type="checkbox"/>	<p>My operating-system is supported by the Dimensions CM for Windows server and satisfies the minimum hardware and software requirements.</p> <p><i>[Record your Operating-System:]</i></p> <p>Proceed to check the status of your locally or remote RDBMS as described below.</p>
<input type="checkbox"/>	<p>My operating-system is not supported by Dimensions CM for Windows server or does not satisfies the minimum hardware and software requirements.</p> <p>If the former, contact Serena Software to see if future support is planned for your operating-system or if some workaround can be devised; if the latter, bring your operating-sy tem up to the minimum specification and then proceed as above.</p>

- b** Provided your operating-system is supported for the Dimensions CM for Windows server, check the status of your RDBMS:

?	Checklist Item
<input type="checkbox"/>	<p>My local Windows RDBMS is supported for use with a Dimensions CM server plus schema installation.</p> <p><i>[Record your RDBMS:]</i></p> <p>Proceed to "Checking Dimensions CM Prerequisites" on page 227.</p>
<input type="checkbox"/>	<p>My remote Windows or UNIX RDBMS is supported for use with a Dimensions CM server plus schema installation.</p> <p><i>[Record your RDBMS:]</i></p> <p>Proceed to "Checking Dimensions CM Prerequisites" on page 227.</p>
<input type="checkbox"/>	<p>My local Windows RDBMS is not supported for use with a Dimensions CM server plus schema installation. Contact Serena Software to see if future support is planned for your RDBMS or if some workaround can be devised. Alternatively, consider installing the Serena-Supplied Runtime RDBMS if your operating-system supports it— see "Installing the Serena-Supplied Runtime RDBMS" on page 35 or "Upgrading the Serena-Supplied Runtime RDBMS" on page 226.</p>
<input type="checkbox"/>	<p>My remote Windows or UNIX RDBMS is not supported for use with a Dimensions CM server plus schema installation. Contact Serena Software to see if future support is planned for your RDBMS or if some workaround can be devised. Alternatively, consider installing the Serena-Supplied Runtime RDBMS if your operating-system supports it— see "Installing the Serena-Supplied Runtime RDBMS" on page 35 or "Upgrading the Serena-Supplied Runtime RDBMS" on page 226.</p>

?	Checklist Item
<input type="checkbox"/>	I do not have an RDBMS. Instal the Serena-Supplied Runtime RDBMS if your operating-system supports it—see "Installing the Serena-Supplied Runtime RDBMS" on page 35 or "Upgrading the Serena-Supplied Runtime RDBMS" on page 226 .

Upgrading the Serena-Supplied Runtime RDBMS

If you want to upgrade your Serena-Supplied Runtime RDBMS to the 11gR2.0.3 version:

?	Checklist Item
<input type="checkbox"/>	I want to upgrade to the 11gR2.0.3 version of the Serena-Supplied RDBMS—see "Migrating to the Serena-Supplied Runtime RDBMS" on page 349 .

Checking Dimensions CM Prerequisites

1 All Components:

For all Dimensions CM components:

?	Checklist Item
<input type="checkbox"/>	Mandatory pre-installation tasks and considerations—see "Pre-installation Tasks for an Upgrade" on page 239.

2 Optional Single Sign On Server (SSO) Components:

If you will be upgrading the Dimensions CM for Windows Single Sign On (SSO) server components, review ["SSO Authentication or SSO and Smart Card Authentication Prerequisites"](#) on page 135 and ["SSO Authentication Prerequisites"](#) on page 137:

?	Checklist Item
<input type="checkbox"/>	<p>I will be using an existing SSO server—see "Local or Remote Windows Server Prerequisites for an Existing SSO Server" on page 137.</p> <p>For the existing SSO server:</p> <p><i>[Record the hostname:]</i></p> <p><i>[Record the SSO port:]</i></p> <p><i>[Record whether secure (https) connection will be required:]</i></p>

?	Checklist Item
<input type="checkbox"/>	<p>I wish the Dimensions CM installer to create a new SSO server— see "Local or Remote Windows Server Prerequisites For a New SSO Server" on page 138.</p> <p>For the new SSO server, record the LDAP parameters to be used:</p> <p><i>[Record the hostname to be used:</i>]</p> <p><i>[Record the port to be used:</i>]</p> <p><i>[Record the base DN to be used:</i>]</p> <p><i>[Record the search filter:</i>]</p> <p><i>[Record the bind user DN:</i>]</p> <p><i>[Record the LDAP password for the bind user DN:</i>]</p>

3 Optional Single Sign On Server (SSO) plus Common Access Card (CAC) Components:

If you will be upgrading the Dimensions CM for Windows Single Sign On (SSO) server plus Common Access Card (CAC) components, review ["SSO Authentication or SSO and Smart Card Authentication Prerequisites"](#) on page 135 and ["SSO and CAC Reader Authentication Prerequisites"](#) on page 140:

?	Checklist Item
<input type="checkbox"/>	<p>I will be using an existing SSO server plus CAC reader—see "Local or Remote Windows Server Prerequisites for an Existing SSO Server and CAC Reader" on page 141.</p> <p>For the existing SSO server:</p> <p><i>[Record the hostname:</i>]</p> <p><i>[Record the SSO port:</i>]</p> <p><i>[Record whether secure (https) connection will be required:</i>]</p>
<input type="checkbox"/>	<p>I wish the Dimensions CM installer to create a new SSO server and configure the CAC software—see "Local or Remote Windows Server Prerequisites For a New SSO Server" on page 138.</p> <p>For the CAC reader, record the LDAP Parameters to be used:</p> <p><i>[Record the hostname:</i>]</p> <p><i>[Record the SSO port:</i>]</p> <p><i>[Record the bind user DN:</i>]</p> <p><i>[Record the LDAP password for the bind user DN:</i>]</p> <p><i>(continued on next page)</i></p>

?	Checklist Item
	<p><i>(continued)</i></p> <p>For the new SSO server, record the LDAP parameters to be used:</p> <p><i>[Record the hostname to be used (by default same as for CAC reader):</i></p> <p style="text-align: right;"><i>]</i></p> <p><i>[Record the port to be used (by default same as for CAC reader):</i></p> <p style="text-align: right;"><i>]</i></p> <p><i>[Record the base DN to be used:</i></p> <p style="text-align: right;"><i>]</i></p> <p><i>[Record the search filter:</i></p> <p style="text-align: right;"><i>]</i></p> <p><i>[Record the bind user DN (by default same as for CAC reader):</i></p> <p style="text-align: right;"><i>]</i></p> <p><i>[Record the LDAP password for the bind user DN (by default same as for CAC reader):</i></p> <p style="text-align: right;"><i>]</i></p>

Upgrading Your Dimensions CM Components

Upgrading Windows Server Components

1 Server Plus Schema Upgrades

If you will be upgrading the Dimensions CM server and schema, see ["Upgrading a Windows Server"](#) on page 249:

?	Checklist Item	
<input type="checkbox"/>	Obtain the installation software as detailed in "Overview of the Server Upgrade Installation Process" on page 250.	
<input type="checkbox"/>	Determine whether you will be launching the installer from the HTML front end or from the extracted downloaded zip file content. Refer to "Launching the Installer" on page 22.	
	<input type="checkbox"/>	Launching from the HTML front end. See "Launching the Installer from the HTML Front End" on page 24.
	<input type="checkbox"/>	Launching from the extracted zip file. See "Launching the Installer from the Extracted Downloaded Zip Files" on page 25.
<input type="checkbox"/>	Run the upgrade server installer. See "Running the Upgrade Server Installer" on page 251 and the installer options and values that you recorded in earlier planning checklists in this chapter.	
<input type="checkbox"/>	Proceed to the post-installation checklist (see "Performing Post-upgrade Procedures and Checks" on page 236).	

2 Server Without Schema Upgrades

If you will be upgrading the Dimensions CM server without schema, see ["Upgrading a Windows Server" on page 249](#):

?	Checklist Item				
<input type="checkbox"/>	Obtain the installation software as detailed in "Overview of the Server Upgrade Installation Process" on page 250 .				
<input type="checkbox"/>	Determine whether you will be launching the installer from the HTML front end or from the extracted downloaded zip file content. Refer to "Launching the Installer" on page 22 .				
<input type="checkbox"/>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50px; text-align: center;"><input type="checkbox"/></td> <td>Launching from the HTML front end. See "Launching the Installer from the HTML Front End" on page 24.</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Launching from the extracted zip file. See "Launching the Installer from the Extracted Downloaded Zip Files" on page 25.</td> </tr> </table>	<input type="checkbox"/>	Launching from the HTML front end. See "Launching the Installer from the HTML Front End" on page 24 .	<input type="checkbox"/>	Launching from the extracted zip file. See "Launching the Installer from the Extracted Downloaded Zip Files" on page 25 .
<input type="checkbox"/>	Launching from the HTML front end. See "Launching the Installer from the HTML Front End" on page 24 .				
<input type="checkbox"/>	Launching from the extracted zip file. See "Launching the Installer from the Extracted Downloaded Zip Files" on page 25 .				
<input type="checkbox"/>	Run the upgrade server installer. See "Running the Upgrade Server Installer" on page 251 and the installer options and values that you recorded in earlier planning checklists in this chapter.				
<input type="checkbox"/>	Proceed to the post-installation checklist (see "Performing Post-upgrade Procedures and Checks" on page 236).				

3 Single Sign On Server (Upgraded at the Same Time as a Dimensions CM Server)

?	Checklist Item
<input type="checkbox"/>	If you will be upgrading/installing or configuring a Single Sign On server (SSO), see "Installing or Configuring an SSO Server" on page 323 .
<input type="checkbox"/>	Run the upgrade installer. Review the installer options and values that you recorded in earlier planning checklists in this chapter.
<input type="checkbox"/>	Perform the SSO additional post-installation checks (see "Configuring Trusted Certificate Authorities for SSO and CAC Installations" on page 175 and "Establishing a Certificate Revocation List" on page 180).

4 Single Sign On Server plus Smart Card (Upgraded at the Same Time as a Dimensions CM Server)

?	Checklist Item
<input type="checkbox"/>	If you will be upgrading/installing or configuring a Single Sign On server (SSO) plus configuring a Common Access Card (CAC) smart card, see "Installing or Configuring an SSO Server and a Smart Card" on page 324.
<input type="checkbox"/>	Run the upgrade installer. Review the installer options and values that you recorded in earlier planning checklists in this chapter.
<input type="checkbox"/>	Perform the SSO additional post-installation checks (see "Configuring Trusted Certificate Authorities for SSO and CAC Installations" on page 175, "Dual Username/Password and CAC Authentication" on page 180, and "Establishing a Certificate Revocation List" on page 180).

5 Single Sign On Server (Installed Subsequently to Upgrading a Dimensions CM Server)

?	Checklist Item
<input type="checkbox"/>	If you will be subsequently installing or configuring a Single Sign On server (SSO), see "Subsequently Installing or Configuring an SSO Server" on page 325.
<input type="checkbox"/>	Run the installer. Review the installer options and values that you recorded in earlier planning checklists in this chapter.
<input type="checkbox"/>	Perform the SSO additional post-installation checks (see "Configuring Trusted Certificate Authorities for SSO and CAC Installations" on page 175 and "Establishing a Certificate Revocation List" on page 180).

6 Single Sign On Server plus Smart Card (Installed Subsequently to Upgrading a Dimensions CM Server)

?	Checklist Item
<input type="checkbox"/>	If you will subsequently be installing or configuring a Single Sign On server (SSO) plus configuring a Common Access Card (CAC) smart card see "Subsequently Installing or Configuring an SSO Server and a Smart Card" on page 328.

?	Checklist Item
<input type="checkbox"/>	Run the installer. Review the installer options and values that you recorded in earlier planning checklists in this chapter.
<input type="checkbox"/>	Perform the SSO additional post-installation checks (see "Configuring Trusted Certificate Authorities for SSO and CAC Installations" on page 175, "Dual Username/Password and CAC Authentication" on page 180, and "Establishing a Certificate Revocation List" on page 180).

Upgrading Windows Agent Components

If you will be upgrading the Dimensions CM for Windows agent components, see ["Upgrading a Windows Agent"](#) on page 257:

?	Checklist Item				
<input type="checkbox"/>	Obtain the installation software as detailed in "Overview of the Agent Upgrade Installation Process" on page 258.				
<input type="checkbox"/>	Determine whether you will be launching the installer from the HTML front end or from the extracted downloaded zip file content. Refer to "Launching the Installer" on page 22.				
	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Launching from the HTML front end. See "Launching the Installer from the HTML Front End" on page 24.</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Launching from the extracted zip file. See "Launching the Installer from the Extracted Downloaded Zip Files" on page 25.</td> </tr> </table>	<input type="checkbox"/>	Launching from the HTML front end. See "Launching the Installer from the HTML Front End" on page 24.	<input type="checkbox"/>	Launching from the extracted zip file. See "Launching the Installer from the Extracted Downloaded Zip Files" on page 25.
<input type="checkbox"/>	Launching from the HTML front end. See "Launching the Installer from the HTML Front End" on page 24.				
<input type="checkbox"/>	Launching from the extracted zip file. See "Launching the Installer from the Extracted Downloaded Zip Files" on page 25.				
<input type="checkbox"/>	Run the agent upgrade installer, see "Running the Upgrade Agent Installer" on page 258, and the installer options and values that you recorded in earlier planning checklists in this chapter.				
<input type="checkbox"/>	Proceed to the post-installation checklist (see "Performing Post-upgrade Procedures and Checks" on page 236).				

Upgrading Windows Client Components

If you will be upgrading the Dimensions CM for Windows client components, see either ["Upgrading Windows Clients" on page 261](#) or ["Silently Upgrading Windows Clients" on page 266](#):

?	Checklist Item	
<input type="checkbox"/>	Determine whether you will be installing the client components using the installer wizard or silently.	
	<input type="checkbox"/>	Using the installer wizard, see "Upgrading Windows Clients" on page 261 .
	<input type="checkbox"/>	Silently, see "Silently Upgrading Windows Clients" on page 266 .
<input type="checkbox"/>	Obtain the installation software.	
<input type="checkbox"/>	Determine whether you will be launching the installer from the HTML front end or from the extracted downloaded zip file content. Refer to "Launching the Installer" on page 22 . For a silent installation you will only be interested in the downloadable zip file.	
<input type="checkbox"/>	<input type="checkbox"/>	Launching from the HTML front end. See "Launching the Installer from the HTML Front End" on page 24 .
	Run the clients upgrade installer using installer options and values that you recorded in earlier planning checklists in this chapter. See: <ul style="list-style-type: none"> ■ "Running the Upgrade Clients Installer" on page 263, or ■ "Silently Upgrading Windows Clients" on page 266. 	
<input type="checkbox"/>	Proceed to the post-installation checklist (see "Performing Post-upgrade Procedures and Checks" on page 236).	

Performing Post-upgrade Procedures and Checks

Checking that the Upgrade Completed Successfully

?	Checklist Item
<input type="checkbox"/>	Check that the installation completes successfully as detailed in "Checking for Successful Completion" on page 164.

Checking for Latest Updates

?	Checklist Item
<input type="checkbox"/>	Check for latest updates as detailed in "Checking for Latest Updates" on page 165.

Windows Server Post-upgrade Activities

?	Checklist Item
<input type="checkbox"/>	Perform applicable post-installation activities and checks from those detailed in "Windows Server Post-upgrade Activities" on page 271.

Windows Agent Post-upgrade Activities

?	Checklist Item
<input type="checkbox"/>	Perform applicable post-installation activities and checks from those detailed in "Windows Agent Post-upgrade Activities" on page 292.

Windows Clients Post-upgrade Activities

?	Checklist Item
<input type="checkbox"/>	Perform applicable post-installation activities and checks from those detailed in "Windows Clients Post-upgrade Activities" on page 292.

Upgrading Additional Dimensions CM Components

Upgrading Dimensions CM Make for Windows

If you will be upgrading Dimensions CM Make for Windows, you should uninstall the previous version and then install the current version—see ["Installing Dimensions CM Make"](#) on page 58.

Upgrading Windows Integrations

Upgrading the Eclipse Integration

If you will be upgrading the Eclipse integration you should uninstall the previous version and then install the current version—see ["Installing the Eclipse Integration"](#) on page 59.

Upgrading the Other Integrations

If you will be upgrading other Dimensions CM for Windows integrations, you should uninstall the previous version and then install the current version—see ["Installing the Other Integrations"](#) on page 60.

Uninstalling Dimensions CM Components

?	Checklist Item
<input type="checkbox"/>	Determine whether you will be uninstalling Dimensions CM 14.2.0.2 components or earlier Dimensions CM upgraded components.
<input type="checkbox"/>	Uninstalling the Dimensions CM 14.2.0.2 components. See "Uninstalling Components" on page 197.
<input type="checkbox"/>	Uninstalling earlier Dimensions CM upgraded components. See "Manually Uninstalling Windows Clients" on page 200.

Chapter 14

Pre-installation Tasks for an Upgrade

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Introduction



NOTE For pre-installation tasks and considerations for a fresh installation, please see ["Pre-installation Tasks for a New Installation" on page 123](#).

This chapter details the necessary pre-installation tasks and considerations that must be undertaken before any upgrade process is attempted. Additionally, if as part of upgrade installation you plan to install a Single Sign On (SSO) server or to install an SSO server and configure a remote Windows Common Access Card (CAC) smart card (*Linux and Solaris only*), you should also consult ["SSO Authentication or SSO and Smart Card Authentication Prerequisites" on page 135](#)



CAUTION! Read and implement, where appropriate, the pre-upgrade tasks and considerations documented in this chapter. Failure to do this may result in a Serena® Dimensions® CM 14.2.0.2 upgrade installation failing (and you not being able to re-instate your existing Dimensions CM server).

Upgrading Server and Clients on the Same Machine

If you intend to upgrade both the Dimensions CM server and client binaries on the same machine, you *must* upgrade the server binaries first.

Temporary Space Requirements

Regardless of where your existing Dimensions CM server, agent, or clients installation is located, the upgrade installer will require temporary space (for example, approximately 3.0 Gbytes for a server upgrade) on the C:\ drive for unpacking installation files and other tasks. This space will be mostly relinquished at the end of the upgrade.

Base Software

A Dimensions CM 14.2.0.2 server, agent, or client upgrade installation can only be run against an existing Dimensions CM server, agent, or client.

If your current Dimensions installation is an earlier release than specified in the above cross-reference, you will need to update it to one of the specified releases first before you can run the upgrade installer—download the appropriate earlier upgrade software and installation documentation from the Serena Web site.



IMPORTANT! The upgrade installer accesses Dimensions information stored in the Windows registry when that software was installed. If your current Dimensions installation has been *manually* moved after initial installation, then the Dimensions CM 14.2.0.2 upgrade installation may fail. In such circumstances, it will be necessary to re-install the Dimensions base software.

Backups

Backing Up Your Existing Database

You are strongly advised to back up your existing RDBMS database before you upgrade the Dimensions CM schema.

If you are using an Oracle Enterprise RDBMS or a Microsoft SQL Server RDBMS, please consult your DBA or vendor documentation.

Backing Up Your Existing Software

You are strongly advised to back up your existing Dimensions CM server, agent, or clients before upgrading them to release level 14.2.0.2. Proceed as follows:

- 1 Establish a Dimensions CM quiescent system (as is also necessary for running the upgrade process itself), see ["Shutting Down Your System" on page 242](#).

- 2 Make operating-system back ups of your Dimensions CM software.
- 3 Dimensions CM upgrade installations result in the existing Dimensions CM files being overwritten with equivalent Dimensions CM 14.2.0.2 files, including certain Dimensions CM configuration files. As an added precaution, you are advised to make additional backups of configuration files such as `dm.cfg`, `email_config.dat`, `listener.dat`, and `registry.dat`. These configuration files are located in `%DM_ROOT%` (`dm.cfg`) and `%DM_ROOT%\dfs` (all others).



NOTE After a server upgrade, Tomcat webapps files for previous installations will be located in one of the following directories:

- Tomcat 6.0: `%DM_ROOT%/../Common Tools/tomcat/6.0`
- Tomcat 7.0: `%DM_ROOT%/../Common Tools/tomcat/7.0`

You can copy them to the Tomcat 8.0 directory:

NOTE `%DM_ROOT%/../Common Tools/tomcat/8.0`

Shutting Down Your System

To ensure a successful Dimensions CM server upgrade:

- 1 Exit all Dimensions CM tools and applications and check that no users are accessing Dimensions CM.
- 2 Using the Windows Services Tool, shut down the services for the Serena Dimensions Listener and Serena Common Tomcat Server, if running.



CAUTIONS!

- If Tomcat is running when you do the upgrade, then the Web archive (.war) files used by the upgraded Dimensions CM Web tools may not expand correctly, rendering these tools non-functioning.
- Make sure that the Windows Services dialog box is closed during upgrades. If it is open during the upgrade installation, the Dimensions Listener Service may fail to start on completion of the installation.
- When you stop the Dimensions Service, the `dmschedule` and `dmemail` processes may continue to run for a period after the other processes have exited. You should ensure that these processes have actually terminated before performing an upgrade installation.

Closing the Microsoft Management Console

Serena recommends that the Microsoft Management Console (for example, Services, Computer Management, etc) is closed before starting an upgrade installation. (This is the option accessed from the Windows Control Panel, or on certain versions of Windows is part of the Control Panel Administrative Tools option.)

Active Database

Before running an upgrade installation, ensure that the local or remote RDBMS database used by Dimensions CM is active ("up") by establishing that you can connect to it using standard RDBMS database utilities.

You should also confirm, using standard RDBMS database utilities, that you know the correct database passwords for `SYSTEM` and `PCMS_SYS`, as you will be prompted for this during a Dimensions CM server upgrade installation for that RDBMS.

Upgrading from the Serena-Supplied Runtime RDBMS



IMPORTANT! When upgrading from version 9.2.0.5 to 10.2.0.2 or 11.2.0.x, you *must* continue to use the same character set encoding in 10.2.0.2 or 11.2.0.x that you use in your current 9.2.0.5 system. Otherwise, data corruption may result if you have high-order ASCII characters in your 9.2.0.5 database.

If you have to upgrade from the Serena-Supplied Runtime RDBMS 9.2.0.5 to 10.2.0.2 or 11.2.0.x to be able to upgrade to Dimensions CM 14.2.0.2, at various stages the Oracle import command will be used as discussed in the *Dimensions CM 10.1.1 Installation Guide* for a 9.2.05 to 10.2.0.2 upgrade. It has come to the notice of Serena that the Oracle AUTOEXTEND ON option that automatically extends datafiles does not apply to Oracle imports.

Resetting Oracle PCMS_SYS Schema User Password

During a Dimensions CM 14.2.0.2 upgrade installation, the installer expects the password for the existing Oracle PCMS_SYS schema user to be a default value of `pcms_sys` (this is the value set, by default, when this schema was initially installed). If another value was set at initial installation of Dimensions CM or its value has been changed since initial installation, the upgrade installer will fail.

To check whether the PCMS_SYS schema user password is still set to the installation default value of `pcms_sys` for the Serena-Supplied Runtime RDBMS or Oracle Enterprise type the following commands:

```
sqlplus system/<system_password>@<ORACLE_SID>  
SQL> connect pcms_sys/pcms_sys
```

If this returns

```
SQL> Connected
```

then the default value is still set.

If you need to change the password back to its default installation value (at least for the duration of the upgrade):

- For the Serena-Supplied Runtime RDBMS:

Run the `dmdba cpas` command—see the *System Administration Guide* for details.

- For Oracle Enterprise:

Type with the following command:

```
SQL> alter user pcms_sys identified by pcms_sys;
```

- For SQL Server Enterprise:

Consult your DBA or vendor documentation.

Upgrading Pre-Dimensions CM 14.2.0.2 Deployment Areas

If you plan to upgrade existing pre-Dimensions CM 14.2.0.2 deployment areas to release level 14.2.0.2 (see ["Upgrading and Migrating Pre-12.x Deployment Data" on page 273](#)), it is advisable to perform a Dimensions CM AUDIT operation against the areas to ensure they contain the correct content before performing the upgrade.

Upgrading a Pre-Dimensions CM 14.2.0.2 Eclipse Integration or Make

If you plan to upgrade an existing pre-Dimensions CM 14.2.0.2 Eclipse integration or Dimensions CM Make to release level 14.2.0.2, to ensure correct functioning of the 14.2.0.2 version of the integration, the following installation sequence *must* be followed:

- 1 Uninstall the earlier version of the integration or Dimensions CM Make using the Windows Control Panel Add/Remove or Programs and Features utility, which for the Eclipse integration will launch a simple uninstall wizard to enable you to specify the existing Eclipse plug-in to uninstall.



CAUTION! To ensure that the existing version of the Eclipse integration uninstalls successfully, you must ensure that the Eclipse IDE is shut down.

- 2 Delete the following folder:

```
%DM_ROOT%\integrations\richeclipse3.x
```
- 3 Upgrade the Dimensions CM clients to release level 14.2.0.2.
- 4 Install the 14.2.0.2 version of the Eclipse integration or Dimensions CM Make.

Upgrading Existing 2009 R2 Clients on Windows 7 or 8 64-Bit Platforms

To upgrade from a Dimensions CM 2009 R2 32-bit client plus shell explorer on a 64-bit platform to a native 32-bit client plus native 64-bit shell explorer, you must adhere to the following installation sequence to ensure correct functioning:

- 1** Manually uninstall the Dimensions CM 2009 R2 32-bit client plus shell explorer using the Windows Control Panel Add/Remove utility—see ["Uninstalling Windows Components" on page 195](#)
- 2** Freshly install the native 32-bit Dimensions CM 14.2.0.2 clients on the 64-bit platform (which will also install the native 64-bit shell explorer for you)—see ["Installing a New Windows Client" on page 145](#).

Chapter 15

Upgrading a Windows Server

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Overview of the Server Upgrade Installation Process

The tasks performed by the server upgrade installer include:

- 1** Stopping the Serena Dimensions Listener Service if it is still running. However, it is recommended that this is done manually before starting the upgrade installation.
- 2** Validating the existing Dimensions CM server and creating temporary backups of certain files.
- 3** Checking status.
- 4** Upgrading the Dimensions CM server and associated components to 14.2.0.2.
- 5** Upgrading the Dimensions CM schema to that corresponding to 14.2.0.2.
- 6** Registering components.
- 7** Validating the Dimensions CM 14.2.0.2 server installation and then removing temporary backup files.
- 8** Stopping the Dimensions CM Web server (normally Tomcat) if it is still running.
- 9** Starting the Serena Dimensions Listener Service.
- 10** Upgrading and configuring the Web Tools and restarting the Dimensions CM Web server.

11 Calculates database statistics.**NOTES**

- The upgrade installer will, after validating the new Dimensions CM 14.2.0.2 server, uninstall the existing Dimensions CM server.
- The upgrade installer will automatically upgrade, if applicable, *the process model that was chosen when the original Dimensions CM server was installed*. There is no option in the upgrade installer to change the process model.
- The upgrade installer allows you to freshly install the Migration Console if so desired. This is the default option.
- After completing a clean installation of a server, or a server upgrade that does not have Single Sign On Server (SSO) enabled, you can optionally rerun the installer and install SSO or SSO plus Common Access Card (CAC).
- The upgrade installer automatically detects if the existing Dimensions CM server is working in conjunction with a local or remote RDBMS. No upgrade installer screen option will, therefore, be presented for choosing a local or remote RDBMS.
- **IMPORTANT!** After completing the upgrade to 14.2.0.2 you must upgrade your projects, streams, and baselines to use the new VRS schema, for details see [page 268](#).

Running the Upgrade Server Installer



IMPORTANT! Before launching a Dimensions CM 14.2.0.2 upgrade server installation you should ensure that you have met the prerequisites detailed in "[Pre-installation Tasks for an Upgrade](#)" on [page 239](#).

For details on launching the Dimensions installer refer to [Chapter 1, "Launching the Installer"](#) on [page 22](#).

- 1 As a user with local Administrative privileges, depending on how you obtained the Dimensions CM installer software, you either run:
 - index.html
 - Dimensions_CM_Server_14.2.0.2.0_win64.exe



NOTES

Some Windows systems high default security settings. If you are installing the Dimensions CM server on a platform with such default settings, you may receive a warning to the effect that "Some files can harm your computer ..." when you attempt to initiate the installation. Click the **Open** button to proceed in such circumstances.

- 2 From the **Serena Dimensions Server Installshield Wizard** screen, click **Next**.
- 3 From the **End User License Agreement** screen, read the license agreement and click **I accept the terms of the End User License Agreement** to accept the terms.
Click **Next**.
- 4 From the **Custom Setup** screen, either accept or deselect the default **Migration Console** component. This component allows you to migrate PVCS Version Manager, CVS, Subversion (SVN), or ClearCase assets into Dimensions CM. (Note that the **Dimensions Server** component cannot actually be deselected.)

Serena Single Sign On (SSO) is used to *freshly* install or configure connection to a Dimensions CM SSO server (if this component is not present in your existing installation being upgraded). This is only required when using other Serena products in collaboration with Dimensions CM or requiring Smart Card authentication support.

Smart Card Setup enables you to *freshly* configure your smart card authentication details with SSO (if this is not present in your existing installation being upgraded). Currently, the only smart card supported is the DoD Common Access Card (CAC)

If you currently (or in the future) wish to freshly select the **Serena Single Sign On** component or the **Serena Single Sign On** component plus **Smart Card Setup** sub-component, see [Chapter A, "Installing Windows Server: Other Scenarios"](#) on page 295.

Either accept the default installation folder of C:\Program Files\Serena\Dimensions 14.2\CM or click **Change...** to specify an alternative folder.

Click **Next**.

- 5 From the **Dimensions Schema Options** screen, click **Dimensions Server components and schema** to upgrade both the Dimensions CM server components and the schema to release 14.2.0.2. This is typically what you would do.

Dimensions server components only is used to upgrade the Dimensions CM server (binaries) only to release 14.2.0.2. Upgrades to the Dimensions CM schema, if applicable, will be handled outside the scope of the upgrade installer.

See ["Installing Windows Server: Other Scenarios" on page 295](#) regarding server only installation scenarios.

Click **Next**.

- 6 From the **Dimensions Server Database Selection** screen, if you want to upgrade a Dimensions CM server to 14.2.0.2 with a Serena-Supplied Runtime RDBMS or your own Oracle Enterprise RDBMS, click **Oracle** and **Next** and then proceed to [Step 7 on page 253](#).

If you want to upgrade a Dimensions CM server to 14.2.0.2 with a SQL Server Enterprise RDBMS, click **SQL Server** and **Next** and then proceed to [Step 8 on page 253](#).

Click **Next**.

- 7 From the **Oracle Administrator Account** screen, confirm the existing Oracle Administrator user and password for your Serena-Supplied Runtime RDBMS or your Oracle Enterprise RDBMS installation. For a Serena-Supplied Runtime RDBMS these will be by default SYSTEM and MANAGER respectively.

Click **Next**. There will be a short delay while the user and password are authenticated. Upon completion of the authentication process, the installer will proceed to [Step 9 on page 254](#).

- 8 From the **Dimensions Server PCMS_SYS Password** screen, Confirm the existing password for the SQL Server Enterprise PCMS_SYS schema. This is normally PCMS_SYS. Click **Next**.

- 9 From the **Install Dimensions CM Server** screen, click **Install**.
- 10 The upgrade installer performs various checks and operations, including:
 - Stopping the Serena Dimensions Listener Service if it is still running.
 - Validating the existing Dimensions CM server and creating temporary backups of certain files.
 - Checking status.
 - Upgrading the Dimensions CM server and associated components to 14.2.0.2.
 - Upgrading the Dimensions CM schema to that corresponding to 14.2.0.2.
 - Registering components.
 - Validating the Dimensions CM 14.2.0.2 server installation and then removing temporary backup files.
 - Stopping the Dimensions CM Web server (normally Tomcat) if it is still running.
 - Starting the Serena Dimensions Listener Service.
 - Upgrading and configuring the Web Tools and restarting the Dimensions CM Web server.
- 11 Click **Finish**.



IMPORTANT!

- If your pre-14.2.0.2 Dimensions CM installation was a server plus clients installation (that is, both server and clients components on the same PC), the clients that remain after the server upgrade will not function correctly and should be upgraded to 14.2.0.2 as soon as possible. See "[Upgrading Windows Clients](#)" on page 261.
- **IMPORTANT!** After completing the upgrade you must update the data in your RDBMS, for details see [page 268](#).

Post-installation Checks

Please proceed to [Chapter 18, "Post-upgrade Activities"](#) to complete and test the upgraded installation.

Chapter 16

Upgrading a Windows Agent

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Overview of the Agent Upgrade Installation Process

The tasks performed by the agent upgrade installer include:

- 1 Validating the existing Dimensions CM agent and creating temporary backups of certain files.
- 2 Checking status.
- 3 Upgrading the Dimensions CM agent and associated components to 14.2.0.2.
- 4 Registering components.
- 5 Validating the Dimensions CM 14.2.0.2 agent installation and then removing temporary backup files.



NOTE The upgrade installer will, after validating Dimensions CM 14.2.0.2 agent, uninstall the existing Dimensions CM agent.

Running the Upgrade Agent Installer



IMPORTANT! Before launching a Dimensions CM 14.2.0.2 upgrade agent installation you should ensure that you have met the prerequisites detailed in ["Pre-installation Tasks for an Upgrade" on page 239](#).

For details on launching a Dimensions CM 14.2.0.2 installer refer to [Chapter 1, "Launching the Installer" on page 22](#).

CAUTION! Deliver all changes to your repository before upgrading.

- 1 As a user with local Administrative privileges, depending on how you obtained the Dimensions CM installer software, you either run:
 - `index.html`
 - `Dimensions_CM_Agents_14.2.0.2.0.exe`
- 2 From the **Serena Dimensions Install** screen, click **Next**.

- 3 From the **End User License Agreement** screen, read the license agreement and click **I accept the terms of the End User License Agreement** to accept the terms.
- 4 From the **Destination Folder** screen, either accept the default installation folder, or click **Change...** to specify an alternative folder.
Click **Next**.
- 5 From the **Install Dimensions Agent** screen, click **Install**.
- 6 The upgrade installer performs various checks and operations, including:
 - Validating the existing Dimensions CM agent and creating temporary backups of certain files.
 - Checking status.
 - Upgrading the Dimensions CM agent and associated components to 14.2.0.2.
 - Registering components.
 - Validating the Dimensions CM 14.2.0.2 agent installation and then removing temporary backup files.
- 7 Click **Finish**.

Silently Upgrading a Windows Agent

See ["Silently Installing an Agent"](#) on page 161.

Post-installation Checks

Please proceed to [Chapter 18, "Post-upgrade Activities"](#) to complete and test the upgraded installation.

Chapter 17

Upgrading Windows Clients

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Overview of the Clients Upgrade Installation Process

The tasks performed by the clients upgrade installer include:

- 1 Checking status.
- 2 Installing the Dimensions CM 14.2.0.2 clients.
- 3 Installing Dimensions Common Tools (unless this a server plus clients installation).
- 4 Registering components.



NOTES

- The upgrade installer will, after validating the Dimensions CM 14.2.0.2 clients, uninstall the existing Dimensions CM clients.
- If you choose **Typical** at the **Setup Type** upgrade installer screen, the installer will automatically upgrade the clients that were chosen when the original Dimensions CM clients were installed. If you wish to install a new 14.2.0.2 client or modify the selection of clients that get upgraded, select **Custom** at the **Setup Type** upgrade installer screen.

Running the Upgrade Clients Installer

CAUTION! Deliver all changes to your repository before upgrading.

For details on launching a Dimensions CM 14.2.0.2 installer refer to [Chapter 1, "Launching the Installer" on page 22](#).

- 1 As a user with local Administrative privileges, depending on how you obtained the Dimensions CM installer software, you either run:
 - `index.html`
 - `Dimensions_CM_Clients_14.2.0.2.0.exe`.



NOTE

There is no 64-bit native Dimensions CM 14.2.0.2 client. For 64-bit Windows, you should select the 32-bit client.

- 2 From the initial **Serena Dimensions CM Clients Installshield Wizard** screen, click **Next**.
- 3 From the **License Agreement** screen, read the license agreement and click **I accept the terms of the End User License Agreement** to accept the terms.
Click **Next**.
- 4 From the **Destination Folder** screen, either accept the default installation folder, or click **Change...** to specify an alternative folder.
Click **Next**.
- 5 From the **Setup Type** screen, choose:
 - **Typical** to automatically upgrade the clients that were chosen when the original Dimensions CM clients were installed. Click **Next** and proceed to [Step on page 264](#).
 - **Custom** if you wish to install a new 14.2.0.2 client (for example, **Visual Studio Migration Tool**) or modify the selection of clients that get upgraded. Click **Next** and proceed to [Step 6 on page 263](#).
- 6 From the **Custom Setup** screen, review the icon states (install state selected by default) and decide if there are any you wish to not

install/upgrade by clicking the appropriate icon and changing its install state.

For a clients-only upgrade, you will also have the opportunity to click **Change ...** should you wish to re-specify your previous choice of destination folder. (For a server plus client installation, this option is not available.)



NOTES

- If you have Microsoft Visual Studio 2008-2013 installed you will be offered the additional choice of the Serena Dimensions for Visual Studio integration.
- The Visual Studio Migration tool component will always be present as it does not depend on Visual Studio being pre-installed (although it does require Microsoft .NET Framework 1.1 or later to be present—this is the case on most Windows systems and can be checked through Windows Add/Remove or Programs and Features Software). By being present without Visual Studio being required, administrators can migrate Visual Studio 2008 solutions in all Windows environments should they wish to.

Click **Next**.

- 7 Note:** This screen is skipped for a Dimensions CM server plus clients upgrade (except when the server is on 64-bit Windows).

Enter the Dimensions CM 14.2.0.2 desktop client and web client connection information that will be used for the Dimensions 14.2.0.2 program group and desktop shortcuts, namely:

- **Server Hostname:** If known, specify the hostname of the remote Dimensions CM 14.2.0.2 server that you will be using. If you leave this entry at its default blank state you will need to explicitly enter the server hostname each time you invoke the desktop or web client.
- **Database Name:** If known, specify the database name on the remote Dimensions CM 14.2.0.2 server that you will be using. If you leave this entry at its default blank state you will need to explicitly enter the database name each time you invoke the desktop or web client.
- **Database Connection:** If known, specify the database connection that you will be using to connect to the remote

Dimensions CM 14.2.0.2 server database. If you leave this entry at its default blank state you will need to explicitly enter the database connection each time you invoke the desktop or web client.

- **Port Number:** Either accept the default value of 8080 or enter an alternative value. It is recommended that you accept the default value unless it (8080) is already being used by some other third-party software or that you plan to install such software in the future. Some software is hard coded to port 8080 and cannot be reassigned.

Click **Next**.

8 From the **Ready to Install the Program** screen, click **Install**.

9 The upgrade installer performs various checks and operations, including:

- Checking for the existence of earlier Dimensions CM clients.
- Validating the existing Dimensions CM clients and creating temporary backups of certain files.
- Checking status.
- Upgrading the Dimensions CM clients and associated components to 14.2.0.2.
- Registering components.
- Validating the Dimensions CM 14.2.0.2 clients installation and then removing temporary backup files
- For a clients only upgrade (that is, an upgrade on a PC not including an upgraded server), installing Dimensions Common Tools.

10 Click **Finish**.

On 64-bit Windows, a 64-bit "Dimensions CM Shell Explorer" component will now be additionally installed. No user input is required.

Restart Windows, as prompted. This is required to register certain DLLs (for example, those for the Windows Explorer Shell Extension component).

Silently Upgrading Windows Clients

See ["Silently Upgrading Clients" on page 161](#).

Post-installation Checks

Please proceed to [Chapter 18, "Post-upgrade Activities"](#) to complete and test the upgraded installation.

Chapter 18

Post-upgrade Activities

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Chapter Overview

This chapter describes the post-upgrade activities that you need to run once your Serena® Dimensions® CM for Windows server, agent, or clients upgrade has completed successfully. These are in addition to the normal post-installation activities described in [Chapter 9, "Post-installation Activities"](#).



IMPORTANT! If you are using the deployment capabilities in Dimensions CM 12.x, you must enable deployment logging and configure the deployment server after upgrading. For details, see the *Deployment Guide*.

Upgrading the Data in your RDBMS

After upgrading to Dimensions CM 14.2.0.2 you must upgrade the data in your RDBMS to use the new Versioned Repository Schema (VRS). The upgrade is required populate the VRS schema for the existing streams, projects, and baselines.

Serena recommends that you first upgrade recently used projects, streams, and baselines so that your users can start work immediately. Then upgrade the rest of the data. Dimensions CM operates normally while the upgrade utility runs in the background.

You can use the following methods to perform the VRS upgrade:

- The Versioned Repository Schema Upgrade GUI utility
- The `dmdba` command line

IMPORTANT! During the VRS upgrade the index tablespace(s) may increase by 50 percent. You may need to make the tablespace bigger before you start the upgrade.

Using the VRS Upgrade Utility

- 1 To launch the Versioned Repository Schema Upgrade GUI utility do one of the following:
 - **Windows:** Start | All Programs | Serena | Dimensions 14.2.0.2 | Versioned Repository Schema Upgrade
 - **Linux:**
 - a Change folder to the Dimensions CM root folder.
 - b Run the `dmprofile` environment script.
 - a Call the `vrsupgradeui` script.
- 2 In the log in dialog box specify a schema name, schema password, and DB connection for the database you want to upgrade.
- 3 Click **OK**.

The Versioned Repository Schema Upgrade utility opens. It may take some time for the data to be loaded from the database. Navigate between the tabs to display the projects, streams, and baselines that can be upgraded.
- 4 By default all objects are selected initially. To modify the list of objects to be upgraded you can apply filters:
 - In the **Filter** box enter a value and from the list select one or more of these filters:
 - ID
 - Last Updated Date
 - Items
 - Select the **From and/or To** options and specify a date range.

TIP: Use the right-click menu to expand, collapse, check, and uncheck objects and trees.

CAUTION: By default all objects are selected. When you apply filters all selected objects will be upgraded, not just those displayed in the filter list. Deselect objects that you do not want to upgrade.
- 5 To upgrade all the selected objects click **Upgrade**.

- 6 Click the **Logging** tab to display details of the upgrade progress.
- 7 When the upgrade is completed click **Finish**.

Using dmdba to Upgrade to VRS

Connect to the base database using the dmdba utility:

```
dmdba DB_name/db_password@db_connection
```

To upgrade projects and streams:

Run the `upgradevrs` command. You must use a pattern or list to specify the projects and streams to be upgraded:

- Project name or pattern: `PRODUCT:PROJECT,PRODUCT:%, %`
- List: specify a file containing a list projects and streams in `/B[ULK_FILE]=filename`

The file should have one stream or project per line followed by '/'.

To upgrade baselines:

Run the `upgradeln141` command. You can use a pattern or list to specify the baselines to be upgraded:

- Baseline name or pattern: `PRODUCT:BASELINE1, %`
- List: specify a file containing a list of baselines in `/B[ULK_FILE]=filename`

The file should have one baseline per line followed by '/'.

To prepare streams for use in CM Bridge:

If you are using CM Bridge run the `upgradecmbr` command to prepare your streams. This command has no parameters and upgrades all streams.

Compute Oracle Statistics

If you are using an Oracle RDBMS, after completing the VRS upgrade Serena recommends that you compute statistics. To compute statistics connect to dmdba as the system user:

```
dmdba system/sys_password@db_connection  
connect base_db  
statistics compute
```

Depending on the size of your RDBMS this operation may take a few hours. When successfully completed it will speed up queries and increase system performance.

Windows Server Post-upgrade Activities

Updating Database Views



IMPORTANT! The following steps are *only* required if the Dimensions CM 14.2.0.2 you upgraded to had Dimensions base databases in *addition* to that specified according to your choice of process model during the initial fresh installation. The fresh installation-specified base databases (for example, `qlarius_cm`) are automatically updated by the upgrade installer.

Before Dimensions CM 14.2.0.2 can be used against a Dimensions base database other than that specified according to your choice of process model during the initial fresh installation, the following steps must be performed on each of the additional base databases:

- 1 Log in to `dmdba` as the Dimensions CM RDBMS Administrator (for the Serena-Supplied Runtime RDBMS or Oracle Enterprise this will normally be `system`; whereas, for Microsoft SQL Server, this will be `pcms_sys`). Do this by typing the following in a Windows Command Prompt (where `<connect_string>` is the appropriate RDBMS Database Source Name for the connection):

- Serena-Supplied Runtime RDBMS or Oracle Enterprise:
dmdba system/<system_password>@<connect_string>

For example:

```
dmdba system/manager@dim14
```

- For SQL Server

```
dmdba pcms_sys@<connect_string>
```

For example:

```
dmdba pcms_sys@dim14
```

- 2 At the SYSTEM> prompt (Serena-Supplied Runtime RDBMS or Oracle Enterprise) or PCMS_SYS> prompt (SQL Server), type the following Dimensions dmdba command-pairs for each base database:

```
drop_base_views <BaseDatabase1> /Force
create_base_views <BaseDatabase1> /Force
drop_base_views <BaseDatabase2> /Force
create_base_views <BaseDatabase2> /Force
...
...
drop_base_views <BaseDatabaseN> /Force
create_base_views <BaseDatabaseN> /Force
exit
```

For example, for a Dimensions CM 14.2.0.2 server that uses SQL Server and has additional base databases test1 and test2 with the default <connect_string> of dim14, you would type.

```
C:\> dmdba pcms_sys@dim14
PCMS_SYS> drop_base_views test1 /Force
PCMS_SYS> create_base_views test1 /Force
PCMS_SYS> drop_base_views test2 /Force
PCMS_SYS> create_base_views test2 /Force
PCMS_SYS> exit
```

Reinstalling Dimensions Published Views

Following a Dimensions CM 14.2.0.2 upgrade installation, you will need to reinstall all Published Views—refer to "[Installing Dimensions Published Views](#)" on page 169 and the related document *Reports Guide* for the necessary instructions.

Rebuilding Developer's Toolkit Applications

Following a Dimensions CM 14.2.0.2 upgrade installation, you will need to ensure that any DTK (API) applications and events that you previously had are rebuilt—refer to the related document *Developer's Toolkit Reference Guide* for the necessary instructions.

Upgrading and Migrating Pre-12.x Deployment Data



NOTE The processes described in this section are only required for upgrades from Dimensions CM installations earlier than 12.x.

You can migrate your existing deployment data from your existing pre-Dimensions CM 12.x version of Dimensions CM to Dimensions CM 14.2.0.2 and use it with the new deployment model. There are two separate processes that enable you to use your existing deployment areas:

- The Dimensions CM 14.2.0.2 database upgrade that is performed automatically during installation.
- A manual standalone upgrade/migration process (documented here) that migrates your existing deployment information into the new Dimensions CM format first introduced with Dimensions CM 12.1. You

can run this migration process when you are ready to bring a deployment area online for use in Dimensions CM 14.2.0.2.



IMPORTANT!

- You cannot deploy to an area that has not been upgraded.
- You must upgrade the metadata in an area before upgrading it. For details about the *dmmeta* Metadata Utility see the *Command-Line Reference*.

You can migrate existing deployment data from pre-Dimensions CM 12.x versions of Dimensions CM to Dimensions CM 14.2.0.2 for one or all of your registered deployment areas. The areas being migrated must be online, accessible, and have valid login credentials specified against them for the migration process to work. For each area being migrated the process performs the following operations:

- Checks that the remote area is online and available.
- Scans the contents of the remote area for files that were placed there by Dimensions CM.
- Creates an initial area version that represents the current contents of that area based on the scan.
- Creates an area audit trail that reflects the area version that was just created.
- Validates that the area version just created is correct.

Preparing for Migration

To successfully run the migration process you must first decide which areas need to be migrated and have those areas online and available. By default, the migration process attempts to migrate all active deployment areas currently registered in your database. If you are only using some of your deployment areas you should only migrate these and leave the others until needed.

Run the following checks against each area to make the migration process run smoothly (you should have previously run an AUDIT operation against each area prior to upgrading to Dimensions CM 14.2.0.2, see ["Upgrading Pre-Dimensions CM 14.2.0.2 Deployment Areas" on page 246](#), but that step is optional):

- Check the area is online and the accessible to Dimensions. If it is running on a Dimensions agent, verify that agent has been started and is running.
- Check the area definition has an area user and password associated with it. Failure to do so means that the migration of this area will be skipped.



NOTE *This note only applies to areas hosted on z/OS mainframes on the MVS file system (not the z/OS UNIX file system).*

The migration process described below explores all MVS data sets inside the area root. Some of the data sets may have been migrated to tape using the HSM product and the upgrade automatically recalls the data sets from tape. However, if this needs to be done for hundreds of data sets it can be a long process as they are recalled one at a time. Serena recommends that you perform the upgrade one area at a time (using the `-area` switch on the command) and make sure that all the relevant data sets are recalled prior to issuing the command. This is a more efficient than a bulk recall of all the data sets. You can also skip old areas that are no longer needed (these areas are likely to be on tape).

Running the Migration Process

You must run the migration process on a Dimensions CM 14.2.0.2 server installation using `dmdba`—see the *System Administration Guide* for details about invoking `dmdba`. For each Dimensions CM base database that you want to migrate:

- 1** Login as a valid Dimensions CM administrator and setup the Dimensions environment.
- 2** Invoke DMDBA against either the SYSTEM (on Oracle) or PCMS_SYS (MSSQL) databases:

```
dmdba system/manager@dim14 (Oracle)
```

```
dmdba pcms_sys@dim14 (MSSQL)
```

- 3** Run the following DMDBA command:

```
UPGRADEDEPLOY <baseDb>@<dsn>
```

where:

<baseDb>@<dsn> refers to the name of the Dimensions CM base database that you want to upgrade.

The UPGRADEDEPLOY command can also accept a number of optional qualifiers:

-area <areaId>

Forces the migration process to only process the specified area identifier. If this qualifier is not specified all registered deployment areas are migrated.

-hidden

Automatically registers any migrated files that are not displayed in the deployment views. Please see the *Deployment Guide* for details on hidden objects.

-force

Forces the migration process to attempt to re-migrate the area even if it has already been migrated.

Example commands:

- To upgrade all the deployment areas in CM_TYPICAL:

```
SYSTEM> UPGRADEDEPLOY cm_typical@dim14
```

- To upgrade only the deployment area LIVE in CM_TYPICAL:

```
SYSTEM> UPGRADEDEPLOY cm_typical@dim14 -area live
```

- To upgrade only the deployment area LIVE in CM_TYPICAL and hide the migrated files:

```
SYSTEM> UPGRADEDEPLOY cm_typical@dim14 -area live -  
hidden
```

Restrictions with the Migration Process

- After you upgrade to Dimensions CM 14.2 (or later), the history for deployment areas only displays the new 'Deployment' event type and does not display pre-Dimensions CM 12.x history. However, *all* of the pre-Dimensions CM 12.x data can be queried from the PCMS_PROMOTE_HISTORY published view.
- The audit trail created by the migration process only consists of an initial area version and a list of all the items that are currently deployed to that area. Details of requests or baselines that might have also been deployed to that area are not created.
- When running the migration, any z/OS machines that are hosting deployment areas must have already been upgraded to

Dimensions CM 14.2.0.2. Failure to do so causes the migration process to fail.

- Items that have been upgraded as a result of this migration process cannot be rolled back unless they are specifically redeployed.

Upgrading and Maintaining the MO_LIST Table

The `build_upgrade_molist` utility program is used to:

- Convert Dimensions MO_LIST rows so that the data items in this table reflect the latest definitions of the data items used in the product.
- Prune unnecessary records from the MO_LIST structure.

You can run the utility repeatedly to perform pruning operations. However, it is most useful when converting to a 14.2.0.2 database. Failure to run this conversion utility will result in incorrect target determination during build processing and incorrect soft record processing.

Serena Support can provide a process to help you check if the upgrade is required. Due to the existence of several paths to 14.2.0.2, some from earlier conversion processes, it is recommended to run this process.

TIP The utility has a backup facility therefore you can use it with relatively low risk.

NOTE If you are not running Serena Build on MVS you do not need to run this utility.



IMPORTANT!

- You must run this utility before you perform any builds in Dimensions CM 14.2.0.2.
- The upgrade utility may delete rows from the MO_LIST table. It is recommended that you back up this table or the whole database before running the utility. As an added safeguard, the utility automatically makes a backup of the data.
- The utility can also be used, including after an upgrade, to reduce the size of the MO_LIST table.

Overview

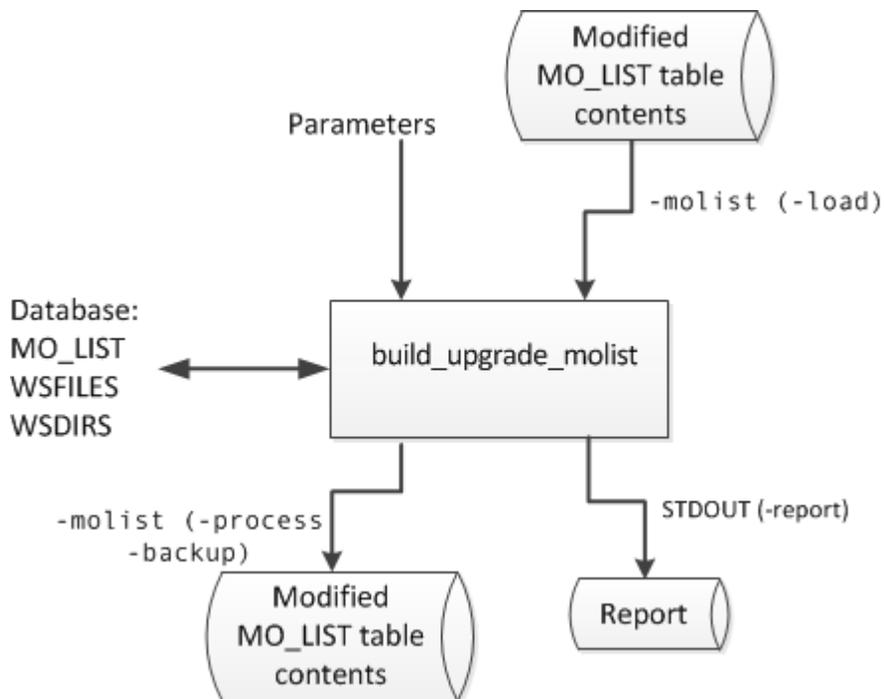
The primary purpose of the utility is to manipulate the contents of the MO_LIST table, which contains build relationships. While the utility is executing the database is not altered and is available. The utility outputs a text file containing the proposed rows. You can then inspect the file and load it into the target system using the -load command or an Oracle utility. There are multiple qualifiers to control the behavior of the commands.

The MO_LIST table holds made-of relationships between items and items. It is used extensively in builds to determine what makes up an artifact. There are several sorts of records on this table. The records used by build have the flags 'O' and 'S':

- O: Hard or ordinary relationship records that record actual dependencies observed by the build system.
- S: Soft records that record putative relationships derived from hard relationships on an earlier version of a source item.

NOTE There are also M flag records placed on this table by dm_make/mcxslave processing, but these are outside the scope of build.

The following diagram illustrates the data input and output flow:



Unique Records

After the utility has completed an upgrade, each pair (`from_uid`, `to_uid`) is unique. This behavior optionally allows a new index to be created against the `MO_LIST` table, which may be useful in very large installations (see a [page 288](#)).

Soft Relationships

A new set of soft records can be created by inspecting the existing relationships. The following should work as expected:

- Impacted target functionality.
- Build wizards.
- Newly edited versions of source files that have never been built.
- Older revisions which will never be built.

You can use this feature to create initial soft records when upgrading from an earlier version, or to replace the current set of records if they need to be reorganized.

Pruning Redundant Relationships

If you have a very large number of rows on MO_LIST the utility purges the redundant rows. This only has a small impact on functionality. The build wizards should work as expected on all source items revisions, even after a rollback, or when using an old baseline.

The following are retained:

- All item revisions of both sources and targets.
- Relationships from all source revisions, with a minimum of one revision of each target present at every stage of each lifecycle.

The only relationships that are removed are duplicate links, from a given source to multiple versions of the same target. However, older versions of targets (not sources) may not have made-of relationships recorded. If this is a problem then a purge can be optional. Purge can be mitigated by using the footprinting feature of Serena Build to record the makeup of each target. A source based impacted targets search works from any version of that source.

Syntax

```
build_upgrade_molist
  [-f <parameter filename>]
  -direct dbname/dbpassword@conn | <server connection
    parameters>
  -process | -backup | -load | -report | -all
  <qualifiers>
```

where qualifiers can be:

Qualifier	-process	-backup	-load	-report	-all	Description
-trace	y	y	y	y	y	Turns on command tracing. <ul style="list-style-type: none"> Options: 0, 1, 2 Default: 0 Option 2 is only available in conjunction with the -spec qualifier to limit the scope of the operation.
-schema	y	y	y	y	y	Overrides a schema, for example: \<"ndp.\" Applies to the MO_LIST table, WSFILES and WSDIRS.
-molist	y	y	y		y	Specifies a text file containing MO_LIST records.
-del			y			Deletes or replaces table rows. <ul style="list-style-type: none"> Options: 0, 1, 2, 3, 9 Default: 2
-overwrite		y				Permits the overwrite of a backup file.
-product				y		Specifies a product.
-project				y		Specifies a project.
-filename				y		Specifies a mask to limit reporting.
-spec	y					Limits processing to specific item spec uids.
-drop	y					Drops relationships to target objects that match the specified mask.
-s	y					Creates soft records. <ul style="list-style-type: none"> Options: 0, 1, 2 Default: 1
-o	y					Controls hard record pruning. <ul style="list-style-type: none"> Options: 0, 1, 2, 9, 99 Default: 9

For full details of all the qualifier options see [page 285](#).

Using a Parameter File

Use the optional command `-f <parameter filename>` to read a file for additional parameters. This is particularly useful for options that are verbose such as `-drop` that can appear many times. It is easier to specify this list in a file, and refer to it with `-f`, than generate long commands. Do not use parameters containing spaces inside the parameter file. Example:

```
-f parm.txt
```

Logging into Dimensions CM

- `-direct`

Use this option if you are local to the Dimensions Oracle instance to log in directly to the database without using Dimensions. Dimensions does not have to be running and users can use the tables when the utility is executing:

```
-direct \"dbname/dbpassword@conn\"
```

Example:

```
-direct intermediate/intermediate@dim14
```

- `<server connection parameters>`

Use this option to log in via a Dimensions server, which must be running.

```
-server          localhost:671
-user           dmsys
-password       dmsys
-database       intermediate
-conn           dim14
```

Example:

```
-server localhost:671 -user dmsys -password dmsys
      -database intermediate -conn dim14
```

-process Command

This command performs an upgrade of the build relationship data without altering the tables. It is a read only process that creates a file containing the changed data. You can then load the file into the database using the `-load` command or use Oracle techniques.

-backup Command

This command creates a text file of every row in the MO_LIST table.

TIP You could instead use Oracle's native backup features.

-load Command

This command loads a text file of build relationships into the MO_LIST table. This is the only command that writes to a table. This file can be a backup taken earlier with the -backup command or an upgraded table produced by the -process command.

TIP sqlldr in Oracle may be quicker for very large tables. For more information see [page 288](#).

-report Command

This command lists the relationships that are found against a set of source revisions. The filename does not include the path and is in Dimensions format. It is used in LIKE ". ." expressions in SQL therefore is case sensitive and can use % and _ wildcards. For mainframe files, use FOO.COBOL rather than COBOL(FOO).

Qualifiers:

- -product (case sensitive)
- -project (case sensitive)
- -filename (filename not the path)

Example:

```
-product PAYROLL  
-project TEST1  
-filename test.c
```

-all Command

This command executes a sequence of commands with pre-defined filenames. You can use it to execute an upgrade with a single command. It is equivalent to the following sequence of commands:

```
-backup molist_backup.txt
-process molist_process.txt
-load molist_process.txt
```

Qualifier Options

Qualifier	Options
-trace	<p>0: No tracing 1: Normal tracing 2: Use with the -report qualifier for more detail.</p>
-schema	<p>The -process command requires these Oracle tables:</p> <ul style="list-style-type: none"> ■ item_catalogue ■ ws_files ■ mo_list <p>Usually the tables all come from the schema you connected to with the -direct or -database options. However, you can get MO_LIST from a different schema if required, using the -schema qualifier. For this to work you will need to grant access to MO_LIST to the user which you logged in with. This is useful if you have restored a backup into BACKUP.MO_LIST and need a matching ws_files and item_catalog in another database. You then run the following commands:</p> <pre>sqlplus backup/backup@dim14</pre> <p>For example:</p> <pre>Grant select, insert, delete on table backup.mo_list to intermediate;</pre> <p>You can load data into a foreign schema with the -schema qualifier. For example, this allows you to load the data into a test system. The table is called XXX.MO_LIST and the active user requires the GRANT INSERT permission.</p>

Qualifier	Options
-del	<p>-del <sql delete option> where option can be:</p> <ul style="list-style-type: none"> ■ 0: No records deleted. ■ 1: Soft records deleted. ■ 2: Soft and hard records deleted. ■ 3: Hard records deleted. ■ 99: All records deleted. <p>The rows read from the file can either replace the rows already on the table or be merged with them. This depends on the -del qualifier that controls which rows on the current table will be deleted. If you are merging records, the index constraints need to be obeyed. Typically, if you are creating a set of soft records you would delete all existing soft records with -del 1. If you are pruning redundant records, delete all records with -del 99.</p>
-spec	<p>-spec <obj_spec_uid></p> <p>For testing and investigation it is useful to limit the utility to process only certain items. You can do this by listing the OBJ_SPEC_UID values, for example:</p> <pre>-spec 8943226 -spec 9070313 -spec 9101070</pre> <p>List the source spec_uid and the target spec_uids if you want all the functionality to work as expected.</p>
-drop	<p>-drop <sql like-clause></p> <p>Use this qualifier to drop relationships to certain types of target objects. Use it multiple times to get a list. The strings are used in LIKE "." SQL statements against WS_FILES.filename. For example:</p> <pre>-drop %.DBRM -drop foo.obj</pre>

Qualifier	Options
-s	<p>-s option</p> <p>Creates soft records where option can be:</p> <ul style="list-style-type: none"> ■ 0: Do not create any soft records. ■ (Default) 1: Create normal soft records. ■ 2: Create fewer soft records than option 1 by un-duplicating records based on the textual filename. This is useful if you have many Dimensions objects with the same name.
-o	<p>-o option</p> <p>Prunes hard records where option can be:</p> <ul style="list-style-type: none"> ■ 0: Do not create normal hard records. ■ 1: Leave one relationship for each source/target/stage combination. ■ 2: Leave two relationships for each source/target/stage combination. ■ (Default) 9: Leave relationships that match the ws_files table criteria, for example, honor -drop. ■ 99: Leave all relationships (-drop will not work in this case). <p>Note: Even if you specify -o 99, records are still un-duplicated to create a unique (from_uid, to_uid) pair.</p>

Reloading the MO_LIST Table

You can use the `-load` command to reload the table. However, for very large tables that exceed one million rows this might take a long time and put a strain on the Oracle re-do logs. It may be quicker to do the following:

- 1** Drop the MO_LIST table and all its indexes.
- 2** Recreate the empty MO_LIST table without indexes.
- 3** Use the sqlldr process from Oracle to reload data from the text file.
- 4** Recreate the indexes.
- 5** Grant again any accesses that are required.
- 6** Redo Oracle statistics.

You can perform step 2 by itself but it will probably be as fast as using the `-load` command.

An Oracle DBA can perform these steps by making note of how the table is currently set up so that it can be re-created in the same way (grants, indexes, and views). This process is quicker because the drop table is much faster than deleting all the rows (due to the re-do logs).

Using sqlldr

Create a text file called `molist-sqlldr.txt` similar to this:

```
load data
infile 'd:\molist_process.txt'
into table mo_list
fields terminated by "," optionally enclosed by '"'
( from_uid
, to_uid
, flag
, rule_uid
, build_uid
, from_fv
, to_fv
, from_workset_uid
, to_workset_uid
, from_virtual
, to_virtual
)
```

Note the `infile` syntax that names what the input file is. This is the file named by `-molist` in the upgrade command. For example:

```
sqlldr intermediate/intermediate@dim14 control=molist-
sqlldr.txt
```

Creating New Indexes for the MO_LIST Table

This is an optional step and is only useful if you have a very large `MO_LIST` table with millions of rows. You can combine it with the `sqlldr` process or execute it after the table is up and running after using the `-load` command. After running the `-process` command with `-o 1,2` or `9`, the data will be unique with respect to `(from_uid, to_uid)`. Certain operation in the server may be faster if unique indexes are created.

The following two indexes can be created:

```
CREATE unique INDEX nbp.mo_listu1 ON nbp.mo_list
(
    to_uid
    , from_uid
);
```

```
CREATE unique INDEX nbp.mo_listu2 ON nbp.mo_list
(
    from_uid
    , to_uid
)
```

Example of a full command:

```
CREATE unique INDEX nbp.mo_listu1 ON nbp.mo_list
(
    to_uid
    , from_uid
)
PARALLEL
(
    DEGREE 1
    INSTANCES 1
)
PCTFREE          10
INITRANS         2
MAXTRANS         255
STORAGE
(
    INITIAL          65536
    NEXT             1048576
    MINEXTENTS       1
    MAXEXTENTS       unlimited
    FREELISTS        1
    FREELIST GROUPS  1
    BUFFER_POOL      DEFAULT
)
LOGGING
TABLESPACE        pcms_data
;

CREATE unique INDEX nbp.mo_list2 ON nbp.mo_list
(
    from_uid
```

```
        , to_uid
    )
    PARALLEL
    (
        DEGREE          1
        INSTANCES       1
    )
    PCTFREE             10
    INITTRANS           2
    MAXTRANS            255
    STORAGE
    (
        INITIAL         65536
        NEXT            1048576
        MINEXTENTS      1
        MAXEXTENTS      unlimited
        FREELISTS        1
        FREELIST_GROUPS  1
        BUFFER_POOL      DEFAULT
    )
    LOGGING
    TABLESPACE         pcms_data
;
```

Upgrade Example

This example shows how to upgrade MO_LIST using the build_MO_LIST_upgrade utility.

1 Back up the MO_LIST table:

```
build_upgrade_molist \  
    -direct intermediate/intermediate@d1222t0 \  
    -backup \  
    -molist ./backup-molist.out
```

This command:

- Copies all the data from the MO_LIST table to a backup file.
- Does not make changes to the MO_LIST table.
- Fails if backup-molist.out already exists. Use the qualifier -overwrite to overwrite it.

2 Reads the MO_LIST structure and obtains a report:

```
build_upgrade_molist \  
-direct intermediate/intermediate@d1222t0 \  
-report \  
-product ACCTS \  
-workset ACCTS \  
-filename %
```

This command:

- Reports on the MO_LIST table contents.
- Does not change the MO_LIST table.
- Sends the output file to stdout.

NOTE: -filename selects everything.

3 Read and process the MO_LIST structure:

```
build_upgrade_molist \  
-direct intermediate/intermediate@d1222t0 \  
-process \  
-molist ./trimmed-molist.out \  
-drop %.DBRM \  
-drop %.LNKLIB \  
-s 2 \  
-o 2
```

This command:

- Drops all relationships from source to DBRMs.
- Drops all relationships from LNKLIB outputs.
- Uses file names to reduce the number of soft records.
- Keeps two generations of source and target pairs.
- Writes the changed MO_LIST data to trimmed-molist.out.
- Always overwrites trimmed-molist.out.
- Does not make changes to the database.

SSO and CAC Post-installation Activities

If, as part of the upgrade installation, you chose to install a Single Sign On (SSO) server or to install an SSO server plus configure a Windows client Common Access Card (CAC) smart card, please refer to the following additional post-installation activities:

- ["Configuring Trusted Certificate Authorities for SSO and CAC Installations" on page 175.](#)
- ["Establishing a Certificate Revocation List" on page 180.](#)



NOTE There is no upgrade installer support for configuring CAC subsequent to the installation of an SSO server (support is only provided for SSO plus CAC). If you wish to implement CAC authentication after upgrading Dimensions CM with an SSO server, please see the manual steps detailed in ["Implementing CAC Support After Installing a Server and SSO" on page 181.](#)

Windows Agent Post-upgrade Activities

There are no agent post-upgrade activities additional to the normal post-installation activities described in [Chapter 9, "Post-installation Activities"](#).

Windows Clients Post-upgrade Activities

Dimensions for Visual Studio Integration Upgrade Tasks

Once you have upgraded your SCC versions of the Dimensions rich integrations for Visual Studio 2008-2013 to Serena Dimensions for Visual Studio, you will need to import your saved customizations and migrate to the new solutions compatible with the new integration using the Serena migration tool.

Part 5

Appendixes

This part contains the following appendixes.

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Appendix A

Installing Windows Server: Other Scenarios

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Chapter Overview

This chapter covers other common fresh Dimensions CM 14.2.0.2 for Windows server installation scenarios; for example:

- A Dimensions CM server installation with a local client-only version of Serena-Supplied Runtime or your own Oracle without installing a Dimensions CM schema.
- A Dimensions CM server installation with a remote Serena-Supplied Runtime or your own Oracle RDBMS.
- Dimensions CM server installations with a local or remote SQL Server Enterprise RDBMS.
- At the same time as installing a Dimensions CM server, the installation of a Single Sign On (SSO) server or the configuring of a connection to an existing SSO server. This is only required when using other Serena products in collaboration with Dimensions CM or requiring Smart Card authentication support.
- At the same time as installing a Dimensions CM server plus installing or configuring an SSO server, the configuring of smart card authentication details with SSO. Currently, the only smart card supported is the DoD Common Access Card (CAC).
- Subsequent to installing a Dimensions CM server, installing or configuring an SSO server
- Subsequent to installing a Dimensions CM server, installing or configuring an SSO server plus configuring a CAC authentication details with SSO.



NOTE There is no installer support for simply configuring a CAC authentication details with SSO subsequent to a Dimensions CM server and SSO server having been installed and configured. If you wish to add CAC support at a later date, this has to be done manually as a post-installation activity. Please see ["Implementing CAC Support After Installing a Server and SSO"](#) on page 181.

With so many options available for a Dimensions CM for Windows server installation, for example, RDBMS type and node location, it is not possible to document every single scenario. However, the installation scenario discussed in [Chapter 5, "Installing a New Windows Server"](#) and

those discussed in this chapter should cover the majority of the common installation scenarios.

A Dimensions CM for Windows server installation automatically checks if any Dimensions CM server installation has already been installed.

- If none is detected, the installer will install a fresh server (including schema if desired) installation.
- If one corresponding to Dimensions CM 2009 R1.01, 2009 R2, or 12.x is detected, the installer will automatically launch the upgrade installer to upgrade the server (including the schema) to Dimensions CM 14.2.0.2.

Choosing the Type of Windows Server Installation

For details on launching a Dimensions CM 14.2.0.2 installer refer to [Chapter 1, "Launching the Installer" on page 22](#).

- 1 As a user with local Administrative privileges, depending on how you obtained the Dimensions CM installer software, you either run:
 - `index.html`
 - `Dimensions_CM_Server_14.2.0.2.0_win64.exe`
- 2 From the **Serena Dimensions Server Install Wizard** initial screen click **Next**.
- 3 Read the license agreement and click **I accept the terms of the End User License Agreement** to accept the terms.
- 4 Click **Next**.
- 5 To install a Dimensions CM 14.2.0.2 server with a Serena-Supplied Runtime RDBMS or your own Oracle RDBMS, click **Oracle** and then **Next**. See ["Installing a Server with a Serena-Supplied Runtime or Oracle" on page 298](#)

To install a Dimensions CM 14.2.0.2 server with a SQL Server Enterprise RDBMS, click **SQL Server** and then **Next**. See ["Installing a Server with SQL Server" on page 309](#)

Installing a Server with a Serena-Supplied Runtime or Oracle

From the **Database Location** screen that gets displayed after you select an **Oracle** database.

If you want to install a Dimensions CM 14.2.0.2 server with a *local* Serena-Supplied Runtime RDBMS or Oracle RDBMS (that is, one installed on the same Windows node upon which you are about to install Dimensions CM), click **Local** and **Next** and then proceed to ["Installing a Server with a Local Serena-Supplied Runtime or Oracle" on page 298](#).

If you want to install a Dimensions CM 14.2.0.2 server with a *remote* Serena-Supplied Runtime RDBMS or Oracle RDBMS (that is, one installed on a computer remote from that upon which you are about to install Dimensions CM), click **Remote** and **Next** and then proceed to ["Installing a Server with a Remote Serena-Supplied Runtime or Oracle" on page 304](#).

Windows Server 2008 R2 or later supports only the 64-bit version of the 11gR2.0.3 Serena-Supplied Runtime RDBMS or Oracle Enterprise 11gR2.0.3.

Installing a Server with a Local Serena-Supplied Runtime or Oracle

- 1 From the **Custom Setup** screen that gets displayed after you select **Local** database.

Either accept the default installation folder of C:\Program Files\Serena\Dimensions 14.2.0.2\CM or click **Change...** to specify an alternative folder.

If you accept the default **Dimensions Server** and **Migration Console** components (note that the **Dimensions Server** component cannot actually be deselected), click **Next** and proceed to [Step 2 on page 299](#).

Serena Single Sign On (SSO) is used to install or configure connection to a Dimensions CM SSO server. This is only required when using other Serena products in collaboration with Dimensions CM or requiring Smart Card authentication support. If you accept this component, click **Next** and proceed to ["Installing or Configuring an SSO Server" on page 323](#).

Smart Card Setup enables you to configure your smart card authentication details with SSO. Currently, the only smart card supported is the DoD Common Access Card (CAC). If you accept this component, click **Next** and proceed to ["Installing or Configuring an SSO Server and a Smart Card" on page 324](#)

If you in the future wish to select the **Serena Single Sign On** component or the **Serena Single Sign On** component plus **Smart Card Setup** sub-component, see ["Subsequently Installing or Configuring an SSO Server" on page 325](#) or ["Subsequently Installing or Configuring an SSO Server and a Smart Card" on page 328](#) respectively.

- 2 From the **Dimensions Schema Options** screen, either:
 - Click **Install Dimensions server components including schema creation** if you wish to install all Dimensions CM 14.2.0.2 server components including schema creation. Click **Next** and then proceed to ["Installing a Server with an Oracle Dimensions Schema Included" on page 299](#).
 - Click **Install Dimensions server components only** if you wish to install the Dimensions CM 14.2.0.2 server (binaries) only. Click **Next** and then proceed to ["Installing a Server without an Oracle Dimensions Schema Included" on page 300](#).

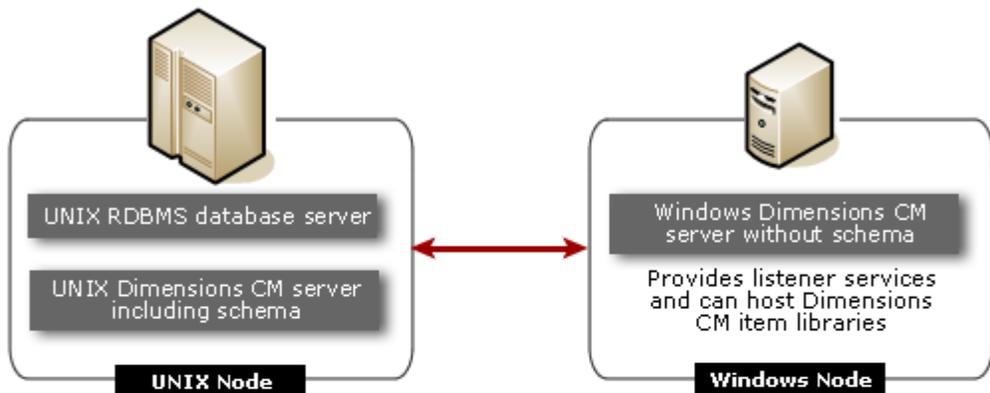
Installing a Server with an Oracle Dimensions Schema Included

The installation steps you have taken so far correspond to the scenarios described in [Chapter 5, "Installing a New Windows Server"](#). Please proceed to [Step 9 on page 129](#) to continue and complete the installation.

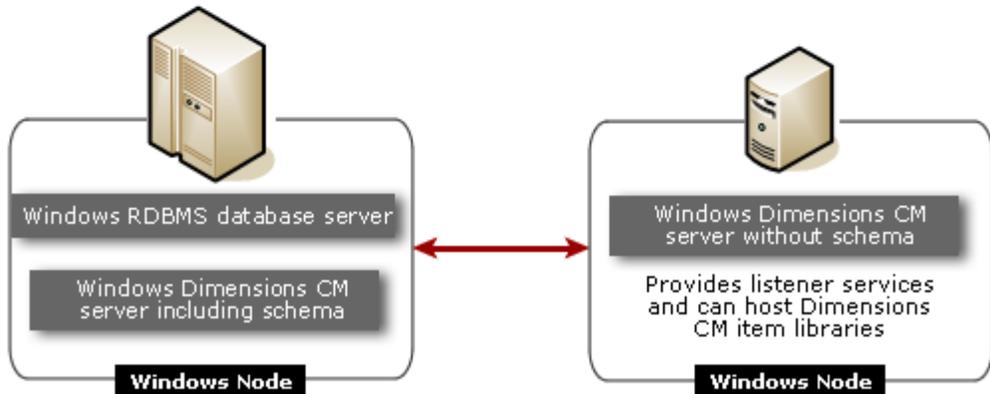
Installing a Server without an Oracle Dimensions Schema Included

Dimensions CM Server Load Sharing Scenarios Utilizing a Windows Dimensions CM Server without a Dimensions Schema

Scenario A



Scenario B



There are several scenarios in which you may want to install a Dimensions CM 14.2.0.2 server without installing a Dimensions CM 14.2.0.2 schema. Examples of these include:

- Scenario 1:** There is already a local Serena-Supplied Runtime RDBMS or Oracle RDBMS with that schema installed. So all you want to install are the Dimensions CM 14.2.0.2 server executables.

- 2 Scenario 2:** You do not want to install *any* of the process-model-associated demonstration products that get offered to you if you chose to install the Dimensions CM schema (from which you *have* to choose one). This would be a scenario in which an existing user of Dimensions CM created their own process model export file and they want to import that export file during Dimensions CM schema creation. Such an exported process model is importing using the import option of the Dimensions CM `dmdba crdb` function, please refer to the *System Administration Guide* for details.
- 3 Scenario 3:** You wish to a install Dimensions CM 14.2.0.2 server, with its own local Serena-Supplied Runtime RDBMS or Oracle RDBMS but without a schema, to communicates (through OCI) with a remote Windows or UNIX RDBMS database server.

The locally installed Dimensions CM 14.2.0.2 server will be somewhat like an Agent installation in that it will provide Dimensions CM listener services and the `dmcli` command client, but the Common Tools (Dimensions web client, Administration Console, and Common Tomcat server) will also be installed.

Reasons why you may want to do this include:

- The users on the local node do not have operating-system accounts on the remote Dimensions CM database server.
- To balance Dimensions CM loads across both the local node and the remote Dimensions CM database server node.

For such a scenario, the remote database server will require both the RDBMS and Dimensions CM binaries to be installed and for a Dimensions CM schema to have been created in that RDBMS.

To enable network connections between the nodes, the remote database server must be running an additional process. For Oracle, this will be the case if the TNS Listener has been started up.

For certain of these scenarios, you need to set up on the *local* node an Oracle Net Service Name for accessing the Serena-Supplied Runtime RDBMS or Oracle RDBMS database server. As this is also required for other installation scenarios discussed in this chapter, the instructions for doing that have been centralized; see ["Setting Up a Local Oracle Net Service Name" on page 78](#).

The installer screens for all the above options are the same.

- 1 The **Choose License Server** screen that gets displayed when you select **Install Dimensions server components only**.

Either accept the default **Install a 30 day evaluation license** option or click the **Specify License Server** option.

Click **Next**.

- 2 Select the Serena-Supplied Runtime RDBMS or your own Oracle RDBMS installation (with an existing Dimensions CM schema) to be used with the Dimensions CM server by selecting the local node Oracle home name from a presented drop down list. This information will be used to automatically tailor certain Dimensions CM configuration files (for example, `dm.cfg` and `listener.dat`). This facilitates configuring the Dimensions CM Listener connection pool (Dimensions CM "app servers") on the local node for communicating between the Dimensions CM server and the local RDBMS once the server is installed.

For the Serena-Supplied Runtime RDBMS the home name will be Dimensions by default. The Oracle **SID** and **Oracle Home** operating-system directory fields will be pre-populated for you and shouldn't need changing. If they do, however, need changing, click **Manual Entry...** and specify the relevant fields in the dialog presented.

Click **Next**.

- 3 Enter the operating system login account name for the Dimensions System Administrator. By default, this will be `dmsys`.

Enter the Windows password.

Click **Next**.

- 4 The Dimensions CM server utilizes a mail host for sending mail to users when, for example, items or requests are actioned. You can specify this mail host now, or specify it later by modifying the `dm.cfg` file. See the *System Administration Guide*. We suggest creating it later, so when the **Dimensions CM Mail Server** screen appears, click **Next**.

- 5 From the **Dimensions Web Server Options** screen enter the port number to be used by the common tools Tomcat Server. This is used for the Dimensions web tools.

Either accept the default value of 8080 or enter an alternative value. It is recommended that you accept the default value unless it (8080)

is already being used by some other third-party software or that you plan to install such software in the future. Some software—for example, the TestDirector and Quality Center integration products—is hard coded to port 8080 and cannot be reassigned (see ["TCP/IP Port Considerations" on page 134](#)).

Click **Next**.

6 Click **Install**.

7 The installer performs various checks and operations, including:

- Checking status.
- Installing the Dimensions CM 14.2.0.2 server and associated components.
- Registering components.
- Validating the Dimensions CM 14.2.0.2 server installation and then removing temporary backup files.
- Configuring the Web Tools.

8 Click **Finish**.

9 Perform the post-installation checks described in ["Checking a Server without Oracle Dimensions Schema Included Installation" on page 303](#) and then download the PDFs and readme as described in ["Start the Serena Dimensions Listener Service service." on page 135](#).

Checking a Server without Oracle Dimensions Schema Included Installation

The following post-installation configuration activities or considerations are either needed or need to be taken into account:

- If utilizing a remote Serena-Supplied Runtime RDBMS or Oracle Enterprise database containing the Dimensions CM schema, make sure that the connection details are added to the Oracle `tnsnames.ora` file.
- Upon conclusion of the Dimensions CM server installation, the `%DM_ROOT%\dfs\listener.dat` file contains the following default values:

```
-dsn cm_typical@dim14  
-initial 0
```

Edit the `-dsn` entry to be the `<database>@<dsn>` for the database containing the Dimensions CM schema and restart the Serena Dimensions Listener service.

- Run the Dimensions CM `dmpasswd` utility against the Dimensions CM schema you will be using; for example:

```
dmpasswd cm_typical@dim14 -add -pwd cm_typical
```

If you need information concerning the running of `dmpasswd`, see the *System Administration Guide*.



NOTE For a Dimensions CM plus schema installation, this step is automatically performed by the installer, it only being required normally for additional base databases for such an installation.

Proceed to "[Checking the Server Installation](#)" on page 132, when filling in the fields of the Dimensions CM login dialog box specify the correct parameters corresponding to the host and database you want to access. Similarly, if you access the Dimensions web client and the Administration Console you must ensure you are specifying the correct parameters.

If you wish to start the server as user `dmsys` rather than the user with local administrative rights who installed it (the default), see "[Starting the Server \(Restricted Mode\)](#)" on page 134.

If you installed or configured an SSO server or additionally configured a Common Access Card (CAC), the login process will differ to that described in "[Checking the Server Installation](#)" on page 132— see the *User's Guide* or online help for details. Also, if you additionally configured a CAC, certain additional post-installation activities are required—see "[Configuring Trusted Certificate Authorities for SSO and CAC Installations](#)" on page 175, "[Dual Username/Password and CAC Authentication](#)" on page 180, and "[Establishing a Certificate Revocation List](#)" on page 180.

Installing a Server with a Remote Serena-Supplied Runtime or Oracle

Installation Scenarios

There are scenarios in which you may want to install a Dimensions CM 14.2.0.2 server that installs the Dimensions CM 14.2.0.2 schema on a

remote Serena-Supplied Runtime RDBMS or Oracle RDBMS (rather than the local node), and subsequently performs all Dimensions CM RDBMS operations with that remote Dimensions CM schema. One such scenario is that in which Dimensions CM users on a local node want to use a remotely administered RDBMS. This remote RDBMS can be a UNIX RDBMS, see ["Performing Remote Database Installations Between Windows and UNIX"](#) on page 306.



NOTE Dimensions CM for Windows Server 2008 R2 or later supports only the 64-bit versions of the 11gR2.0.3 Serena-Supplied Runtime RDBMS and Oracle Enterprise 11gR2.0.3.

To be able to use a remote RDBMS, a RDBMS "client" must be set up on the local node to perform database service operations between the local Dimensions CM server and the remote RDBMS.

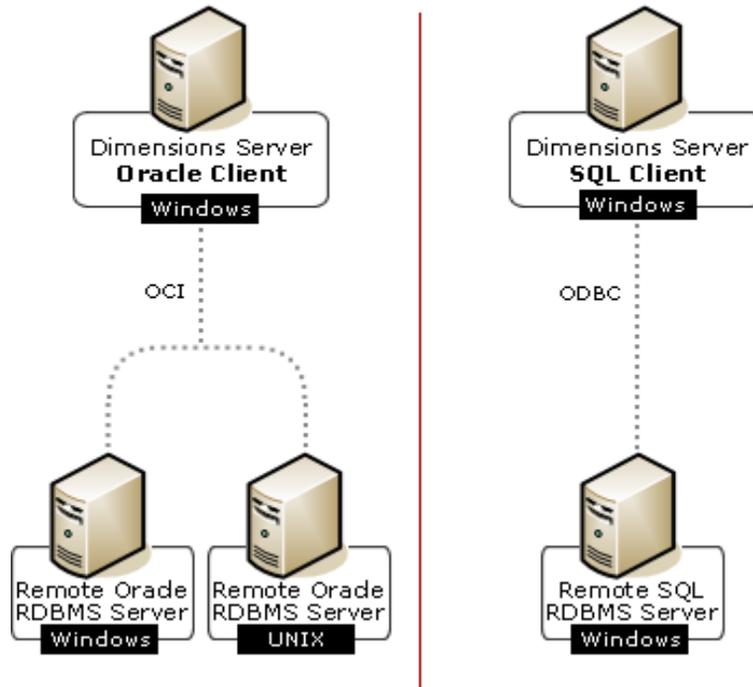
For the Serena-Supplied Runtime RDBMS or Oracle RDBMS, the Windows "client" RDBMS can be:

- An installation of the Serena-Supplied Runtime RDBMS, without database instance creation, that is, the **Create Oracle Instance** option deselected.
- Your own Oracle client installation.
- An installation of the Serena-Supplied Runtime RDBMS, with database instance creation, that is, the **Create Oracle Instance** option selected. This is more than is required to set up this scenario.
- A full Oracle installation. This is more than is required to set up this scenario.

There are various database connectivity mechanism that are supported as standard by Dimensions CM. The diagram below shows the connectivity mechanisms supported by a Windows Oracle (and Serena-

Supplied Runtime) or SQL Server client RDBMS. An Oracle client can connect to either a Windows or UNIX remote RDBMS server.

Remote Dimensions CM Server Database Connectivity Mechanisms (Windows)



Performing Remote Database Installations Between Windows and UNIX

Oracle runtime instances are installed and configured differently on a Windows Serena-Supplied Runtime RDBMS compared to a UNIX Serena-Supplied Runtime RDBMS. If you plan to install Dimensions CM on a Windows system and create an Oracle instance on a remote UNIX Serena-Supplied Runtime RDBMS, then you must perform the following manual check—and take appropriate action if necessary—before beginning the installation:

Make sure that a `pcms_sys` Oracle user *does not* exist on the Windows "client" Oracle RDBMS, that is, that the "client" is not an Oracle RDBMS upon which Dimensions CM has been installed in the past.

Performing a Remote Installation

- 1 The **Custom Setup** is the screen that gets displayed after you select **Remote** database.

Either accept the default installation folder of C:\Program Files\Serena\Dimensions 14.2.0.2\CM or click **Change...** to specify an alternative folder.

If you accept the default **Dimensions Server** and **Migration Console** components (note that the **Dimensions Server** component cannot actually be deselected), click **Next** and proceed to [Step 2 on page 307](#).

Serena Single Sign On (SSO) is used to install or configure connection to a Dimensions CM SSO server. This is only required when using other Serena products in collaboration with Dimensions CM or requiring Smart Card authentication support. If you accept this component, click **Next** and proceed to ["Installing or Configuring an SSO Server" on page 323](#).

Smart Card Setup enables you to configure your smart card authentication details with SSO. Currently, the only smart card supported is the DoD Common Access Card (CAC). If you accept this component, click **Next** and proceed to ["Installing or Configuring an SSO Server and a Smart Card" on page 324](#).

If you in the future wish to select the **Serena Single Sign On** component or the **Serena Single Sign On** component plus **Smart Card Setup** sub-component, see ["Subsequently Installing or Configuring an SSO Server" on page 325](#) or ["Subsequently Installing or Configuring an SSO Server and a Smart Card" on page 328](#) respectively.

- 2 From the **Dimensions Schema Options** screen click **Install Dimensions server components and schema** to install all Dimensions CM 14.2.0.2 server components including schema creation. This is the choice pertinent to this scenario.

Install Dimensions server components only with no schema creation is used to install the Dimensions CM 14.2.0.2 server (binaries) only where a Dimensions CM schema has already been created in the RDBMS database. This is the same as the installation option described in ["Installing a Server without an Oracle Dimensions Schema Included" on page 300](#), with the following difference:

At [Step 2 on page 302](#), select the home name of your *local* Serena-Supplied Runtime client or Oracle client that will manage communication with the *remote* Serena-Supplied Runtime RDBMS or Oracle RDBMS (see [Step 4 on page 308](#) and [Step 5 on page 308](#) in this current procedure for further details of selecting a client database).

Click **Next**.

- 3 From the **Choose License Server screen**, either accept the default **Install a 30 day evaluation license** option or click the **Specify License Server** option.

Click **Next**.

- 4 From the **Select Oracle Installation** screen, click **Manual Entry**.

- 5 From the **Server Installation Information** screen specify:

- The location of your *local* Serena-Supplied Runtime client or Oracle client that will manage communication with the *remote* Serena-Supplied Runtime RDBMS or Oracle RDBMS, typically:

C:\Oracle\ora12c

- The Oracle SID for the remote Serena-Supplied Runtime RDBMS or Oracle RDBMS. More strictly this is the Net Service Name by which your local Serena-Supplied Runtime client or Oracle client installation knows the remote Serena-Supplied Runtime RDBMS or Oracle RDBMS. If you need more information, please see ["Setting Up a Local Oracle Net Service Name" on page 78](#).

Click **OK**.

- 6 From the **Select Oracle Installation** screen, click **Next**.

- 7 From the **Remote Oracle Connection** screen, confirm the **Net Service Name** you entered in ["Setting Up a Local Oracle Net Service Name" on page 78](#).

Click **Next**.

The remaining installation steps you have to take are the same as that described in [Chapter 5, "Installing a New Windows Server"](#), starting at [Step 10 on page 129](#). Start from that step and continue to complete the installation.

- 8 When you have finished the installation, perform the following post-installation checks described in ["Checking a Server with a Remote](#)

RDBMS" on page 309 and then download the PDFs and readme as described in "Start the Serena Dimensions Listener Service service." on page 135.

Checking a Server with a Remote RDBMS

See "Checking the Server Installation" on page 132.

If you wish to start the server as user `dmsys` rather than the user with local administrative rights who installed it (the default), see "Starting the Server (Restricted Mode)" on page 134.

If you installed or configured an SSO server or additionally configured a Common Access Card (CAC), the login process will differ to that described in "Checking the Server Installation" on page 132— see the *User's Guide* or online help for details. Also, if you additionally configured a CAC, certain additional post-installation activities are required— see "Configuring Trusted Certificate Authorities for SSO and CAC Installations" on page 175, "Dual Username/Password and CAC Authentication" on page 180, and "Establishing a Certificate Revocation List" on page 180.

Installing a Server with SQL Server



NOTE Dimensions CM for Windows Server 2008 R2 or later supports only the 64-bit version of SQL Server.

- 1 From the **SQL ODBC Connection** screen that gets displayed after you select a **SQL Server** database.

Select **Existing** if an ODBC connection already exists to your underlying database in the *local* or *remote* RDBMS (for remote RDBMS, please also see "Preparing a Remote Microsoft SQL Server Enterprise" on page 80 or refer to the Microsoft help). Click **Next**.

Select **New** if no ODBC connection already exists to an underlying database in the *local* (only) RDBMS. The installer will create an ODBC connection to the local RDBMS for you. Click **Next**.

- 2 From the **Database Location** screen:

- If you want to install a Dimensions CM 14.2.0.2 server with a *local* SQL Server Enterprise RDBMS (that is, one installed on the same Windows node upon which you are about to install Dimensions CM), click **Local** and **Next** and then proceed to ["Installing a Server with a Local SQL Server" on page 310](#).
- If you want to install a Dimensions CM 14.2.0.2 server with a *remote* SQL Server Enterprise RDBMS (that is, one installed on a computer remote from that upon which you are about to install Dimensions CM), click **Remote** and **Next** and then proceed to ["Installing a Server with a Remote SQL Server" on page 320](#).

Installing a Server with a Local SQL Server

- 1 From the **Custom Setup** screen that gets displayed after you select **Local** database in [Step 2 on page 309](#).

Either accept the default installation folder of C:\Program Files\Serena\Dimensions 14.2.0.2\CM or click **Change...** to specify an alternative folder.

If you accept the default Dimensions CM server **Dimensions Server** and **Migration Console** components (note that the **Dimensions Server** component cannot actually be deselected), click **Next** and proceed to [Step 2 on page 311](#). The **Migration Console** component allows you to migrate PVCS Version Manager, CVS, Subversion (SVN), or ClearCase assets into Dimensions CM.

Serena Single Sign On (SSO) is used to install or configure connection to a Dimensions CM SSO server. This is only required when using other Serena products in collaboration with Dimensions CM or requiring Smart Card authentication support. If you accept this component, click **Next** and proceed to ["Installing or Configuring an SSO Server" on page 323](#).

Smart Card Setup enables you to configure your smart card authentication details with SSO. Currently, the only smart card supported is the DoD Common Access Card (CAC). If you accept this component, click **Next** and proceed to ["Installing or Configuring an SSO Server and a Smart Card" on page 324](#).

If you in the future wish to select the **Serena Single Sign On** component or the **Serena Single Sign On** component plus **Smart Card Setup** sub-component, see ["Subsequently Installing or Configuring an SSO Server" on page 325](#) or ["Subsequently Installing](#)

or [Configuring an SSO Server and a Smart Card](#)" on page 328 respectively.

- 2 From the **Dimensions Schema Options** screen, either:

Click **Install Dimensions server components and schema** if you wish to install all Dimensions CM 14.2.0.2 server components including schema creation. Click **Next** and then proceed to "[Installing a Server with a SQL Server Dimensions Schema Included](#)" on page 311.

Click **Install Dimensions server components only** if you wish to install the Dimensions CM 14.2.0.2 server (binaries) only. Click **Next** and then proceed to "[Installing a Server without a SQL Server Dimensions Schema Included](#)" on page 316.

Installing a Server with a SQL Server Dimensions Schema Included

- 1 The **Choose License Server** screen that gets displayed when, in [Step 2 on page 311](#), you select **Install Dimensions server components and schema**.

Either accept the default **Install a 30 day evaluation license** option or click the **Specify License Server** option.

Click **Next**.

- 2 **New ODBC only.**

If you selected **New** in [Step 1 on page 309](#), you will get this additional installer screen **SQL Server Instance**.

Select the SQL Server instance you want to create an ODBC connection to from the presented drop down list. By default, this will be local or MSSQLSERVER depending on whether you are running SQL Server Enterprise.

Click **Next**.

- 3 From the **SQL Server Options** screen:

If you selected **New** in [Step 1 on page 309](#), either accept the pre-populated values in the **DB Name** (DIM14) and **DSN** (DIM14) fields or type appropriate values. These SQL Server database values are used by the Dimensions CM schema. The DSN is an ODBC data source that stores information about how to connect to the database.

If you selected **Existing** in [Step 1 on page 309](#), make sure that the pre-populated values are correct. Correct them if necessary.

Click **Next**.

- 4 From the **SQL Server Home Directory** screen, either accept the default SQL Server home folder of C:\Program Files\Microsoft SQL Server\ or click **Change...** to specify an alternative folder.

On Windows Server 2008 R2 or later, the default will be C:\Serena_Database\.

Click **Next**.

- 5 From the **SQL Server Database Location** screen, either accept the SQL Server default database folder of C:\Program Files\Microsoft SQL Server\Dimensions Data\ or click **Change...** to specify an alternative folder.

On Windows Server 2008 R2 or later, the default will be C:\Serena_Database\data.

Click **Next**.

- 6 From the **Schema Dimensions Database Size** screen, either accept the default disk space allocations for SQL Server **Dimensions Data** and **Log file** or assign appropriate values. The default values are sufficient for the initial installation and SQL Server will automatically increase these sizes if and when necessary during operation.

Click **Next**.

- 7 From the **Dimensions Server PCMS_SYS Password** screen, enter the password for the PCMS_SYS schema that will be created for the SQL Server Enterprise database. This is normally set to PCMS_SYS.



IMPORTANT! Make a note of this password. You will need it for RDBMS database operations and future upgrades of Dimensions CM.

Click **Next**.

- 8 From the **Select a Demo Process Model** screen, select the type of process model you wish to use.

Click **Next**.

- 9 The "**Typical, Stream Development**" and "**Typical, Non-Stream Development**" process models create a demonstration product QLARIUS that registers a suite of Dimensions CM users corresponding to various use cases.

The Dimensions Tool Manager (also used for the "**Custom**" process model) is the person who is the Dimensions CM base database manager. By default, this will be the same user, `dmsys`, as the Dimensions System Administrator. Either accept the default (recommended) or replace the entry with the actual Dimensions CM login ID of the Dimensions Tool Manager. See the *System Administration Guide* for a discussion of the duties of these two users.

For the "**Typical, Stream Development**" and "**Typical, Non-Stream Development**" process models, you will also be asked to provide the following entries for Dimensions CM work and deployment areas:

- The **Area Owner ID**. Either accept the default of `dmsys` (recommended) or replace the entry with the actual Dimensions CM login ID of the team member you wish to assign. *Note that this entry will assigned by default to the Dimension System Administrator in the **Dimensions System Administrator Login ID** installer screen that comes next.*
- Either accept the default folder of `C:\Serena_Workareas` for the demo process model areas or click **Change** to browse to an alternative folder.

To be able to use the demonstration product fully, after installation, you will need to assign operating system accounts to the Qlarius Dimensions CM users—if you have not already done this as part of the pre-installation process, see "[Creating Operating System User Accounts](#)" on page 130.

See "[Choosing a Process Model During a Fresh Installation](#)" on page 131.

Click **Next**.

- 10 From the **Dimensions System Administration Login ID** screen, for the "**Typical, Stream Development**" and "**Typical, Non-Stream Development**" process models, the operating system **Login** account name and **Password** entries for the Dimensions System Administrator will by default be populated with the entries you made on the previous **Dimensions Demo Process**

Model Options screen. Either accept the default entries (where applicable) or type the appropriate values for the Dimensions System Administrator.

Click **Next**.

- 11** The Dimensions CM server utilizes a mail host for sending mail to users when, for example, items or requests are actioned. You can specify this mail host now, or specify it later by modifying the `dm.cfg` file. See the *System Administration Guide*. We suggest creating it later, so when the **Dimensions CM Mail Server** screen appears, click **Next**.

- 12** From the **Dimensions Web Server Options** screen enter the port number to be used by the common tools Tomcat Server. This is used for the Dimensions web tools.

Either accept the default value of 8080 or enter an alternative value. It is recommended that you accept the default value unless it (8080) is already being used by some other third-party software or that you plan to install such software in the future. Some software—for example, the TestDirector and Quality Center integration products—is hard coded to port 8080 and cannot be reassigned (see "[TCP/IP Port Considerations](#)" on page 134 for a discussion on this topic).

Click **Next**.

- 13** Click **Install**.

- 14** The installer performs various checks and operations, including:

- Checking status.
- Installing the Dimensions CM 14.2.0.2 server and associated components.
- Installing the Dimensions CM 14.2.0.2 schema into the RDBMS to be used by the Dimensions CM server.
- Registering components.
- Validating the Dimensions CM 14.2.0.2 server installation and then removing temporary backup files.
- Configuring the Web Tools.

- 15** Click **Finish**.

- 16** Perform the following post-installation checks described in ["Checking a Server with a Local SQL Server RDBMS" on page 315](#) and then download the PDFs and readme as described in ["Start the Serena Dimensions Listener Service service." on page 135.](#)

Checking a Server with a Local SQL Server RDBMS

See ["Checking the Server Installation" on page 132](#). However, as this is a SQL Server installation, you will need to:

- Replace the checks for Oracle only Windows services with a check for the following SQL Server service:

```
SQL Service <instance_name>
```

- Replace the checks for Oracle only processes with a check for the following SQL Server process:

```
sqlserver.exe
```

- Replace the check for the Oracle only Dimensions CM process `dmappsrv.exe` with a check for the following Dimensions CM process:

```
dmappsrv
```

If you wish to start the server as user `dmsys` rather than the user with local administrative rights who installed it (the default), see ["Starting the Server \(Restricted Mode\)" on page 134](#).

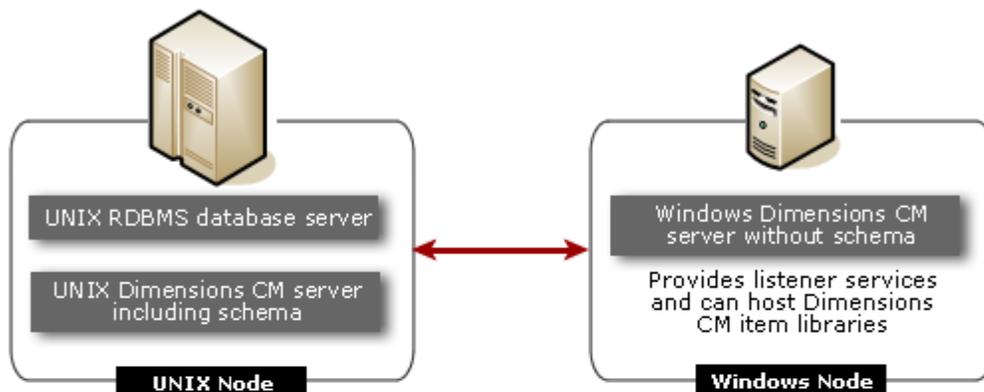
If you installed or configured an SSO server or additionally configured a Common Access Card (CAC), the login process will differ to that described in ["Checking the Server Installation" on page 132](#)—please see the *User's Guide* or online help for details. Also, if you additionally configured a CAC, certain additional post-installation activities are required—see ["Configuring Trusted Certificate Authorities for SSO and CAC Installations" on page 175](#), ["Dual Username/Password and CAC Authentication" on page 180](#), and ["Establishing a Certificate Revocation List" on page 180](#).

Installing a Server without a SQL Server Dimensions Schema Included

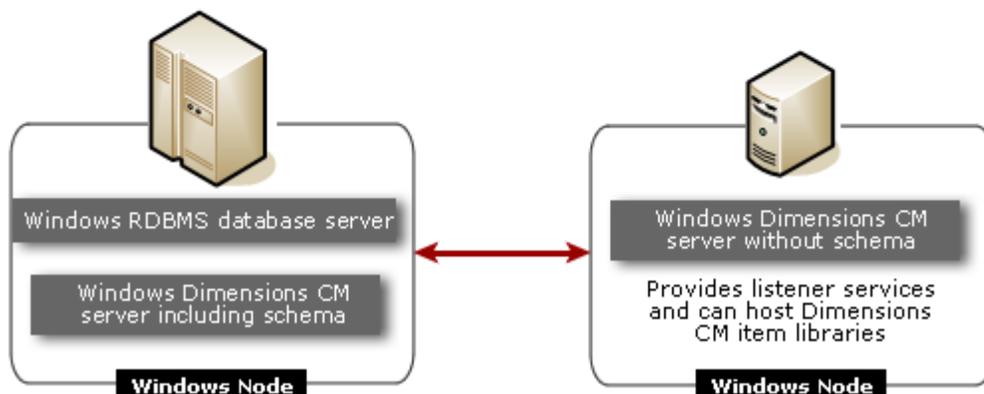
There are several scenarios in which you may want to install a Dimensions CM 14.2.0.2 server without installing a Dimensions CM 14.2.0.2 schema. Examples of these include:

Dimensions CM Server Load Sharing Scenarios Utilizing a Windows Dimensions CM Server without a Dimensions Schema

Scenario A



Scenario B



- 1 Scenario 1:** There is already a local SQL Server RDBMS with that schema installed. So all you want to install are the Dimensions CM 14.2.0.2 server executables.
- 2 Scenario 2:** You do not want to install *any* of the process-model-associated demonstration products that get offered to you if you chose to install the Dimensions CM schema (from which you *have* to choose one). This would be a scenario in which an existing user of Dimensions CM created their own process model export file and they want to import that export file during Dimensions CM schema creation. Such an exported process model is importing using the import option of the Dimensions CM `dmdba c r db` function, please refer to the *System Administration Guide* for details.
- 3 Scenario 3:** You wish to a install Dimensions CM 14.2.0.2 server, with its own local SQL Server RDBMS but without a schema, to communicate with a remote Windows or UNIX RDBMS database server.

The locally installed Dimensions CM 14.2.0.2 server will be somewhat like an Agent installation in that it will provide Dimensions CM listener services and the `dmcli` command client, but the Common Tools (Dimensions web client, Administration Console, and Common Tomcat server) will also be installed.

Reasons why you may want to do this include:

- The users on the local node do not have operating-system accounts on the remote Dimensions CM database server.
- To balance Dimensions CM loads across both the local node and the remote Dimensions CM database server node.

For such a scenario, the remote database server will require both the RDBMS and Dimensions CM binaries to be installed and for a Dimensions CM schema to have been created in that RDBMS.

For certain of these scenarios you need to set up the *local* node to access the SQL Server RDBMS database server. As this is also required for other installation scenarios discussed in this chapter, the instructions for doing that have been centralized, see "[Preparing Local and Remote Nodes for SQL Server Installations](#)" on page 81.

The installer screens for all the above options are the same.

- 1 The **Choose License Server** screen gets displayed when you select **Install Dimensions server components only with no schema creation**.

Either accept the default **Install a 30 day evaluation license** option or click the **Specify License Server** option.

Click **Next**.

- 2 From the **Dimension Administration Login ID** screen enter the operating system login account name for the Dimensions System Administrator. By default, this will be `dmsys`.

Type the Windows password for the Dimensions System Administrator.

The installer then validates the Dimensions System Administrator username and password. If this validation fails, you will get prompted to determine whether or not you wish to ignore the error and continue with the installation. If you do continue with the installation in such circumstances, you must ensure the user exists before attempting to start the Dimensions listener service and connecting to the Dimensions CM database.

Click **Next**.

- 3 The Dimensions CM server utilizes a mail host for sending mail to users when, for example, items or requests are actioned. You can specify this mail host now, or specify it later by modifying the `dm.cfg` file. See the *System Administration Guide*. We suggest creating it later, so when the **Dimensions CM Mail Server** screen appears, click **Next**.

- 4 From the **Dimensions Web Server Options** screen enter the port number to be used by the common tools Tomcat Server. This is used for the Dimensions web tools.

Either accept the default value of 8080 or enter an alternative value. It is recommended that you accept the default value unless it (8080) is already being used by some other third-party software or that you plan to install such software in the future. Some software—for example, the TestDirector and Quality Center integration products—is hard coded to port 8080 and cannot be reassigned (see "[TCP/IP Port Considerations](#)" on page 134 for a discussion on this topic).

Click **Next**.

- 5 From the **Install Dimensions CM Server** screen, click **Install**.

- 6 The installation begins. The installer performs various checks and operations, including:
 - Checking status.
 - Installing the Dimensions CM 14.2.0.2 server and associated components.
 - Registering components.
 - Validating the Dimensions CM 14.2.0.2 server installation and then removing temporary backup files.
 - Configuring the Web Tools.
- 7 Click **Finish**.
- 8 Perform the following post-installation checks described in "[Checking a Server without Oracle Dimensions Schema Included Installation](#)" on page 303 and then download the PDFs and readme as described in "[Start the Serena Dimensions Listener Service service.](#)" on page 135.

Checking a Server without SQL Server Dimensions Schema Included Installation

The following post-installation configuration activities or considerations are either needed or need to be taken into account:

- Create a DSN in ODBC connecting you to the local or remote SQL Server database containing the Dimensions CM schema. See "[Preparing Local and Remote Nodes for SQL Server Installations](#)" on page 81.
- Upon conclusion of the Dimensions CM server installation, the %DM_ROOT%\dfs\listener.dat file contains the following values similar to:

```
-dsn cm_typical@dim14  
-initial 0
```

Edit the -dsn entry to be the <database>@<dsn> for the database containing the Dimensions CM schema and restart the Serena Dimensions Listener Windows service.

Proceed to "[Checking the Server Installation](#)" on page 132, but be sure that when filling in the fields of the Dimensions CM login dialog box that you specify the correct parameters corresponding to the host and

database you want to access. Similarly, if you access the Dimensions web client and the Administration Console you must ensure you are specifying the correct parameters.

If you wish to start the server as user dmsys rather than the user with local administrative rights who installed it (the default), see ["Starting the Server \(Restricted Mode\)" on page 134](#).

If you installed or configured an SSO server or additionally configured a Common Access Card (CAC), the login process will differ to that described in ["Checking the Server Installation" on page 132](#)—please see the *User's Guide* or online help for details. Also, if you additionally configured a CAC, certain additional post-installation activities are required—see ["Configuring Trusted Certificate Authorities for SSO and CAC Installations" on page 175](#), ["Dual Username/Password and CAC Authentication" on page 180](#), and ["Establishing a Certificate Revocation List" on page 180](#).

Installing a Server with a Remote SQL Server

Installation Scenarios

There are scenarios in which you may want to install a Dimensions CM 14.2.0.2 server while installing a Dimensions CM schema into a remote RDBMS server and subsequently perform all Dimensions CM RDBMS operations with that remote Dimensions CM schema. One such scenario is that in which Dimensions CM users on a local node want to use a remotely administered RDBMS.

The remote RDBMS is most likely to be a SQL Server database (without an existing Dimensions CM schema) utilizing ODBC connectivity, and that is the scenario considered here.

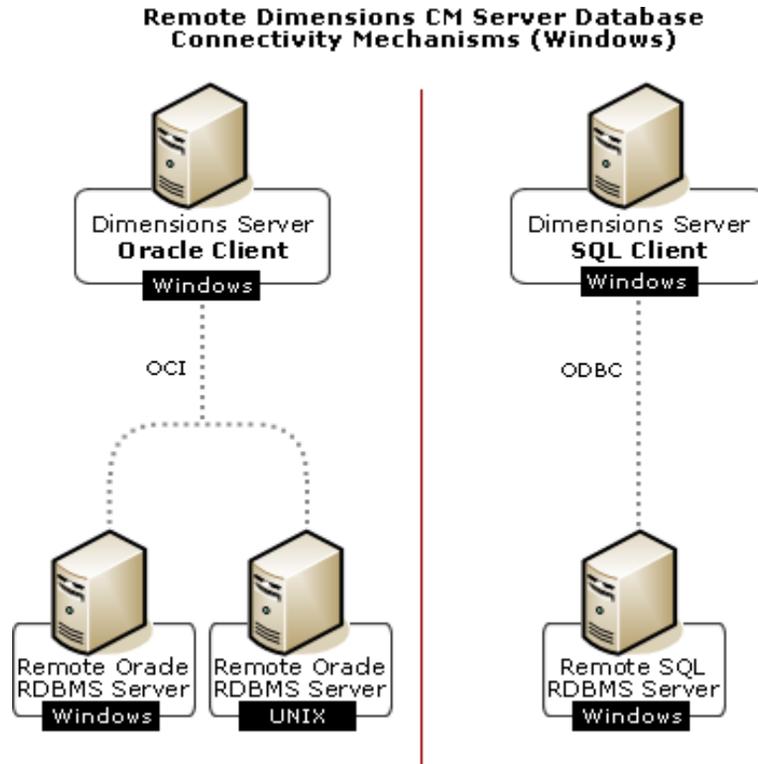
To be able to use a remote RDBMS, a RDBMS "client" must be set up on the local node to perform database service operations between the local Dimensions CM server and the remote RDBMS.

For SQL Server Enterprise RDBMS, the Windows "client" RDBMS can be:

- Your own SQL Server Enterprise client installation.
- A full SQL Server Enterprise installation. This is more than is required to set up this scenario.

Refer to your SQL Server Enterprise documentation or your DBA for installation details.

There are various database connectivity mechanism that are supported as standard by Dimensions CM. The diagram below shows the connectivity mechanisms supported by a Windows Oracle (and Serena-Supplied Runtime) or SQL Server client RDBMS.



Pre-installation Activities



CAUTION! Various Windows and SQL Server pre-installation activities have to be performed on both the local and remote nodes. If they are not performed, the installation of Dimensions CM with the remote database will not be successful. These pre-installation activities are discussed in ["Preparing a Remote Microsoft SQL Server Enterprise" on page 80](#).

Performing a Remote Installation

The installer steps for installing a Dimensions CM 14.2.0.2 server that will be used with a remote SQL Server database are the same—except where detailed below—as that for a local Dimensions CM 14.2.0.2 server that installs a Dimensions CM schema into a local SQL Server RDBMS. Refer to [Step 1 on page 310](#) of "Installing a Server with a Local SQL Server" on page 310 onwards with the differences detailed below.

- 1 Once the **SQL Server Options** screen is reached, as you are installing Dimensions CM with a remote SQL Server, you should overtype the default values in the **DB Name** and **DSN** fields with the remote database values. The DSN is an ODBC system data source that stores information about how to connect to the database.

Click **Next**.

The following SQL Server local-database-specific screens are skipped:

- SQL Server Instance ([Step 2 on page 311.](#))
- SQL Server Home Directory ([Step 4 on page 312.](#))
- Serena Dimensions Database Size ([Step 6 on page 312.](#))

Checking a Server with a Remote RDBMS

See ["Checking a Server with a Local SQL Server RDBMS" on page 315](#), but be sure that when filling in the fields of the Dimensions CM login dialog box that you specify the correct parameters corresponding to the host and database you want to access. Similarly, if you access the Dimensions web client and the Administration Console you must ensure you are specifying the correct parameters.

If you wish to start the server as user `dmsys` rather than the user with local administrative rights who installed it (the default), see ["Starting the Server \(Restricted Mode\)" on page 134](#).

If you installed or configured an SSO server or additionally configured a Common Access Card (CAC), the login process will differ to that described in ["Checking the Server Installation" on page 132](#)—please see the *User's Guide* or online help for details. Also, if you additionally configured a CAC, certain additional post-installation activities are required—see ["Configuring Trusted Certificate Authorities for SSO and CAC Installations" on page 175](#), ["Dual Username/Password and CAC](#)

Authentication" on page 180, and "Establishing a Certificate Revocation List" on page 180.

Installing or Configuring an SSO Server



IMPORTANT! Installing or configuring a Single Sign On (SSO) server requires several Light Directory Access Protocol (LDAP) parameters to be entered at particular installer wizard screens. You should not attempt to install or configure the SSO server unless you are conversant with these parameters—please see ["SSO Authentication Prerequisites" on page 137](#) for a detailed description of the appropriate parameters.

- 1 The initial **Serena Single Sign-On** screen gets displayed after you select **Serena Single Sign-On** during a server installation.

Select **Existing** if you wish to configure a connection to an existing SSO server—for example, a Serena Business Manager (SBM) SSO server. Click **Next** and proceed to [Step 2 on page 323](#).

Select **New** if no SSO server already exists and you wish to install one. Click **Next** and proceed to [Step 3 on page 323](#).
- 2 From the **Serena Single Sign On** screen (for existing) enter the relevant **Hostname** and **SSO Port** details as explained in ["Local or Remote Windows Server Prerequisites for an Existing SSO Server" on page 137](#), paying particular attention to the setting of the **Secure (https) Connection** checkbox as explained there.

Click **Next** and then go back to the completion of your server installation.
- 3 From the **Serena Single Sign On** screen (for new) please see ["Local or Remote Windows Server Prerequisites For a New SSO Server" on page 138](#) for information on how to populate the **Hostname**, **Port**, **Base DN**, **Search Filter**, **Bind User DN**, and **Password** fields. The **Port** and **Search Filter** fields will be prepopulated with the default values of 389 and `(&(objectClass=user)(sAMAccountName={0}))` respectively.

Click **Next** and then go back to the completion of your server installation.

Also you will need to perform additional post-installation activities—see ["Configuring Trusted Certificate Authorities for SSO and CAC Installations"](#) on page 175 and ["Establishing a Certificate Revocation List"](#) on page 180.

Installing or Configuring an SSO Server and a Smart Card



IMPORTANT! Installing or configuring a Single Sign On (SSO) server plus configuring a smart card reader requires several Light Directory Access Protocol (LDAP) parameters to be entered at particular installer wizard screens. You should not attempt to install or configure the SSO server with additional configuring of a smart card reader unless you are conversant with these parameters—please see ["SSO and CAC Reader Authentication Prerequisites"](#) on page 140 for a detailed description of the appropriate parameters.

- 1 The initial **Serena Single Sign-On** screen gets displayed after you select **Serena Single Sign-On** and **Smart Card Setup** during a server installation.
- 2 Select **Existing** if you wish to configure a connection to an existing SSO server plus Smart Card (CAC) reader—for example, a Serena Business Manager (SBM) SSO server plus CAC reader. Click **Next** and proceed to [Step 3 on page 324](#).

Select **New** if no SSO server installation or CAC configuration set up already exists and you wish to install the server and configure the reader setup. Click **Next** and proceed to [Step 4 on page 324](#).

- 3 From the **Serena Single Sign-On** screen (for existing) enter the relevant **Hostname** and **SSO Port** details as explained in ["Local or Remote Windows Server Prerequisites for an Existing SSO Server and CAC Reader"](#) on page 141, paying particular attention to the setting of the **Secure (https) Connection** checkbox as explained there.

Click **Next** and then go back to the completion of your Dimensions CM server installation.

- 4 From the **Serena Single Sign-On** screen (for new) please see ["Local or Remote Windows Server Prerequisites For a New SSO Server and](#)

[CAC Reader" on page 142](#) for information on how to populate the **Hostname**, **Port**, **Bind User DN**, and **Password** fields for CAC reader LDAP connection authentication. These entries will get inherited as default values if you subsequently choose LDAP authentication for the new SSO server (see [Step 5 on page 325](#)).

Click **Next** and proceed to [Step 5 on page 325](#).

- 5 From the **Serena Single Sign-On** screen (for new) please see "[Local or Remote Windows Server Prerequisites For a New SSO Server and CAC Reader" on page 142](#) for information on how to populate the **Hostname**, **Port**, **Base DN**, **Search Filter**, **Bind User DN**, and **Password** fields.

The **Hostname**, **Port**, **Bind Use DN**, and **Password** fields will be prepopulated with the default values inherited from the CAC reader LDAP set up installer screen at [Step 4 on page 324](#).

The **Search Filter** field will be prepopulated with the default value of (&(objectClass=user)(sAMAccountName={0})).

Click **Next** and then go back to the completion of your Dimensions CM server installation.

Also you will need to perform additional post-installation activities—see "[Configuring Trusted Certificate Authorities for SSO and CAC Installations" on page 175](#), "[Dual Username/Password and CAC Authentication" on page 180](#), and "[Establishing a Certificate Revocation List" on page 180](#).

Subsequently Installing or Configuring an SSO Server

This section describes the scenario where you have already successfully installed a Dimensions CM server without installing or configuring a

Single Sign On (SSO) server, but subsequently decide that you wish to install or configure an SSO server.



IMPORTANT! Installing or configuring a Single Sign On (SSO) server requires several Light Directory Access Protocol (LDAP) parameters to be entered at particular installer wizard screens. You should not attempt to install or configure the SSO server unless you are conversant with these parameters—please see "[SSO Authentication Prerequisites](#)" on page 137 for a detailed description of the appropriate parameters.

- 1 The initial **Installshield Wizard** screen gets displayed after you launch the standard Dimensions CM server software, see "[Running the Server Installer](#)" on page 127.
Click **Next**.
- 2 From the **Program Maintenance** screen click **Modify**.
- 3 From the **Feature Setup** screen click Serena **Single Sign On**.
- 4 From the **Serena Single Sign On** screen, either:
 - Select **Existing** if you wish to configure a connection to an existing SSO server—for example, a Serena Business Manager (SBM) SSO server. Click **Next** and proceed to [Step 5 on page 326](#).
 - Select **New** if no SSO server already exists and you wish to install one. Click **Next** and proceed to [Step 6 on page 326](#).
- 5 From the **Serena Single Sign On** screen (for existing) enter the relevant **Hostname** and **SSO Port** details as explained in "[Local or Remote Windows Server Prerequisites for an Existing SSO Server](#)" on page 137, paying particular attention to the setting of the **Secure (https) Connection** checkbox as explained there.
Click **Next** and proceed to [Step 7 on page 327](#) to perform the modification installation.
- 6 From the **Serena Single Sign On** screen (for new) please see "[Local or Remote Windows Server Prerequisites For a New SSO Server](#)" on page 138 for information on how to populate the **Hostname**, **Port**, **Base DN**, **Search Filter**, **Bind User DN**, and **Password** fields. The **Port** and **Search Filter** fields will be prepopulated with the default values of 389 and `(&(objectClass=user)(sAMAccountName={0}))` respectively.

Click **Next** and proceed to [Step 7 on page 327](#) to perform the modification installation.

- 7** From the **Ready to Modify the Program** screen click **Install**.
- 8** The installation will begin.
- 9** Click **Finish**.

You will now need to perform additional post-installation activities—see "[Configuring Trusted Certificate Authorities for SSO and CAC Installations](#)" on page 175 and "[Establishing a Certificate Revocation List](#)" on page 180.

Demo Certificates Mismatch

NOTE Only applicable if you are using demo certificates.

Upgrading an 12.x server (without SSO) to 14.2.0.2 and then enabling SSO with the demo certificates causes a mismatch of the jks and pem files. You will need to manually restore the 14.2.0.2 certificates and restart Tomcat:

- 1** Stop the Tomcat service.
- 2** Rename this file:

```
..\common\tomcat\8.0\alfssogatekeeper\conf\truststore.jks
```

Replace it with a file called `truststore.jks.14.2.0.2` in the same folder.
- 3** Rename this file:

```
\opt\serena\dimensions\12.1\cm\dfs\sts.pem
```

Replace it with a file called `sts.pem.14.2.0.2` in the same folder.
- 4** Restart the Tomcat service.

Subsequently Installing or Configuring an SSO Server and a Smart Card

This section describes a scenario where you have already successfully installed or configured a Dimensions CM server without a Single Sign On (SSO) server or a configured smart card (CAC), but subsequently decide that you wish to install or configure an SSO server and configure a CAC.



IMPORTANT! Installing or configuring a Single Sign On (SSO) server plus configuring a smart card reader requires several Light Directory Access Protocol (LDAP) parameters to be entered at particular installer wizard screens. You should not attempt to install or configure the SSO server with additional configuring of a smart card reader unless you are conversant with these parameters—please see ["SSO and CAC Reader Authentication Prerequisites" on page 140](#) for a detailed description of the appropriate parameters.

- 1 The initial **Installshield Wizard** screen gets displayed after you launch the standard Dimensions CM server software, see ["Running the Server Installer" on page 127](#).
Click **Next**.
- 2 From the **Program Maintenance** screen click **Modify**.
- 3 From the **Feature Setup** screen click Serena **Single Sign On and Smart Card Setup**.
- 4 From the **Serena Single Sign On** screen either:

Select **Existing** if you wish to configure a connection to an existing SSO server plus Smart Card (CAC) reader—for example, a Serena Business Manager (SBM) SSO server. Click **Next** and proceed to [Step 5 on page 328](#).

Select **New** if no SSO server or CAC configuration set already exists and you wish to install the server and configure the reader setup. Click **Next** and proceed to [Step 6 on page 329](#).
- 5 From the **Serena Single Sign On** screen (for existing) enter the relevant **Hostname** and **SSO Port** details as explained in ["Local or Remote Windows Server Prerequisites for an Existing SSO Server and CAC Reader" on page 141](#), paying particular attention to the setting of the **Secure (https) Connection** checkbox as explained there.

Click **Next** and proceed to [Step 8 on page 329](#) to perform the modification installation.

- 6 Please see "[Local or Remote Windows Server Prerequisites For a New SSO Server and CAC Reader](#)" on page 142 for information on how to populate the **Hostname**, **Port**, **Bind User DN**, and **Password** fields for CAC reader LDAP connection authentication. These entries will get inherited as default values if you subsequently choose LDAP authentication for the new SSO server (see [Step 7 on page 329](#)).

Click **Next** and proceed to [Step 7 on page 329](#).

- 7 From the **Serena Single Sign On** screen (for new) please see "[Local or Remote Windows Server Prerequisites For a New SSO Server and CAC Reader](#)" on page 142 for information on how to populate the **Hostname**, **Port**, **Base DN**, **Search Filter**, **Bind User DN**, and **Password** fields.

The **Hostname**, **Port**, **Bind Use DN**, and **Password** fields will be prepopulated with the default values inherited from the CAC reader LDAP set up installer screen at [Step 6 on page 326](#).

The **Search Filter** field will be prepopulated with the default value of `(&(objectClass=user)(sAMAccountName={0}))`.

Click **Next** and proceed to [Step 8 on page 329](#) to perform the modification installation.

- 8 From the **Ready to Modify the Program** screen click **Install**.

The installation will begin.

- 9 Click **Finish**.

You will now need to perform additional post-installation activities—"[Configuring Trusted Certificate Authorities for SSO and CAC Installations](#)" on page 175, "[Dual Username/Password and CAC Authentication](#)" on page 180, and "[Establishing a Certificate Revocation List](#)" on page 180.

Appendix B

Item Library Security on Windows NTFS Server

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Protection

The Serena® Dimensions® CM item libraries are protected from unauthorized changes by setting an access control list (ACL) on each folder which is defined to hold a Dimensions CM item library—this must be done manually, using the Windows Explorer. Because ACLs are allowed only on files on a disk with an NTFS file system, it is recommended that item libraries are *not* defined on disks with FAT file systems, as there would be no way to protect the item libraries from unauthorized changes.



NOTE Only the Administrator user is permitted to write, change, or delete ACLs.

Serena recommends an ACL with the following attributes:

System:Full Control

Administrators:Read Access

Owner:Read Access

This will ensure that only the Dimensions CM server is able to write files into these directories.

Some additional users could be granted Read access to the item files by adding a group or users (using the Windows Explorer | Properties | Security | Permissions menu option). Do not give any users Write, Change, or Delete access.

Library Access Process: Listener Service

The library access service Serena Dimensions Listener Service is started by the Server Service administration (from Start | Settings | Control Panel | Services; or from Start | Programs | Administrative Tools | Services) whenever the machine is started. This process is responsible for servicing PCMS_SDP protocol connection requests. Messages generated by the Serena Dimensions Listener Service process are placed in the Windows Server Event Application log. This can be viewed by navigating to the Event Viewer (Start | Programs | Administrative Tools | Event viewer) starting it, and selecting the

Application option from the Log menu, or by selecting **Application log** from the **Event Viewer** tree view.

If you intend placing item libraries on a disk that is mounted with non-standard access permissions you may need to change the login identity of the Serena Dimensions Listener Service accordingly. The identity can be changed in the Services dialog by selecting by: right clicking on the entry; selecting **Properties**; selecting the **Log On** tab; checking **This account**; and entering the new identity.

Item Library Node Location

In the case of item libraries, it is important from an overall network perspective to ensure that they are defined on nodes that can handle the load and are local to the users that most often require access to them.

Appendix C

Troubleshooting

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Introduction

This appendix helps you to diagnose and correct problems that you might encounter with Serena® Dimensions® CM 14.2.0.2 for Windows installations. It describes issues that you might encounter and suggests ways that you can try to diagnose and correct these issues.

Troubleshooting Installation Issues

Dimensions Listener Does Not Start or Starts and Then Immediately Exits

Dimensions CM uses a listener process/service to manage access by clients to the Dimensions CM server. If users are unable to connect to Dimensions CM after an installation, this may be caused by the listener not starting successfully. Follow the procedures below to ensure that Dimensions CM connection details are valid, and that the installation is properly configured.

- **Validate that the Serena Dimensions Listener and pool management executables load and run successfully**

To validate that Dimensions CM has been installed correctly and that the executables can run without any issues, log in as the owner of the Dimensions CM installation, set up the Dimensions CM environment, and try to run the following executables from the command prompt:

```
dm1snr  
dmpool  
dmappsrv
```

If any of these executables fail to run cleanly due to library or DLL loading errors, your Dimensions CM installation may have failed to install properly. You will need to determine why these loading errors are present before you can successfully run Dimensions CM. Common causes for such errors might be the failure to follow pre-installation requirements (for example, installing the necessary patches), running on a non-supported operating system, or that the Dimensions CM environment is not set up correctly. If none of these

appear to be the case and re-installing Dimensions CM does not solve the issue, contact Serena Support for more assistance.

- **Validate that the log in details used for the Dimensions CM pool are correct**

During the installation process you were prompted for details such as the user who will own the Dimensions CM pool. If the details you supplied during installation are incorrect, the Serena Dimensions Listener may fail to start. You can check if these login details are correct by utilizing a set of special initialization parameters that activate tracing of the Serena Dimensions Listener and provide more details as to what the cause of failure might be. For instructions on how to activate this listener tracing, see [Enabling Dimensions Listener Tracing on "Enabling Dimensions Listener Tracing" on page 346](#).

If the logs generated as a result of enabling the listener trace contain errors such as

```
dmpool 2014/01/23 12:25:55 E P3036 T1204 password not
      set for user xxx\dmsys
dmpool 2014/01/23 12:25:55 E P3036 T1204
      StartUserProcess failed with 1326, Logon failure:
      unknown user name or bad password.
dmpool 2014/01/23 12:25:55 E P3036 T1204 xxx\xxx/
*****, invalid user or password
dmpool 2014/01/23 12:25:55 E P3036 T1204 Cannot
      initialize pool
dmpool 2014/01/23 12:25:55 L P3036 T1204 Exiting
```

or

```
dmpool 2014/01/23 12:33:26 L P2208 T3648 DBS process
      created, id 928
dmpool 2014/01/23 12:33:26 L P2208 T3648 write message
      to process 928
dmpool 2014/01/23 12:33:26 L P2208 T3648 read message
      from process 928
dmpool 2014/01/23 12:33:26 E P2208 T3648 dmappsrv
      initialization failed, process 928
dmpool 2014/01/23 12:33:26 E P2208 T3648 Cannot
      initialize pool
dmpool 2014/01/23 12:33:26 L P2208 T3648 Exiting
```

it is possible that either the user name or associated password that you specified during the installation are wrong.

You can correct these details as follows:

The username is specified by the `-user` parameter in the `%DM_ROOT%\dfs\listener.dat` file (Windows server or agent) or `$DM_ROOT/dfs/listener.dat` file (UNIX agent). If this value is incorrect, edit this file to change the specified user.

To reset the associated user password used by Dimensions CM, do the following as the administrator of the Dimensions CM installation:

```
dmpasswd <username> -del
```

```
dmpasswd <username> -add -pwd <newPasswd>
```

where:

<username> is the operating system user.

<newPasswd> is the current password for this user.

■ **Validate the system environment and registry entries**

Validate the environment set up from which you are trying to run Dimensions CM. This action is more applicable after a Dimensions CM upgrade installation, but the checks are still valid for a fresh installation. To check the environment set up:

- Verify that your `DM_ROOT` variable is pointing to the correct installation and that the executables in the path are the correct ones. You might have earlier versions of executables from previous installations that are being picked up first. Also, ensure that your path is only picking up one installation of Dimensions CM.
- Ensure that your Windows system environment does not have `DM_ROOT` (or `PCMS_ROOT`) specified. These should only be specified in the Windows registry. If you have `PCMSDB`, `DMDB`, or `LOCAL` set in your system environment, verify that they are pointing to the correct values. Do not specify these variables in the system environment unless absolutely necessary.
- Open your Windows registry hive and navigate to the following key:

```
HKEY_LOCAL_MACHINE/SOFTWARE/Serena/Dimensions
```

Under this key you will find entries for each of the versions of Dimensions CM that you have installed on your machine. For the version of Dimensions CM you are trying to run, navigate to that

sub-key and verify that the following entries are present and point to the correct locations:

```
DM_ROOT
DimensionsStart
DimensionsStop
```

- **Validate that the socket you are using for the listener has not already been allocated or used**

It is possible that the socket service you have chosen for the listener to run on, as specified by the `-service` parameter in the `%DM_ROOT%\dfs\listener.dat` file (Windows server or agent) or `$DM_ROOT/dfs/listener.dat` file (UNIX agent), is already being used. To validate the socket service:

- a Check that the `-service` parameter refers to a valid TCP/IP service name.
- b *Windows only*: Check that the socket service number has been specified in the `%DM_ROOT%/dm.cfg` file. The format for this specification is:

```
DM_SERVICE_<SERVICE_NAME>_TCP <serviceNo>
```

where:

<SERVICE_NAME> is the name of the TCP/IP service.

<serviceNo> is the number associated with the socket.

- c Run the command `netstat -a` and check the output to determine if the socket you have allocated to Dimensions CM is already being used by another application. If it is, then repeat the steps above to reset the TCP/IP service number and try again.
- d If you are using firewalls or other network software/hardware, check that these have been correctly configured to allow communication on your chosen socket/service.

- **Validate that the Windows user has the correct privileges to run Dimensions CM**

Verify that the Windows user running `dmpool.exe` (by default SYSTEM) has the following Windows operating system privileges to enable them to run the executable:

- Act as part of the operating system
- Adjust memory quotas for a process

- Bypass traverse checking
- Create a token object
- Log in as a service
- Replace a process level token
- **Validate that the Serena License Server is up and running**

If the listener is running properly, the next step is to validate that the Serena License Server is running, or that the Dimensions CM server is configured to point to a valid license server. If your Serena License Server is running on the same machine as your Dimensions CM installation, perform the following checks to examine the status of your SLM installation:

 - Check that the Windows service
Serena License Server
has the status Started.
- **Check the user's password**

For the user name that is specified by the `-user` parameter in the `%DM_ROOT%\dfs\listener.dat` file (Windows server or agent) or `$DM_ROOT/dfs/listener.dat` file (UNIX agent), check that the operating system password for that user contains no underscore ("`_`") characters. If it does, reset the password using the appropriate operating system commands and through the `dmpasswd` utility as documented above.
- **Validate the ODBC DSN used for connections**

If you are using ODBC as the Dimensions CM database connection layer, validate that the name of the user specified by the `-user` parameter in the `%DM_ROOT%\dfs\listener.dat` file (Windows server or agent) or `$DM_ROOT/dfs/listener.dat` file (UNIX agent) is not the same as your DSN name. Failure to do so may cause ODBC connection errors to occur.
- **Check SQL Net authentication errors using Oracle on Windows**

Under certain circumstances, you may find that SQL Net (Oracle) fails to authenticate with your pool user. This issue has been seen on various Windows platforms when using Active Directory for user authentication. You can identify this issue by enabling listener tracing, as documented on ["Enabling Dimensions Listener Tracing" on page 346](#). Check the resulting trace logs in the

dmappsrv<processId>.log files to see if you have Oracle connection errors. If you have errors, try changing the SQL Net authentication service:

Edit the contents of the file `sqlnet.ora` in your `%ORACLE_HOME%\NETWORK\ADMIN` folder.

If the file contains the line

```
SQLNET.AUTHENTICATION_SERVICES= (NTS)
```

change the line to read

```
SQLNET.AUTHENTICATION_SERVICES= (none)
```

and restart the listener.

- **Remove OPS\$ Accounts when using Oracle and ODBC**

If the user managing the pool, as defined by the `-user` parameter in the `%DM_ROOT%\dfs\listener.dat` file (Windows server or agent) or `$DM_ROOT/dfs/listener.dat` file (UNIX agent), has an OPS\$ account defined for them in Oracle, this can cause problems with ODBC connectivity.

To determine if this user has OPS\$ privilege, log in as that user and try the following command:

```
sqlplus /
```

If a connection to the database is established, run the following SQL commands to drop that OPS\$ account.

```
SQL> connect system/<system_passwd>
SQL> drop user OPS$<userId> cascade;
```

- **Database connection errors**

If none of the suggestions above have helped, the next step is to verify the connection to the database by enabling listener tracing, as documented in ["Enabling Dimensions Listener Tracing" on page 346](#). After attempting to start the listener, look at the output from the log files that are generated. If these log files contain errors similar to the ones shown below, the database details specified by the `-dsn` parameter in the `%DM_ROOT%\dfs\listener.dat` file (Windows server or agent) or `$DM_ROOT/dfs/listener.dat` file (UNIX agent) are probably incorrect. In the case of the Oracle below, the password details for the database have not been correctly registered:

```
dmappsrv 2014/01/23 12:33:26 E P928 T2516 Pcms error:
  1, Error: Unable to connect to database
  "cm_typical"
dmappsrv 2014/01/23 12:36:30 E P3864 T3572 Pcms error:
  1, Error: Schema version check failed for
  Dimensions database "cm_typical"
```

To verify that the database connection details are correct, use the RDBMS utilities such as TNSPING (Oracle) to validate that the DSN you specified exists, and that you can connect to it. Also, test the connection to the database specified through the `-dsn` parameter in the `%DM_ROOT%\dfs\listener.dat` file (Windows server or agent) or `$DM_ROOT/dfs/listener.dat` file (UNIX agent) file, and validate that the connection works.

If you are running against Oracle, use the Dimensions CM `dmdba cpas` utility to ensure that the database password for the database you are trying to connect to has been registered against Dimensions CM. Use `help cpas` within `dmdba` to ascertain the appropriate options.

If none of the above solutions help, contact Serena Support for more assistance.

Troubleshooting a Windows Server

This section addresses problems that have been reported by various customers while performing a Dimensions CM server installation on a Windows platform.

Installation Problems

Problem	Cause and Solution
<p>Dimensions Installer starts, but then exits.</p>	<ul style="list-style-type: none"> ■ Check your Windows log in user-id privileges—you must have Administrator privileges to you start the Dimensions installer. ■ You are using a version of Windows that <i>does not</i> support a Dimensions CM server installation.
<p>Installation stops because there is not enough disk space on the installation partition.</p>	<ul style="list-style-type: none"> ■ If the installation exits due to lack of disk space, you should uninstall the Dimensions CM server components before continuing—see "Uninstalling Windows Components" on page 195. Before restarting the installation, ensure that the partition has enough disk space. ■ Check also that there is at least 3GB free space on the Windows System disk.
<p>The installation terminates with an error message (other than those described below).</p>	<ul style="list-style-type: none"> ■ Check that your Windows user-id has full control over the installation folder and all its sub-directories. Before continuing, you may need to uninstall the Dimensions CM server components—see "Uninstalling Windows Components" on page 195.

Problem	Cause and Solution
<p>The Serena-Supplied Runtime RDBMS installation fails.</p>	<ul style="list-style-type: none"> ■ The Serena-Supplied Runtime RDBMS installer utilizes the third-party Oracle Universal Installer (OUI) during the installation process. If this installation fails, check the contents of the log files in the folder <WINDISK>\Oracle\Inventory\logs for a possible explanation. The most likely causes are as follows. <ul style="list-style-type: none"> • Lack of disk space on <WINDISK>. • Information obtained from files in <WINDISK>\Oracle and Windows registry keys under HKEY_LOCAL_MACHINE\SOFTWARE\ORACLE is inconsistent. This may happen if the files or keys were deleted manually.
<p>Other problems causing the installation to fail.</p>	<ul style="list-style-type: none"> ■ Uninstall the Dimensions CM server components and re-start the installation— see "Uninstalling Windows Components" on page 195.

Connection Problems

Problem	Cause and Solution
<p>Unable to connect using the Dimensions desktop client.</p>	<ul style="list-style-type: none"> ■ Check that <i>all</i> Windows service components have started on the server. These are: All RDBMS: Serena Dimensions Listener Service Serena License Server Oracle 11gR2.0.3 and 12c: Oracle<oracle_home_name>TNSListener OracleService<service_name> SQL Server: SQL Server <instance_name> <p>Restart any of the above that are <i>not</i> started, and then try to reconnect to the client.</p> <ul style="list-style-type: none"> ■ You are not using a valid login in the Dimensions desktop client connection dialog, that is, one other than that specified during the installation or created later.
<p>'... cannot find program ...' '... unable to load....'</p>	<ul style="list-style-type: none"> ■ Ensure that %DM_ROOT%\prog is included in your PATH environment variable.

Problem	Cause and Solution
License key not found.	<ul style="list-style-type: none">■ Check that you entered the license information correctly, or■ on the server platform, enter the License Key as described in Chapter 5, "Installing a New Windows Server" and the <i>System Administration Guide</i>.
Other Licensing Problems.	<ul style="list-style-type: none">■ See the debug log file. This is usually in the folder corresponding to %DM_LICENSE%.

Miscellaneous

Enabling Dimensions Listener Tracing

There may be occasions when it is necessary to diagnose possible issues with the Serena Dimensions Listener. Dimensions CM provides two special initialization parameters that you can use to start the listener in a mode that will trace internal progress and status information to a log file for debugging purposes.

To enable tracing, uncomment and edit appropriately the following lines to the `listener.dat` file contained in the `%DM_ROOT%\dfs` folder (Windows server or agent) or `$DM_ROOT/dfs` directory (UNIX agent):

```
-tracedir <directory_name>
-trace
```

where

`<directory_name>` is the name of a folder where the trace files are to be created.

After you have made this change, stop and restart Dimensions CM. To disable this tracing, comment out the two variables and restart Dimensions CM.

Extracting Windows-Based Directory Items on Solaris

If you wish to store a Dimensions CM folder item on a Windows platform and then attempt to extract it onto a Solaris platform with a directory pathname of greater than 100 characters, then you must install the publicly available GNU tar utility on both the Windows platform and the Solaris platform—in the directories %DM_ROOT%\prog and \$DM_ROOT/prog respectively.

If you do not do the above, the following error will be reported:

```
Error: unable to extract from archive file
```

This is a result of this 100-character limitation being handled incompatibly by the GNU tar utility and the native version of tar shipped with Solaris.

Appendix D

Migrating to the Serena-Supplied Runtime RDBMS

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Chapter Overview

This appendix documents a roadmap of the operations required to migrate to the latest version of the Serena-Supplied Runtime RDBMS.



NOTE Some migration scenarios might require additional steps not mentioned here (for example, the `pcms-sys.pcms_db_details` table might become out of sync in some cases). If so, knowledgebase articles or Support personnel might be of assistance.

Disclaimer

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Migration Scenario

Typical migration scenario:

- On *Node A* you have an existing Dimensions CM production server running against a local Serena-Supplied Runtime RDBMS based on Oracle 10g.
- The version of the Serena-Supplied Runtime RDBMS based on Oracle 11gR2.0.3 demands more system resources than the earlier version. You have decided that you cannot upgrade to the latest Oracle version on *Node A*.
- You install the latest Serena-Supplied Runtime RDBMS on a more powerful machine, *Node B*.
- You want to migrate your existing Dimensions CM production server and Dimensions CM production databases to *Node B* and upgrade to

Dimensions CM 14.2.0.2 running against the Serena-Supplied Runtime RDBMS based on Oracle 11gR2.0.3.

To run this scenario:

- 1** On Node B create an Oracle instance as explained in the guide *Installing the Serena-Supplied Runtime RDBMS*.
- 2** On Node B perform a fresh installation of a Dimensions CM 14.2.0.2 for Windows server with the local Serena-Supplied Runtime RDBMS based on Oracle 11gR2.0.3. See ["Installing a New Windows Server" on page 125](#).
- 3** On Node B, drop the pcms_sys database and the demonstration database that get installed in [Step 2](#). The particular demonstration database that was installed depends on which choice of process model was made during installation, namely:
 - For the **"Typical, Stream Development"** and **"Typical, Non-Stream Development"** process models, it will be cm_typical.
 - For the **"Custom"** process model, it will have been specified by the export file used during its creation.

Consult your DBA or Serena Support for the Oracle-specific steps required to drop databases.

- 4** On *Node A*, export your existing pcms_sys and demonstration databases from the Serena-Supplied Runtime RDBMS based on Oracle 10g.

Consult your DBA or Serena Support for the Oracle-specific steps required to export databases.

- 5** On Node B, import into your Serena-Supplied Runtime RDBMS based on Oracle 11gR2.0.3 the database export file created in [Step 4](#).

Consult your DBA or Serena Support for the Oracle-specific steps required to import an export file.

- 6 On Node B, manually upgrade the imported Serena-Supplied Runtime RDBMS databases to use the Dimensions CM 14.2.0.2 schema, as explained below:
 - a Log in to the Dimensions CM 14.2.0.2 dmdba utility as the Oracle Administration user (this will usually be `system`, but might be different for your Oracle installation—it will, however, here be assumed to be `system`). Type the following in a Windows Command Prompt:



NOTE If you need additional information concerning the launching and usage of the `dmdba` utility, consult the *Dimensions CM System Administration Guide*.

```
dmdba system/<system_password>@<connect_string>
```

For example:

```
dmdba system/manager@dim14
```

- b At the `SYSTEM>` prompt, type:

```
upgrade all /force
```
 - c At the `SYSTEM>` prompt, type:

```
exit
```
- 7 Update the data in your RDBMS, for details see [page 268](#).

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