SERENA®

DIMENSIONS® CM and RM

Installing the Serena-Supplied Runtime RDBMS

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Table of Contents

Welcome to the Serena-Supplied Runtime RDBMS 7

About Serena Dimensions 8

Contacting Serena Technical Support 8

Demonstrations 9

Chapter 1 **Installing the Windows Serena-Supplied Runtime RDBMS 11**

Introduction 12

Checklist 18

Pre-installation Considerations 19

Installation Disk Space Requirements for the 11gR2 Serena-Supplied Runtime RDBMS 19

Installing the Windows Serena-Supplied Runtime RDBMS on a Computer that Utilizes DHCP Network Addressing 19

Preparing the Windows Serena-Supplied Runtime RDBMS Software 25

Making the Contents of the Zip File Available to the Installer 25

Serena Oracle Response Files 26

Windows Serena-Supplied Runtime RDBMS Installation Overview 26

Launching the Serena-Supplied Runtime RDBMS Installation 27

Introduction 27

Launching the Installer from the HTML Front End (Dimensions CM Only) 28

Launching the Installer from the Extracted Downloaded Zip File Contents 30

Running the 32-Bit or 64-Bit 11gR2 Windows Serena-Supplied Runtime RDBMS Installer. 32

Initial Steps. 32

Specifying Installation Parameters 33

Progress Monitoring 39

Running the 32-Bit 10g Windows Serena-Supplied Runtime RDBMS Installer 41
Initial Steps 42
Specifying Installation Parameters. 43
Progress Monitoring. 47
Post-installation Activities and Considerations 50
General Post-installation Activities. 50
Applying Oracle Patches. 50
Creating an Oracle Instance 51
11gR2 Oracle Password Expiration 52
11gR2 Oracle Case Sensitivity 53
Next Step. 53
Error Recovery 53
Incomplete Installation 53

Chapter 2 **Installing the UNIX Serena-Supplied Runtime RDBMS 57**

Introduction 58
Checklist. 64
Pre-installation Considerations 64
Installation Disk Space Requirements for the 11gR2 Serena-Supplied Runtime RDBMS. 65
Installer Prerequisites 65
Configuring System Kernel for Shared Memory and Semaphores 65
Changes to the Default Parameter Files 66
. 67
IBM AIX Kernel Configuration Requirements 68
Presence of the UNIX "uncompress" Utility 68
Pre-existing Operating System User Account and Directories 69
Preparing the Serena-Supplied Runtime RDBMS Software 69
UNIX Serena-Supplied Runtime RDBMS Installation Overview 71
Installing the 64-Bit 11gR2 UNIX Serena-Supplied RDBMS . . 71
Launching the Installer from the Serena Runtime HTML Front End (Dimensions CM Only) 72
Launching the Installer from the Extracted Downloaded tar File Contents 73

Running the 64-Bit 11gR2 UNIX Serena-Supplied Runtime RDBMS Installer 75
Installing the 32-Bit 10g UNIX Serena-Supplied RDBMS . . . 87
Starting the Installation 87
Performing the Installation 90
Post-installation Activities 92
Applying Oracle Patches 92
Creating an Oracle Instance 93
Checking Whether the Oracle Services Have Started . . 94
11gR2 Oracle Password Expiration 97
11gR2 Oracle Case Sensitivity 98
Serena Oracle Response Files 98
11gR2 Post-installation Tasks for Use with Dimensions CM 99
Next Step 100
Error Recovery 100
Incomplete Installation 100

Index 103

Welcome to the Serena-Supplied Runtime RDBMS

The Windows Serena-Supplied Runtime RDBMS is an optional Serena-supplied Windows runtime RDBMS (based on 32-bit Oracle 10g or 32-bit or 64-bit Oracle 11gR2) to be used as foundation software for the Serena® Dimensions® CM and Serena® Dimensions® RM server. For Dimensions CM for Windows or Dimensions RM, it can be installed either locally or remotely with respect to the server; whereas, for Dimensions CM for UNIX, it can only be installed remotely with respect to the server.

The UNIX Serena-Supplied Runtime RDBMS is an optional Serena-supplied UNIX runtime RDBMS (based on 32-bit Oracle 10g or 64-bit Oracle 11gR2) to be used as foundation software for the Dimensions CM and Dimensions RM server. For Dimensions CM for UNIX, it can be installed either locally or remotely with respect to the server; whereas, for Dimensions CM for Windows or Dimensions RM, it can only be installed remotely with respect to the server.

NOTE See "Introduction" on page 12 for further details on Serena-Supplied Runtime RDBMS supported platforms and operating systems relevant to a local Windows or UNIX node.

If the option to use the Serena-Supplied Runtime RDBMS is not exercised, you must have your own RDBMS pre-installed for use by Dimensions CM or Dimensions RM, namely:

- For Dimensions CM for Windows: your own Oracle 10g or 11gR2, or Microsoft SQL Server Enterprise 2005, 2008, or 2012 RDBMS.
- For Dimensions CM for UNIX, your own Oracle 10g or 11gR2 RDBMS.
- For Dimensions RM, your own Oracle 10g, 11gR1, or 11gR2 RDBMS.

For the exact versions, please see:

- TheDimensions CM or Dimensions RM readme file.

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

  http://su\pport.serena.com/roadmap/Product.aspx?sel=PVDIMENSIONS

- The Serena public Dimensions RM Supported Platforms Web site at:

  http://support.serena.com/roadmap/product.aspx?sel=RTM

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 URL 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 e-mail 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.

Chapter 1

Installing the Windows Serena-Supplied Runtime RDBMS

Introduction	12
Checklist	18
Pre-installation Considerations	19
Windows Serena-Supplied Runtime RDBMS Installation Overview	26
Launching the Serena-Supplied Runtime RDBMS Installation	27
Running the 32-Bit or 64-Bit 11gR2 Windows Serena-Supplied Runtime RDBMS Installer	32
Running the 32-Bit 10g Windows Serena-Supplied Runtime RDBMS Installer	41
Post-installation Activities and Considerations	50
Error Recovery	53

Introduction

The Windows Serena-Supplied Runtime RDBMS is an optional Serena-supplied Windows runtime RDBMS (based on 32-bit Oracle 10g or 32-bit or 64-bit 11gR2) to be used as foundation software for the Serena® Dimensions® CM and Serena® Dimensions® RM server. For Dimensions CM for Windows or Dimensions RM, it can be installed either locally or remotely with respect to the server; whereas, for Dimensions CM for UNIX, it can only be installed remotely with respect to the server.

If the option to use the Serena-Supplied Runtime RDBMS is not exercised, then you must have your own RDBMS pre-installed for use by Dimensions CM or Dimensions RM, namely:

- For Dimensions CM for Windows: your own Oracle 10g or 11gR2; or Microsoft SQL Server Enterprise 2005, 2008, or 2012 RDBMS.
- For Dimensions CM for UNIX, your own Oracle 10g or 11gR2 RDBMS.
- For Dimensions RM, your own Oracle 10g, 11gR1, or 11gR2 RDBMS.

For the exact versions of the Serena-Supplied Runtime RDBMS or your own Oracle or SQL Server RDBMS please see:

- The Dimensions CM or Dimensions RM readme file.
- The Serena public Dimensions CM Supported Platforms Web site at: http://su\pport.serena.com/roadmap/Product.aspx?sel=PVDIMENSIONS
- he Serena public Dimensions RM Supported Platforms Web site at:

  http://support.serena.com/roadmap/product.aspx?sel=RTM

IMPORTANT! The Serena-Supplied Runtime RDBMS is third-party licensed software based on Oracle 10g or 11gR2. Consequently, this software can only be used as stated on the Copyright page of this manual, that is, "Third-party programs included with the Dimensions product are subject to a restricted-use license and can be used only in conjunction with Dimensions". Additionally, all problems relating to the Serena-Supplied Runtime RDBMS must be addressed to Serena Support *not* the Oracle Corporation.

Serena-Supplied Runtime RDBMS Supported on Dimensions CM

The Serena-Supplied Runtime RDBMS operating systems are as a rule only supported on platforms that are also supported for Dimensions CM servers. Consequently they can normally be co-located with Dimensions CM servers unless specified otherwise.

Serena-Supplied Runtime RDBMS Operating System Type	Local Windows Node Location Supported	Remote Node Location Supported (Windows or UNIX as Appropriate)
Windows Server 2003 R2, Enterprise Edition 32-bit x86. 32-bit 10g Serena or 32-bit 11gR2 Serena-Supplied Runtime RDBMS.	Yes.	Yes.
Windows Server 2008 R2, Enterprise Edition 64-bit. 64-bit 11gR2 Serena-Supplied Runtime RDBMS only. *32-bit 10g or 32-bit 11gR2* Serena-*Supplied Runtime RDBMS not supported.*	Yes (64-bit version only).	Yes (subject to statement in left hand column).
AIX 5.x 64-bit Power PC. 32-bit 10g or 64-bit 11gR2 Serena-Supplied Runtime RDBMS.	No.	Yes.
AIX 6.x 64-bit Power PC. 32-bit 10g or 64-bit 11gR2 Serena-Supplied Runtime RDBMS.	No.	Yes.
HP-UX 11.2x 64-bit PA-RISC. *Not supported.*	No.	No.
HP-UX 11.3x 64-bit x64 Itanium. 32-bit 10g or 64-bit 11gR2 Serena-Supplied Runtime RDBMS.	No.	Yes.
Red Hat 5.x and 6.x 64-bit x86-64. 32-bit 10g or 64-bit 11gR2 Serena-Supplied Runtime RDBMS.	No.	Yes.
SLES 10.x 64-bit x86-64. 32-bit 10g or 64-bit 11gR2 Serena-Supplied Runtime RDBMS.	No.	Yes.
SLES 10.x 64-bit x64 Itanium. *Not supported.*	No.	No.

Serena-Supplied Runtime RDBMS Operating System Type	Local Windows Node Location Supported	Remote Node Location Supported (Windows or UNIX as Appropriate)
SLES 11.x 64-bit x86-64. 32-bit 10g or 64-bit 11gR2 Serena-Supplied Runtime RDBMS. **NOTE** This is a Dimensions CM 12.1 Tier 2 server.	No.	Yes.
Solaris 10 64-bit SPARC. 32-bit 10g or 64-bit 11gR2 Serena-Supplied Runtime RDBMS. **NOTE** This is a Dimensions CM 12.1 Tier 2 server.	No.	Yes.

Serena-Supplied Runtime RDBMS Supported on Dimensions RM

The Serena-Supplied Runtime RDBMS operating systems are as a rule only supported on platforms that are also supported for Dimensions RM servers. Consequently they can normally be co-located with Dimensions RM servers unless specified otherwise.

Serena-Supplied Runtime RDBMS Operating System Type	Local Windows Node Location Supported	Remote Node Location Supported (Windows or UNIX as Appropriate)
Windows Server 2003, 32-bit x86. 32-bit 10g or 32-bit 11gR2 Serena-Supplied Runtime RDBMS.	Yes.	Yes.
Windows Server 2003, Standard Edition 32-bit x86. 32-bit 10g or 32-bit 11gR2 Serena-Supplied Runtime RDBMS.	Yes.	Yes.
Windows Server 2003, Standard Edition 64-bit x86-64. 32-bit 10g or 32-bit or 64-bit 11gR2 Serena-Supplied Runtime RDBMS.	Yes.	Yes.

Serena-Supplied Runtime RDBMS Operating System Type	Local Windows Node Location Supported	Remote Node Location Supported (Windows or UNIX as Appropriate)
Windows Server 2003 SP2, Enterprise Edition 32-bit x86. 32-bit 10g or 32-bit 11gR2 Serena-Supplied Runtime RDBMS.	Yes.	Yes.
Windows Server 2003 SP2, Enterprise Edition 64-bit x86-64. 32-bit 10g or 32-bit or 64-bit 11gR2 Serena-Supplied Runtime RDBMS.	Yes.	Yes.
Windows Server 2003 R1, Enterprise Edition 32-bit x86. 32-bit 10g or 32-bit 11gR2 Serena-Supplied Runtime RDBMS.	Yes.	Yes.
Windows Server 2003 R1, Enterprise Edition 64-bit x86-64. 32-bit 10g or 32-bit or 64-bit 11gR2 Serena-Supplied Runtime RDBMS.	Yes.	Yes.
Windows Server 2003 R2, 32-bit x86. 32-bit 10g or 32-bit 11gR2 Serena-Supplied Runtime RDBMS.	Yes.	Yes.
Windows Server 2003 R2, Enterprise Edition 32-bit x86. 32-bit 10g Serena or 32-bit 11gR2 Serena-Supplied Runtime RDBMS.	Yes.	Yes.
Windows Server 2003 R2, Enterprise Edition 64-bit x86-64. 32-bit 10g or 32-bit or 64-bit 11gR2 Serena-Supplied Runtime RDBMS.	Yes.	Yes.
Windows Server 2008, Enterprise Edition 32-bit x86. *32-bit 10g or 32-bit 11gR2 Serena-Supplied Runtime RDBMS not supported.*	No.	Yes (subject to statement in left hand column).

Serena-Supplied Runtime RDBMS Operating System Type	Local Windows Node Location Supported	Remote Node Location Supported (Windows or UNIX as Appropriate)
Windows Server 2008, Enterprise Edition 64-bit. 64-bit 11gR2 Serena-Supplied Runtime RDBMS only. *32-bit 10g or 32-bit 11gR2* Serena-*Supplied Runtime RDBMS not supported.*	Yes (64-bit version only).	Yes (subject to statement in left hand column).
Windows Server 2008 R1, Enterprise Edition 32-bit x86. *32-bit 10g or 32-bit 11gR2 Serena-Supplied Runtime RDBMS not supported.*	No.	Yes (subject to statement in left hand column).
Windows Server 2008 R1, Enterprise Edition 64-bit. 64-bit 11gR2 Serena-Supplied Runtime RDBMS only. *32-bit 10g or 32-bit 11gR2* Serena-*Supplied Runtime RDBMS not supported.*	Yes (64-bit version only).	Yes (subject to statement in left hand column).
Windows Server 2008 R2, Enterprise Edition 64-bit. 64-bit 11gR2 Serena-Supplied Runtime RDBMS only. *32-bit 10g or 32-bit 11gR2* Serena-*Supplied Runtime RDBMS not supported.*	Yes (64-bit version only).	Yes (subject to statement in left hand column).
AIX 5.x 64-bit Power PC. 32-bit 10g or 64-bit 11gR2 Serena-Supplied Runtime RDBMS. **NOTE** This operating-system is not supported for a co-located Dimensions RM server.	No.	Yes.
AIX 6.x 64-bit Power PC. 32-bit 10g or 64-bit 11gR2 Serena-Supplied Runtime RDBMS. **NOTE** This operating-system is not supported for a co-located Dimensions RM server.	No.	Yes.
HP-UX 11.2x 64-bit PA-RISC. *Not supported.*	No.	No.

Serena-Supplied Runtime RDBMS Operating System Type	Local Windows Node Location Supported	Remote Node Location Supported (Windows or UNIX as Appropriate)
HP-UX 11.3x 64-bit x64 Itanium. 32-bit 10g or 64-bit 11gR2 Serena-Supplied Runtime RDBMS. **NOTE** This operating-system is not supported for a co-located Dimensions RM server.	No.	Yes.
Red Hat 5.x and 6.x 64-bit x86-64. 32-bit 10g or 64-bit 11gR2 Serena-Supplied Runtime RDBMS. **NOTE** This operating-system is not supported for a co-located Dimensions RM server.	No.	Yes.
SLES 10.x 64-bit x86-64. 32-bit 10g or 64-bit 11gR2 Serena-Supplied Runtime RDBMS. **NOTE** This operating-system is not supported for a co-located Dimensions RM server.	No.	Yes.
SLES 10.x 64-bit x64 Itanium. *Not supported.*	No.	No.
SLES 11.x 64-bit x86-64. 32-bit 10g or 64-bit 11gR2 Serena-Supplied Runtime RDBMS. **NOTE** This operating-system is not supported for a co-located Dimensions RM 1.2.1 server.	No.	Yes.
Solaris 10 64-bit SPARC. 32-bit 10g or 64-bit 11gR2 Serena-Supplied Runtime RDBMS. **NOTE** This operating-system is not supported for a co-located Dimensions RM server.	No.	Yes.

The Serena-Supplied Runtime RDBMS for each particular software platform is available:

- Directly from the Serena-supplied platform-specific Runtime DVDs. For Dimensions CM 12.1.1, only the 11gR2 versions will be available on DVD.
- By copying the contents of the appropriate DVD to your disk of choice, being careful to maintain the directory layout structure.
- By downloading a compressed file from the Serena Support Web site.

NOTE The default character set for the Serena-Supplied Runtime RDBMS is Unicode UTF-8 (Oracle designate this AL32UTF8). Dimensions CM and Dimensions RM are, by preference, designed to work with the AL32UTF8 character set, and for best performance that character set should be used. Dimensions CM and Dimensions RM 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 the Serena-Supplied Runtime RDBMS installation other than AL32UTF8, Serena strongly advises you to consult Serena Support before proceeding.

Checklist

☐	If you will be installing on a Windows PC that utilizes DHCP, ensure that you first install a Microsoft Loopback Adapter (see "Installing the Windows Serena-Supplied Runtime RDBMS on a Computer that Utilizes DHCP Network Addressing" on page 19).
☐	Ensure that the installation software is not located on a shared disk utilizing UNC pathnames (see "Preparing the Windows Serena-Supplied Runtime RDBMS Software" on page 25).
☐	Review the installation overview (see "Windows Serena-Supplied Runtime RDBMS Installation Overview" on page 26).
☐	Launch the installation (see "Launching the Serena-Supplied Runtime RDBMS Installation" on page 27).

☐	Follow the installation steps for either: ▪ 32-bit or 64-bit 11gR2 (see "Running the 32-Bit or 64-Bit 11gR2 Windows Serena-Supplied Runtime RDBMS Installer" on page 32), or ▪ 32-bit 10g (see "Running the 32-Bit 10g Windows Serena-Supplied Runtime RDBMS Installer" on page 41).
☐	Perform the post-installation steps necessary to configure the Serena-Supplied Runtime RDBMS (see "Post-installation Activities and Considerations" on page 50).

Pre-installation Considerations

Installation Disk Space Requirements for the 11gR2 Serena-Supplied Runtime RDBMS

CAUTION! The 32-bit and 64-bit Windows 11gR2 versions of the Serena-Supplied Runtime RDBMS with default database instance creation, require approximately 11Gbytes of free space on the disk upon which they are installed (the `C:\` drive by default).

Installing the Windows Serena-Supplied Runtime RDBMS on a Computer that Utilizes DHCP Network Addressing

Dynamic Host Configuration Protocol (DHCP) assigns dynamic IP addresses on a computer network. Dynamic addressing allows a computer to have a different IP address each time it connects to the network. This simplifies network administration by enabling you to add a new computer to the network without having to manually assign that computer a unique IP address.

The Serena-Supplied Runtime RDBMS, however, requires a static IP address. On a DHCP network, the assignment of a static IP address can

be achieved by installing a Microsoft Loopback Adapter as the primary adapter.

When you install a Microsoft Loopback Adapter, you will have at least two network adapters on your computer: your own network adapter and the Microsoft Loopback Adapter. The Serena-Supplied Runtime RDBMS needs to have Windows using the Microsoft Loopback Adapter as the *primary* adapter.

The primary adapter is determined by the order in which you install adapters: it is the last adapter installed. If you install additional network adapters after you install the Microsoft Loopback Adapter, you will need to uninstall the Microsoft Loopback Adapter and reinstall it to ensure it is the primary adapter.

CAUTION!

If you do not install a Microsoft Loopback Adapter as the primary adapter when connected to a DHCP network, during installation of the Serena-Supplied Runtime RDBMS you will receive a warning message about a prerequisite check failure and a prompt to proceed (YES) or not proceed (NO).

If you click YES, the installation will proceed and complete successfully. However, whenever the DHCP-assigned IP address subsequently changes (for example, at a system reboot), the Oracle Net Listener will no longer work and will have to be recreated using the Oracle Net Configuration Assistant tool.

To start the Oracle Net Configuration Assistant tool, click the Windows Start menu and then select

> All Programs | Oracle - Dimensions | Configuration and Migration Tools | Net Configuration Assistant

and click the **Help** on each dialog box for guidance in using this tool.

In such circumstances, you can install the Microsoft Loopback Adapter after installation of the Serena-Supplied Runtime RDBMS to ensure that the Oracle Net Listener will continue to work after subsequent system reboots.

Checking Whether a Microsoft Loopback Adapter Is Already Installed on Your Computer

To check whether a Microsoft Loopback Adapter is already installed on your computer, run the `ipconfig /all` command from the Command Prompt window:

```
C:\> ipconfig /all
```

If there is a Microsoft Loopback Adapter already installed, its values will be listed in the output of the above command. For example:

```
Ethernet adapter Local Area Connection 2:
  Connection-specific DNS Suffix  . :
  Description . . . . . . . . . . . : Microsoft Loopback
                                      Adapter
  Physical Address. . . . . . . . . : 02-00-4C-4F-4F-50
  DHCP Enabled. . . . . . . . . . . : Yes
  Autoconfiguration Enabled . . . . : Yes
  Autoconfiguration IP Address. . . : 169.254.25.129
  Subnet Mask . . . . . . . . . . . : 255.255.0.0
```

Even if a Microsoft Loopback Adapter is installed, you need to check that it is listed as the last adapter installed. If it is not, you will need to uninstall it (see "Uninstalling a Microsoft Loopback Adapter" on page 24) and install it again (see "Installing a Microsoft Loopback Adapter on Windows Server 2003 and 2008" on page 21) to ensure it becomes the last adapter installed.

Installing a Microsoft Loopback Adapter on Windows Server 2003 and 2008

To install a loopback adapter on Windows Server 2003 or 2008:

1 Start | Control Panel.

2 Start the Add Hardware wizard.

On those versions of Windows that support Classic View, you do this by double-clicking **Add Hardware**.

On other versions of Windows:

a In Category View, open the Device Manager:

```
Control Panel | System and Maintenance | Open Device
    Manager
```

b Right-click the top level server name.

c Select **Add Legacy Hardware**.

3 In the Welcome window, click **Next**. For Windows Server 2008, proceed to Step 6 on page 22.

4 In the **Is the hardware connected?** window, select **Yes, I have already connected the hardware**, and then click **Next**.

5 In the **The following hardware is already installed on your computer** window, at the end of the **Installed hardware list**, select **Add a new hardware device**, and then click **Next**.

6 In the **The wizard can help you install other hardware** window, select **Install the hardware that I manually select from a list**, and then click **Next**.

7 From the list of hardware types, select **Network adapters**, and then click **Next**.

8 In the Select Network Adapter window:

a Make the following selections:

- Manufacturer: Select **Microsoft**.
- Network Adapter: Select **Microsoft Loopback Adapter**.

b Click **Next**.

9 In the **The wizard is ready to install your hardware** window, click **Next**.

10 In the **Completing the Add Hardware Wizard** window, click **Finish**.

11 Restart your computer.

12 Right-click **My Network Places** on the desktop or Windows Explorer and chose **Properties**; or, from control panel, right-click **Network Connections** in Windows Server 2003 or **Networking and Sharing Center** in Windows Server 2008 and chose **Properties**. This displays the Network **Connections Panel** in Windows Server 2003 or the **Networking and Sharing Center** in Windows Server 2008. For Windows Server 2008, click the **Manage network connections** Task to show the **Connections Panel**.

13 Right-click the connection that was just created. This is usually named **Local Area Connection n** and can also be confirmed to be the Microsoft Loopback Adapter by hovering the mouse over that entry. Choose **Properties**.

14 On the General tab (Windows Server 2003) or the Networking tab (Windows Server 2008), select:

- For Windows Server 2003: **Internet Protocol (TCP/IP)**.
- For Windows Server 2008: **Internet Protocol Version 4 (TCP/IPv4)** or **Internet Protocol Version 6 (TCP/IPv6)**. The version you need to choose will be the one corresponding to the networking protocol used by your site. Version 6 is the latest version of protocol that provides communication across diverse interconnected networks; whereas, Version 4 is the default version, and the one that would normally be chosen.

  Click the **Properties** button.

15 In the Properties dialog box, click **Use the following IP address** on the General tab and enter the following:

a IP Address: Enter a non-routable IP for the loopback adapter. Oracle recommends the following non-routable addresses:

- `192.168.x.x` (where x is any value between 0 and 255)
- `10.10.10.10 (available for TCP/IPv4 only)`

b Subnet mask: Enter `255.255.255.0`.

c Record the values you entered, which you will need later in this procedure.

d Leave all other fields empty.

e Click **OK**.

16 Click **Close** to close Network Connections.

17 Restart the computer.

18 In the `C:\WINDOWS\system32\drivers\etc\hosts` file, use a text editor to add a line immediately after the `localhost` line with the following format:

```
IP_address   hostname.domainname   hostname
```

where each entry is followed by white space (for example, spaces or a tab character):

- `IP_address` is the non-routable IP address you entered in Step 15.
- `hostname` is the name of the computer.
- `domainname` is the name of the domain.

For example:

```
10.10.10.10   mycomputer.mydomain.com   mycomputer
```

19 Check the network configuration:

a Open **System** in the Control Panel, and select the Computer Name tab.

In **Full computer name**, make sure you see the host name.

b Click **Change**.

In **Computer name**, you should see the hostname.

c Exit the System Control Panel.

Uninstalling a Microsoft Loopback Adapter

To remove the loopback adapter:

1 Open **System** in the Control Panel.

2 For Windows Server 2003, on the Hardware tab, click **Device Manager**; for Windows Server 2008, click the **Device Manager Tasks** link.

3 In the Device Manager window, expand **Network adapters**. You should see **Microsoft Loopback Adapter**.

4 Right-click **Microsoft Loopback Adapter** and select **Uninstall**.

5 Click **OK**.

Preparing the Windows Serena-Supplied Runtime RDBMS Software

IMPORTANT! The Serena-Supplied Runtime RDBMS installer is not able to properly resolve Microsoft Universal Naming Convention (UNC) pathnames when accessing the installation software if that software is located on a shared network disk. An example of an UNC pathname is `\\server\share\directory`.

Consequently, the installer will exit with an error condition if you attempt to use an UNC pathname. To workaround this, you will have to copy the installation software to a local area where it can be accessed by the installer using conventional MS-DOS directory naming such as `D:\users\fred`.

The Windows Serena-Supplied Runtime RDBMS for each particular software platform is available:

- Directly from the Serena-supplied platform-specific Runtime DVDs (Dimensions CM only). For Dimensions CM 12.1.1, only the 11gR2 versions will be available on DVD.
- By copying the contents of the appropriate DVD to your disk of choice, being careful to maintain the directory layout structure (Dimensions CM only).
- As a downloadable Windows Zip file. This Zip file is available for download from Serena Support. Once you download the Zip file, you will need to extract its contents to a local disk area as described in the next subsection. The extracted contents will include the required Windows installers and Windows binaries necessary for the Serena-Supplied Runtime RDBMS.

Making the Contents of the Zip File Available to the Installer

For the installer to be able to install the Serena-Supplied Runtime RDBMS, you will need to extract the contents of the Zip file into a sub-directory on your hard disk.

Before beginning the installation, you therefore need to:

1 Decide where to locate the sub-directory.

2 Ensure you have adequate space available.

3 Extract the contents of the Zip file to the sub-directory.

Serena Oracle Response Files

The Serena Oracle response files are located in the following directory in the installation media:

```
11gR2\response
```

Windows Serena-Supplied Runtime RDBMS Installation Overview

The Windows Serena-Supplied Runtime RDBMS installation includes:

1 Automatic running of various prerequisite checks. If any of these fail, you will receive a warning message about a prerequisite check failure and a prompt to proceed (`YES`) or not proceed (`NO`). In such circumstances, you should *always* answer `NO` and proceed to "Incomplete Installation" on page 53.

IMPORTANT! Sometimes this warning message referred to above can get hidden behind other windows you may have opened during installation. Therefore, if the installation appears to have hung, minimize all opened windows to check for the presence of this warning message.

2 Automatically checking whether any Serena-Supplied Runtime RDBMS and/or RDBMS instance has already been installed.

3 Copying the Serena-Supplied Runtime RDBMS files into the directory structure you specify.

For the 32-bit Oracle 10g version of the files, this is an automatic two step process:

a Firstly, the Oracle 10.2.0.1 software will be installed.

b Secondly, the Oracle 10.2.0.2 patch will be installed onto the Oracle 10.2.0.1 software.

For the 32-bit or 64-bit Oracle 11gR2 version of the files, this is an automatic one step process in which the Oracle 11.2.0.3 software will be installed.

4 Optionally, by default, creating a database instance.

5 Starting the Serena-Supplied Runtime RDBMS by creating and automatically starting Windows services:

```
OracleService<oracle_service_name>
Oracle<oracle_home_name>TNSListener
```

For a default 32-bit 10g Serena-Supplied Runtime RDBMS installation these services will be:

```
OracleServiceDIM10
OracleDimensionsTNSListener
```

For a default 32-bit or 64-bit 11gR2 Serena-Supplied Runtime RDBMS installation these services will be:

```
OracleServiceDIM12
OracleDimensionsTNSListener
```

NOTE All other `Oracle<oracle_home_name>*` services created by the Serena-Supplied Runtime RDBMS installer do not need to be started or active to access Dimensions CM or Dimensions RM.

Launching the Serena-Supplied Runtime RDBMS Installation

This section covers the different approaches to running the Serena-Supplied Runtime RDBMS installer.

Introduction

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 Serena-Supplied Runtime RDBMS installer software, you launch the installer in one of the following ways:

- From the HTML front end that comes with the Serena-Supplied Runtime RDBMS Software DVD (Dimensions CM only and restricted to the 32-bit or 64-bit 11gR2 Serena-Supplied Runtime RDBMS software). Proceed to "Launching the Installer from the HTML Front End (Dimensions CM Only)" on page 28.
- 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 File Contents" on page 30.

Launching the Installer from the HTML Front End (Dimensions CM Only)

1. Log in as a user with local Administrative privileges.
2. Insert the Dimensions 32-bit or 64-bit 11gR2 Serena-Supplied Runtime RDBMS Windows Software DVD into your DVD drive (or navigate to and run the HTML installation front end `index.html` file in the directory containing the copied contents of the DVD).
3. If the HTML installation front end does not automatically start when using a DVD, do one of the following:
   - From My Computer, right-click the **DVD** icon and select **AutoPlay**.
   - Run `index.html` from the DVD drive.

NOTES

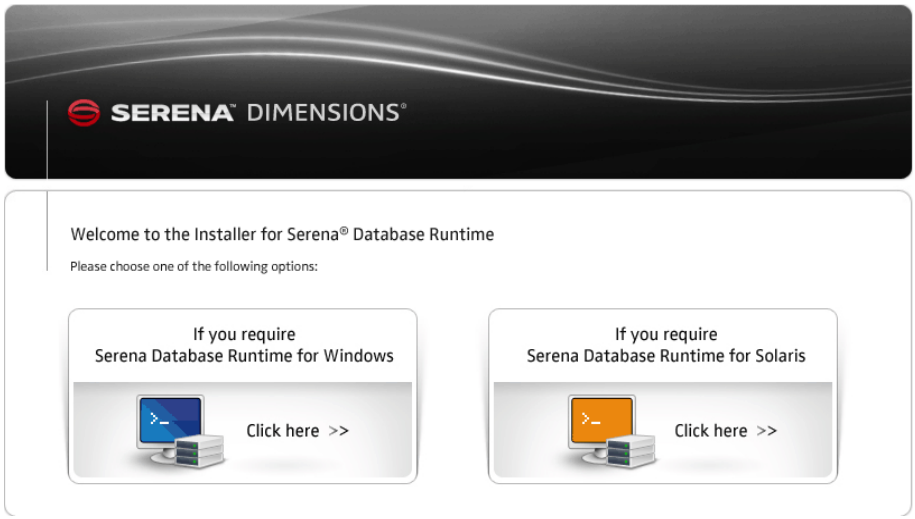
- If running Microsoft Internet Explorer 8 browser, please ensure that you are running in compatibly view:

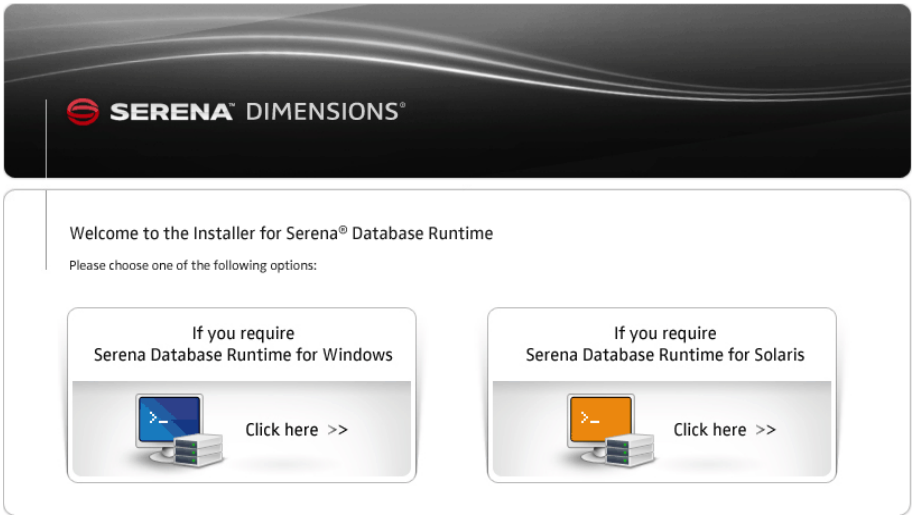
  ```
  Tools | Compatibility View Settings |
      Display all Websites in Compatibility View
  ```

- Some Windows systems, such as Windows Server 2003 or 2008, have high default security settings. If you are installing the Serena-Supplied Runtime RDBMS 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.

NOTES

- Depending on your browser and its settings, you may receive:
  - **a** **File Download - Security Warning** message **Do you want to run or save this file?** If so, click **Run**.
  - **b** **Internet Explorer - Security Warning** message **The publisher could not be verified...** If so, click **Run**.





4 Click **Click here >>** in the **If you require Serena Database Runtime for Windows** region to initiate the installation wizard.

5 Proceed to "Running the 32-Bit or 64-Bit 11gR2 Windows Serena-Supplied Runtime RDBMS Installer" on page 32.

NOTE It will take some time for the installer to process various files before the **Welcome** screen appears; please be patient.

Launching the Installer from the Extracted Downloaded Zip File Contents

1 Log in as a user with local Administrative privileges.

2 Navigate down to and run the appropriate extracted downloaded file

```
SerenaOracleRuntime32.exe
```

or

```
SerenaOracleRuntime64.exe
```

NOTE Some Windows systems (for example Windows Server 2003 or 2008) have high default security settings. If you are installing the Serena-Supplied Runtime RDBMS 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.

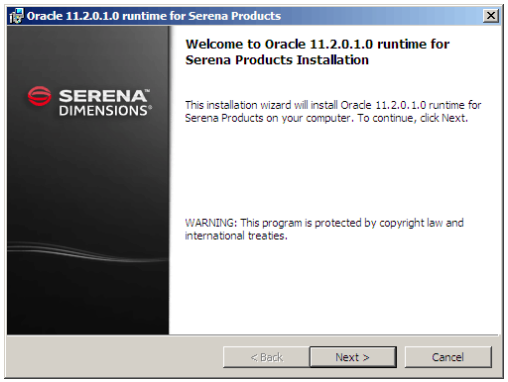
3 Proceed to "Running the 32-Bit or 64-Bit 11gR2 Windows Serena-Supplied Runtime RDBMS Installer" on page 32 or "Running the 32-Bit 10g Windows Serena-Supplied Runtime RDBMS Installer" on page 41.

NOTE It will take some time for the installer to process various files before the **Welcome** screen appears; please be patient.

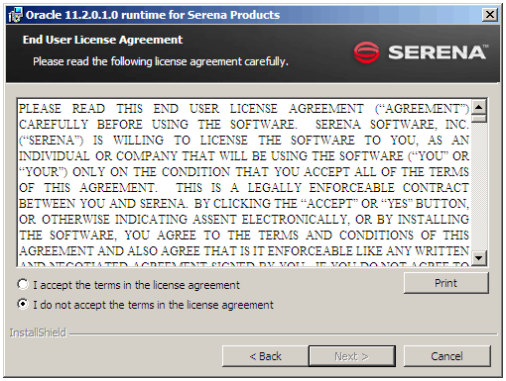
Running the 32-Bit or 64-Bit 11gR2 Windows Serena-Supplied Runtime RDBMS Installer

NOTE The steps and installer screens for installing the 32-bit and the 64-bit 11gR2 Windows Serena-Supplied Runtime RDBMS are the same apart from some minor differences—these differences will be noted at the appropriate places.

Initial Steps



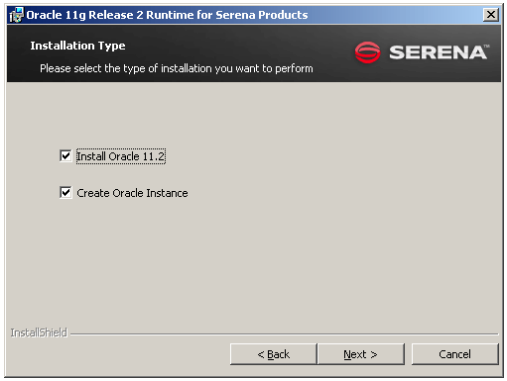
1 Click **Next** to start the installation.



2 Read the license agreement and click **I accept the terms of the End User License Agreement** to accept the terms, and then click **Next**.

Specifying Installation Parameters

In *Step 4 to Step 6* of the following, if a Serena-Supplied Runtime RDBMS from a previous Dimensions CM for Windows or Dimensions RM installation is still present on your Windows system or has not been completely uninstalled (for example, old registry entries still exist), then the default values presented by the installer (directory names, Oracle home name, and Oracle SID) may reflect these old values. In such circumstances, you must *not* accept these defaults as this may cause the installation to fail; you must specify new, unique values for the new Serena-Supplied Runtime RDBMS installation.

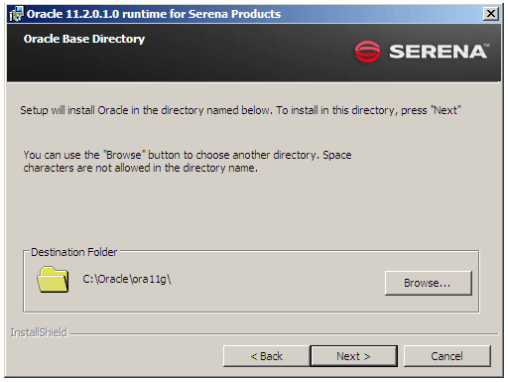


3 Select the type of installation you wish to perform and click **Next**.

the default is for the **Install Oracle 11.2** and **Create Oracle Instance** check boxes to be checked.

IMPORTANT! You cannot use the installer **Create Oracle Instance** check box option to separately create an instance in an existing 11gR2 RDBMS (the installer will prevent you selecting this option). If you want to separately create an instance, you must use the template provided by Serena (or your own) and use the Oracle Database Configuration Assistant utility.

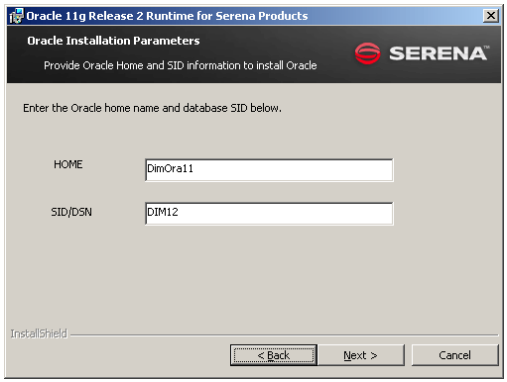
If you plan to plan to use a locally installed Serena-Supplied Runtime RDBMS as a client to communicate with a remotely installed Serena-Supplied Runtime RDBMS, you should also uncheck **Create Oracle Instance**.



4 Accept the default Oracle Home destination directory for the Oracle software or click **Browse** to select a different location, and click **Next**.

Only accept the default if there is no existing Serena-Supplied Runtime RDBMS installation on your Windows system; otherwise, use **Browse** to select a new, unique directory name.

IMPORTANT! Space characters are *not* allowed in the directory name.



5 Specify values for the parameters that are requested on this page.

a Specify an Oracle home name to be given to the Oracle installation (Serena recommend `DimOra11`).

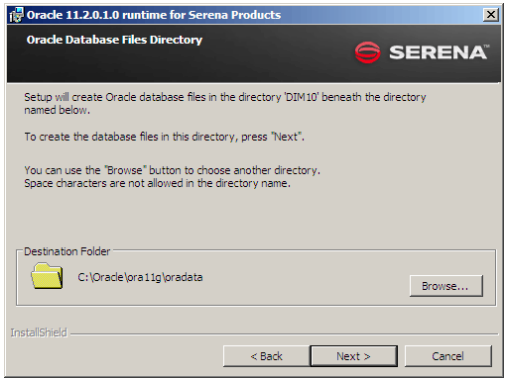
If there is an existing Serena-Supplied Runtime RDBMS installation on your Windows system with a home name of, for example, `DimOra11`, make sure you specify a new, unique home name, for example, `DimOra11 Ver2`.

IMPORTANT! Make a note of this name, as it will appear in the list of known Oracle home names displayed during the installation of the Dimensions CM for Windows or Dimensions RM server, and you must ensure at that point that you select the name that you are specifying here.

b Specify an Oracle SID/DSN. This is an alphanumeric string, up to eight characters long, used to uniquely identify this installation of the third-party Oracle installation (Serena recommend `DIM12`).

NOTE

- The SID name must only contain alphanumeric characters.
- The first character of the SID must be alphabetic.
- For 11gR2, the SID Is case-sensitive.

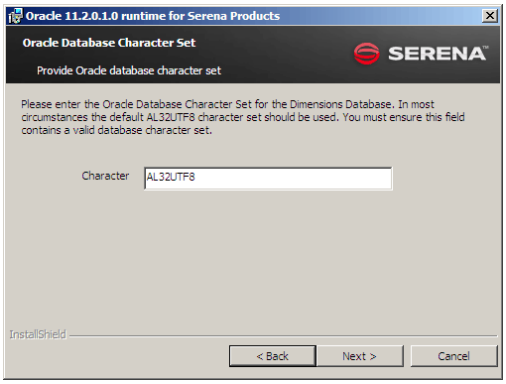


6 Specify the root directory into which the Serena-Supplied Runtime RDBMS database files will be created. The database files will be created in a sub-directory of the root-directory, with the sub-directory name being the same as the name you specified for the Oracle SID/DSN in Step 5 on page 35, `DIM12` being the recommended value.

- The default root directory is `C:\Oracle\ora11g\oradata`. You can, if desired, use **Browse** to select a new directory name.
- The recommended sub-directory is DIM12, but the value will be as specified in Step 5 on page 35.

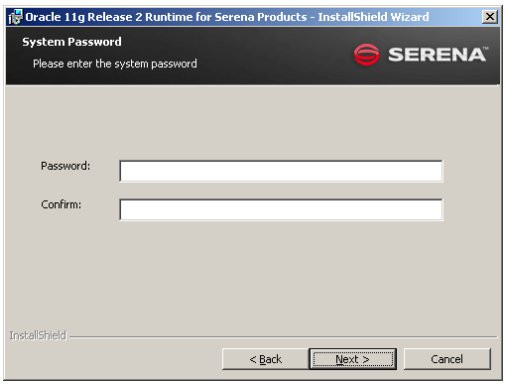
IMPORTANT! Space characters are not allowed in the directory name.

NOTE If the destination you specify contains insufficient space, you will be notified of that fact.



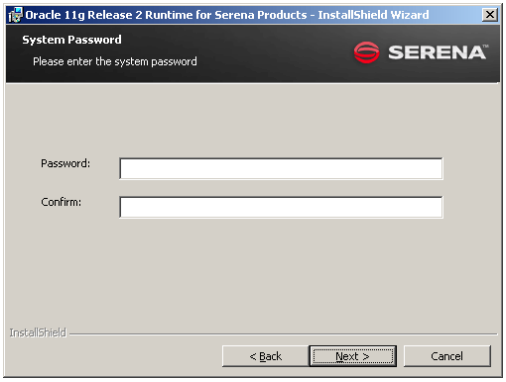
7 Specify the Serena-Supplied Runtime RDBMS database character set that will be used when creating the Dimensions database and click **Next**. This field must contain a valid character set for the installation to succeed.

IMPORTANT! If you plan to use a character set other than the Unicode UTF-8 AL32UTF8 character set, Serena strongly advises you to consult Serena Support before proceeding. See page 18 for a discussion of database character sets.



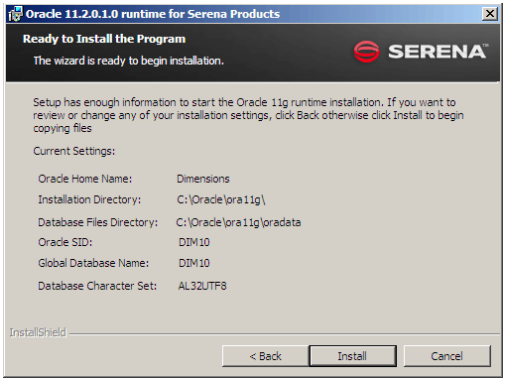
8 Type and confirm the password to be assigned to the oracle `SYSTEM` user, and click **Next**.

IMPORTANT! Oracle 11g2R2 password recommendations are that you do not use the default of `'manager'` (or any case variants of that password) for `SYSTEM`. If you follow those recommendations, you must ensure that you keep a record of the passwords you assign, otherwise Serena Support will not be able to provide you with assistance if you have any problems with you database.



9 Type and confirm the password to be assigned to the oracle `SYS` user, and click **Next**.

IMPORTANT! Oracle 11g2R2 password recommendations are that you do not use the default of `'change_on_install'` (or any case variants of those passwords) for `SYS`. If you follow those recommendations, you must ensure that you keep a record of the passwords you assign, otherwise Serena Support will not be able to provide you with assistance if you have any problems with you database.



10 Review your installation settings carefully (the order they are presented in and the values will differ depending on whether you are using the 32-bit or 64-bit version) and click **Install** if they are correct and complete. Go to "Progress Monitoring" on page 47. See also, "Error Recovery" on page 53 if the installation appears to stall.

To make changes to your installation settings, you must click **Back** until you reach the relevant page and start the installation sequence again.

Progress Monitoring

If the default installer options were chosen, an installation of the Serena-Supplied Runtime RDBMS will typically take about an hour to complete, depending on the recipient system's attributes.

During the installation, a third-party Oracle Universal Installer console window and a Windows Command Prompt window will monitor and provide feedback on the progress of the installation. In addition, logs of the installation will be generated in:

- `C:\Oracle\Inventory\logs`
- X:\Oracle\cfgtoolslogs\dbca\<OraSID>

NOTES

- On certain Windows systems you may need to 'unblock' system blockers that pop up during installation.
- The inventory logs will always be located in

  `C:\Oracle\Inventory\logs`

  regardless of the directories you chose for receipt of the third-party Oracle files in the installation wizard.

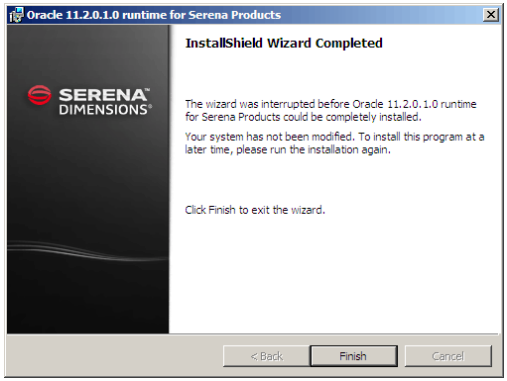
11 The third-party Oracle Universal Installer console window monitors the progress of the installation of the Oracle 11.2.0.3 base server files. Once this stage of the installation is completed successfully (please be patient), you will be prompted to press ENTER to exit the Oracle Universal Installer console window.

IMPORTANT! If this screen fails to appear after a few minutes, the prerequisite checks will probably have failed. See Step 1 on page 26 for details of how to proceed.

12 If the default **Create Oracle Instance** check box was left checked in Step 3 on page 33, the third-party Database Configuration Assistant will start creating the instance; otherwise, the installation will progress to Step 13 on page 41. During the instance creation process:

A Command Prompt window appears to monitor progress of the database instance creation.

IMPORTANT! Creating an Oracle instance takes a fairly long time. Please be patient.



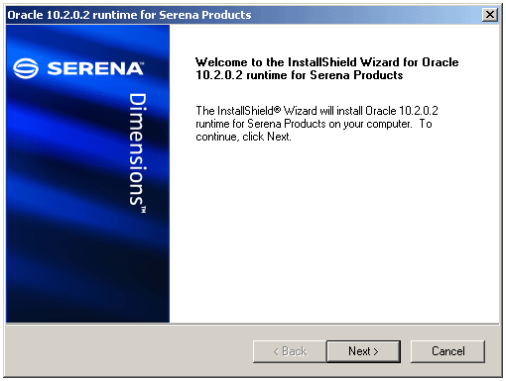
13 When installation completes, the above screen appears. Click **Finish** to exit the Wizard.

14 Proceed to "Post-installation Activities and Considerations" on page 50.

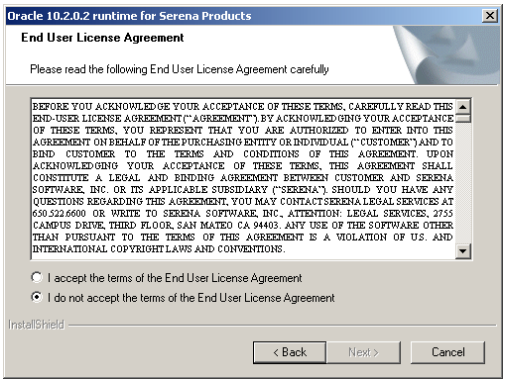
Running the 32-Bit 10g Windows Serena-Supplied Runtime RDBMS Installer

This section walks through the process of running the installer for the 32-bit 10g Windows version of the Serena-Supplied Runtime RDBMS.

Initial Steps



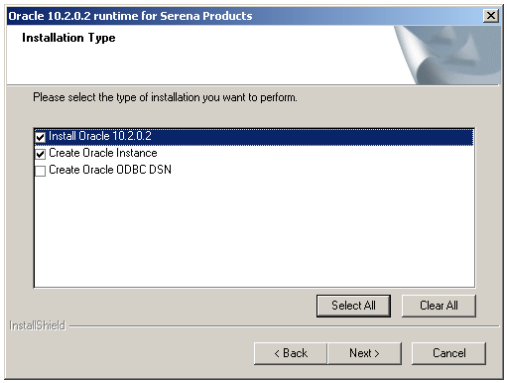
1 Click **Next** to start the installation.



2 Read the license agreement and click **I accept the terms of the End User License Agreement** to accept the terms, and then click **Next**.

Specifying Installation Parameters

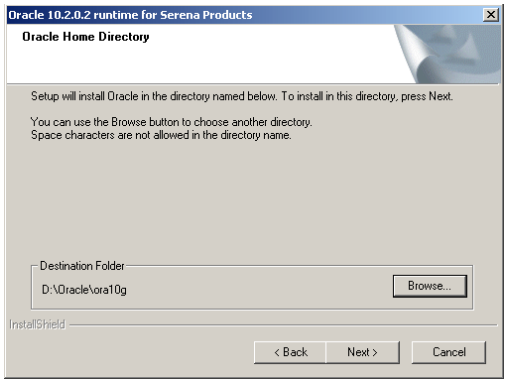
IMPORTANT! In *Step 4 on page 44* to *Step 6 on page 46* of the following, if a Serena-Supplied Runtime RDBMS from a previous Dimensions CM for Windows or Dimensions RM installation is still present on your Windows system or has not been completely uninstalled (for example, old registry entries still exist), then the default values presented by the installer (directory names, Oracle home name, and Oracle SID) may reflect these old values. In such circumstances, you must *not* accept these defaults as this may cause the installation to fail; you must specify new, unique values for the new Serena-Supplied Runtime RDBMS installation.



3 Select the type of installation you wish to perform and click **Next**. The default is for the **Install Oracle 10.2.0.2** and **Create Oracle Instance** check boxes to be checked.

The **Create Oracle ODBC DSN** check box is a non-functioning historical artifact left over from when Dimensions CM supported the alternative Open Database Connectivity (ODBC) mechanism (it now only supports the Oracle Open Call Interface (OCI) connectivity mechanism, as does Dimensions RM)—you should *not* select this check box.

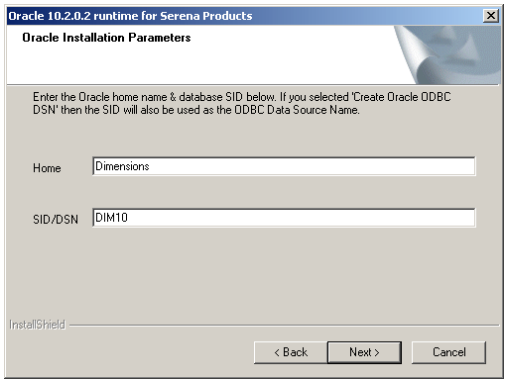
If you plan to plan to use a locally installed Serena-Supplied Runtime RDBMS as a client to communicate with a remotely installed Serena-Supplied Runtime RDBMS, you should also uncheck **Create Oracle Instance**.



4 Accept the default destination directory for the third-party Oracle software or click **Browse** to select a different location, and click **Next**.

Only accept the default if there is no existing Serena-Supplied Runtime RDBMS installation on your Windows system; otherwise, use **Browse** to select a new, unique directory name.

IMPORTANT! Space characters are *not* allowed in the directory name.



5 Specify values for the parameters that are requested on this page.

a Specify an Oracle home name to be given to the third-party Oracle installation.

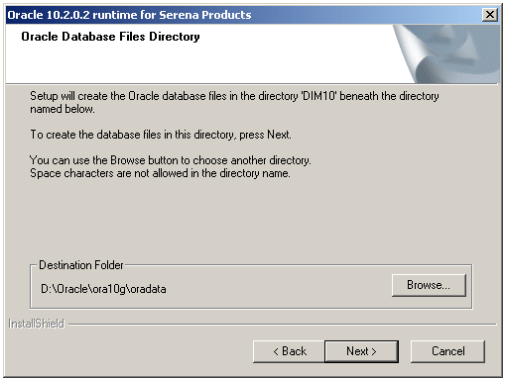
If there is an existing Serena-Supplied Runtime RDBMS installation on your Windows system with a home name of, for example, `Dimensions`, make sure you specify a new, unique home name, for example, `Dimensions 2010`.

IMPORTANT! Make a note of this name, as it will appear in the list of known Oracle home names displayed during the installation of the Dimensions CM or Dimensions RM server, and you must ensure at that point that you select the name that you are specifying here.

b Specify an Oracle SID/DSN. This is an alphanumeric string, up to six characters long, used to uniquely identify this installation of the third-party Oracle installation. The default displayed is DIM10, but Serena recommend `DIM12` for both Dimensions CM and Dimensions RM.

NOTE

- The SID name must only contain alphanumeric characters.
- The first character of the SID must be alphabetic.
- For 11gR2, the SID Is case-sensitive

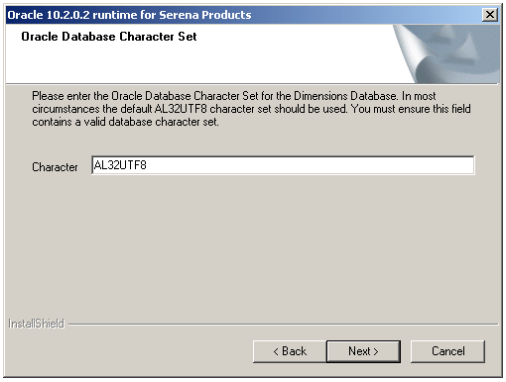


6 Specify the directory into which the Serena-Supplied Runtime RDBMS database files will be created.

Only accept the default if there is no existing Serena-Supplied Runtime RDBMS installation on your Windows system; otherwise, use **Browse** to select a new, unique directory name.

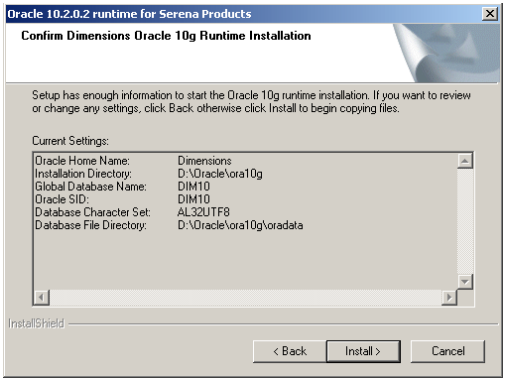
IMPORTANT! Space characters are not allowed in the directory name.

NOTE If the destination you specify contains insufficient space, you will be notified of that fact.



7 Specify the Serena-Supplied Runtime RDBMS database character set that will be used when creating the Dimensions database and click **Next**. This field must contain a valid character set for the installation to succeed.

IMPORTANT! If you plan to use a character set other than the Unicode UTF-8 AL32UTF8 character set, Serena strongly advises you to consult Serena Support before proceeding. See page 18 for a discussion of database character sets.



8 Review your installation settings carefully and click **Install** if they are correct and complete. Go to "Progress Monitoring" on page 47. See also, "Error Recovery" on page 53 if the installation appears to stall.

To make changes, you must click **Back** until you reach the relevant page and start the installation sequence again.

Progress Monitoring

If all the installer options were chosen, an installation of the Serena-Supplied Runtime RDBMS will typically take about an hour to complete, depending on the recipient system's attributes.

During the installation, third-party Oracle Universal Installer (twice) and Database Configuration Assistant screens will monitor and provide feedback on the progress of the installation. In addition, logs of the installation will be generated in:

- `C:\Oracle\Inventory\logs`
- `X:\Oracle\ora10g\cfgtoollogs\dbca\<oraSID>`

NOTES

- On certain Windows systems you may need to 'unblock' system blockers that pop up during installation.
- The inventory logs will always be located in

  `C:\Oracle\Inventory\logs`

  regardless of the directories you chose for receipt of the third-party Oracle files in the installation wizard.

9 The first occurrence of the third-party Oracle Universal Installer screen monitors the progress of the installation of the Oracle 10.2.0.1 base server files. No input is required.

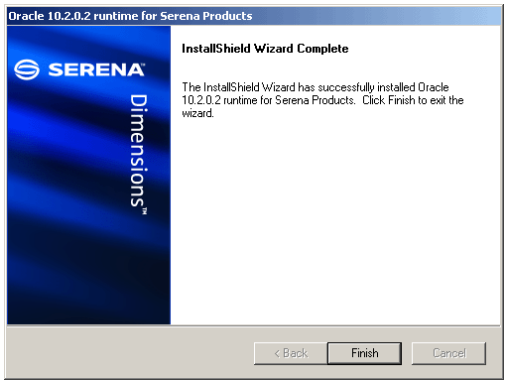
IMPORTANT! If this screen fails to appear after a few minutes, the prerequisite checks will probably have failed. See Step 1 on page 26 for details of how to proceed.

10 The second occurrence of the third-party Oracle Universal Installer screen monitors the progress of the installation of the Oracle 10.2.0.2 patch to the Oracle 10.2.0.1 base server files. No input is required.

11 If the default **Create Oracle Instance** check box was left checked in Step 3, the third-party Database Configuration Assistant screen will be displayed; otherwise, the installation will progress to Step 13.

IMPORTANT! Creating an Oracle instance will take a fairly long time. Some of the steps, for example, **Creating data dictionary views** and **Adding Enterprise Manager Repository** may appear to "freeze". Please be patient, do *not* click the **Stop** button.

12 When the Oracle instance completes, click **OK** on the associated third-party Database Configuration Assistant screen. Please ignore the Password Management facility.



13 When installation completes, the above screen appears. Click **Finish** to exit the Wizard.

14 Proceed to "Post-installation Activities and Considerations" on page 50.

Post-installation Activities and Considerations

This section covers some post-installation tasks.

General Post-installation Activities

Before the new installation can be used, check in the Windows Services Tool (`Control Panel | Administrative Tools | Services`) that the following Windows services have been automatically started.

```
OracleService<oracle_service_name>
Oracle<oracle_home_name>TNSListener
```

There may be other Oracle Services installed, but only the two identified above are required by Dimensions CM or Dimensions RM.

For a default 32-bit 10g Serena-Supplied Runtime RDBMS installation these services will be:

```
OracleServiceDIM10
OracleDimensionsTNSListener
```

For a default 32-bit or 64-bit 11gR2 Serena-Supplied Runtime RDBMS installation these services will be:

```
OracleServiceDIM12
OracleDIOra11TNSListener
```

If these Windows services are not running, attempt to start them using the Windows Services Tool. If it is not possible to manually start them, proceed to "Error Recovery" on page 53.

Applying Oracle Patches

Patching the 32-Bit 10g Serena-Supplied Runtime RDBMS

The installed 32-bit 10G Serena-Supplied Runtime RDBMS is at Oracle release level 10.2.0.2. For Dimensions CM, no subsequent patching is required.

For Dimensions RM, however, Serena recommend that the 32-bit Serena-Supplied Runtime RDBMS needs to be patched to a minimum of Oracle

release level 10.2.0.3 or, preferably, 10.2.0.4. You can download the 10.2.0.4 patch from:

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

In the **Ask a Question** search field, search for the following patch:

P2484

Oracle 10.2.0.4 Windows 32bit Patch Set

After unzipping the Oracle patch, locate the Oracle 10.2.0.4 patchset installation instructions in the `patch_note.htm` file in the top-level directory. Apply the patch according to instructions and upgrade the `DIM10` database as part of those instructions.

Patching the 32-Bit or 64-Bit 11gR2 Serena-Supplied Runtime RDBMS

The installed 32-bit or 64-bit Serena-Supplied Runtime RDBMS is at Oracle release level 11.2.0.3. For both Dimensions CM and Dimensions RM, no subsequent patching is required.

Creating an Oracle Instance

Creating a 32-Bit 10g Serena-Supplied Runtime Oracle Instance

For Dimensions CM, the default Oracle instance (`DIM10`) created by the 32-bit 10g Serena-Supplied Runtime RDBMS installer can be directly used when installing a Dimensions CM server.

For Dimensions RM, however, `DIM10` is only suitable if you are an experienced Oracle DBA, as to use it involves manually merging the Dimensions CM Oracle template `Dim10Oracle10g.dbt` and the standard Oracle Provided `Transaction Processing` template, plus various other manual Oracle tasks. Consequently, Serena normally recommend that you create a new instance for Dimensions RM (typically called `RM`) when installing a Dimensions RM server.

Full instructions on how to create a new Oracle instance for use by the Dimensions RM server (using the Windows Oracle Database Configuration Assistant (DBCA)) are provided in the Dimensions RM

Installation Guide. That guide also describes how to delete the `DIM10` instance, which helps improve database performance

.

IMPORTANT! Do *not* delete the `DIM10` instance if you plan to install both Dimensions CM and Dimensions RM into the same RDBMS to make use of the ALM integration between these two products.

Creating a 32-Bit or 64-Bit 11gR2 Serena-Supplied Runtime Oracle Instance

The default Oracle instances created by the 32-bit or 64-bit 11gR2 Serena-Supplied Runtime RDBMS installer (`DIM12`) utilizes a Dimensions ALM Oracle 11gR2 database template. This instance can be used either:

- Separately by either a Dimensions CM or a Dimensions RM server installation.
- Jointly for Dimensions CM and Dimensions RM server installations associated together in an Application Lifecycle Management (ALM) integration.

11gR2 Oracle Password Expiration

For the 11gR2 versions of the Serena-Supplied Runtime RDBMS, the Oracle account passwords expire after 180 days (which is the Oracle default).

To make passwords permanent, consult your DBA or proceed as follows:

```
$ sqlplus system/<sysytem_password>@<OraSID>
SQL> ALTER PROFILE DEFAULT LIMIT PASSWORD_GRACE_TIME
    UNLIMITED;
SQL> EXIT;
```

IMPORTANT! With respect to Dimensions CM, if you do not make the Oracle account passwords permanent this will also have knock on effects with respect to the Dimensions CM base databases/schemas. In such default circumstances, once the Oracle account passwords are reset by the Serena-Supplied Runtime RDBMS after 180 days, the corresponding entries in the `%DM_ROOT%\dfs\registry.dat` file would need to be re-registered using the `dmpasswd` utility in order to be able to connect to Dimensions CM. See the section "Registering of Base Databases for Dimensions CM Connectivity" in the *Installation Guide for Windows* and the *System Administration Guide* for details on using `dmpasswd`.

11gR2 Oracle Case Sensitivity

To ensure correct functioning of Dimensions CM for the 11gR2 versions of the Serena-Supplied Runtime RDBMS, case-sensitivity (introduced in Oracle 11gR2 by default) has been disabled, that is, the runtime is case-insensitive.

Next Step

If the post-installation checks are successfully, proceed to the Dimensions CM i*nstallation Guide for* or Dimensions RM *Installation Guide*.

Error Recovery

This section covers some rarely necessary recovery procedures.

Incomplete Installation

If the Serena-Supplied Runtime RDBMS installation fails to successfully complete, you will need to perform a complete re-installation.

It is advisable to, first however, check the contents of the log files (file extension `'.log'`) in the directories

- `C:\Oracle\Inventorylogs`
- For the 10g version:

  `X:\Oracle\ora10g\cfgtoollogs\dbca\<oraSID>`
- For the 11gR2 version:

  `X:\Oracle\cfgtoollogs\dbca\<oraSID>`

to endeavor to understand why the installation failed, and perform any corrective actions required.

NOTES

- The Oracle inventory logs will always be located in

  `C:\Oracle\Inventorylogs`

  regardless of the disk (`X:\`) and directory you chose for receipt of the third-party Oracle files in the installation wizard.
- The most likely cause of an error is that a previous Serena-Supplied Runtime RDBMS installation has not been uninstalled correctly. See the **IMPORTANT** note that follows for instructions on how to correctly perform an uninstallation.
- If an installation prerequisite, for example, the presence of a Microsoft Loopback Adapter or minimum RAM, is not met, then you will receive a warning message about a prerequisite check failure and a prompt to proceed (`YES`) or not proceed (`NO`). In such circumstances, you should answer `NO`.

  The text file

  `C:\Oracle\Inventory\logs\opraInstallActions<date>.log`

  contains a "Prerequisites Checks" page, which will detail the prerequisite that failed to be met. You must rectify the failed prerequisite and repeat the Serena-Supplied Runtime RDBMS installation.

IMPORTANT! Do not attempt to manually delete a Serena-Supplied Runtime RDBMS installation. Use the Oracle Universal Installer (OUI), which will automatically uninstall the files and accordingly update the inventory information. Failure to do so may affect the success of subsequent installations.

The OUI is invoked by:

```
Start | Programs | Oracle - <oraclehome> | Oracle
    Installation Products | Universal Installer
```

If you need to restart the Serena-Supplied Runtime RDBMS Windows services, see "General Post-installation Activities" on page 50.

Chapter 2

Installing the UNIX Serena-Supplied Runtime RDBMS

Introduction	58
Checklist	64
Pre-installation Considerations	64
UNIX Serena-Supplied Runtime RDBMS Installation Overview	71
Installing the 64-Bit 11gR2 UNIX Serena-Supplied RDBMS	71
Installing the 32-Bit 10g UNIX Serena-Supplied RDBMS	87
Post-installation Activities	92
Error Recovery	100

Introduction

The various UNIX and Linux versions of the Serena-Supplied Runtime RDBMS are optional Serena supplied UNIX runtime RDBMS (based on 32-bit Oracle 10g or 64-bit 11gR2) to be used as foundation software for the Serena® Dimensions® CM and Serena® Dimensions® RM server. For Dimensions CM for UNIX, they can be installed either locally or remotely with respect to the server; whereas, for Dimensions RM, they can only be installed remotely with respect to the server.

If the option to use the Serena-Supplied Runtime RDBMS is not exercised, then you must have your own RDBMS pre-installed for use by Dimensions CM or Dimensions RM, namely:

- For Dimensions CM for Windows: your own Oracle 10g or 11gR2; or Microsoft SQL Server Enterprise 2005, 2008, or 2012 RDBMS.
- For Dimensions CM for UNIX, your own Oracle 10g or 11gR2 RDBMS.
- For Dimensions RM, your own Oracle 10g, 11gR1, or 11gR2 RDBMS.

For the exact versions of the Serena-Supplied Runtime RDBMS or your own Oracle or SQL Server RDBMS please see:

- The Dimensions CM or Dimensions RM readme file.
- The Serena public Dimensions CM Supported Platforms Web site at:

  http://su\pport.serena.com/roadmap/Product.aspx?sel=PVDIMENSIONS

- The Serena public Dimensions RM Supported Platforms Web site at:

  http://support.serena.com/roadmap/product.aspx?sel=RTM

IMPORTANT! The Serena-Supplied Runtime RDBMS is third-party licensed software based on Oracle 10g or 11gR2. Consequently, this software can only be used as stated on the Copyright page of this manual, that is, "Third party programs included with the Dimensions product are subject to a restricted use license and can only be used in conjunction with Dimensions". Additionally, all problems relating to the Serena-Supplied Runtime RDBMS must be addressed to Serena Support *not* the Oracle Corporation.

Serena-Supplied Runtime RDBMS Supported on Dimensions CM

The Serena-Supplied Runtime RDBMS operating systems are as a rule only supported on platforms that are also supported for Dimensions CM servers. Consequently they can normally be co-located with Dimensions CM servers unless specified otherwise.

Serena-Supplied Runtime RDBMS Operating System Type	Local UNIX Node Location Supported	Remote Node Location Supported (Windows or UNIX as Appropriate)
Windows Server 2003 R2, Enterprise Edition 32-bit x86. 32-bit 10g or 32-bit 11gR2 Serena-Supplied Runtime RDBMS.	No.	Yes. See Chapter 1.
Windows Server 2008 R2, Enterprise Edition 64-bit. 64-bit 11gR2 Serena-Supplied Runtime RDBMS only. *32-bit 10g or 32-bit 11gR2* Serena-*Supplied Runtime RDBMS not supported.*	No.	Yes (subject to conditions). See Chapter 1.
AIX 5.x 64-bit Power PC. 32-bit 10g or 64-bit 11gR2 Serena-Supplied Runtime RDBMS.	Yes.	Yes.
AIX 6.x 64-bit Power PC. 32-bit 10g or 64-bit 11gR2 Serena-Supplied Runtime RDBMS.	Yes.	Yes.
HP-UX 11.2x 64-bit PA-RISC. *Not supported.*	No.	No.
HP-UX 11.3x 64-bit x64 Itanium. 32-bit 10g or 64-bit 11gR2 Serena-Supplied Runtime RDBMS.	Yes.	Yes.
Red Hat 5.x 64-bit x86-64. 32-bit 10g or 64-bit 11gR2 Serena-Supplied Runtime RDBMS.	Yes.	Yes.
SLES 10.x 64-bit x86-64. 32-bit 10g or 64-bit 11gR2 Serena-Supplied Runtime RDBMS.	Yes.	Yes.
SLES 10.x 64-bit x64 Itanium. *Not supported.*	No.	No.

Serena-Supplied Runtime RDBMS Operating System Type	Local UNIX Node Location Supported	Remote Node Location Supported (Windows or UNIX as Appropriate)
SLES 11.x 64-bit x86-64. 32-bit 10g or 64-bit 11gR2 Serena-Supplied Runtime RDBMS.	Yes.	Yes.
Solaris 10 64-bit SPARC. 32-bit 10g or 64-bit 11gR2 Serena-Supplied Runtime RDBMS.	Yes.	Yes.

Serena-Supplied Runtime RDBMS Supported on Dimensions RM

The Serena-Supplied Runtime RDBMS operating systems are as a rule only supported on platforms that are also supported for Dimensions RM servers. Consequently they can normally be co-located with Dimensions RM servers unless specified otherwise.

Serena-Supplied Runtime RDBMS Operating System Type	Local UNIX Node Location Supported	Remote Node Location Supported (Windows or UNIX as Appropriate)
Windows Server 2003, 32-bit x86. 32-bit 10g or 32-bit 11gR2 Serena-Supplied Runtime RDBMS.	No.	Yes.
Windows Server 2003, Standard Edition 32-bit x86. 32-bit 10g or 32-bit 11gR2 Serena-Supplied Runtime RDBMS.	No.	Yes.
Windows Server 2003, Standard Edition 64-bit x86-64. 32-bit 10g or 32-bit or 64-bit 11gR2 Serena-Supplied Runtime RDBMS.	No.	Yes.
Windows Server 2003 SP2, Enterprise Edition 32-bit x86. 32-bit 10g or 32-bit 11gR2 Serena-Supplied Runtime RDBMS.	No.	Yes. See Chapter 1.

Serena-Supplied Runtime RDBMS Operating System Type	Local UNIX Node Location Supported	Remote Node Location Supported (Windows or UNIX as Appropriate)
Windows Server 2003 SP2, Enterprise Edition 64-bit x86-64. 32-bit 10g or 32-bit or 64-bit 11gR2 Serena-Supplied Runtime RDBMS.	No.	Yes. See Chapter 1.
Windows Server 2003 R1, Enterprise Edition 32-bit x86. 32-bit 10g or 32-bit 11gR2 Serena-Supplied Runtime RDBMS.	No.	Yes. See Chapter 1.
Windows Server 2003 R1, Enterprise Edition 64-bit x86-64. 32-bit 10g or 32-bit or 64-bit 11gR2 Serena-Supplied Runtime RDBMS.	No.	Yes. See Chapter 1.
Windows Server 2003 R2, 32-bit x86. 32-bit 10g or 32-bit 11gR2 Serena-Supplied Runtime RDBMS.	No.	Yes. See Chapter 1.
Windows Server 2003 R2, Enterprise Edition 32-bit x86. 32-bit 10g Serena or 32-bit 11gR2 Serena-Supplied Runtime RDBMS.	No.	Yes. See Chapter 1.
Windows Server 2003 R2, Enterprise Edition 64-bit x86-64. 32-bit 10g or 32-bit or 64-bit 11gR2 Serena-Supplied Runtime RDBMS.	No.	Yes. See Chapter 1.
Windows Server 2008, Enterprise Edition 32-bit x86. *32-bit 10g or 32-bit 11gR2 Serena-Supplied Runtime RDBMS not supported.*	No.	Yes (subject to conditions). See Chapter 1.
Windows Server 2008, Enterprise Edition 64-bit. 64-bit 11gR2 Serena-Supplied Runtime RDBMS only. *32-bit 10g or 32-bit 11gR2* Serena-*Supplied Runtime RDBMS not supported.*	No.	Yes (subject to conditions). See Chapter 1.

Serena-Supplied Runtime RDBMS Operating System Type	Local UNIX Node Location Supported	Remote Node Location Supported (Windows or UNIX as Appropriate)
Windows Server 2008 R1, Enterprise Edition 32-bit x86. *32-bit 10g or 32-bit 11gR2 Serena-Supplied Runtime RDBMS not supported.*	No.	Yes (subject to conditions). See Chapter 1.
Windows Server 2008 R1, Enterprise Edition 64-bit. 64-bit 11gR2 Serena-Supplied Runtime RDBMS only. *32-bit 10g or 32-bit 11gR2* Serena-*Supplied Runtime RDBMS not supported.*	No.	Yes (subject to conditions). See Chapter 1.
Windows Server 2008 R2, Enterprise Edition 64-bit. 64-bit 11gR2 Serena-Supplied Runtime RDBMS only. *32-bit 10g or 32-bit 11gR2* Serena-*Supplied Runtime RDBMS not supported.*	No.	Yes (subject to conditions). See Chapter 1.
AIX 5.x 64-bit Power PC. 32-bit 10g or 64-bit 11g Serena-Supplied Runtime RDBMS. **NOTE** This operating-system is not supported for a co-located Dimensions RM server.	Yes.	Yes.
AIX 6.x 64-bit Power PC. 32-bit 10g or 64-bit 11g Serena-Supplied Runtime RDBMS. **NOTE** This operating-system is not supported for a co-located Dimensions RM server.	Yes.	Yes.
HP-UX 11.2x 64-bit PA-RISC. *Not supported.*	No.	No.
HP-UX 11.3x 64-bit x64 Itanium. 32-bit 10g or 64-bit 11gR2 Serena-Supplied Runtime RDBMS.	Yes.	Yes.
Red Hat 5.x 64-bit x86-64. 32-bit 10g or 64-bit 11g Serena-Supplied Runtime RDBMS. **NOTE** This operating-system is not supported for a co-located Dimensions RM server.	Yes.	Yes.

Serena-Supplied Runtime RDBMS Operating System Type	Local UNIX Node Location Supported	Remote Node Location Supported (Windows or UNIX as Appropriate)
SLES 10.x 64-bit x86-64. 32-bit 10g or 64-bit 11g Serena-Supplied Runtime RDBMS. **NOTE** This operating-system is not supported for a co-located Dimensions RM server.	Yes.	Yes.
SLES 10.x 64-bit x64 Itanium. *Not supported.*	No.	No.
SLES 11.x 64-bit x86-64. 32-bit 10g or 64-bit 11g Serena-Supplied Runtime RDBMS. **NOTE** This operating-system is not supported for a co-located Dimensions RM server.	Yes.	Yes.
Solaris 10 64-bit SPARC. 32-bit 10g or 64-bit 11g Serena-Supplied Runtime RDBMS. **NOTE** This operating-system is not supported for a co-located Dimensions RM server.	Yes.	Yes.

The Serena-Supplied Runtime RDBMS for each particular software platform is available

- Directly from the Serena-supplied platform-specific Runtime DVDs. For Dimensions CM 12.1.1, only the 11gR2 versions will be available on DVD.
- By copying the contents of the appropriate DVD to your disk of choice, being careful to maintain the directory layout structure.
- By downloading a compressed file from the Serena Support Web site.

NOTE The default character set for the Serena-Supplied Runtime RDBMS is Unicode UTF-8 (Oracle designate this AL32UTF8). Dimensions CM and Dimensions RM are, by preference, designed to work with the AL32UTF8 character set, and for best performance that character set should be used. Dimensions CM and Dimensions RM 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 the Serena-Supplied Runtime RDBMS installation other than AL32UTF8, Serena strongly advises you to consult Serena Support before proceeding.

Checklist

☐	Ensure that you satisfy the general and platform specific Oracle pre-installation considerations (see "Pre-installation Considerations" on page 64). Failure to do is likely to lead to an incorrectly functioning Serena-Supplied Runtime RDBMS.
☐	Review the installation overview (see "UNIX Serena-Supplied Runtime RDBMS Installation Overview" on page 71).
☐	Follow the installation steps for either: ▪ 64-bit 11gR2 (see "Installing the 64-Bit 11gR2 UNIX Serena-Supplied RDBMS" on page 71). ▪ 32-bit 10g (see "Installing the 32-Bit 10g UNIX Serena-Supplied RDBMS" on page 87).
☐	Perform the post-installation steps necessary to configure the Serena-Supplied Runtime RDBMS (see "Post-installation Activities" on page 92).

Pre-installation Considerations

This section covers some issues to address before beginning the actual installation.

Installation Disk Space Requirements for the 11gR2 Serena-Supplied Runtime RDBMS

CAUTION! The 64-bit UNIX 11gR2 version of the Serena-Supplied Runtime RDBMS with default database instance creation, requires approximately 11Gbytes of free space on the disk upon which it is installed.

Installer Prerequisites

The installer requires the following to be pre-installed to satisfy its own and the database pre-requisites:

- Java runtime 1.1.5 or later to run the installer in GUI mode.
- GNU C Library `glibc` to satisfy the database pre-requisites.

Configuring System Kernel for Shared Memory and Semaphores

The UNIX Serena-Supplied Runtime RDBMS requires the UNIX system kernel to be configured for shared memory and semaphores. The RDBMS database will require one semaphore per RDBMS user process (or Dimensions CM or Dimensions RM user), plus one. The maximum number of user processes is governed by the `init.ora` parameter "processes", which by default will be set by Dimensions CM or Dimensions RM to 100. It may, thus, be necessary to adjust the values of the following UNIX system parameters to meet this requirement:

Parameter	Description
SHMMAX	The maximum size in bytes of a single shared memory segment.
SHMMIN	The minimum size in bytes of a single shared memory segment.
SHMMNI	The number of shared memory identifiers.

Parameter	Description
SHMSEG	The maximum number of shared memory segments that can be attached by a process.
SEMMNI	The number of semaphore set identifiers in the system. `SEMMNI` determines the number of semaphore sets that can be created at any one time.
SEMMNS	The number of semaphores system-wide.
SEMMSL	The maximum number of semaphores that can be in one semaphore set. Should be the same size as the maximum number of Serena-Supplied Runtime RDBMS Oracle processes.

The default settings for the above are usually sufficient, except if detailed in the readme file for particular UNIX platforms.

CAUTION! Setting the above parameters to too high a value may prevent the machine from booting up. Refer to your operating system administration documentation for further information about these parameters.

Changes to the Default Parameter Files

The default UNIX system kernel configuration values assume that you are using the default values from the parameter files provided with Dimensions CM or Dimensions RM. If you *change or reconfigure* these values, then you may need to rebuild the UNIX kernel to reflect these changes. The following table is provided to help you with this process:

Kernel Parameter	Formula to Calculate Value
SHMMAX	`0.5 * (physical memory present in machine)`
SEMMSL	`10 + GREATEST ('PROCESSES' parameter of all the init<sid>.ora files in your` Serena-Supplied Runtime RDBMS `installation)`

Kernel Parameter	Formula to Calculate Value
SEMMNS	(SUM('PROCESSES' parameter of each init<sid>.ora file in your Oracle installation EXCEPT the greatest of those 'PROCESSES' values) + (GREATEST('PROCESSES' parameter of all the init<sid>.ora files in your Serena-Supplied Runtime RDBMS installation)*2) + ((number of Serena-Supplied Runtime RDBMS Oracle instances you have installed)*10))

IBM AIX Kernel Configuration Requirements

If installing Dimensions CM or Dimensions RM products against the Serena-Supplied Runtime RDBMS under IBM AIX, the Serena-Supplied Runtime RDBMS Oracle requires that a special Oracle Post-Wait Kernel Extension be loaded prior to installation. To load this kernel extension, navigate to the following directories in the extracted Serena-Supplied Runtime RDBMS software media (that is, prior to running the installer):

- 10g:

  ```
  <oracle_media>/oracle/10.2.0.2/aix/rootpre
  ```

- 11gR2:

  ```
  <oracle11g_media>/database
  ```

and run the following commands as user `root`:

```
$ sh ./rootpre.sh
```

For further information relating to the Oracle Post-Wait Kernel Extension see the README.txt file located in the `rootpre` directory.

Presence of the UNIX "uncompress" Utility

The 10g Serena-Supplied Runtime RDBMS installer relies on the UNIX `uncompress` utility and this must be present on the UNIX machine. Most UNIX machines will have this installed as standard, and its presence can be confirmed with commands such as:

```
$ which uncompress
$ uncompress -h
```

If your UNIX machine does not have `uncompress` installed, your system administrator will need to install it before you can proceed with the installation of the 10g Serena-Supplied Runtime RDBMS.

Pre-existing Operating System User Account and Directories

A pre-existing operating system user account name must be available for the owner of the Serena-Supplied Runtime RDBMS files that will be installed, and it must be a member of a group named `dba`.

Use the standard UNIX utilities to:

1. Create a group called `dba`.
2. Create a user account name for the Oracle files (the Serena-Supplied Runtime RDBMS runtime installer will default to the account name `oracle` unless told otherwise).
3. Assign the user account name to the group dba.

During installation of the 11gR2 version of the Serena-Supplied Runtime RDBMS you will prompted for the following directories:

- A directory for the Oracle inventory files. By default:

  ```
  /var/opt/serena/oraInventory
  ```

- A directory for the Oracle installation files. By default:

  ```
  /opt/serena/oracle
  ```

These directories must be readable/writable by the Oracle owner user.

Preparing the Serena-Supplied Runtime RDBMS Software

The UNIX Serena-Supplied Runtime RDBMS for each particular software platform is available

- Directly from the Serena-supplied platform-specific Runtime DVDs (Dimensions CM only). For Dimensions CM 12.1.1, only the 11gR2 versions will be available on DVD.
- By copying the contents of the appropriate DVD to your disk of choice, being careful to maintain the directory layout structure (Dimensions CM only).

- By downloading the software.

  - 10g Version:

  As a downloadable `compressed tar` file. This compressed tar file is available for download from Serena Support. The extracted contents will include the required UNIX installers and UNIX binaries necessary for the Serena-Supplied Runtime RDBMS.

  For the installer to be able to install the Serena-Supplied Runtime RDBMS, you will need to extract the contents of the compressed `tar` file into a sub-directory on your hard disk.

  Before beginning the installation, you therefore need to:

  a Decide where to locate the sub-directory.

  b Ensure you have adequate space available.

  c Extract the contents of the compressed `tar` file to the sub-directory.

  - 11gR2 Version:

  As a downloadable UNIX tar file. This tar file is available for download from the Serena Support Web site. For each particular supported UNIX platform they are located in platform-specific UNIX tar files. The tar filename for a particular flavor of UNIX gets saved with the default name of `oracle_runtime_11201-<platform>.tar` where `<platform>` is one of the entries in the table below:

<platform>	Flavor of UNIX
AIX64	IBM AIX 5.x 64-bit Power PC
AIX64	IBM AIX 6.x 64-bit Power PC

  Each particular tar file contains an extractable UNIX installer executable file appropriate to your particular flavor of UNIX, this file being located in directory:

```
<oracle11g_media>/<platform>/Disk1/InstData/
    <platform>/VM
```

  and being named:

```
SerenaOracleRuntime.bin
```

UNIX Serena-Supplied Runtime RDBMS Installation Overview

The UNIX Serena-Supplied Runtime RDBMS installation includes:

- *For the 10g Version*: renaming the Oracle home directory supplied by the installer if it appears that a Serena-Supplied Runtime RDBMS has already been installed in that directory. This is done before the new Oracle files are loaded. The directory will be renamed by appending `.old` to the old directory, for example, `/usr/oracle` will be renamed to `/usr/oracle.old` (and the new Oracle files will then be installed in `/usr/oracle`).
- Loading the Oracle files into the Oracle home directory, setting up the file protections appropriately, and performing pre-installation and consistency checks to identify any data corruption that might have taken place during the media-to-media file transfers.
- Creating an RDBMS database of the minimum (installation default) size. Particular Dimensions CM and Dimensions RM UNIX and Linux platforms will have different sized Serena-Supplied Runtime RDBMS binaries.

Installing the 64-Bit 11gR2 UNIX Serena-Supplied RDBMS

This section walks through the process of running the installer for the 64-bit 11gR2 UNIX version of the Serena-Supplied RDBMS.

Introduction

IMPORTANT! Before launching a 64-bit 11gR2 installation you should ensure that you have met the prerequisites detailed in "Pre-installation Considerations" on page 64.

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

- From the HTML front end that comes with the Serena-supplied platform-specific Runtime DVDs (Dimensions CM only). Proceed to

"Launching the Installer from the Serena Runtime HTML Front End (Dimensions CM Only)" on page 72.

- From the installer software extracted from the tar file that you downloaded from the Serena Support Web site. Proceed to "Launching the Installer from the Extracted Downloaded tar File Contents" on page 73.

Launching the Installer from the Serena Runtime HTML Front End (Dimensions CM Only)

Mounting a Runtime Software DVD

If you are directly using a Serena Runtime Software DVD or copying its contents to a local disk of your choice, rather than accessing the equivalent downloadable tar file, you will first need to mount the DVD as described in this section.

1 Log in to the `root` account.

2 Mount the Serena Runtime DVD appropriate to the target platform, as described below, using either a DVD drive located on your machine or through NFS using an NFS server with a DVD drive.

NOTES

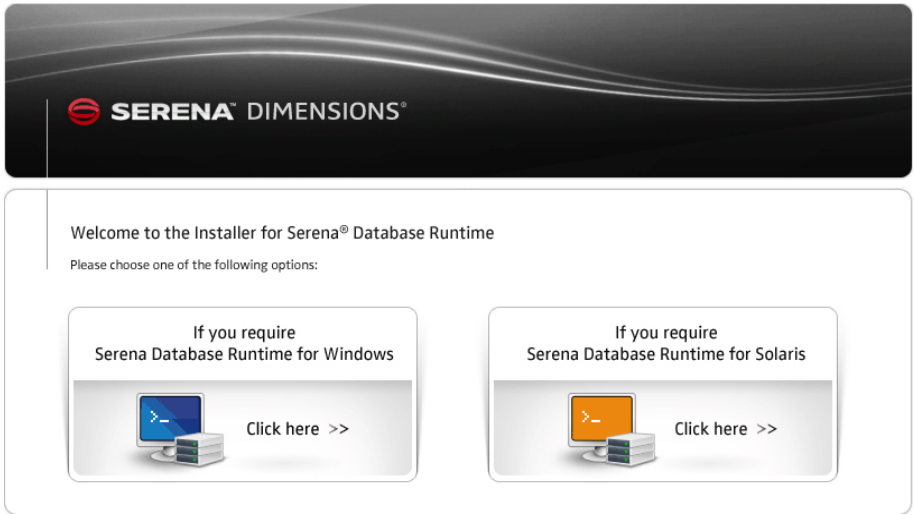
- The Serena Runtime Software DVDs are in ISO 9660 format (with Rock Ridge information).
- The following instructions include example DVD device and mount points. These will need to be modified to reflect your particular system.

IBM AIX Mount the DVD at the mount point as per the following example:

```
# mount -rv cdrfs /dev/cd0 /cdrom
```

Launching the HTML Front End

1 Navigate to and run the HTML installation front end `index.html` file either on the mounted DVD or in the directory containing the copied contents of the DVD.



2 Click **Click here >>** in the **If you require Serena Database Runtime for <platform>** region.

3 Copy the appropriate link and paste the link into a terminal window to manually run the executable in a similar manner to that described in "Launching the Installer from the Extracted Downloaded tar File Contents" on page 73.

4 Proceed to "Running the 64-Bit 11gR2 UNIX Serena-Supplied Runtime RDBMS Installer" on page 75.

Launching the Installer from the Extracted Downloaded tar File Contents

If your UNIX machine has an X11 windowing environment, the installer when initiated will, by default, run itself in a graphical user interface (GUI) mode that is analogous to the Windows version of the installer.

However, if your UNIX machine is a simple "VT100/dumb terminal" system, you can specify a `-i console` flag when you initiate the installer so that the launcher runs in character user interface (CUI) mode. This CUI mode is completely analogous, installer screen for installer screen, to the GUI mode so will not be documented separately. The standard CUI installer screen navigation key commands are:

- 1 to progress to the next screen.
- 2 to return to the previous screen.
- 3 to cancel a screen.
- 5 to re-display a screen.

NOTE You must specify -i `console` in full. Abbreviations are not accepted.

IMPORTANT! In console mode, non-alphanumeric character such as backspace will be picked up and used by the installer if so typed. For example, if you type the following for the installation location:

```
oracle/ore^?^?oracle/
```

then the installer will the assign that as the directory rather than:

```
oracle/oracle/
```

To recap:

- For GUI mode you run:

```
# xhost +
# ./SerenaOracleRuntime.bin
```

- For CUI mode you run:

```
# ./SerenaOracleRuntime.bin -i console
```

1 Log in as a user root.

2 Allow the Oracle user account access to the X11 GUI features:

```
# xhost +
```

3 Check that you have GUI capability for the Oracle user account, for example, by typing:

```
# su -oracle -c xterm
```

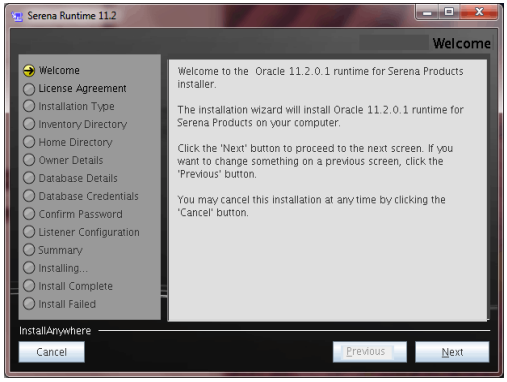
4 Run the installer binary file:

```
# ./SerenaOracleRuntime.bin
```

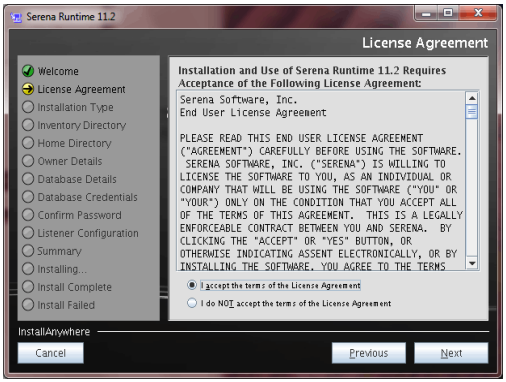
5 Proceed to "Running the 64-Bit 11gR2 UNIX Serena-Supplied Runtime RDBMS Installer" on page 75.

Running the 64-Bit 11gR2 UNIX Serena-Supplied Runtime RDBMS Installer

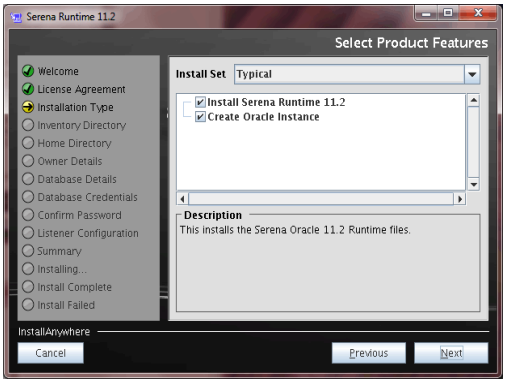
Installer Steps



1 Click **Next** to start the installation.



2 Read the license agreement and click **I accept the terms of the License Agreement** to accept the terms, and then click **Next**.



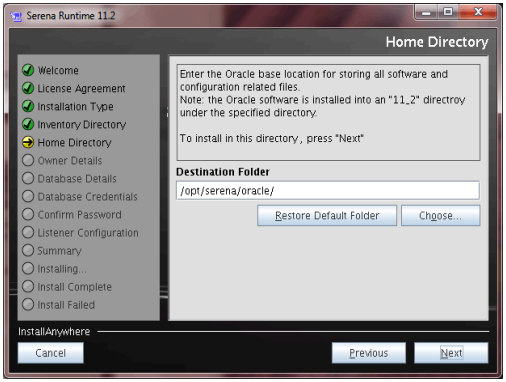
3 Select the type of installation you wish to perform and click **Next**.

The default is for the **Install Serena Runtime 11.2** and **Create Oracle Instance** check boxes to be checked.

In contrast to the 11gR2 Windows Serena-Supplied Runtime RDBMS, you can select the **Install Serena Runtime 11.2** or the **Create Oracle Instance** check box separately to either simply install the runtime or create an instance. The screens for these separate options are subset of the default **Install Serena Runtime 11.2** and **Create**

Oracle Instance and the differences will be identified where appropriate in the following screens (which will be for the default joint selection).

If you plan to plan to use a locally installed Serena-Supplied Runtime RDBMS as a client to communicate with a remotely installed Serena-Supplied Runtime RDBMS, you should also uncheck **Create Oracle Instance.**



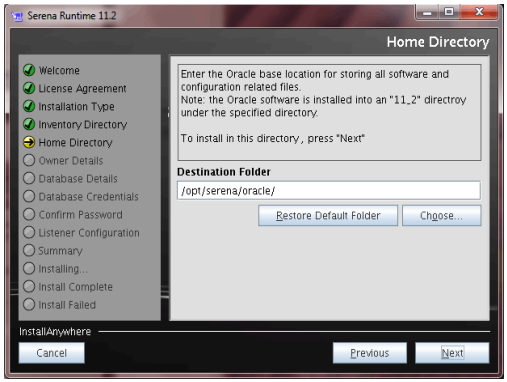
This screen is skipped for a Standalone Create Oracle Instance Installation

4 Either accept the default destination directory of `/var/opt/serena/orainventory` for the Oracle Inventory files or type a different location.

Click **Next**.

The installer automatically sets up sub-directories for each product to contain inventory data.

IMPORTANT! Space characters are *not* allowed in the directory name.



5 Either accept the default Oracle Home destination root-directory of /opt/serena/oracle for the Oracle software and configuration files or click **Choose** to select a different location. The Oracle software itself will be installed in a '11_2' sub-directory below the specified root-directory.

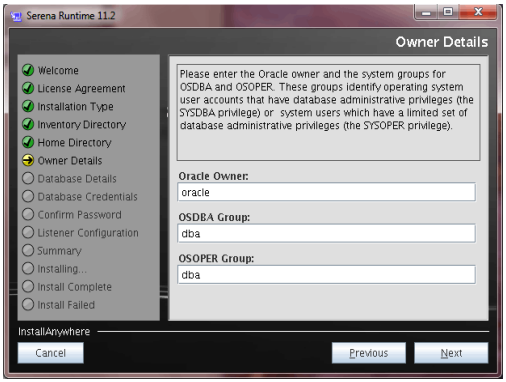
Click **Next**.

Only accept the default if there is no existing Serena-Supplied Runtime RDBMS installation on your Windows system; otherwise, use **Choose** to select a new, unique directory name.

IMPORTANT! Space characters are *not* allowed in the directory name.

- Space characters are *not* allowed in the directory name.
- Sufficient disk space must exist at the directory location specified, see `page 65.

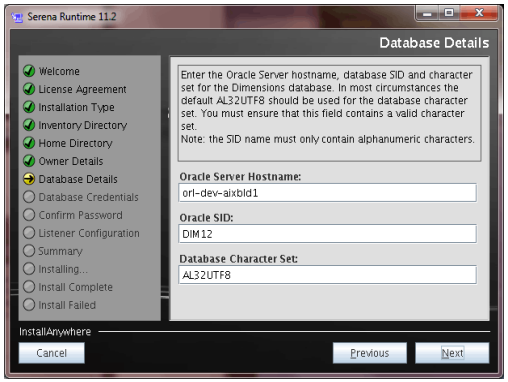
NOTE If you only selected the **Create Oracle Instance** check box at Step 3 on page 76 certain files will be installed at /opt/serena/oracle regardless of the path that you specify here for destination root-directory,



6 Either accept the default entries for **Oracle Owner**, **OSDBA Group**, and **OSOPER Group** of `oracle`, `dba`, and `dba` respectively, or populate these fields with the values relevant to your intended installation.

Click **Next.**

NOTE These groups identify operating-system user accounts that have database administrative privileges (the `SYSDBA` privilege) or system users that have a limited set of database administrative privileges (the `SYSOPER` privilege).



This screen is skipped for a Standalone Oracle Runtime Installation

7 Either accept the default entries for **Oracle Server Hostname**, **Oracle SID**, and **Database Character Set** of <local-hostname>, `DIM12`, `AL32UTF8` respectively, or populate these fields with the values relevant to your intended installation.

The Oracle SID is an alphanumeric string, up to eight characters long, used to uniquely identify this installation of the third-party Oracle installation (Serena recommend `DIM12`).

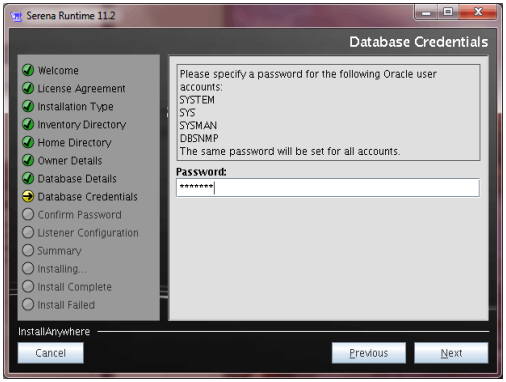
NOTE

- The SID name must only contain alphanumeric characters.
- The first character of the SID must be alphabetic.
- For 11gR2, the SID Is case-sensitive

The **Database Character Set** field must contain a valid character set for the installation to succeed in creating the Dimensions database.

IMPORTANT! If you plan to use a character set other than the Unicode UTF-8 AL32UTF8 character set, Serena strongly advises you to consult Serena Support before proceeding. See page 64 for a discussion of database character sets.

Click **Next**.



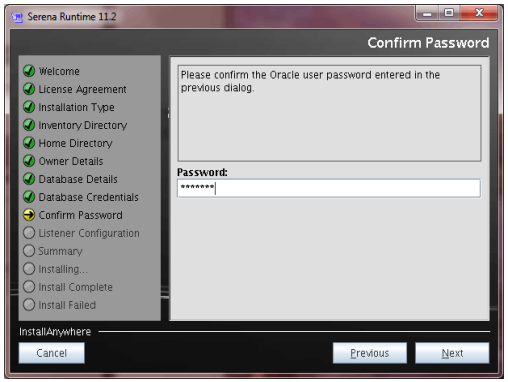
This screen is skipped for a Standalone Oracle Runtime Installation

8 Specify a common password for the following Oracle user accounts:

- SYSTEM
- SYS
- SYSMAN
- DBSNMP

IMPORTANT! Oracle 11gR2 password recommendations are that you do not use the default of `'manager'` (or any case variants of that password) for `SYSTEM`. If you follow those recommendations, you must ensure that you keep a record of the password you assign, otherwise Serena Support will not be able to provide you with assistance if you have any problems with you database.

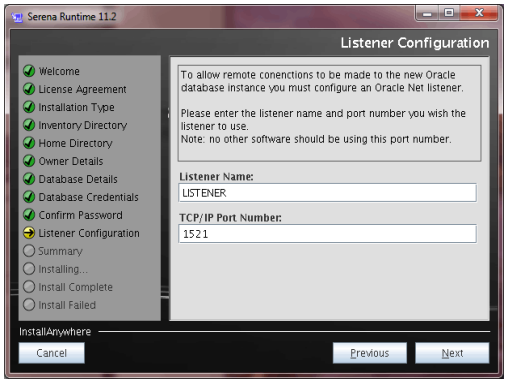
Click **Next**.



This screen is skipped for a Standalone Oracle Runtime Installation

9 Confirm the password you entered in Step 8 on page 81.

Click **Next**.

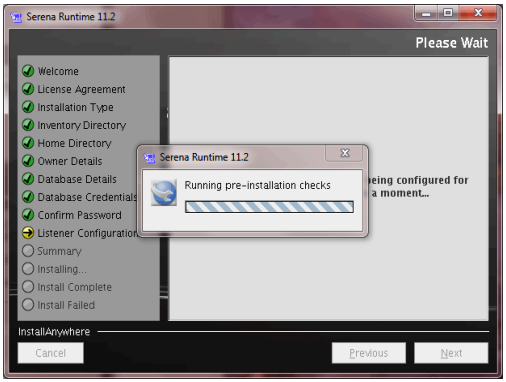


This screen is skipped for a Standalone Oracle Runtime Installation

10 Either accept the default values for the **Listener Name** and **TCP/IP Port Number** of `LISTENER` and `1521` respectively or specify values appropriate to your installation.

NOTE These parameters are require in order to configure the Oracle Net listener to allow connections to be made to the about to be created Oracle database instance.

Click **Next**.

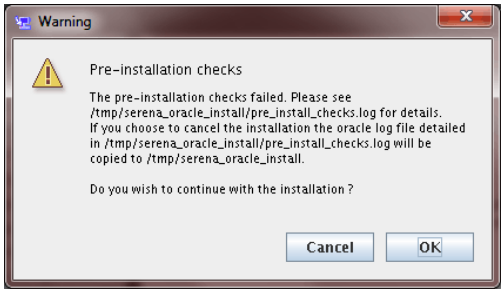


This screen is skipped for a Standalone Oracle Runtime Installation

11 The installer silently calls the Oracle Universal Installer (OUI) to perform some pre-installation checks.

If the checks are successful, you will progress to the next screen (see Step 12 on page 85) summarizing the parameters that will be used for the installation.

If the checks fail, the following dialog box appears.



You will be referred to:

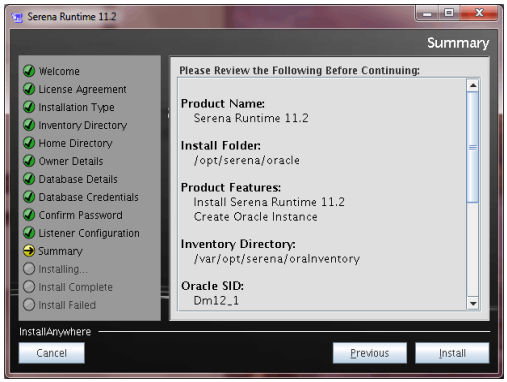
```
/tmp/serena_orcle_install/pre_install_checks.log
```

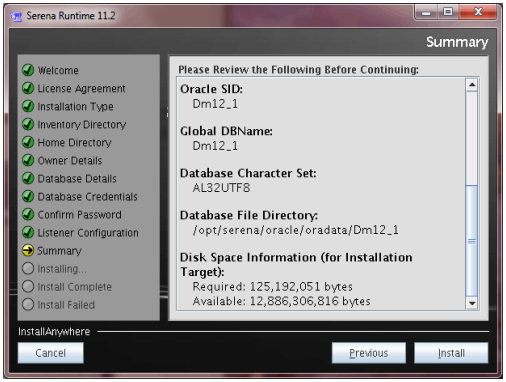
for details of what caused the failure.

After reading the log file to determine the nature and seriousness of the failure, either:

Click **Cancel** to exit the installation and then go to "Error Recovery" on page 100.

Click **OK** to proceed with the installation.



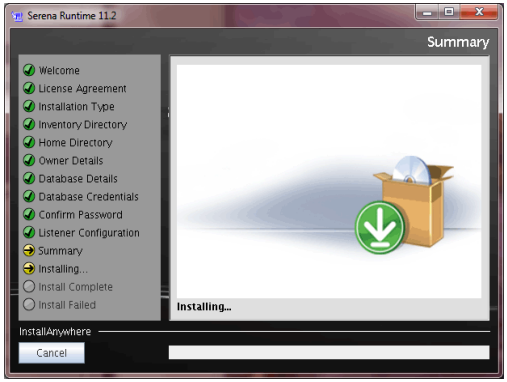


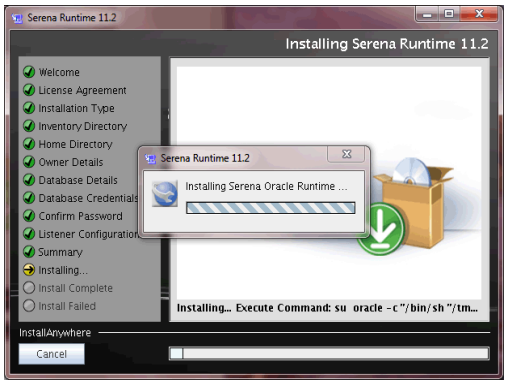
12 Review your installation settings carefully (the settings presented and the values will differ depending on whether you are doing a default runtime plus database instance creation installation or a standalone runtime or instance creation installation) and click **Install** if they are correct and complete. Go to "Progress Monitoring" on page 85. See also, "Error Recovery" on page 100 if the installation appears to stall.

To make changes to your installation settings, you must click **Previous** until you reach the relevant screen and start the installation sequence again.

Progress Monitoring

NOTE If the default installer options were chosen, an installation of the Serena-Supplied Runtime RDBMS will typically take about an hour to complete, depending on the recipient system's attributes.





13 The first phase of the installation begins, populating the directories you specified earlier.

14 The installation will then continue to create the Oracle instance (if chosen as an installation option), the network configuration files, etc.

15 When installation completes, exit the installer.

16 Proceed to "Post-installation Activities" on page 92.

Installing the 32-Bit 10g UNIX Serena-Supplied RDBMS

This section walks through the process of running the installer for the 32-bit 10g UNIX version of the Serena-Supplied RDBMS.

Starting the Installation

At various points, the installer displays messages and asks for the input of appropriate information. Where there is a default value, this is shown in square brackets. This will be used if the input is just the `RETURN` key.

NOTE It is good practice to keep a log of the installation using the UNIX command `script`, if available. If keeping a log, then remember to exit from the log session after the installation.

The 32-bit 10g Serena-Supplied Runtime RDBMS installation software is available in the following ways:

- A downloadable compressed UNIX `tar` image

  ```
  dimensions_oracle_<platform_id>.tar
  ```

  for example `dimensions_oracle_aix.tar`. Each image, one for each UNIX flavor supported, is available for download from Serena Support.

  Once you have downloaded this compressed `tar` image, you will need to uncompress it and extract its contents to an appropriate local disk area. These extracted contents will include the required installation scripts and an included UNIX `tar` file necessary for the Serena-Supplied Runtime RDBMS.

- A UNIX platform specific DVD (only available with earlier media releases of Dimensions CM; for Dimensions CM 12.1 or later, only the 64-bit 11gR2 versions are shipped on DVDs).

- The copied contents of the appropriate DVD directories.

IMPORTANT! You must log in to the `root` account to perform the installation *not* the user account that will own the Oracle files

Start the 10g Serena-Supplied Runtime RDBMS installation procedure with the following initial commands for all UNIX or Linux platforms:

```
# script install_ora.log
# umask 022
```

NOTE Remember to exit script logging after completion of the Oracle installation by typing `exit`.

If installing the 10g Serena-Supplied Runtime RDBMS from a local disk area into which you extracted the downloaded Serena-supplied `tar` image or have copied the DVD contents, navigate to the top of that area and then type the following operating-system commands:

```
# cd oracle/10.2.0.2/<platform_id>
# sh install_ora
```

Alternatively, if installing the Serena-Supplied Runtime RDBMS from a Oracle runtime DVD, type the following operating-system command:

```
# cd /cdrom/oracle/10.2.0.2/<platform_id>
# sh install_ora
```

Where `<platform_id>` corresponds to the flavor of UNIX/Linux, namely, `aix`, `hpux`, hpuxia64, `linux`, linux-suse32, or `solaris`.

NOTE *Sun Sparc:* If your machine uses Volume Management to automount DVD-ROMs (`vold(1M)` daemon will be running), then instead of the above, type:

```
# cd /cdrom/<volume_id>/oracle/10.2.0.2/solaris
# sh install_ora
```

where `<volume_id>` is the Volume Label of the DVD e.g. `cdrom0`.

CAUTION! *Hewlett Packard HP-UX:* If the `mount` command on your system fails to convert filenames to lower case and does not remove version strings, then type instead:

```
# cd /cdrom/<volume_id>/oracle/10.2.0.2/hpux
# sh 'INSTALL_ORA;1' default
```

The following message will be displayed:

Screen Output

```
Oracle 10.2.0.2 Runtime for Dimensions Installation Requirements
----------------------------------------------------------------

      1 You are currently running from the root account.
      2 OS user account exists for the Oracle owner and is in
          group dba.
      3 The Oracle runtime DVD-ROM is mounted or there is a copy
        of the tar file available on this machine.
      4 The following disk space requirements are met:
        -- xxx Gbytes for Oracle Runtime
```

NOTE The `tar` file referred to here is not the compressed `tar` file downloadable from Serena Support. It is a constituent of that file or the DVD.

Prompt **Please confirm continue (** *[y]/n* **)**

Hit RETURN to continue, or enter **y** to exit.

The installer will now search the current directory for the file `ora_run_reply.txt`. It uses this file to save your replies to the questions it asks during installation, so that they can be provided as default answers during subsequent re-installations.

The installer will proceed as follows:

- If an `ora_run_reply.txt` file *is not found* in the current directory, you will be prompted to supply the name of another *directory* containing an `ora_run_reply.txt` file generated during a previous installation.

  If you:

  - *Have not got* an `ora_run_reply.txt` file, which will be the case for an initial installation, you must either enter **'c'** to create one or **'q'** to quit the installation. If you answer **'c'**, the installer will continue with the installation (providing its own default answers to its installation questions) and create the `ora_run_reply.txt` file to capture your replies. These pre-defined default answers are the ones shown in the remainder of this chapter.

- *Have got* an `ora_run_reply.txt` file located in a directory (other than the current) to which you have supplied the directory path above, then the answers stored in that file will determine the default answers that the installer will present to you during the installation.

- If a `ora_run_reply.txt` file *is found* in the current directory, the installer will present the answers stored in that file as the default answers during the installation.

Proceed as described in the following section for the installation of the 10g Serena-Supplied Runtime RDBMS.

Performing the Installation

Screen Output

```
*********************************************************
Please read the following license agreement carefully
*********************************************************
<Serena End User License Agreement>
```

Prompt **Do you accept the terms of the Serena License Agreement (Yes,No)?** *[No]*

Read the license agreement and type **y(es)** to accept the terms.

Prompt **Enter installation medium (or Ctrl-c to quit) [***/cdrom/oracle/10.2.0.2/<platform_id>/oracle.tar***]**

If the installation is being performed directly from a Serena-Supplied Runtime RDBMS DVD, the "installation medium" is the absolute pathname of the file `oracle.tar` located on the appropriate DVD.

Alternatively, if you have extracted the downloaded Serena-supplied tar image to a disk of your choice or you have copied the appropriate `oracle.tar` file from the DVD to a disk of your choice, then that absolute pathname must be entered.

Prompt **Enter main Oracle directory [***<pwd>/oracle***]**

- If the directory you specify does not exist then the following message will be displayed:

  ```
  Directory <directory> not found. It will be created.
  ```

- If this directory already contains Oracle files, the installer gives the message:

CAUTION! Oracle appears already to be installed in this directory. Before installing the new Oracle, the installation script will rename this directory to /usr/oracle.old.

`Please confirm continue ? (y/[n])`

Unless **y** is entered, the message *"Please choose a different directory to install Oracle"* is displayed, and the installer re-displays the previous prompt. (If you would prefer to restart you can do so below when you have been asked to confirm the parameters.)

Prompt **Enter the name of the owner of the Oracle files [*oracle*]**

NOTE The user must already exist.

Prompt **Enter the name of the group to own the Oracle files [*dba*]**

NOTE The group must already exist.

The installer now has all the information it requires to perform a 10g Serena-Supplied Runtime RDBMS installation. It will output a summary of the values it will use (below is a partial example, yours will be particular to the values you specified) followed by a confirmation to proceed prompt:

Screen Output

```
Oracle Runtime Installation Parameters
--------------------------------------
Install from:
    /cdrom/oracle/10.2.0.2/<platform_id>/oracle.tar
Oracle location:
    <pwd>/oracle/10.2.0.2/<platform_id>/oracle
Oracle owner/group:   oracle/dba
```

Prompt **Please confirm you wish to proceed with these parameters (*y/[n]*)**

Reply **y** to continue the installation. Replying **n** will terminate the installation.

The installation script uses your responses to load and set up Serena-Supplied Runtime RDBMS server files. It will give suitable messages indicating the task being performed at each stage. After the installation completes, perform the post-installation activities detailed below.

Post-installation Activities

Applying Oracle Patches

Patching the 32-Bit 10g Serena-Supplied Runtime RDBMS

The installed 32-bit 10g Serena-Supplied Runtime RDBMS is at Oracle release level 10.2.0.2. For Dimensions CM, no subsequent patching is required.

For Dimensions RM, however, the 32-bit Serena-Supplied Runtime RDBMS needs to be patched to a minimum of Oracle release level 10.2.0.3 or, preferably, 10.2.0.4. You can download appropriate UNIX or Linux 10.2.0.4 patches from:

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

For example, in the **Ask a Question** search field, search for the following patch:

P6810189

Oracle 10.2.0.4 Linux 32bit Patch Set

After unzipping the Oracle patch, locate the Oracle 10.2.0.4 patchset installation instructions in the `patch_note.htm` file in the top-level directory. Apply the patch according to instructions and upgrade the `DIM10` database as part of those instructions.

Patching the 64-Bit 11gR2 Serena-Supplied Runtime RDBMS

The installed 64-bit Serena-Supplied Runtime RDBMS is at Oracle release level 11.2.0.3. For both Dimensions CM and Dimensions RM, no subsequent patching is required.

Creating an Oracle Instance

Creating a 32-Bit 10g Serena-Supplied Runtime Oracle Instance

The installation of a 32-bit 10g UNIX Serena-Supplied Runtime RDBMS, unlike a default installation of its Windows equivalent, does not create the requisite Oracle database instance ready for a Dimensions CM or Dimensions RM installation.

For Dimensions CM for UNIX, the following UNIX shell script is provided to enable you to create the requisite Oracle instance (default name DIM10):

```
create_ora_inst
```

Full instructions on how to run this script are provided in the Dimensions CM *Installation Guide for UNIX*.

For Dimensions RM, you need to create the requisite Oracle instance yourself by using the UNIX Oracle Database Configuration Assistant (DBCA). Full instructions on how to do this are provided in the Dimensions RM *Installation Guide*.

Creating a 64-Bit 11gR2 Serena-Supplied Runtime Oracle Instance

The default Oracle instance created by the 64-bit 11gR2 Serena-Supplied Runtime RDBMS installer (`DIM12`) utilizes a Dimensions ALM Oracle 11gR2 database template. This instance can be used either:

- Separately by either a Dimensions CM or a Dimensions RM server installation.
- Jointly for Dimensions CM and Dimensions RM server installations associated together in an Application Lifecycle Management (ALM) integration.

Checking Whether the Oracle Services Have Started

The Oracle instance creation procedure should start up Oracle services by creating processes with names similar to:

```
ora_ckpt_<orasid>
ora_dbw0_<orasid>
ora_lgwr_<orasid>
ora_pmon_<orasid>
ora_psp0_<orasid>
ora_mman_<orasid>
ora_mmnl_<orasid>
ora_mmon_<orasid>
ora_q000_<orasid>
ora_q001_<orasid>
ora_qmnc_<orasid>
ora_reco_<orasid>
ora_smon_<orasid>
```

where `<orasid>` is the Oracle SID supplied by the installer.

It should also start the Oracle listener:

```
tnslsnr LISTENER
```

To check whether these processes have started, type

```
ps -eaf | grep ora
```

If these services are running, no further actions are required.

Otherwise you will need to manually start the Oracle services and listener as described in the next two subsections.

Manually Starting the Oracle Services on the Serena-Supplied Runtime RDBMS

If your Oracle services have not started following Oracle instance creation, you will need to manually start them as described in this section (in the following example steps, the Serena-Supplied Runtime RDBMS Enterprise is assumed to be 11gR2 and to be installed in `/opt/oracle/serena/11_2`, and the Oracle SID is assumed to be `DIM12`):

1. Log in as the Oracle owner (by default UNIX user-id `oracle`). *This is essential, do not try and start the Oracle services as UNIX user `root`.*

2. Set up the Oracle environment as follows (on AIX `<libvar>` is `LIBPATH`; on HP-UX it is `SHLIB_PATH`; and on Solaris and Linux it is `LD_LIBRARY_PATH`) . You will also need to specify the ORACLE_HOME specific to your installation:

   - Bourne Shell

     ```
     $ ORACLE_HOME=/opt/oracle/serena/11_2
     $ export ORACLE_HOME
     $ <lib_var>=/opt/oracle/serena/11_2/lib:/usr/lib:/
         lib
     $ export <lib_var>
     $ PATH=/opt/oracle/11_2/bin:$PATH
     $ export PATH
     $ ORACLE_SID=DIM12
     $ export ORACLE_SID
     ```

   - C Shell

     ```
     $ setenv ORACLE_HOME /opt/oracle/serena/11_2
     $ setenv <lib_var> /opt/oracle/serena/11_2/lib:/usr/lib:/
         lib
     $ set path = (/opt/oracle/serena/11_2/bin $path)
     $ rehash
     $ setenv ORACLE_SID DIM12
     ```

3. Start the Oracle services as follows:

   ```
   $ sqlplus /nolog
   SQL> connect / as sysdba
   SQL> shutdown
   SQL> startup
   SQL> exit
   ```

4. Confirm that the Oracle services have started as follows:

   ```
   ps -eaf | grep ora
   ```

5. Proceed to start the Oracle listener as described in the next section.

Manually Checking and Starting the Oracle Listener on Your Own Oracle Enterprise 10g or 11gR2

To manually check if the Oracle listener is running and to start it up if it is not running, either first ensure that the Oracle services are running or start them up as described above and then proceed as follows:

1 If you are *not* performing this procedure immediately following manually restarting the Oracle services, ensure that you log in as the Oracle owner (by default UNIX user-id `oracle`)—*this is essential, do not try and start the Oracle services as UNIX user `root`*—and set up your Oracle environment as described above.

2 Check that the file

```
/etc/tnsnames.ora
```

or, Solaris only,

```
/var/opt/oracle/tnsnames.ora
```

has been updated with the new Oracle service name (`dim10` or `DIM12` by default).

If that file has not been automatically updated, you will need to manually edit it using the

```
$ORACLE_HOME/network/admin/tnsnames.ora
```

file as a template/example. You must *not* simply copy that file.

3 Start the Oracle listener with the following command:

```
$ lsnrctl
```

4 Check for the existence of any listener services with the following command:

```
LSNRCTL > services
```

The services summary should display information for the new Oracle instance that was created using the `create_ora_inst` script.

5 If the listener is not running *or has not been updated with the new Oracle Service name*, then run the commands below.

> **NOTE** If you are running multiple Oracle instances on the database server machine, you will first need to manually update the file `/etc/listener.ora` or `/var/opt/oracle/listener.ora` (Solaris only) with the new Oracle service name before restarting the Oracle listener.

```
LSNRCTL > stop
LSNRCTL > start
LSNRCTL > services
LSNRCTL > exit
```

6 As an additional check that the listener has started, type the following command:

```
ps -eaf | grep tnslsnr
```

7 As the final check that you are ready to install Dimensions CM, enter the following commands (it is assumed here that you will install Dimensions CM as Oracle user `SYSTEM`, if this is not the case you will need to change the command appropriately):

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

for example

```
$ sqlplus system/manager@DIM12
```

This should connect you to the instance and will result in the `SQL>` prompt.

8 Exit `sqlplus` with the following command:

```
SQL> exit
```

9 Log out from the Oracle user UNIX account (default `oracle`).

11gR2 Oracle Password Expiration

For the 11gR2 versions of the Serena-Supplied Runtime RDBMS, the Oracle account passwords expire after 180 days (which is the Oracle default).

To make passwords permanent, consult your DBA or proceed as follows:

```
$ sqlplus system/<sysytem_password>@<OraSID>
SQL> ALTER PROFILE DEFAULT LIMIT PASSWORD_GRACE_TIME
    UNLIMITED;
SQL> EXIT;
```

IMPORTANT! With respect to Dimensions CM, if you do not make the Oracle account passwords permanent this will also have knock on effects with respect to the Dimensions CM base databases/schemas. In such default circumstances, once the Oracle account passwords are reset by the Serena-Supplied Runtime RDBMS after 180 days, the corresponding entries in the `$DM_ROOT/dfs/registry.dat` file would need to be re-registered using the `dmpasswd` utility in order to be able to connect to Dimensions CM. See the section "Registering of Base Databases for Dimensions CM Connectivity" in the *Installation for UNIX* and the *System Administration Guide* for details on using `dmpasswd`.

11gR2 Oracle Case Sensitivity

To ensure correct functioning of Dimensions CM for the 11gR2 versions of the Serena-Supplied Runtime RDBMS, case-sensitivity (introduced in Oracle 11gR2 by default) has been disabled, that is, the runtime is case-insensitive.

Serena Oracle Response Files

The Serena Oracle response files are extracted to the installation temporary location iINSTALLER_TEMP_DIR this directory is referenced in the installation log file and this location contains the Serena response files. To find this location type the following commands:

```
$ grep INSTALLER_TEMP_DIR /tmp/serena_oracle_install/
 verbose.log
```

This will return an output string such as:

```
INSTALLER_TEMP_DIR=/tmp/393850.tmp
```

if you list that directory you will see the Serena response files, for example:

```
$ ls /tmp/393850.tmp/*.rsp
```

/tmp/393850.tmp/serena_dbca.rsp

/tmp/393850.tmp/serena_install.rsp

/tmp/393850.tmp/serena_netca.rsp

11gR2 Post-installation Tasks for Use with Dimensions CM

Before you can begin the installation of a Dimensions CM server utilizing the 11gR2 version of the UNIX Serena-Supplied Runtime RDBMS that included the option of creating a database instance), you will need to perform the following tasks:

1 Check the existence of the a PCMS_SYS Oracle and create it if it does not.

a To check whether or not `PCMS_SYS` exits, type the following commands:

```
$ sqlplus system/<system_passwd>@<dsn>
SQL> select * from all_users where
    username='PCMS_SYS';
```

If user PCMS_SYS exists, you will get output confirming that and the date upon which it was created.

b If, and only if, `PCMS_SYS` *does not* exist, create it as follows:

```
$ sqlplus /nolog
$ SQL> connect / as sysdba
$ SQL> create user pcms_sys identified by
    <pcms_sys_password> default tablespace PCMS_DATA
    temporary tablespace PCMS_TEMP;
$ SQL> grant connect, resource, create view to
    pcms_sys;
$ SQL> commit;
$ SQL> exit;
```

For example:

```
$ sqlplus /nolog
$ SQL> connect / as sysdba
$ SQL> create user pcms_sys identified by pcms_sys
    default tablespace PCMS_DATA temporary
    tablespace PCMS_TEMP;
```

```
$ SQL> grant connect, resource, create view to
    pcms_sys;
$ SQL> commit;
$ SQL> exit;
```

2 Copy the Oracle network configuration files to directory `/etc`.

If the Oracle configuration files do not already exist in `/etc`, copy the file `$ORACLE_HOME/network/admin/tnsnames.ora` to `/etc`.

If this file does already exists in `/etc`, then merge the contents of `$ORACLE_HOME/network/admin/tnsnames.ora` with `/etc/tnsnames.ora`.

Next Step

If the post-installation checks are successfully, proceed to the Dimensions CM i*nstallation Guide for* or Dimensions RM *Installation Guide*.

Error Recovery

This section covers some rarely necessary recovery procedures.

Incomplete Installation

If the Serena-Supplied Runtime RDBMS installation fails to successfully complete, you will need to perform a complete re-installation.

It is advisable to, first, check the contents of the log files (file extension `'.log'`) in the directory `/tmp/serena_oracle_install`

NOTES

1 For the 11gR2 version of the Serena-Supplied Runtime RDBMS the Oracle inventory logs will by default be located always be located in

`/var/opt/serena/oraInventory`

unless you chose another director in Step 4 on page 77.

2 For the 10g version of the Serena-Supplied Runtime RDBMS, delete the installation as follows:

a Log in as user `root`.

b Delete the directory tree containing the runtime executables, for example:

`/opt/serena/oracle/10.2.0.2`

For the 11gR2 version of the Serena-Supplied Runtime RDBMS, you delete the installation as follows:

a Log in as user `root`.

b Navigate to the `uninstall` directory located at:

`$ORACLE_HOME/../"Uninstall_Serena Runtime 11.2"`

c Run the following program:

`"Uninstall_Serena Runtime 11.2"`

d The uninstaller will step through:

- A welcome screen.
- A screen that offers you the choice of nominating some or all of the installation components for uninstalling. Select all.

e Once the uninstaller completes, delete the directory tree containing the remainder of runtime executables, for example:

`/opt/serena/oracle`

3 If you are not going to re-install he Serena-Supplied Runtime RDBMS, remove the `TSNAMES.ora`, `SQLNET.ora`, and `LISTENER` entries from the `/etc/services` file.

Index

Numerics

11gR2 disk space requirements 19, 65

C

contacting technical support 8

I

installing 10g Windows Serena-Supplied Runtime RDBMS
- initiating wizard 42
- license agreement acceptance 42
- Oracle folder 44
- proceed with installation 47
- progress monitoring 47
- selecting type 43
- specifying an Oracle home for multi-home machines 45
- specifying character set 46
- specifying database file folder 46
- specifying Oracle SID 45

installing 11gR2 UNIX Serena-Supplied Runtime RDBMS
- initiating wizard 76
- license agreement acceptance 76
- Oracle folder 78
- proceed with installation 85
- progress monitoring 85
- selecting type 76
- specifying Oracle SID 80

installing 11gR2 Windows Serena-Supplied Runtime RDBMS
- initiating wizard 32
- license agreement acceptance 33
- Oracle folder 34
- proceed with installation 39
- progress monitoring 39
- selecting type 33
- specifying an Oracle home for multi-home machines 35
- specifying character set 37
- specifying database file folder 36
- specifying Oracle SID 35

installing Dimensions components
- initiating
  - inserting DVD 73

installing UNIX Serena-Supplied Runtime RDBMS
- character set considerations 64
- checklist 64
- error recovery
  - incomplete installation 100
  - Oracle installation logs 100
- extracting compressed tar file contents to disk 70
- introduction 58
- logging 87
- main installation media 90
- Oracle directory 90
- Oracle files owner 91
- Oracle group owner 91
- overview 71
- post-installation activities
  - 11gR2 case sensitivity 98
  - applying Oracle patches 92
  - creating an Oracle instance 93
- pre-installation considerations 64
- proceed with installation 92

installing Windows Serena-Supplied Runtime RDBMS
- 11gR2 disk space requirements 19, 65
- character set considerations 18
- checklist 18

DHCP considerations 19
error recovery
incomplete installation 53
Oracle installation logs 53
extracting zip file contents to disk 25
initiating
inserting DVD 28
logging in as local Administrator 28
initiating HTML front end 30
introduction 12
Microsoft Loopback Adapter 19
checking if already installed 21
installing on Windows Server 2003 or 2008 21
uninstalling 24
overview 26
post-installation activities
11gR2 case sensitivity 53
11gR2 password expiration 52, 97
applying Oracle patches 50
creating an Oracle instance 51
general 50
specifying character set 80

L

logging
UNIX Serena-Supplied Runtime RDBMS installation 87
logging the installation 53, 100

M

mounting Dimensions Software DVD
IBM AIX 72

O

online demonstrations 9

P

pre-installation
changing shared memory and semaphore default parameter files 66
preparing a 11gR2 UNIX Serena-Supplied Runtime RDBMS for a use with Dimensions CM 99

S

Serena Oracle response files 26, 98

T

technical support
contacting 8

U

uninstalling the UNIX Serena-Supplied Runtime RDBMS 101