

**Oracle® Application Server Integration
InterConnect**

Installation Guide

10g Release 2 (10.1.2)

B14070-02

November 2005

Oracle Application Server Integration InterConnect Installation Guide, 10g Release 2 (10.1.2)

B14070-02

Copyright © 2003, 2005, Oracle. All rights reserved.

Primary Author: Rima Dave

Contributing Author: Vimmy K Raj

Contributing Author: Maneesh Joshi, Harish Sriramulu, Aruna Kasturi, Asuka Onoda, Ashwin Patel, Sandeep Jain

The Programs (which include both the software and documentation) contain proprietary information; they are provided under a license agreement containing restrictions on use and disclosure and are also protected by copyright, patent, and other intellectual and industrial property laws. Reverse engineering, disassembly, or decompilation of the Programs, except to the extent required to obtain interoperability with other independently created software or as specified by law, is prohibited.

The information contained in this document is subject to change without notice. If you find any problems in the documentation, please report them to us in writing. This document is not warranted to be error-free. Except as may be expressly permitted in your license agreement for these Programs, no part of these Programs may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose.

If the Programs are delivered to the United States Government or anyone licensing or using the Programs on behalf of the United States Government, the following notice is applicable:

U.S. GOVERNMENT RIGHTS Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are "commercial computer software" or "commercial technical data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the Programs, including documentation and technical data, shall be subject to the licensing restrictions set forth in the applicable Oracle license agreement, and, to the extent applicable, the additional rights set forth in FAR 52.227-19, Commercial Computer Software—Restricted Rights (June 1987). Oracle Corporation, 500 Oracle Parkway, Redwood City, CA 94065

The Programs are not intended for use in any nuclear, aviation, mass transit, medical, or other inherently dangerous applications. It shall be the licensee's responsibility to take all appropriate fail-safe, backup, redundancy and other measures to ensure the safe use of such applications if the Programs are used for such purposes, and we disclaim liability for any damages caused by such use of the Programs.

Oracle, JD Edwards, PeopleSoft, and Retek are registered trademarks of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

The Programs may provide links to Web sites and access to content, products, and services from third parties. Oracle is not responsible for the availability of, or any content provided on, third-party Web sites. You bear all risks associated with the use of such content. If you choose to purchase any products or services from a third party, the relationship is directly between you and the third party. Oracle is not responsible for: (a) the quality of third-party products or services; or (b) fulfilling any of the terms of the agreement with the third party, including delivery of products or services and warranty obligations related to purchased products or services. Oracle is not responsible for any loss or damage of any sort that you may incur from dealing with any third party.

Contents

Preface	v
Audience	v
Documentation Accessibility	v
Related Documents	vi
Conventions	vi
1 Overview	
1.1 OracleAS Integration InterConnect Overview	1-1
1.2 OracleAS Integration InterConnect Installation Types	1-3
1.3 Dependent Products	1-3
1.4 Deployment Topology	1-4
1.5 OracleAS Integration InterConnect System Requirements	1-5
1.5.1 Hardware Requirements	1-5
1.5.1.1 Hub	1-5
1.5.1.2 Adapters	1-5
1.5.1.3 Development Kit	1-5
1.5.2 Software Requirements	1-6
2 Installing OracleAS Integration InterConnect	
2.1 Preparing for Installation	2-1
2.1.1 Hub Preinstallation Tasks	2-1
2.1.2 Development Kit Preinstallation Tasks	2-1
2.2 Installing OracleAS Integration InterConnect	2-2
2.2.1 Installing OracleAS Integration InterConnect Hub	2-5
2.2.2 Installing OracleAS Integration InterConnect Adapters	2-10
2.2.3 Installing OracleAS Integration InterConnect Development Kit	2-11
2.2.3.1 Development Kit Installation Process	2-11
2.2.3.2 Development Kit Postinstallation Tasks	2-12
3 Managing OracleAS Integration InterConnect	
3.1 Starting OracleAS Integration InterConnect	3-1
3.2 Changing OracleAS Integration InterConnect and Oracle Workflow Schemas Passwords	3-2
3.3 Creating Multiple Repository Schemas in the Same Database	3-3

A Upgrading Oracle Application Server Integration InterConnect

A.1	Reviewing Your Current Oracle Application Server Integration InterConnect Installations A-1	
A.2	Installing and Upgrading Hub Components, Adapters, and Development Kit	A-1
A.3	Upgrading Metadata	A-2
A.4	Upgrading Management.....	A-3

Index

Preface

This Preface contains these topics:

- [Audience](#)
- [Documentation Accessibility](#)
- [Related Documents](#)
- [Conventions](#)

Audience

Oracle Application Server Integration InterConnect Installation Guide is intended for system administrators and others responsible for installing Oracle products.

Documentation Accessibility

Our goal is to make Oracle products, services, and supporting documentation accessible, with good usability, to the disabled community. To that end, our documentation includes features that make information available to users of assistive technology. This documentation is available in HTML format, and contains markup to facilitate access by the disabled community. Accessibility standards will continue to evolve over time, and Oracle is actively engaged with other market-leading technology vendors to address technical obstacles so that our documentation can be accessible to all of our customers. For more information, visit the Oracle Accessibility Program Web site at

<http://www.oracle.com/accessibility/>

Accessibility of Code Examples in Documentation

Screen readers may not always correctly read the code examples in this document. The conventions for writing code require that closing braces should appear on an otherwise empty line; however, some screen readers may not always read a line of text that consists solely of a bracket or brace.

Accessibility of Links to External Web Sites in Documentation

This documentation may contain links to Web sites of other companies or organizations that Oracle does not own or control. Oracle neither evaluates nor makes any representations regarding the accessibility of these Web sites.

TTY Access to Oracle Support Services

Oracle provides dedicated Text Telephone (TTY) access to Oracle Support Services within the United States of America 24 hours a day, seven days a week. For TTY support, call 800.446.2398.

Related Documents

For more information, refer to these Oracle resources:

- *Oracle Application Server Integration InterConnect User's Guide*
- *Oracle Application Server Integration InterConnect Adapter Guides*

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
<i>italic</i>	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
monospace	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

This chapter describes how to install Oracle Application Server Integration InterConnect (OracleAS Integration InterConnect). It contains the following topics:

- [OracleAS Integration InterConnect Overview](#)
- [OracleAS Integration InterConnect Installation Types](#)
- [Dependent Products](#)
- [Deployment Topology](#)
- [OracleAS Integration InterConnect System Requirements](#)

1.1 OracleAS Integration InterConnect Overview

This section explains terminology used in this guide:

Design Time The phase of integration development where you model the integration scenario. The modelled information is stored as metadata. The following components are required for modeling your integration:

- [iStudio](#)
- [Repository](#)
- [Hub Database](#)
- [Oracle Workflow Builder](#) (required only if your scenario has business process modeling)

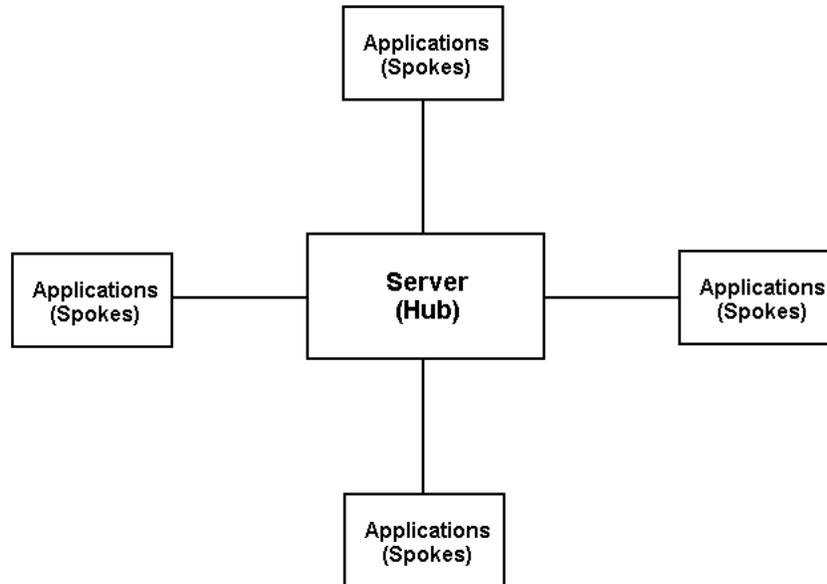
Run Time At run time, the metadata gathered at design time is used to carry out integration. The following components are required for run time:

- [Adapters](#)
- [Repository](#)
- [Hub Database](#)
- [Oracle Workflow](#) (required only if your scenario has business process modeling)
- [Oracle Workflow Communication](#) (required only if your scenario has business process modeling)
- [Oracle InterConnect Manager](#)

Hub and Spoke The physical architectural approach for integration used by OracleAS Integration InterConnect is called the hub and spoke arrangement. In this

approach, all applications (spokes) are connected through a central server (hub), as illustrated in [Figure 1-1](#).

Figure 1-1 Hub and Spoke Architecture



The OracleAS Integration InterConnect has the following components:

- [iStudio](#)
- [Repository](#)
- [Hub Database](#)
- [Adapters](#)
- [Oracle Workflow Builder](#)
- [Oracle Workflow Communication](#)
- [Oracle Workflow](#)
- [Oracle InterConnect Manager](#)
- [OracleAS Integration InterConnect Development Kit](#)

iStudio The tool used at design time to define the integration. iStudio is a design-time integration specification tool used to help business analysts specify the integration logic at a functional level, instead of a technical coding level. iStudio exposes the integration methodology using simple wizards and reduces or eliminates the need for writing code to specify the integration logic. This reduces the total time required to complete an integration.

Repository This is a middle tier repository server, java process, that communicates with the repository schema in the hub database to store and retrieve metadata. At design time, this server is used to store metadata in the hub database. At run time, adapters can access the metadata through the repository.

Hub Database The hub database has three uses:

- **Store Metadata:** The repository schema contains all the metadata modeled at design time through iStudio.
- **Store and Forward Messages:** At run time, all messages enter and leave the OracleAS Integration InterConnect hub AQ queues.
- **Store Tracking and Error Information:** At run time, all message tracking and error information is stored in the repository schema.

Adapters Adapters are the run time engines that carry out the integration based on the metadata modeled during design time.

Oracle Workflow Builder This component is used to model a business process at design time.

Oracle Workflow Communication This component is used to communicate between OracleAS Integration InterConnect hub and Oracle Workflow at run time.

Oracle Workflow The collection of Workflow design time (Oracle Workflow Builder) and run time components.

Oracle InterConnect Manager Oracle InterConnect Manager (IC Manager), this command-line tool is used for monitoring OracleAS Integration InterConnect at run time.

OracleAS Integration InterConnect Development Kit This contains iStudio and adapter SDKs that enable you to extend OracleAS Integration InterConnect.

See Also: *Oracle Application Server Integration InterConnect User's Guide*

1.2 OracleAS Integration InterConnect Installation Types

OracleAS Integration InterConnect installation types are presented in [Table 1–1](#). You can choose the installation types on the Select Installation Type screen during installation.

Table 1–1 OracleAS Integration InterConnect Installation Types

Installation Type	Description
Hub	Installs the OracleAS Integration InterConnect Repository, Oracle Workflow Communication, and Oracle Workflow Server.
Adapter	Installs OracleAS Integration InterConnect Adapters.
Development Kit	Installs iStudio (Windows only), OracleAS Integration InterConnect Development Kit, and Oracle Workflow Builder (Windows only).

1.3 Dependent Products

You can use an Oracle Database 10g as the hub database to run OracleAS Integration InterConnect. Alternatively, you can also use a OracleAS Infrastructure database or a Oracle Standalone 9.2.0.x database.

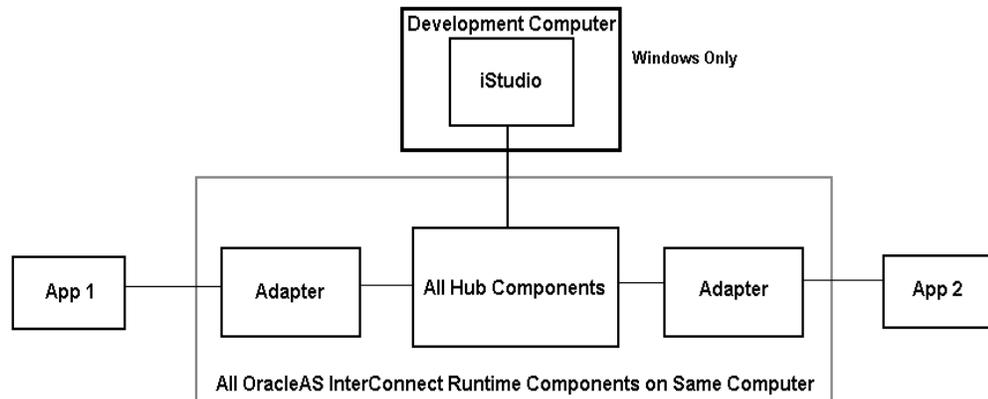
Note: The 10g DB import and export scripts are not compatible with the 9.2 DB, so if you wish to import or export the ichub schema from a 9.2 database, port the scripts to the 9.2 Oracle home. Copy the SQL scripts from the `$INTERCONNECT_HOME/repository/sql` directory to the destination directory. Please ensure the Oracle home values of the `oaiimport` and `oaiexport` scripts are changed to the new values.

1.4 Deployment Topology

The commonly used deployment topologies are as follows:

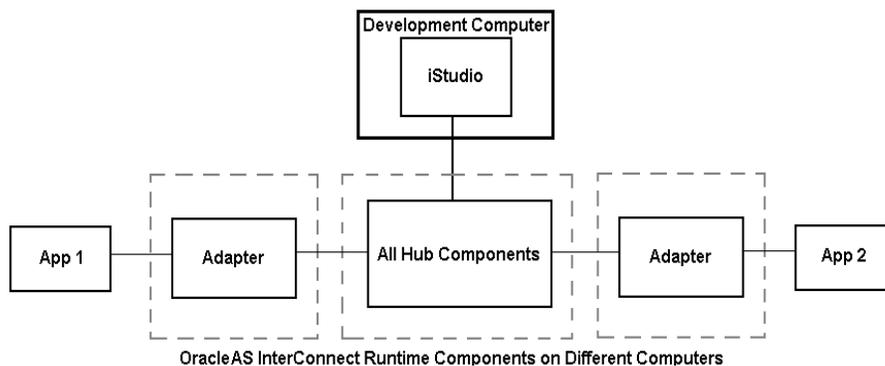
- All OracleAS Integration InterConnect run time components on one computer and iStudio on a separate development computer, as illustrated in [Figure 1-2](#).

Figure 1-2 OracleAS Integration InterConnect Components on One Computer



- All hub components on one computer, all spoke components on separate computers, and iStudio on a separate development computer, as illustrated in [Figure 1-3](#). In this case, there is a dedicated computer for the hub components. Adapters either have dedicated separate computers or are co-located with the applications they are connected to.

Figure 1-3 OracleAS Integration InterConnect Run-Time Components on Different Computers



The OracleAS Integration InterConnect hub can exist on the same, or a different computer as the hub database.

1.5 OracleAS Integration InterConnect System Requirements

The following sections describe the OracleAS Integration InterConnect system requirements:

- [Hardware Requirements](#)
- [Software Requirements](#)

1.5.1 Hardware Requirements

This section contains hardware requirements for the following:

- [Hub](#)
- [Adapters](#)
- [Development Kit](#)

1.5.1.1 Hub

For hub, the computer should meet the minimum requirements listed in [Table 1–2](#).

Table 1–2 Hardware Requirements for Hub Computer

Hardware	UNIX	Windows
CD-ROM Device	A CD-ROM drive to install, or the ability to access a CD-ROM device over the network.	A CD-ROM drive to install, or the ability to access a CD-ROM device over the network.
Disk Space	1 GB	1 GB
Memory	512 MB	512 MB

Note: Do not use Hummingbird Exceed to perform the installation remotely on a UNIX computer, as that can cause problems during installation.

1.5.1.2 Adapters

For adapters, the computer should meet the minimum requirements listed in [Table 1–3](#).

Table 1–3 Hardware Requirements for Adapters

Hardware	UNIX	Windows
Disk Space	400 MB	400 MB
Memory	512 MB	512 MB

1.5.1.3 Development Kit

For Development Kit, the computer should meet the minimum requirements listed in [Table 1–4](#).

Table 1–4 Hardware Requirements for Development Kit

Hardware	UNIX (Solaris Only)	Windows
Disk Space	512 MB	500 MB
Memory	256 MB	512 MB

See Also: *Oracle Workflow Administrator's Guide*

1.5.2 Software Requirements

This section contains the software requirements for the following:

- [Operating System Requirements](#)
- [JRE Requirements](#)
- [Operating System Patches](#)

Operating System Requirements

Table 1–5 lists the operating system requirements for the computer on which hub and spoke will be installed.

Table 1–5 Operating System Requirements

Operating System	Version
HP Tru64	HP Tru64 UNIX (Alpha) 5.1b
HP-UX	HP-UX (PA-RISC) 11.11, 11.23
IBM AIX	AIX (POWER) version 5.2
Linux (x86)	Red Hat Enterprise Linux 2.1, 3.0 SuSE SLES8, SLES9
Sun SPARC Solaris	Sun SPARC Solaris 2.8 and 2.9
Microsoft Windows	Windows XP Professional, Windows 2000 (SP3 or higher)

JRE Requirements

OracleAS Integration InterConnect runs on Java Runtime Environment (JRE) 1.4. JRE is bundled with OracleAS Integration InterConnect on Sun SPARC Solaris, Linux, and Windows. When you install OracleAS Integration InterConnect on these platforms, JRE is automatically installed for you.

Operating System Patches

The operating system patches can be found at *OracleMetaLink*:

<http://metalink.oracle.com>

Installing OracleAS Integration InterConnect

This chapter contains instructions for installing OracleAS Integration InterConnect. It contains the following topics:

- [Preparing for Installation](#)
- [Installing OracleAS Integration InterConnect](#)

2.1 Preparing for Installation

This section describes the preinstallation steps that need to be carried out before the installation of the OracleAS Integration InterConnect. It contains the following topics:

- [Hub Preinstallation Tasks](#)
- [Development Kit Preinstallation Tasks](#)

2.1.1 Hub Preinstallation Tasks

Hub or adapters can be installed only over an existing Oracle Application Server 10.1.2 Middle Tier and not on any other oracle homes, including new oracle homes. When you install Hub, ensure that the corresponding 10.1.2 Middle Tier is already installed.

To install OracleAS Integration InterConnect on an Real Application Cluster database, you need to manually create OAIUSERS tablespace. The data file for this tablespace should be created on the shared storage. By default, OracleAS Integration InterConnect creates this data file in an unshared location. To create the OAIUSERS tablespace, log on as system administrator and use the following command.

```
CREATE TABLESPACE OAIUSERS DATAFILE '<full path of the shared
storage>/oaiusers.dbf' SIZE 50m AUTOEXTEND ON MAXSIZE UNLIMITED;
```

This command also creates the data file for OAIUSERS tablespace on the shared storage.

2.1.2 Development Kit Preinstallation Tasks

Consider the following before starting the installation process:

- If you are installing OracleAS Integration InterConnect on Sun SPARC Solaris, then the development kit installation option also includes the OracleAS Integration InterConnect SDK.
- If you want to use iStudio, then you must install the OracleAS Integration InterConnect Development Kit on Windows.

When you install iStudio, ensure that it is installed in a new Oracle home or an existing 10.1.2 Middle Tier.

OracleAS Integration InterConnect Development Kit enables you to create custom OracleAS Integration InterConnect adapters. It also installs all dependencies. If you have not installed the OracleAS Integration InterConnect Hub, then you need to do so before proceeding with this installation.

2.2 Installing OracleAS Integration InterConnect

This section contains instructions for installing OracleAS Integration InterConnect.

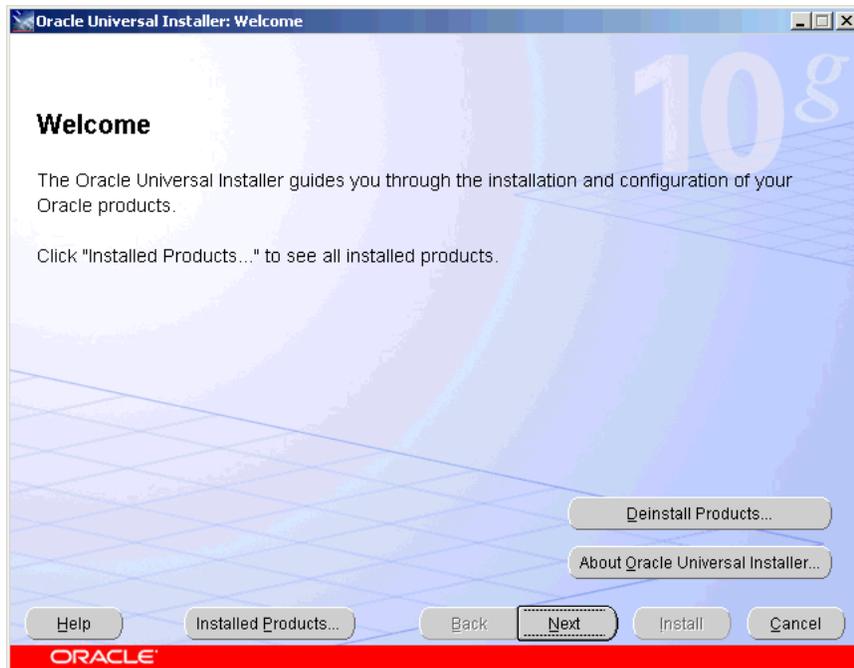
See Also: *Oracle Application Server Release Notes*

Perform the following steps to install OracleAS Integration InterConnect:

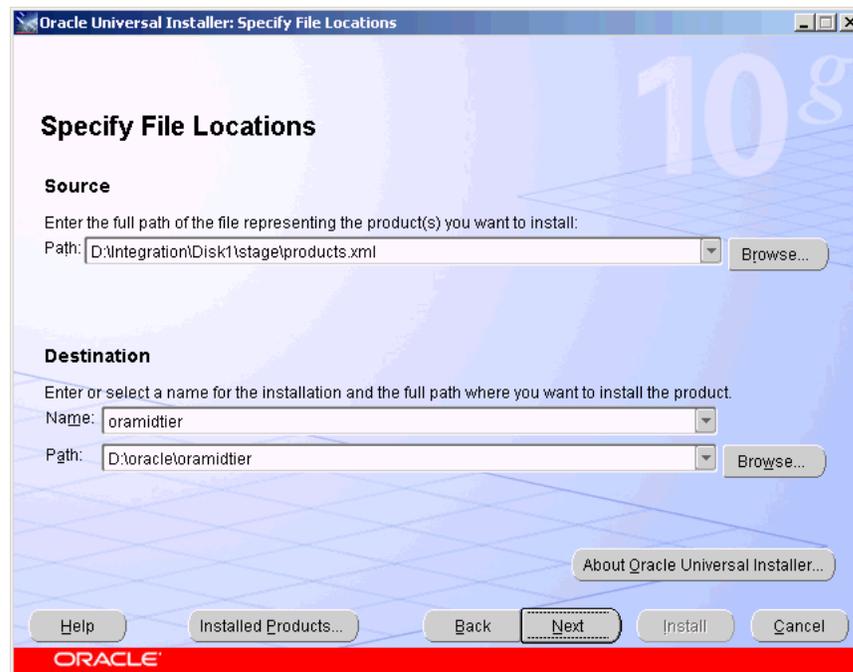
1. Insert the OracleAS Integration CD-ROM in your CD-ROM drive.
2. Start the Oracle Universal Installer (OUI):
 - UNIX: Type `runInstaller`
 - Windows: Double-click `setup.exe`

The OUI Welcome screen is displayed as shown in [Figure 2–1](#). It provides information about OUI.

Figure 2–1 Oracle Universal Installer Welcome Screen



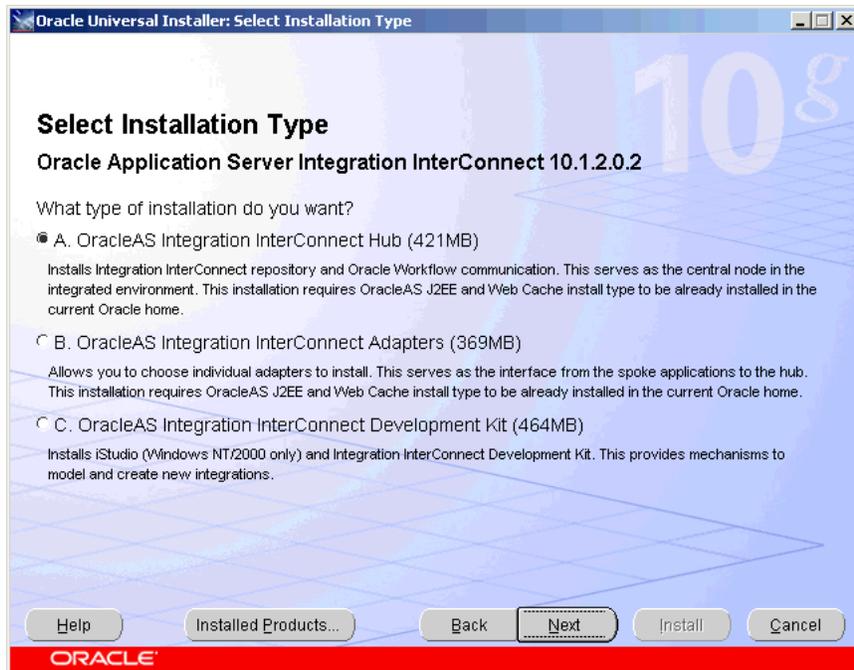
3. Click **Next**. The Specify File Locations screen is displayed as shown in [Figure 2–2](#).

Figure 2–2 Specify File Locations Screen

4. Enter the following information in the fields provided:
 - a. Source Path: The default value displays. Do not change this value.
 - b. Destination Name: Enter the desired Oracle home name, which contains the existing Oracle Application Server 10.1.2 Middle Tier.
 - c. Destination Path: Browse or enter the path to your Oracle home.
5. Click **Next**. The Select a Product to Install screen is displayed as shown in [Figure 2–3](#).

Figure 2–3 Select a Product to Install Screen

6. Select the Oracle Application Server Integration InterConnect. The Select Installation Type screen is displayed as shown in [Figure 2–4](#).

Figure 2–4 Select Installation Type Screen

7. Select the OracleAS Integration InterConnect installation type from the following list:
 - OracleAS Integration InterConnect Hub

- OracleAS Integration InterConnect Adapters
- OracleAS Integration InterConnect Development Kit

The following links direct you to installation information for each installation type.

- [Installing OracleAS Integration InterConnect Hub](#)
- [Installing OracleAS Integration InterConnect Adapters](#)
- [Installing OracleAS Integration InterConnect Development Kit](#)

2.2.1 Installing OracleAS Integration InterConnect Hub

This section contains instructions for installing OracleAS Integration InterConnect Hub. OracleAS Integration InterConnect Hub installation type installs Oracle Workflow Server and the OracleAS Integration InterConnect repository.

Hub Installation Process

During the Hub installation process, you see two dialogs, one enables you to specify the database to use as the Hub database, and the other enables you to set the password for the OracleAS Integration InterConnect schema (IC Hub schema).

If you have an existing Oracle Workflow Server setup, then you need to migrate it to Oracle Application Server Workflow Server after Hub installation.

See Also: *Oracle Application Server Upgrade and Compatibility Guide*

Perform the following steps to install OracleAS Integration InterConnect Hub:

1. Select OracleAS Integration InterConnect Hub from the Select Installation Type screen, then click **Next**.
2. The Set Oracle Wallet Password screen is displayed as shown in [Figure 2-5](#). Enter and confirm the password on the screen, which will be used to administer OracleAS Integration InterConnect installation passwords.

Figure 2–5 Set Oracle Wallet Password Screen

Note: If the InterConnect Wallet does not exist in this Oracle home, then the installation will prompt you to set an InterConnect Wallet password. However, if the InterConnect Wallet already exists, then the installation prompts you to specify its password.

3. The Specify Hub Database screen is displayed in [Figure 2–6](#). Specify database connection information on this screen.

Figure 2–6 Specify Hub Database Screen

Specify Hub Database

The OracleAS Integration InterConnect Hub requires metadata to be loaded into a database before it can be used. This database stores information that will be used by the OracleAS Integration InterConnect Hub to coordinate communication between the various Integration InterConnect components. The ichub schema is used for storing the metadata. Please ensure that it does not exist in the Hub database.

Enter the hostname, port, system identifier and system users password for the database you would like to use to store the OracleAS Integration InterConnect metadata.

Host Name:

Port Number:

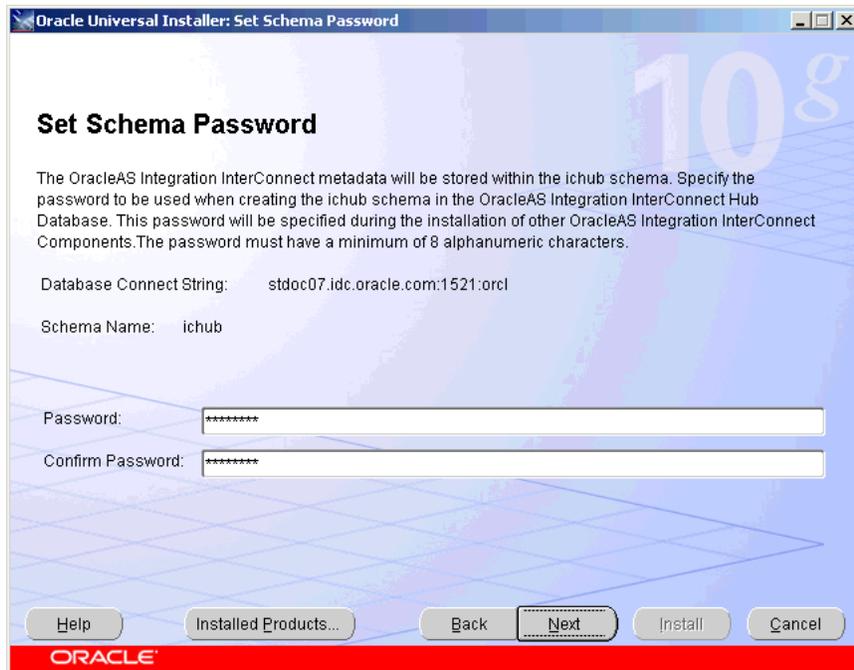
Database SID:

System Password:

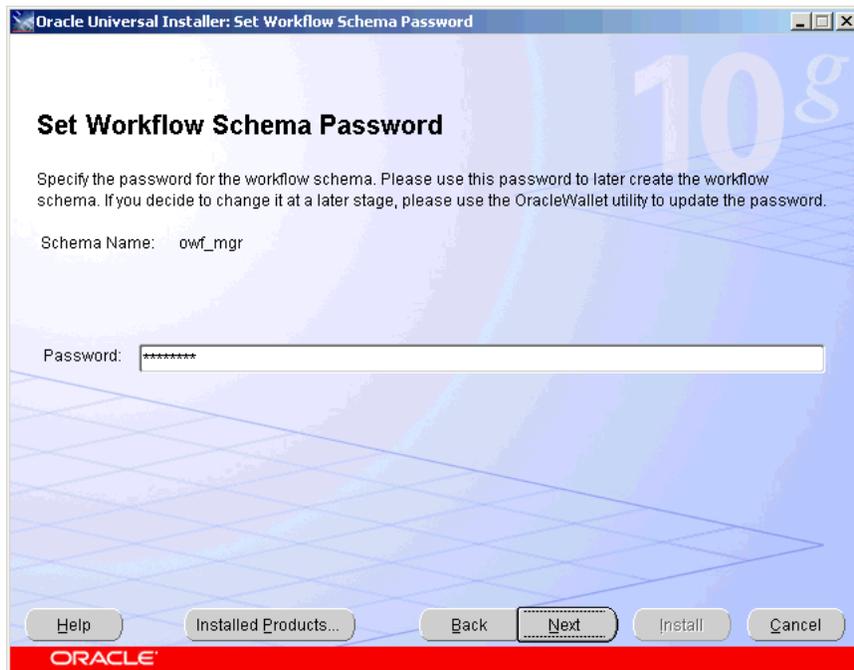
Help Installed Products... Back **Next** Install Cancel

ORACLE

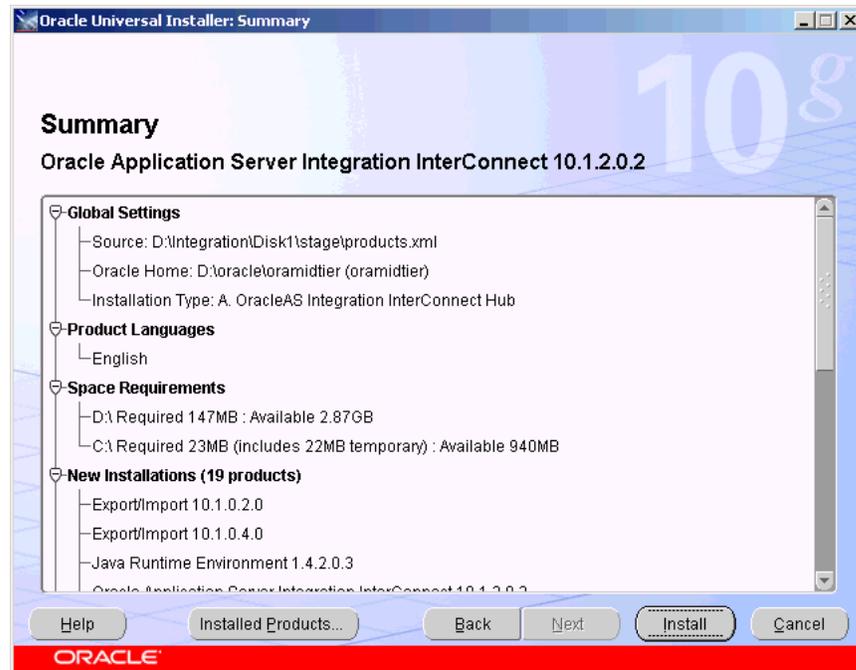
- a. Enter database connection information in the following fields:
 - Host Name: Host name for the database. The default is localhost.
 - Port Number: Port number for the database. The default is 1521.
 - Database SID: The database System Identifier (SID). The default is iasdb.
 - System Password: The system users password.
 - b. Click **Next**.
4. The Set Schema Password screen is displayed as shown in [Figure 2–7](#). Enter and confirm the password for the ichub schema on this screen. The password should be more than 8 characters.

Figure 2–7 Set Schema Password Screen

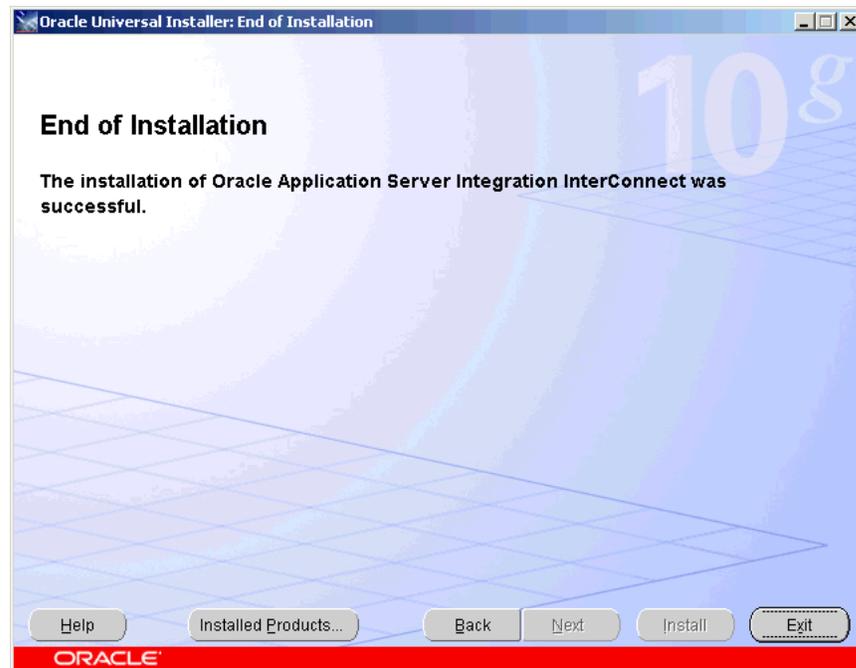
5. Click **Next**. The Specify Workflow Schema Password screen is displayed as shown in [Figure 2–8](#). Enter the password for the `owf_mgr` schema on this screen. The password should be more than 8 characters.

Figure 2–8 Specify Workflow Schema Password Screen

6. Click **Next**. The Summary screen is displayed as shown in [Figure 2–9](#). Review the selections made on previous screens and click **Install**.

Figure 2–9 Summary Screen

- The End of Installation screen is displayed as shown in [Figure 2–10](#), indicating that the installation has completed. Click **Exit** to exit the installer.

Figure 2–10 End of Installation Screen

See Also: If you have an existing workflow installation in the hub database, then upgrade the workflow schema to the 2.6.3.5 version by performing the steps documented in *Oracle Workflow Installation Notes for Oracle Content Management SDK*.

Note: To configure Oracle Workflow to use a schema in a database different from the InterConnect Hub database, edit the following parameters in the \$ORACLE_HOME/integration/interconnect/workflow/adapter.ini file to point to the Workflow database.

```
aq_bridge_host=mpjoshi-lap
aq_bridge_port=1521
aq_bridge_instance=ora10g
```

2.2.2 Installing OracleAS Integration InterConnect Adapters

This section contains instructions for installing OracleAS Integration InterConnect adapters. OracleAS Integration InterConnect adapters must be installed on a Oracle Application Server Middle Tier installation. To install one or more OracleAS Integration InterConnect adapters, start the Oracle Universal Installer and complete the following steps.

1. On the Select Installation Type screen:
 - a. Select **OracleAS Integration InterConnect Adapters**.
 - b. Click **Next**.

See Also: ["Installing OracleAS Integration InterConnect"](#) on page 2-2 for instructions on how to display the Specify Installation Types screen
2. The Available Product Components screen is displayed.
 - a. Select the adapter you want to install. The following adapters are available:
 - OracleAS Integration InterConnect Adapter for AQ 10.1.2.0.2
 - OracleAS Integration InterConnect Adapter for DB 10.1.2.0.2
 - OracleAS Integration InterConnect Adapter for Oracle Applications 10.1.2.0.2
 - OracleAS Integration InterConnect Adapter for FTP 10.1.2.0.2
 - OracleAS Integration InterConnect Adapter for HTTP 10.1.2.0.2
 - OracleAS Integration InterConnect Adapter for IBM WebSphere MQ 10.1.2.0.2
 - OracleAS Integration InterConnect Adapter for SMTP 10.1.2.0.2
 - OracleAS Integration InterConnect EIS Adapter Plugin 10.1.2.0.2
 - OracleAS Integration InterConnect Adapter For JCA 10.1.2.0.2
 - b. Click **Next**.
3. Refer to the adapter guides mentioned in [Table 2–1](#) for adapter-specific installation instructions.

Table 2–1 Adapter-specific Installation Information

Adapter	Installation Instructions
AQ	<i>OracleAS Integration InterConnect Adapter for AQ Installation and User's Guide</i>

Table 2–1 (Cont.) Adapter-specific Installation Information

Adapter	Installation Instructions
DB	<i>OracleAS Integration InterConnect Adapter for DB Installation and User's Guide</i>
FTP	<i>OracleAS Integration InterConnect Adapter for FTP Installation and User's Guide</i>
HTTP	<i>OracleAS Integration InterConnect Adapter for HTTP Installation and User's Guide</i>
WebSphere MQ	<i>OracleAS Integration InterConnect Adapter for WebSphere MQ Installation and User's Guide</i>
OA	<i>OracleAS Integration InterConnect Adapter for OA Installation and User's Guide</i>
SMTP	<i>OracleAS Integration InterConnect Adapter for SMTP Installation and User's Guide</i>
EIS Plugin	<i>Oracle Application Server Adapters Installation Guide</i>
JCA	<i>OracleAS Integration InterConnect Adapter for J2CA Installation and User's Guide</i>

2.2.3 Installing OracleAS Integration InterConnect Development Kit

This section describes how to install the OracleAS Integration InterConnect Development Kit. It contains the following topics:

- [Development Kit Installation Process](#)
- [Development Kit Postinstallation Tasks](#)

2.2.3.1 Development Kit Installation Process

Perform the following steps to install the OracleAS Integration InterConnect Development Kit:

1. On the Select a Product to Install screen, select **Oracle Application Server Integration InterConnect**.
2. Click **Product Languages**. The Language Selection dialog box is displayed.
3. Select all the languages in the Available Languages list.

Note: To view data in languages such as Japanese, Korean, Traditional Chinese, and Simplified Chinese, the correct fonts have to be installed. The installation of the font is based on the language selected. For example, if you select Korean among the languages, then the Korean font is installed. Hence, to view data in Japanese, Korean, Traditional Chinese, and Simplified Chinese, select the relevant languages.

4. Click the right arrow. All the languages are displayed in the Selected Languages list. Click **Ok**.
5. Click **Next**. The Select Installation Type screen is displayed.
6. Select **OracleAS Integration InterConnect Development Kit**, and then click **Next**.
7. The Set Oracle Wallet Password screen is displayed, as shown in [Figure 2–5](#). Enter and confirm the password on the screen, which will be used to manage OracleAS Integration InterConnect installation.

- Go to step 8, if installing in an OracleAS Middle Tier Oracle home that does not have an InterConnect component already installed. Ensure that the OracleAS Integration InterConnect hub has been installed.
- Go to step 9, if installing in an OracleAS Middle Tier Oracle home that has an existing InterConnect component. Ensure that it is a home directory to an OracleAS Integration InterConnect component.

Note: If the InterConnect Wallet does not exist in this Oracle home, then the installation will prompt you to set an InterConnect Wallet password. However, if the InterConnect Wallet already exists, then the installation prompts you to specify its password.

8. Click **Next**. The Specify Hub Database Connection screen is displayed, as shown in [Figure 2–6](#). Enter the host name, port, system identifier, and InterConnect users password for the database.

Note: This screen appears only when all of the following conditions are met:

- You are installing the OracleAS Integration InterConnect Development Kit on a UNIX platform.
 - The Oracle home in which you are installing the OracleAS Integration InterConnect Development Kit does not have any OracleAS Integration InterConnect components.
-

9. Click **Next**. The Summary screen is displayed. Review the selections made on previous screens and click **Install**. The development kit is installed on your computer in the following directory:
 - UNIX: `ORACLE_HOME/integration/interconnect/sdk`
 - Windows: `ORACLE_HOME\integration\interconnect\sdk`
10. The End of Installation screen is displayed, indicating that the installation has completed. Click **Exit** to exit the installer.

2.2.3.2 Development Kit Postinstallation Tasks

On Windows, configure Oracle Net using the Oracle Net Configuration Assistant. Select the typical configuration option and follow the directions in the configuration assistant help to complete the configuration. If you are using Oracle Workflow, after installing the Oracle Workflow Client, perform the following steps:

Step 1 Set up Oracle Workflow HTML Help

If you install Oracle Workflow Builder while installing Oracle Workflow Client, then OUI copies a `.zip` file containing the HTML help, `wfdoc.zip`, to the Workflow directory in your Oracle home. For example, `ORACLE_HOME\wf\wfdoc.zip`. To view the HTML help, extract the doc directory list from the `.zip` file to your file system:

1. Use an `unzip` utility to extract the doc directory list from the `.zip` file within the Workflow directory. You need at least 7 MB of free disk space to extract the `.zip` file. Extract the files to `ORACLE_HOME/wf/`. You should get the following subdirectories:
 - `ORACLE_HOME\wf\doc\lang\wf`: Contains Oracle Workflow Guide.

- `ORACLE_HOME\wf\doc\lang\wfcust`: Contains custom help. You can add your own customized Workflow help in this directory.
- 2. After extracting the doc directory list, you can remove the `.zip` file. This step is optional.
- 3. You can now view the HTML help using a Web browser.
The path for the contents page of the *Oracle Workflow Online Help* is:
`ORACLE_HOME\wf\doc\lang\wf\toc.htm`
The path for the contents page of your custom *Oracle Workflow Online Help* is:
`ORACLE_HOME\wf\doc\lang\wfcust\wfcust.htm`
- 4. To add custom help, replace the placeholder file in the `wfcust` directory, `wfcust.htm`, with your own help material. The HTML file that is the main entry point for your custom help must be named `wfcust.htm` and must contain an anchor named `contents`. Your custom help is accessible through the Custom Help link on the contents page of the *Oracle Workflow Online Help*. This step is optional.

Step 2 Modify Fonts in Oracle Workflow Builder

If you are installing Oracle Workflow Builder in another language, such as Japanese, then you can modify the font used by the windows in Oracle Workflow Builder to a font that is suitable for your language. Any change you make applies to all windows within the program. This step is optional.

1. Choose **Font** from the View menu in Oracle Workflow Builder to display the Fonts properties page.
2. Select the font you want to use in the labels for your icons and in the navigator list. The Sample region shows the appearance of the font you select. For example, when using Oracle Workflow Builder in Japanese, you might choose the font MS PGothic.
3. Select the font style, for example, regular, bold, italic, or bold italic. Some fonts have a limited selection of font styles.
4. Select the font size. Some fonts have a limited selection of font sizes.
5. Select the Underline or Strikeout check boxes to apply those effects.
6. Click **OK** when you are finished.
7. Close and restart Oracle Workflow Builder. The new font settings should have taken into effect.

Step 3 Review Documentation for Custom Adapters

If you need to create custom adapters and browsers, then refer to the documentation in `ORACLE_HOME/integration/interconnect/sdk/cookbook.zip`. This step is optional.

Note: You can use assistive technologies, such as JAWS screen reader, with InterConnect by installing Java Access Bridge. For more information about installing Java Access Bridge, see *Oracle Application Server Installation Guide*.

Managing OracleAS Integration InterConnect

This chapter describes how to manage OracleAS Integration InterConnect after installation. It contains the following topics:

- [Starting OracleAS Integration InterConnect](#)
- [Changing OracleAS Integration InterConnect and Oracle Workflow Schemas Passwords](#)
- [Creating Multiple Repository Schemas in the Same Database](#)

3.1 Starting OracleAS Integration InterConnect

Start OracleAS Integration InterConnect using the following steps:

1. Start the Hub database.
2. Start the Hub database listener.
3. Start InterConnect Repository.

On UNIX:

Use the `start` command:

```
cd ORACLE_HOME/integration/interconnect/repository
./start
```

On Windows:

Use the `start.bat` command or the Windows Services to start and stop the repository:

```
cd ORACLE_HOME\integration\interconnect\repository
.\start.bat
```

Note: The Windows Service Names of the OracleAS Integration InterConnect Components are:

- OracleAS Integration InterConnect Adapters:
OracleOracleHomeNameInterConnect-adapterName, for example, *myAQApp*
 - OracleAS Integration InterConnect Repository:
OracleOracleHomeNameInterConnectRepository
 - Oracle Workflow:
OracleOracleHomeNameInterConnectWorkflow
-

4. Use iStudio to design integration metadata. To start iStudio, use the following shortcut from the Start menu:

Start, Programs, *ORACLE_HOME_NAME*, Application Development

5. Start adapters.

See Also: [Table 2-1](#) on page 2-10 for a list of adapter-specific documentation

3.2 Changing OracleAS Integration InterConnect and Oracle Workflow Schemas Passwords

You might need to change the passwords of the `ichub` and `owf_mgr` schemas on a regular basis, depending on your company's security policy. The `ichub` is the schema for OracleAS Integration InterConnect, and `owf_mgr` is the schema for Oracle Workflow.

OracleAS Integration InterConnect uses Oracle Wallet Manager to maintain system passwords. When you install OracleAS Integration InterConnect, Oracle Wallet Manager is also installed and a password store is created. All passwords used by OracleAS Integration InterConnect components are stored in the password store.

You can create, update, and delete passwords using the `oraclewallet` command. When you run the command, it prompts you for the admin password.

To change the passwords of the `ichub` and `owf_mgr` schemas in the Oracle database, perform the following steps:

1. Enter the following command on the command prompt of the directory where OracleAS Integration InterConnect is installed:

```
oraclewallet -updatesecret passwordname
```

When you press Enter, it will prompt you for the admin authentication, which is required for updating the password.

2. Enter the admin password and press Enter.
3. A following confirmation message is displayed:

The secret `ichub` has been updated in the secret store.

3.3 Creating Multiple Repository Schemas in the Same Database

The first schema was created in the repository database during the hub installation. If you need a second schema in the repository database, you can create it using the following steps:

1. Run the InterConnect Hub installation procedure to install OracleAS Integration InterConnect Hub in a new OracleAS Middle Tier Oracle home.

When the installer prompts you for database information, enter hub information (database host, port, and SID) that is identical to the hub information in the first install.

2. After the install is complete, make a copy of the following files so that you have a copy of the original. You will be making changes to these files:

- NEW_ORACLE_
HOME/integration/interconnect/repository/hubschema
- NEW_ORACLE_
HOME/integration/interconnect/repository/oaiexport
- NEW_ORACLE_
HOME/integration/interconnect/repository/oaiimport
- NEW_ORACLE_
HOME/integration/interconnect/repository/sql/hub1.sql
- NEW_ORACLE_
HOME/integration/interconnect/repository/sql/deinstall_
schema.sql
- NEW_ORACLE_HOME/integration/interconnect/hub/hub.ini

3. Replace all occurrences of `ichub` with the name of the new schema in the preceding files. For example, if you want the new schema to be called `ichub2`, replace `ichub` with `ichub2`.
4. Run the modified `hubschema` script to create the new hub user (`ichub2` in this example) in the hub database.
5. Update the `hub_password` key in the Oracle Wallet for this new Oracle home.

Upgrading Oracle Application Server Integration InterConnect

This section explains how to upgrade Oracle Application Server 10g Release 2 Integration InterConnect.

The upgrade process consists of the following tasks:

- [Reviewing Your Current Oracle Application Server Integration InterConnect Installations](#)
- [Installing and Upgrading Hub Components, Adapters, and Development Kit](#)
- [Upgrading Metadata](#)
- [Upgrading Management](#)

A.1 Reviewing Your Current Oracle Application Server Integration InterConnect Installations

The location where you install Oracle Application Server Integration InterConnect components varies, depending upon the version you are using:

- In Oracle9iAS Release 2 (9.0.2) topologies, Oracle Application Server Integration InterConnect components reside in the Infrastructure or middle tier Oracle home, or a different Oracle home.
- In 10g (9.0.4), Oracle Application Server Integration InterConnect components do not reside in the Infrastructure or middle tier Oracle home. In fact, you must install them in a different Oracle home.
- In 10g Release 2 (10.1.2.0.1 and 10.1.2.0.2), Oracle Application Server Integration InterConnect components reside in the middle tier Oracle home.

A.2 Installing and Upgrading Hub Components, Adapters, and Development Kit

Your first step in upgrading to Oracle Application Server Integration InterConnect 10g Release 2 (10.1.2.0.2), is to install the 10g Release 2 (10.1.2.0.2) Hub, Adapters, and Development Kits by following the installation instructions in the Oracle Application Server Integration InterConnect installation documentation, which is available on the Oracle Application Server documentation library CD-ROM.

The information provided in the installation procedure should reflect the configuration of the 10g Release 2 (10.1.2.0.1) components that you are upgrading.

Ensure that the architecture described in the 10g Release 2 (10.1.2.0.2) installation is the same as the 10g (9.0.4) or 10g Release 2 (10.1.2.0.1) architecture, unless you intend to change the architecture.

A.3 Upgrading Metadata

Follow these steps to upgrade the Oracle Application Server Integration InterConnect metadata:

1. Install the most recent Oracle Application Server Integration InterConnect patch set for the version you are upgrading.

For example, if you are upgrading from 10g (9.0.4), be sure that you have installed the latest 10g (9.0.4) patchset.

2. Run the `oaiexport` script provided with the Release 2 (9.0.2), 10g (9.0.4) or 10g Release 2 (10.1.2.0.1) installation.

Supply values for repository name, file name, system password, and connect string with the following command:

```
SOURCE_ORACLE_HOME\oai\version\repository\oaiexport file_name
system\system_password connect_string
```

In this example, `version` represents 9.0.2, 9.0.4 or 10.1.2.0.1, depending upon the version of Oracle Application Server Integration InterConnect you are upgrading.

The metadata is exported to the `file_name` you provide in the current directory.

3. Run the `oaiimport` script provided with the 10g Release 2 (10.1.2.0.2) installation.

Supply values for repository name, file name, from user (the user ID of the user whose metadata is being imported), system password, `ichub` schema password, and connect string with the following command:

```
DESTINATION_MIDTIER_
HOME\integration\interconnect\repository\oaiimport file_name
from_user system\system_password ichub_schema_password
connect_string
```

When you run this command, the `file_name` you provide is imported into the 10g Release 2 (10.1.2.0.2) Hub database.

4. Create the tables in the hub schema database by executing one of the following SQL commands in the hub schema.
 - If you are upgrading from Release 2 (9.0.2), execute the SQL commands in [Example A-1](#).
 - If you are upgrading from 10g (9.0.4), execute the SQL commands in [Example A-2](#).
 - If you are upgrading from 10g Release 2 (10.1.2.0.1), execute the SQL commands in [Example A-3](#).

Example A-1 Creating Oracle Application Server Integration InterConnect Tables When Upgrading From Release 2 (9.0.2)

```
CREATE TABLE emdcomments (emdid NUMBER(10)
    CONSTRAINT fk_emdcomments_emdid REFERENCES emd(id) ON DELETE CASCADE
    CONSTRAINT nn_emdcomments_emdid NOT NULL, name VARCHAR2(4000)
    CONSTRAINT nn_emdcomments_name NOT NULL, comments LONG);
DROP TABLE ComponentInfoValue;
```

```

CREATE TABLE ComponentInfoValue (seqnum NUMBER
    CONSTRAINT fk_seqnum REFERENCES
    ComponentInfo(seqnum) ON DELETE CASCADE, value RAW(1024));
Execute xsd.sql from
    DESTINATION_MIDTIER_HOME\integration\interconnect\repository\sql

```

Example A–2 Creating Oracle Application Server Integration InterConnect Tables When Upgrading From 10g (9.0.4).

```

DROP TABLE ComponentInfoValue;
CREATE TABLE ComponentInfoValue (seqnum NUMBER
    CONSTRAINT fkseqnum REFERENCES
    ComponentInfo(seqnum) ON DELETE CASCADE, value RAW(1024));
Execute xsd.sql from
    DESTINATION_MIDTIER_HOME\integration\interconnect\repository\sql

```

Example A–3 Creating Oracle Application Server Integration InterConnect Tables When Upgrading From 10g Release2 (10.1.2.0.1)

```

Execute xsd.sql from
    DESTINATION_MIDTIER_HOME\integration\interconnect\repository\sql

```

A.4 Upgrading Management

The Oracle Application Server Integration InterConnect Management architecture has changed significantly since Release 2 (9.0.2), 10g (9.0.4) and from 10g Release 2 (10.1.2.0.1). Now, you can use the 10g Release 2 Oracle Application Server Enterprise Manager to manage Oracle Application Server Integration InterConnect runtime components.

The Oracle Application Server Enterprise Manager can only be used for configuring the Interconnect hub, repository and adapter properties, starting/stopping the Interconnect runtime components (Repository and Adapters) and to monitor the runtime performance metrics of the running adapters.

For other management activities, for example, to modify and resubmit the error or fault messages, you can use the ICManager command-line tool to manage InterConnect runtime components. ICManager is available at the following location within the 10g (10.1.2) Oracle Application Server Integration InterConnect Oracle home:

```

DESTINATION_MIDTIER_HOME\integration\interconnect\bin\ICManager.bat

```

See Also: Oracle Application Server Integration InterConnect Installation Guide and the Oracle Application Server Integration InterConnect User's Guide for more information.

A

adapters, 1-3
 custom, 2-13

C

Creating Multiple Repository Schemas in the Same Database, 3-3

D

dependent products, 1-3
deployment topology, 1-4
design time, 1-1

H

hardware requirements, 1-5
 adapters, 1-5
 development kit, 1-5
 hub, 1-5
hub database, 1-2

I

iStudio, 1-2

J

JRE Requirements, 1-6

M

managing
 OracleAS Integration InterConnect, 3-1

O

Operating System, 1-6
Operating System Patches, 1-6
Oracle InterConnect Manager, 1-3
Oracle Workflow, 1-3
 HTML help, 2-12
Oracle Workflow Builder, 1-3
 fonts, 2-13
Oracle Workflow Communication, 1-3

OracleAS Integration InterConnect

 development kit
 installation, 2-11
 postinstallation, 2-12
 preinstallation, 2-1
 hardware requirements, 1-5
 adapters, 1-5
 development kit, 1-5
 hub, 1-5

 Hub

 preinstallation, 2-1
 installation, 2-2
 installation types, 1-3
 adapter, 1-3
 development kit, 1-3
 hub, 1-3
 managing, 3-1
 overview, 1-1
 software requirements, 1-6
 starting, 3-1

OracleAS Integration InterConnect Development Kit, 1-3, 2-1

OracleAS Integration InterConnect Hub, 2-1

OracleAS InterConnect Development Kit, 2-11, 2-12

P

password
 changing
 schemas, 3-2

R

repository, 1-2
run time, 1-1

S

software requirements, 1-6
starting
 OracleAS Integration InterConnect, 3-1

