Oracle9*i*AS InterConnect

Release Notes

Release 2 (9.0.2) for Windows NT

May 2002

Part No. A97396-01

This document summarizes the differences between Oracle9*i*AS InterConnect and its documented functionality.

> **See Also:**   *Oracle9i Application Server Release Notes*

1 Certification and System Requirements

The following lists the Oracle9*i*AS InterConnect components and the supported platforms:

- Oracle9*i*AS InterConnect Adapter for CICS—Windows NT, Windows 2000

- Oracle9*i*AS InterConnect Adapter for JDEdwards—Windows NT, Windows 2000

- Oracle9*i*AS InterConnect Adapter for PeopleSoft 7.5x—Windows NT, Windows 2000

- Oracle9*i*AS InterConnect Adapter Publishing Engine—Windows NT, Windows 2000

- Oracle9*i*AS InterConnect Adapter for SAP—Windows NT, Windows 2000

- Oracle9*i*AS InterConnect Adapter for Siebel 2000—Windows NT, Windows 2000

1.1 Siebel Adapter—Supported Systems

The Oracle9*i*AS InterConnect Adapter for Siebel 2000 supports 6.2.1 Enterprise Edition with patch 110 or higher.

> **Note:** This version of the adapter only works with Siebel eBusiness 2000 version 6.2.1 with patch 110 or higher applied. This patch is necessary to resolve a memory leak on the Siebel server when any kind of remote client is used. All instructions in the patch 110 *Maintenance Release Guide* from Siebel Systems must be followed carefully. The most important instruction as far as remedying the server side memory leak is the setting of a Siebel server component parameter called "recyclefactor" to a value greater than the default of zero. The *Maintenance Release Guide* recommends a value of 3. This will improve server performance and memory usage. This must be done for all object managers in use.

2 New Features

This section describes new features for Oracle9*i*AS InterConnect.

2.1 DatabaseOperation Transformation

The DatabaseOperation transformation has been added to the current list of transformations.

2.1.1 DatabaseOperation Transformation Parameters

The following is a list of parameters associated with the DatabaseOperation Transformation:

- db user—The database user name.
- db password—The password of the database user.
- db host—The hostname of the database.
- db port—The listener port of the database.
- db sid—The SID of the database.
- jdbc driver—The JDBC driver to use (`thin` or `oci`).
- retry count—The number of retries.
- retry delay—The delay before each retry in seconds.
- operation—The SQL or PL/SQL statement of the database operation.

2.1.2 DatabaseOperation Transformation Description

Apply some SQL or PL/SQL operations to the source fields(s) and copy the result to the destination field(s). The transformation operation can be processed on any database; not necessarily the hub or database adapter instance. Connect to the database given by the connectivity parameters (user, password, host, port, sid, driver) and bind the input variables to the corresponding bind variables of the SQL or PL/SQL given by the 'operation' parameter.

The statement is then executed and upon successful execution, the results are copied to the destination fields of the transformation. The connection to the database is then closed and the result of the transformation is returned.

For the PL/SQL type of transformations, the following syntax of the PL/SQL statement is assumed:

- IN parameters are specified with a **?I**

- OUT parameters are specified with a **?O:<T>**

- IN/OUT parameters are specified with a **?IO:<T>**

where <T> is a single character type specifier denoting the type of the variable. Valid variable values are:

- S—String

- I—Integer

- F—Float

- D—Double

- T—Date

- B—Binary

For example, if the transformation is a PL/SQL function foo (par1 in number, par2 in out varchar) returning number, then the transformation operation needs to be specified as:

```
begin ?o:i := foo(?i, ?io:s); end;
```

3 Open Issues

This section describes open issues for Oracle9iAS InterConnect.

3.1 Content Based Routing—Known Bug

When creating a content based routing rule and then exiting iStudio, upon re-starting iStudio and editing the content based routing rule, the following error is reported by iStudio:

```
"Unable to load CBR for <event>"
```

The following error is also logged in the `iStudioLog.txt` file:

```
"::: org.omg.CORBA.UNKNOWN"
```

The workaround for this known bug is to create a subscribing application in iStudio before creating a content based routing event involving the application.

4 General Issues and Workarounds

This section describes general issues and their workarounds for Oracle9iAS InterConnect.

4.1 Publishing Engine

To use the Publishing Engine on Windows NT, you must have a profile named iStudio. If you have run iStudio on your machine and browsed the PeopleSoft, SAP, Siebel, and JDEdwards adapters, this profile is created automatically. If you have not run iStudio on your machine and want to run the Publishing Engine, create an iStudio profile by running the Configuration Editor.

4.2 Oracle9iAS InterConnect Adapter for Siebel—Unformatted DTYPE_PHONE Values

Siebel DTYPE_PHONE is mapped to Oracle9iAS InterConnect as `java.lang.String`. The Siebel adapter expects unformatted phone number values for inserts and updates.

A formatted phone number looks like:

```
    (514) 332-6430 x909
```

An unformatted phone number looks like:

```
    5143326430x909
```

If you submit a formatted phone number where the format matches the locale for which the Siebel application server has been set, for any business component phone field (of type DTYPE_PHONE), the insert/update will succeed but all subsequent queries to retrieve that record will fail with a seemingly unrelated error message back from Siebel. If you insert multiple records, the first will succeed and the rest will fail.

As a workaround, submit all phone numbers as unformatted.

The following is the exception in the ACB log if formatted phone number values are submitted:

```
Exception occurred:
Source: Siebel
Error Code: 65538 (0x10002)
Cause: Siebel://exception=SBLException (Unique ID <none)
E-SBL0041: Call to business component Insert failed- Check record at
index 1- Siebel error msg-  Failed to retrive the new record that
was inserted.  Contact Siebel Administrator Could not move the
record pointer to first record. The insert operation failed at index
1- Siebel error code- 65538- Siebel record index- 1
```

4.3 Installing a Second HTTP Adapter in the Same Oracle Home

To install a second HTTP adapter in the same Oracle home, complete the following steps:

1. Use the following `copyAdapter` utility to make a copy of the existing HTTP adapter:

    ```
    c:\> cd ORACLE_HOME\oai\9.0.2 bin
    c:\< copyAdapter <oldAdapterName> <new AdapterName>
    ```

2. Change the parameters in the `adapter.ini` file for the new adapter. In particular, make sure the following parameters in the new `adapter.ini` file are different from the `adapter.ini` file for the existing HTTP adapter:

    a. Change the send endpoint (`ota.send.endpoint`) parameter.

    b. Change the receive endpoint (`ota.receive.endpoint`) parameter.

        The default receive endpoint set by the installer is:

        ```
        http://<machine name>:<port number>/oai/servlet/transportServlet
        ```

        You can change the receive endpoint to the following:

        ```
        http://<machine name>:<portnumber>/oai1/servlet/transportServlet
        ```

    c. Change the payload type parameter (`ota.type`) if necessary.

   d. Change the rmi registry port parameter
(`http.receiver.registry_port`) to a port not used on this
machine.

3. Change the content of the `web.xml` file to match that of the
`adapter.ini` file. The `web.xml` file is in the following directory:

```
ORACLE_HOME\oai\9.0.2\adapters\<newAdapterName>\webapps\WEB-INF
```

- Change the rmi port to match the value entered in Step 2d.

  * Change the following entry in the `web.xml` file:

    ```
    <param-value>9901</param-value>
    ```

    to:

    ```
    <param-value> port-number-you-used-step-2d </param-value>
    ```

4. Change the following entry in the `application.xml` file in the
`ORACLE_HOME\oai\9.0.2\adapters\<your new http app
name>\webapps\META-INF` directory:

```
<context-root>oai/servlet</context-root>
```

to:

```
<context-root>oai1/servlet</context-root>
```

5. Prepare the java archive parameter (`oai1.ear`):

```
c:\> ORACLE_HOME\oai\9.0.2\adapters\<your new http app name>\webapps
c:\> jar cvf oai.war WEB-INF
c:\> jar cvf oai1.ear oai.war META-INF
```

An `.ear` file has been created called `oai1.ear` which is ready for
deployment.

6. Deploy the `oai1.ear` file in the Oracle9*i*AS environment:

```
c:\> ORACLE_HOME\dcm\bin\dcmctl shell
dcmctl> deployApplication -f oai1.ear  -a oaiservlet1 -co oc4J_OAI
dcmctl> exit
```

> **Note:** Here, `oaiservlet1` is a unique application name
> that you assign to your servlet. If this name is already used
> in the current environment, select a different name.

7. Restart the HTTP server. Verify if the new receiving endpoint is functioning by entering the URL used in Step 2b in your browser. If the servlet is deployed correctly, a diagnostic page appears.

4.4 DB Adapter—Schema Password Exposed through the agent1.sql File

The password to the Oracle9*i*AS InterConnect schema in the spoke database of the database adapter is exposed through the `agent1.sql` file located in the following directory:

```
ORACLE_HOME\oai\9.0.2\adapters\<adapter_name>\
```

Make sure this file is password protected using the utilities provided by the operating system.

4.5 FTP Adapter—Installation Parameters

Do not set the `ota.send.endpoint` parameter to the same value set for the `ota.receive.endpoint` parameter unless you perform a loop-back test for the FTP adapter. The files that you send out are used by the receiving end.

4.6 FTP Adapter—Windows Parameter Settings

On Windows platforms, if you have a file system endpoint, you can use the drive letter and directory name as part of the endpoint url.

For example:

```
ota.receive.endpoint=file://localhost/c:\test
```

4.7 Creating Multiple Adapters using the copyAdapter Script

The `copyAdapter` script is copied to the `ORACLE_HOME\oai\9.0.2\bin` directory only during hub installation. If you need to use this script to create multiple adapters on a spoke machine, copy the script to the `ORACLE_HOME\oai\9.0.2\bin` directory of the spoke machine and edit the script to reflect the new Oracle Home.

4.8 MQ Series Adapter Will Not Start

The MQ Series adapter is based on the IBM MA**88** support pac. IBM recently released a version 5.2.1 of its MA**88** support pac which contains the following:

- MQSeries classes for Java version V5.2.1

- MQSeries classes for Java Message Service (JMS) V5.2.1

The MQ Series adapter was developed based on version 5.2.0 of these classes.

The following instructions apply only if you have installed the 5.2.1 version of the MA88 support pac (or if it came on the installation CD from IBM). You can verify your version in the `readme.txt` file in the `C:\Program Files\IBM\MQSeries\Java\doc\en_US` directory.

If you have 5.2.0 or earlier version installed, ignore the following.

Version 5.2.1 introduces a dependency on the J2EE Connector Architecture exception `javax.resource.ResourceException`, which is defined in the MQ Series JAR `connector.jar` file.

Consequently, the MQ Series adapter configuration must be modified to include this JAR file in the classpath, to avoid receiving the following error while starting the MQ Series adapter:

```
java.lang.NoClassDefFoundError: javax/resource/ResourceException at
com.ibm.mq.MQEnvironment.<clinit>(MQEnvironment.java)
```

The `connector.jar` file can normally be found in the `C:\Program Files\IBM\MQSeries\Java\lib` directory.

As a workaround, change the `service_classpath` in the `adapter.ini` file to the following:

```
service_classpath=C:\Program Files\IBM\Java\lib\connector.jar;
<previous>
```

The `java/lib` directory should be added to the OS dynamic link library path. Modify the MQ Series `adapter.ini` file as follows:

```
service_path=C:\Program Files\IBM\MQSeries\Java\lib;D:\oai902\jdk\bin;
D:\oai902\jdk\jre\bin\hotspot;D:\oai902\bin
```

4.9 Using the HTTP Adapter to Send Messages Via SSL

To use the HTTP adapter to send messages via SSL, modify the `service_classpath` parameter in the `adapter.ini` file. Make sure the `http_client.jar` file in the `<ORACLE_HOME>\j2ee\home1ib\` directory is in the `service_classpath`.

> **Note:** `<ORACLE_HOME>` is the actual path of the Oracle Home.

4.10 The HTTP Adapter Must Have the J2EE/Webcache Component Installed

If the HTTP adapter is installed on a spoke machine that does not have the J2EE/Webcache component, the `http_client.jar` file needed by the HTTP adapter is missing.

To workaround this issue, install the J2EE/Webcache component in the HTTP adapter's Oracle Home if it is not an Oracle9*i*AS InterConnect Oracle Home.

4.11 Oracle9*i*AS InterConnect Adapters Fail to Initialize

If the JavaHome and RuntimeLib keys are not present or do not point to the correct JDK, the Oracle9*i*AS InterConnect adapters fail to initialize. At design time, the iStudio browser will not display or the data from the backend system cannot be imported.

Create the JavaHome and RuntimeLib keys. Make sure these keys point to the JRE present in your Oracle Home. This step is only necessary if using the CICS, PeopleSoft, Siebel, SAP, and JDEdwards adapters or browsers in iStudio.

To created these keys, use the Windows regedit tool. To access the regedit tool:

1. Click Start and select Run.

2. Enter regedit and click OK.

The following example displays the values for these keys when Oracle9*i*AS InterConnect is installed under the `C:\Oracle\Ora90` directory:

```
[HKEY_LOCAL_MACHINE\SOFTWARE\JavaSoft\Java Runtime Environment]

[HKEY_LOCAL_MACHINE\SOFTWARE\JavaSoft\Java Runtime Environment\1.3]
"CurrentVersion"="1.3"

[HKEY_LOCAL_MACHINE\SOFTWARE\JavaSoft\Java Runtime Environment\1.3]
"JavaHome"="c:\\oracle\\ora90\\jdk\\jre"
"MicroVersion"="1"
"RuntimeLib"="C:\\Oracle\\Ora90\\jdk\\jre\\bin\\hotspot"
```

5 Documentation Errata

This section describes known errors in the documentation.

5.1 Oracle9*i*AS InterConnect Adapter for FTP—Missing Installation Parameters

Table 1 lists two parameters missing from the FTP Adapter Parameters table (Table 2.6) in the Installation chapter of the *Oracle9iAS InterConnect Adapter for FTP Installation and User's Guide*. If your FTP server does not use the default port 21, set the port number by setting the file.sender.port parameter (for sending from Oracle9*i*AS InterConnect to external) or the file.receiver.port parameter (for receiving messages from external to Oracle9*i*AS InterConnect) in the adapter.ini file.

Table 1   Missing FTP Adapter Parameters

Parameter	Description	Example
file.receiver. polling_interval	Defines the time interval to poll the message source in milliseconds. The default value is 60000.	file.receiver.polling_ interval = 10000
file.receiver.max _msgs_retrieved	Defines the maximum number of messages to be retrieved in each session. The default value is 30.	file.receiver.max_ msgs_retreived = 10

5.2 Oracle9*i*AS InterConnect Adapter Documentation

Several Oracle9*i*AS InterConnect Adapter Installation and User's Guides contain a chapter which address frequently asked questions. In this chapter, the issue of installing multiple Oracle9*i*AS InterConnect components in the same Oracle Home is addressed incorrectly. Please refer to Appendix C of the *Oracle9iAS Installation Guide* for the correct information.

5.3 Oracle9*i*AS InterConnect User Documentation

The D3L DTD example in Appendix B of the *Oracle9iAS InterConnect User's Guide* is missing two element attributes for the message element. These attributes are object (mandatory) and reply (optional). In addition, the name attribute should be defined as mandatory. The definition of the message element should be as follows:

```
<!ELEMENT message ( %MessageElements; )* >
    <!ATTLIST message
        name        %Name;          #REQUIRED
        object      CDATA           #REQUIRED
        type        IDREF           #REQUIRED
        comment     %Comment;       #IMPLIED
        id          ID              #IMPLIED
        header      CDATA           #IMPLIED
        value       CDATA           #IMPLIED
        magic       CDATA           #IMPLIED
        endpoint    CDATA           #IMPLIED
        reply       (Y|N)           "N"
    >
```

> **Note:** The endpoint attribute is currently not used.

5.4 Windows NT Service Name of Oracle9*i*AS InterConnect Components

The Windows Service Name of Oracle9*i*AS InterConnect components are:

- Oracle9*i*AS InterConnect
  Adapters—`Oracle<OracleHomeName>InterConnect-<adapterName>`, for example `myAQApp`.

- Oracle9*i*AS InterConnect
  Repostory—`Oracle<OracleHomeName>InterConnectRepository`.

- Oracle Workflow—
  `Oracle<OracleHomeName>InterConnectWorkflow`.

6 Post Installation Steps

This section describes post installation steps.

6.1 iStudio Post Installation Steps for the Oracle9*i*AS InterConnect Adapter for JDEdwards

Complete the following iStudio post installation steps to fully enable the Oracle9*i*AS InterConnect Adapter for JDEdwards.

1. Update the `PATH` environment variable to include the `ORACLE_HOME\oai\9.0.2\bin` directory. This is required for running the utilities in this directory.

2. Copy the `Kernel.jar` and `Connector.jar` libraries from the JDEdwards OneWorld installation to the `ORACLE_HOME\oai\9.0.2\lib` directory in your Oracle Home.

3. Edit the `jdeinterop.ini` file located in the `ORACLE_HOME\oai\9.0.2\config\JDE\` directory to specify path to the log files for the following parameters:

    ```
    [LOGS]
    log=
    debuglog=

    [DEBUG]
    log=
    DebugFile=
    JobFile=
    ```

    For example:

    ```
    log=C:\Oracle\Ora90\oai\9.0.2\jdelog.txt
    ```

    Set the following parameter to point to `ORACLE_HOME\oai\9.0.2\lib` directory:

    ```
    [INTEROP]
    repository=
    ```

    For example:

    ```
    repository=C:\Oracle\Ora90\oai\9.0.2\lib
    ```

    Set the other parameters in this file before using the adapter.

4. Set the configuration settings for the adapter using the Configuration Editor before using the JDEdwards adapter.The Configuration Editor is a Java application and can be launched by running the configeditor.bat file located in the `ORACLE_HOME\oai\9.0.2\config\` directory.

The files in the ORACLE_HOME\oai\9.0.2\jde\ESU directory are provided to create custom packages on the JDEdwards OneWorld server. Custom packages must be set up on the this server before you can use the adapter.

> **See Also:** *Oracle9iAS InterConnect Adapter for JDEdwards Installation and User's Guide*

6.2 iStudio Post Installation Steps for the Oracle9*i*AS InterConnect Adapter for SAP

Complete the following iStudio post installation steps to fully enable the Oracle9*i*AS InterConnect Adapter for SAP.

1. Update the PATH environment variable to include the ORACLE_HOME\oai\9.0.2\bin directory. This is required to run the utilities in this directory.

2. The SAP adapter requires the librfc32.dll SAP library for browsing the SAP system in iStudio and for run time. If the SAP graphical interface is installed on a machine, the librfc32.dll can be found in the following directories:

   ```
   <SAP install directory>SAPpc\SapGui\RFCSDK\lib
   <SAP install directory>SAPpc\SapGui\RFCSDK\bin
   ```

   The version information for the library is librfc32.dll 4640.5.734.3319. Copy this library file to the ORACLE_HOME\oai\9.0.2\bin directory.

   If you do not have the library available at your site, please refer to R/3 note number 0413708. In this note you can find the information regarding procurement of the libraries.

3. To enable dynamic access to IDocs and enhanced use of RFCs, use the files provided in the ORACLE_HOME\oai\9.0.2\sap directory and upload the source code on to the SAP server. This directory has the following folders:

   - a. ale_files—The files in this folder are used on the SAP server to enable dynamic access to IDocs at both design time and runtime. See IdocBrow.txt for instructions. Without uploading the source code in these files, you will not be able to dynamically access IDocs. In that case you need to manually download the IDoc definitions from the SAP server.

- b. `rfc_files`—The files in this folder are used on the SAP server or enhanced access to RFCs at both design time and runtime. See `rfcbrows.txt` for instructions. RFC browsing and runtime calls will be slower if the source code in these files are not uploaded to the SAP server.

4. Set the configuration settings for the adapter using the Configuration Editor before using the PeopleSoft adapter for runtime. The Configuration Editor is a Java application and is launched by running the `configeditor.bat` file in the `ORACLE_HOME/oai/9.0.2/config/` directory.

> **See Also:** *Oracle9iAS InterConnect Adapter for SAP Installation and User's Guide*

6.3 iStudio Post Installation Steps for the Oracle9*i*AS InterConnect Adapter for PeopleSoft 7.5x

Complete the following iStudio post installation steps to fully enable the Oracle9*i*AS InterConnect Adapter for PeopleSoft 7.5x.

1. Update the `PATH` environment variable to include the `ORACLE_HOME\oai\9.0.2\bin` directory. This is required for running the utilities in this directory.

2. Customize the PeopleSoft panel and make it available through the application's Message Server API. The files in the `ORACLE_HOME\oai\9.0.2\peoplesoft` directory are provided for this purpose.

> **See Also:**
>
> - `readme.html` in the `ORACLE_HOME\oai\9.0.2\peoplesoft` directory

3. Set the configuration settings for the adapter using the Configuration Editor before using the PeopleSoft adapter for runtime. The Configuration Editor is a Java application and is launched by running the `configeditor.bat` file in the `ORACLE_HOME/oai/9.0.2/config/` directory.

> **See Also:** *Oracle9iAS InterConnect Adapter for PeopleSoft 7.5x Installation and User's Guide*

6.4 iStudio Post Installation Steps for the Oracle9*i*AS InterConnect Adapter for Siebel 2000

Complete the following iStudio post installation steps to fully enable the Oracle9*i*AS InterConnect Adapter for Siebel 2000.

1. Update the PATH environment variable to include the ORACLE_HOME\oai\9.0.2\bin directory. This is required for running the utilities in this directory.

2. Copy the following libraries from the Siebel installation to the ORACLE_HOME\oai\9.0.2\lib directory:

    - SiebelTcOM.jar

    - SiebelTcCommon.jar

    - SiebelTC_enu.jar

    - SiebelDataBean.jar

    These .jar files comprise the Siebel Java Data Bean and are provided on the Siebel installation CD.

3. Siebel requires that you enable the Siebel Thin Client Enterprise Component to allow any thin client to communicate remotely with the Siebel Application Server.

4. Set the configuration settings for the adapter using the Configuration Editor before using the PeopleSoft adapter for runtime. The Configuration Editor is a Java application and is launched by running the configeditor.bat file in the ORACLE_HOME/oai/9.0.2/config/ directory.

> **See Also:** *Oracle9iAS InterConnect Adapter for Siebel 2000 Installation and User's Guide*

6.5 iStudio Post Installation Steps for the Oracle9*i*AS InterConnect Adapter for CICS

Complete the following iStudio post installation steps to fully enable the Oracle9*i*AS InterConnect Adapter for CICS:

1. Update the PATH environment variable to include the ORACLE_HOME/oai/9.0.2/bin directory. This is required for running the utilities in this directory.

2. The CICS adapter requires the individual message reply and request pairs that describe interactions between clients and servers be modeled as methods in Message Description Language(MDL) format.

> **See Also:** *Oracle9iAS InterConnect Adapter for CICS Installation and User's Guide* for information on the MDL syntax and sample MDL files.

The MDL files must be located in the `ORACLE_HOME/oai/9.0.2/config/CICS` directory for design time and runtime.

3. Set the configuration settings for the adapter using the Configuration Editor before using the CICS adapter for runtime. The Configuration Editor is a Java application and is launched by running the `configeditor.bat` file in the `ORACLE_HOME/oai/9.0.2/config/` directory.

> **See Also:** *Oracle9i*AS InterConnect *Adapter for CICS Installation and User's Guide*

6.6 Post Installation Steps for Registering the License for the SAP, PeopleSoft, Siebel, JDEdwards, and CICS Adapters

Before using the SAP, PeopleSoft, Siebel, JDEdwards, and CICS adapters, or if using these browsers in iStudio, the license needs to be registered using the license registration tool. This tool uses the following files:

- `licreg.exe`—Located in the `ORACLE_HOME\oai\9.0.2\bin` directory.

- `acboai.lic`—The license file located in the `ORACLE_HOME\oai\9.0.2\config` directory.

To register the license, complete the following:

1. Update the `PATH` environment variable to include the `ORACLE_HOME\oai\9.0.2\bin` directory. This is required for running the utilities in this directory.

2. Double click on `licreg.exe` to display the License Manager dialog.

3. Navigate to the `ORACLE_HOME\oai\9.0.2\config` directory.

4. Select `acboai.lic` and click OK.

`Licreg.exe` silently registers the license. To verify the registration, from a command prompt, launch `logdump.exe` located in `ORACLE_HOME\oai\9.0.2\bin` directory. This prints the log messages regarding license registration.