

Oracle9i Warehouse Builder

Release Notes

Release 2 (9.0.2)

April 2002

Part No. A95951-01

These release notes provide information on Oracle9i Warehouse Builder as part of Oracle9iDS Release 2 (9.0.2).

See Also: *Oracle9i Developer Suite Release Notes*

This document contains the following topics:

- Certification and System Requirements
- Installation Notes
- System Privileges
- Known Limitations and Workarounds
- Undocumented Functionality
- Documentation Errors
- Resolved Issues

1 Certification and System Requirements

1.1 Customers with Oracle 8.1.7

Database: Oracle 8.1.7.2 or later Enterprise Edition.

Application Server: Oracle9iAS 9.0.2 or later.

Oracle Enterprise Manager: OEM 2.2.

Oracle Workflow: Workflow server: 2.6.0 and Workflow client: 2.6.1

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Open System Gateways: Use Oracle Transparent Gateway versions 8.1.6 for Informix, Sybase or Microsoft SQL Server after applying the appropriate gateway patches for bugs 1363140, 1363152, 1363149 respectively.

Mainframe Gateways: Oracle Transparent Gateway for DB2 on IBM OS 390 (MVS) version 8.0.4.1.

DRDA Gateway: Use Oracle Transparent Gateway for DRDA version 8.0.4.

1.2 Customers with Oracle 9.0.1

Database: Oracle 9.0.1.2 or later Enterprise Edition. Oracle9i Warehouse Builder is not certified against Oracle9i Standard Edition.

Application Server: Oracle9iAS 1.0.2.2 or later.

Oracle Enterprise Manager: OEM 9.0.1.

Oracle Workflow: Oracle Workflow server: 2.6.1/2.6.2 (2.6.2 is preferred) and Workflow client: 2.6.1

Open System Gateways: Use Oracle Transparent Gateway version 9.0.1 for Informix, Sybase or Microsoft SQL Server only after upgrading the Oracle Server to 9.0.1.2 and applying the patch for 2102253 Warehouse Builder

Mainframe Gateways: Oracle Transparent Gateway for DB2 on IBM OS 390 (MVS) version 8.1.7. (The use of Warehouse Builder and Oracle 9.0.1 with this gateway is not yet certified.)

DRDA Gateway: Use Oracle Transparent Gateway for DRDA version 9.0.1. (The use of Warehouse Builder and Oracle 9.0.1 with this gateway is not yet certified.)

Oracle Gateways:

For all gateways, including generic connectivity, the database patches apply to both the repository and target databases, because Warehouse Builder uses the gateway twice (in the repository instance for retrieving metadata, and in the target instance for retrieving data).

The required gateway patches for each gateway are:

- Informix: patch for bug 1363140 (Solaris and HP/UX)
- Microsoft SQL Server: patch for bug 1363149 (Windows NT)
- Sybase: Patch for bug 1363152 (Solaris, HP/UX, IBM AIX and Windows NT)

To download gateway patches, go to the patch section of MetaLink. Select Product: Oracle Transparent Gateway for [database] and the appropriate platform.

Compatibility with Pure*Integrate and Pure*Extract

Oracle Pure Integrate 5.3, 5.3.1 and Pure Extract 6.2 export MDL files in Warehouse Builder 2.1 format. To use these files with Oracle9i Warehouse Builder, you must first use the MDL upgrade utility to upgrade them. These versions however, cannot read Oracle9i Warehouse Builder MDL files. Oracle Pure Integrate 5.5 can read and write Oracle9i Warehouse Builder MDL files.

2 Installation Notes

Before you begin installing Warehouse Builder, make sure that you have the following CDs, in addition to the Warehouse Builder CD:

- Oracle8i, Release 3 (8.1.7) Enterprise Edition or Oracle9i (9.0.1.2) Enterprise Edition
- Oracle Portal Version 3.0 (9iAS 1.0.2.1 or 1.0.2.2 Enterprise Edition)
- Oracle Workflow Client Release 2.6 for Microsoft Windows NT (optional)
- Oracle Workflow Cartridge 2.6 for Microsoft Windows NT and Sun SPARC Solaris (optional)
- OEM 2.2 Change Management Pack (optional, but required for Warehouse Upgrade feature)

Shut down all Oracle Services when installing Warehouse Builder on a Windows NT system. This ensures that the Oracle Universal Installer can access all necessary files.

2.1 Oracle Homes

Use a separate Oracle Home when installing Warehouse Builder.

2.2 Upgrading and Migrating

For Oracle 9i Warehouse Builder version 9.0.2, the following upgrades and migrations are supported:

- Repository migration from 2.x to 9.0.2. Use the Migration Toolkit utility.
- Repository upgrade from 3i to 9.0.2. Use the Repository Assistant.
- Runtime upgrade from 2.x/3i to 9.0.2. Use the Repository Assistant.
- Portal migration from 3i to 9.0.2. Use the Administration pages in the Warehouse Builder Browser.

2.3 Dropping a Repository

When you drop a repository in the Repository Assistant or the Runtime Repository Assistant, the Assistant removes all repository objects. It does not remove any other objects from the schema, such as database links and user deployed objects, and it does not remove the schema itself. You must remove these objects manually.

2.4 Support for Oracle9i

Warehouse Builder XML toolkit is not currently supported for Oracle9i.

In order to browse/report against a Oracle9i Warehouse Builder repository that is running on an Oracle9i database, you must install Warehouse Builder Browser into Oracle9iAS 1.0.2.2 running on Oracle 8.1.7.

Parameters are not imported into an Oracle9i repository from a function or procedure that contains parameters. (1803624, 2099200)

The combination of Warehouse Builder and Oracle Workflow is not currently certified on Oracle9i.

3 System Privileges

Oracle9i Warehouse Builder grants the privileges to repository, runtime and browser schemas. These roles and privileges are intended to create a level of security. In keeping with the Oracle recommended practice, privileges are granted by specific privilege instead of by role.

3.1 Repository Privileges

These are the Repository privileges:

- grant select_catalog_role to %user
- grant CREATE DATABASE LINK to %user;
- grant create snapshot to %user
- CREATE DIMENSION
- CREATE INDEXTYPE
- CREATE MATERIALIZED VIEW
- CREATE SEQUENCE
- CREATE SESSION
- ALTER SESSION
- CREATE SYNONYM

- CREATE PROCEDURE
- EXECUTE PROCEDURE
- CREATE PUBLIC SYNONYM
- DROP PUBLIC SYNONYM
- CREATE TABLE
- CREATE TYPE
- CREATE VIEW
- Unlimited tablespace

3.2 Runtime Privileges

These are the Runtime privileges:

- CREATE DATABASE LINK
- CREATE DIMENSION
- GLOBAL QUERY REWRITE
- CREATE INDEXTYPE
- CREATE PROCEDURE
- CREATE SEQUENCE
- CREATE SESSION
- ALTER SESSION
- CREATE SNAPSHOT
- CREATE SYNONYM
- CREATE PUBLIC SYNONYM
- DROP PUBLIC SYNONYM
- CREATE TABLE
- CREATE VIEW
- CREATE TRIGGER
- grant execute on sys.dbms_stats to %user
- Unlimited tablespace

3.3 Browser Privileges

These are the Browser privileges:

- CREATE DATABASE LINK
- create any index, drop any index
- create procedure, drop any procedure, execute any procedure
- create sequence, drop any sequence, select any sequence
- create session, alter session
- create synonym, drop any synonym
- create table, delete any table, drop any table, insert any table, select any table, update any table
- create view, drop any view

4 Known Limitations and Workarounds

4.1 XML Toolkit

Due to limitations in Oracle 8i and 9i Release 1 of the database, the Warehouse Builder XML Toolkit is limited by memory of the JVM process in the server when applying the stylesheet. It is advisable to use XML files (<10Mb) which require no stylesheet or use a simple stylesheet. Larger XML files can be handled if the document splitter feature is utilized, otherwise use SQL*Loader. In Oracle 9.2 of the database, the XML features will alleviate these issues.

4.2 Time Dimension Modifications (1140535)

Do not modify, rename, or delete any component of a time dimension that has been generated by the Time Dimension Wizard. Doing so will cause the code generator to generate invalid code. You may safely modify user-defined components.

4.3 Materialized View Query Rewrite (1364923)

By default, Warehouse Builder creates unique key constraint on each dimension level and generates a unique key constraint for the dimension table for the lowest or standalone level. Because unique keys allow null values, this can be a problem for materialized view query rewrite. The query is not redirected to the materialized view.

The problem is a materialized delta join, which is a join that occurs in the materialized view but not in the query. You must guarantee LOSSLESSNESS for a join in the materialized view you want to discard.

You can do this either with:

- Foreign key relationship and a NOT NULL constraint on the foreign key column
- Usage of an outer join (for the dimension join key column) and a NOT NULL constraint on the join key column in the fact (foreign key column)

4.3.0.1 Workaround Open the dimension table properties and change the constraint type to Primary Key for all the lowest level and standalone level constraints.

4.4 Warehouse Upgrade Cannot Delete an Index (1477144, 1668554)

The Warehouse Upgrade does not drop an index from the data warehouse when you delete that index from the model in the Warehouse Builder repository. The upgrade script is created and deployed successfully but the index remains in the database.

4.4.0.2 Workaround You can do one of the following:

- Within Warehouse Builder, generate the object using both the Create and Drop options instead of the upgrade option. Deploy the DROP INDEX script to the database.
- Use another database tool external to Warehouse Builder (such as, SQL*Plus® or DBA Studio) to drop the index.

4.5 Pre-model and post-model triggers for SQL*Loader (1524760)

Pre-model and post-model triggers for SQL*Loader do not function correctly.

4.5.0.3 Workaround You can define an external process for the function that you wanted in the pre or post map triggers and use OEM or Workflow to call the external processes before or after the SQL*Loader mapping.

4.6 Transparent Gateways for Informix (1612581,1620126)

On the Import Wizard selection page, if you select related tables with ALL levels of foreign key relationship, the Informix Gateway can compute only

the FIRST level and only the FIRST level is selected. The import of metadata is not affected.

4.7 Right-click Pop-up Menus May Not Appear (1621822, 1766652)

In the Console and Module Editor, be careful about shrinking the window horizontally and where you position the cursor if you use a right-click pop-up menu for any node. If the window is shrunk too far you may have to either right click on the extreme left or the extreme right of the node label. If you click in the middle of the label the menu will not appear. Also if the window is narrower than the menu, the menu will not appear.

4.7.0.4 Workaround Stretch the window horizontally and the menu will appear. Or, use the menu bar items, such as Transformation, Edit, and View, instead of the pop-up menu.

4.8 Upgrading maps from previous releases may have performance issues

Performance issues can arise when you upgrade a map that was built in release 2.11 or earlier of Warehouse Builder. If a map contains a join or filter, the upgrade process will create a join operator for the map. Each column from the source will be mapped through the join operator. When executing the map in any form of row mode, each column will get assigned to a local variable in the mapping code. The map could execute faster if only the columns used in the join and/or filter clause are mapped through the operator.

4.8.0.5 Workaround Re-map the columns directly to the join operator and remove the extra columns from this join operator.

4.9 Numbers in Object Names (1745790)

It is recommended that you avoid giving objects names that start with numbers. This may cause inconsistencies in the handling of names starting with numbers in the Add and Rename options and in the Expression Builder. Avoid this type of naming convention.

4.10 Open Mappings in Two Sessions (1756848)

If you open a mapping in one session in read/write mode and you open the same mapping in another session, then the map can only be accessed in read-only mode. No write operations are possible in the second session. You will see the message: Object cannot be edited in Read-Only mode.

Modifications made and committed in the first session can be viewed in the second session by clicking the synchronize button. You cannot edit attributes in read-only mode. To edit the mapping, use the first session or close the mapping editors in both sessions and reopen the mapping in the second session to enter read/write mode.

4.11 Unpredictable outcome for set-based fail over runs to multiple targets (1807064)

Where multiple targets are involved, the order of the mappings to those targets is unpredictable, and may vary from one generation to the next for exactly the same mapping.

In failover modes, if any of the batch procedures fails, it will skip the rest of the set-based processing. This means that if the mapping has errors for one table but not for the other, it is unpredictable whether the mapping without errors will run in set-based or row-based mode.

This has two implications:

1. Performance
2. In certain cases, the mapping which would have run in set-based mode may not run in row-based mode (for example, if it is TRUNCATE/INSERT that requires foreign key disablement).

4.12 Partition values and Warehouse Upgrade scripts (1811047)

Warehouse Upgrade scripts are incorrectly generated for objects that have had partition values changed or new partition keys added to a previously deployed partition.

4.12.0.6 Workaround Using an external Oracle database tool (SQL*Plus or DBA Studio), drop the partition and then recreate it.

4.13 Password field is read-only in OEM (1820109)

When deploying a map, if the password dialog for OEM is displayed and you cannot enter the password, change focus to another window on your desktop, and then back to the password dialog. You should now be able to type the password.

4.14 Verifying mappings deployed to Oracle Workflow (1887131)

If deploying mappings to Oracle Workflow, you will have to write custom functions to verify the executed PL/SQL package completed as expected.

Currently, every Warehouse Builder PL/SQL procedure returns a Procedure successfully completed message even if it had errors. This will cause the Workflow process to continue even if the mapping failed.

While the mapping is executing, if the number of errors reaches the max number specified, execution of the mapping stops and a Failed status is logged to the audit table. The package is then exited as expected. This results in an error status in the audit viewer but a successful status in Workflow.

4.15 Deployment order for materialized view with index (1919295)

For a materialized view with an index, the order of deployment is not correct. If you attempt to deploy all generated scripts for a materialized view at once, Warehouse Builder will deploy the index before the materialized view, and index creation will fail.

4.15.07 Workaround You can deploy scripts individually, rather than let Warehouse Builder, to maintain the order. The materialized view should be deployed after the base tables with constraints are deployed. The correct order is:

1. Materialized view
2. Materialized view index

4.16 Foreign Key reference should not span modules (1962675)

A foreign key spanning modules is allowed in the MDL but not in Warehouse Builder user interface. Do not create foreign keys that span modules using the MDL.

4.17 PL/SQL Import/Re-import unable to import default parameter values. (1709764, 183707)

If a PL/SQL Import or Re-import transformations occur in a mapping, and there are default values for these parameters that were not explicitly defined by the user, the following validation error displays:

VLD-2452: Operator () may be allowed to have unconnected optional input attributes. If an optional attribute is not connected, all other optional attributes below the first unconnected attribute must be unconnected.

4.17.08 Workaround Define the parameter default values manually in the property sheet after you import PL/SQL by opening the property sheet of the imported stand-alone procedure or function. Then set the Required field

in the Parameter Page to No and define your default values. Reconcile inbound for these Parameters to see the default values.

If you set different default values than those in the source (schema where the Function or Procedure got imported), after these transformations are deployed, the newly defined default values will display, not the default values of the Function or Procedure in Source Schema.

4.18 OMG CWM import (2032477)

The OMG CWM import to Warehouse Builder repository using the Transfer wizard fails with a 'CWM-12526 Import into repository failed - STOP' error in the log file.

This error occurs in a transfer from an OMG CWM file containing Dimension definitions with the 'Process OLAP Physical Representation' option set and the Dimension has two unique keys set up with the same name.

4.19 Time dimension wizard granularity (2046225)

If you use the Time Dimension wizard to generate a time dimension, you must have a hierarchy with day as the lowest level. To create time dimensions with other hierarchies (for example, with month as the lowest level), you must populate your time dimension manually.

4.20 Renaming large objects (2048683)

Renaming very large objects (for example, mappings with many operators and attributes) can take several minutes. The time can be reduced if you close any Editors for that object.

4.21 Large objects causing out of memory error (2060103)

User may get an Out of Memory exception (java.lang.OutOfMemoryError) while importing sets of very large MDL files or with extensive use of client operations in large mappings.

4.21.0.9 Workaround When this exception occurs, exit Warehouse Builder and restart. You can increase the heap size based on available memory on the computer.

4.22 SAP Use Internal tables setting (2062170)

For configuring a mapping that has SAP tables as the source to generate ABAP code, the configuration properties sub-screen has a 'Use Internal

tables' parameter with a default value of FALSE. If this parameter is changed to TRUE, no change is reflected in the generated ABAP code. This feature is under development.

4.23 An Error displays when using two object editors (2080010)

OWB Error: NullPointerException happens when an editor is opened for the same object twice in the same session, and then you edit an object in the first editor, edit an object in the second editor.

4.23.0.10 Workaround Do not attempt to edit the object in the two simultaneously opened editors.

4.24 Old port name in NASvrPort.log (2084804)

The Name and Address server uses a dynamic TCP Port assignment. The port number that it is currently using is in the file NASvrPort.log. If the server is shut down in a manner that prevents clean up of the Port file, an old port remains in the file. If another process starts using this port before the Name and Address server can start again, you can get a hang or network error the next time you make a name and address request.

4.24.0.11 Workaround Delete the NASvrPort.log file and then restart the server with the NASTart command.

4.25 User name and password quoted in code (2089342)

The user name and password are always quoted in the generated code. Do not enclose quotes around user/password.

4.26 Deploying mapping into a Warehouse Builder 3i Runtime (2095888)

If you deploy a Mapping generated from the current release into a Warehouse Builder 3i Runtime, you will get an error.

The PLSQL generated from London requires that a RESOLVE_NAME method exists in the WBPRTIU package. This method does not exist in the Warehouse Builder 3i Runtime, and so the deployment fails.

4.26.0.12 Workaround Use the Runtime Assistant to upgrade the Runtime to the current release.

4.27 MDL Import and blank/NULL values (2102061)

The physical record information in the Property sheet is not updated correctly for MDL import. If a string value is blank, MDL exports that attribute as a NULL value. If the value is changed, and then the original MDL file is re-imported to replace the object, the NULL value for that attribute does nothing to replace the new value. This is a generic issue for all objects.

4.28 Validating before generating code (2129299)

Mappings from a flat file to a table may not generate code. You must validate your mapping code before you generate it.

4.29 Code generation issues (2142068)

The filter operator will generate incorrect intermediate code if the operator is not connected to a downstream operator. The WHERE clause will be empty. Make sure to connect the operator before generating code.

A mapping that uses a loading type of UPDATE may not generate code and may cause the error: VLD-2750 that no UPDATE condition was specified. Retrying the generation may resolve the error.

4.30 Full outer join on three remote tables (2022515)

A package generated for a mapping that has a full outer join on three remote tables fails on execution in the MODE_ROW and MODE_ROW_TARGET. This is a result of a server bug 2024335 to be fixed in Oracle 9.2

4.30.0.13 Workaround Remove the driving hint in the mapping configuration.

4.31 Cannot upgrade Module after adding a new column to a table (2142968)

If you make changes to a table in a warehouse after it has been deployed, you cannot generate upgrade scripts for the entire Module. This problem also affects Dimensions. Use the same workaround.

4.31.0.14 Workaround In the Module Editor, select the table that has been altered and generate the upgrade scripts for the table. For Dimensions, select the Dimension and generate the scripts.

4.32 Cannot upgrade both new column and renamed column at the same time(2142990)

If you add a new column and then rename a column in the same table, you cannot generate upgrade scripts for the entire Module.

4.32.0.15 Workaround Perform the upgrade in two steps. First rename the column and generate and run the upgrade scripts. Then add the new column and generate and run the upgrade scripts.

4.33 Module upgrade does not generate any DDLs (2155212)

If you try to upgrade an entire Module, the generated code does not contain any DDLs. This is caused by the database link name containing too many periods(.) which cannot be handled by the parser.

4.33.0.16 Workaround Replace the periods(.) in the database link name with underscores(_). For example, change SCOTT.uk.oracle.com to SCOTT_uk_oracle_com.

5 Undocumented Functionality

The following information describes current functionality in this release that is not documented in the current documentation.

5.1 Database session remains active after exiting

Occasionally, connections to the repository exist even after exiting from Warehouse Builder. This is typical behavior for the Oracle Database. JDBC sessions can be closed without killing the Database Sessions.

5.2 Using Bridges

If a bridge or MDL file is executed using command line scripts immediately after Warehouse Builder has been installed, the process will hang. This is because the preference.properties file has not been created. The user should first logon to Warehouse Builder before performing either of these operations.

5.3 Bulk Mode Configuration

If you configure the bulk size parameter in a mapping, the commit frequency value automatically defaults to the bulk size in the generated code. A commit will be run for every bulk size. The commit frequency value only applies to non-bulk code.

6 Documentation Errors

The following errors occur in the *Oracle9i Warehouse Builder User's Guide*:

6.1 Erratum:

In note at the top of page 8-12, the third bullet-point should read: generates NO row-based code. (2052152)

6.2 Add to note after the third bullet point:

A MERGE statement will not generate if you use row-based loading as the default operating mode. See "Setting Runtime Parameters" on page 8-19 for more information.

6.3 Add to page 9-22:

Partition Exchange Loading is available for INSERT, TRUNCATE/INSERT, DELETE/INSERT and CHECK/INSERT only. (2047920)

6.4 Erratum:

At the bottom of page 8-5, the sentence '...the reconcile process will replace the attributes of the operator with an exact copy of the columns/fields of the selected repository object' is wrong. Replace it with 'At least one check box must be checked to perform reconciliation.' (1833941)

6.5 Erratum:

On page 8-35, the User Guide states: "When you generate a mapping, you are creating the SQL code that performs the DML and DDL commands necessary to move the data from the sources to the targets defined in your mapping."

The sentence should state: "When you generate a mapping, you are creating the SQL code that performs the DML commands necessary to move the data from the sources to the targets defined in your mapping."

The following sentence should be added before the cross reference for clarity: "If you want to view the DDL scripts, then you must generate the code at the warehouse module level as you would for any other warehouse object." See "Generating Scripts" on page 9-26 for more information on generating scripts. (2030088)

7 Resolved Issues

(1507768) The Universal Installer will receive a Dr. Watson error if you try to install on a PC containing a Pentium 4.

(1806323) DOS console window appears when deploying to OEM and when deploying to workflow.

(1477361) The Import Wizard imports PLS integer as binary integer data types from PL/SQL objects that contain them.

(1743705,1707730) Re-import of metadata on Informix and Sybase using Gateways could produce an ORA-02063 error.

(1722478,1675644, 1727531) Restricted query support via gateways.

(1810263) Database links are not generated correctly for Gateways.

(1827572) MDL Conversion does not convert pseudocolumns (sequences) in SQL* Loader Mapping.

(1819125) Constants operator is not enabled for flat files.

(1821407) Metadata import from Designer fails for warehouse installed module.

(1801315) MDL should not allow granular export of a transform belonging to a transform category of type imported package.

(1823959, 1829230) Warehouse Builder does not support a client OS or a Warehouse Builder Repository installed on a database using multi-byte character sets.

(1829910) Transformations cannot be defined if the DataBase's character set is multibyte.

(1817906) The Runtime Audit Viewer could hang if a Job is selected before the Login panel appears on the screen.

(1809976) Invalidstringlength error during EUL import for Disco due to ForeignKey Name has a 100 character limit.

(1802377) Add/Remove attributes dialog is active but not visible.

(1786358) The Menu, Dialog and Navigator are displayed in reverse order when Warehouse Builder is run on an Arabic Operating System.

(1707511,1707730) You will receive an ORA-00604 error while trying to communicate with SQL Server through the Open Systems Gateway.

(1810383) Mapping from a Data Generator Field to a transformation will generate an invalid SQL*Loader control script.

(2003686) Warehouse Builder Browser images and navigation tabs do not display when using older versions of Apache server.

(2074624) If you use functions with input, output, and input/output parameters, the mapping code may be generated incorrectly.

(2109471) For localized versions, there are some translation issues. For example, labels for input/output parameters are not translated correctly.

(2112412) Name and Address client does not report server errors.

(2125394) A map will not parse name and address data without having the North American Region installed in the instance of the database you are running.

(2126614) When installing Warehouse Builder into an existing Oracle Home, an error message may display, indicating that file jvm.dll cannot be copied.

(1264827) In the File Sample dialog, the scroll bar was stopping at the 200th character of the record. There is now a 2000 character limit.

