

**Oracle® Insurance Policy
Administration**

Version Upgrade Utility

Version 10.2.0.0

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INTRODUCTION

The OIPA upgrade utility is a rich client application that provides OIPA application upgrade automation. The utility can perform and track a variety of database changes that are necessary to move between application versions. Changes may include database schema updates, required system and business data modifications and business rule syntax updates. These changes may be necessary to support new functionality or non-backward compatible rule engine changes.

The necessary changes for moving from the prior release to the current release are included with the installation of the utility. This guide describes the overall upgrade process, installation and execution of the utility, along with details about the utility's operation. The upgrade utility supports upgrades from 9.4.0.0 to 10.2.0.0. Make sure to begin the upgrade process from your current version.

Customer Support

If you have any questions about the installation or use of our products, please visit the My Oracle Support website: <https://support.oracle.com>, or call (800) 223-1711.

Oracle customers have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

Prerequisites

1. Database and IVS installed according to the OIPA Database Installation Instructions.

Note: Upgrade Utility does not require IVS for upgrading OIPA Database. Non-IVS environment can be created and used to upgrade between versions. If this approach is used, IVS upgrade scripts has to be run after OIPA upgrade is performed.

Non-IVS Environment approach is recommended.

2. NON-IVS Environment Approach:

- a. (For Upgrades from 9.7.x to 10.X) Palette Web Application Utility version 10.x , deployed and configured (as described in the Rules Palette Set-Up Instructions)
- b. Hostname and port for the Palette Web Application Utility
- c. Upgrade Utility login credentials (this is same as Rules Palette Credentials).

3. IVS Environment Approach:

- a. (For Upgrades from 9.7.x to 10.X) IVS scripts (given at the end of this document) should be run before using the upgrade Utility tool to upgrade the OIPA database.

- b. (For Upgrades from 9.7.x to 10.X) Palette Web Application Utility version 10.x , deployed and configured (as described in the Rules Palette Set-Up Instructions)
 - c. Microsoft Windows 2000 or later
 - d. Hostname and port for the Palette Web Application Utility Upgrade Utility login credentials (this is same as Rules Palette Credentials).
4. OIPA application database and IVS database user name and password
5. The following scripts must be run in the OIPA database before running the upgrade utility for the first time:
- a. `INSERT INTO DATABASECHANGELOGLOCK (ID,LOCKED,LOCKGRANTED,LOCKEDBY)
VALUES (1,0,null,null);`

Note: The script above may not be necessary in some cases. If a violation of the PK_DATABASECHANGELOGLOCK constraint is returned upon execution of the script, the violation can be disregarded.

BACKWARD COMPATIBILITY

While Oracle strives to maintain backward compatibility between releases of OIPA, some new features and enhancements will necessitate changes to business rule syntax/structure or database structure/content that are not compatible with previous versions. One of the main purposes of the upgrade utility is to assist in bringing rule sets developed on prior versions up to compatibility with the latest release of OIPA. Please refer to the OIPA release notes for a complete explanation of new features and how they may affect business rules and data.

Configuration Changes Addressed with this Utility

The following configuration-related enhancements to version 9.4.0.0 through 9.7.0.0 of OIPA are not compatible with previous versions. The upgrade utility will remedy compatibility issues for each of the areas identified below.

Note: Even if there are no configuration-related backward compatibility issues between two releases, the upgrade utility must still be used when upgrading, in order to address other differences between the versions.

Compatibility Issues for 9.4.0.0 to 9.5.1.0

1. QuoteScreen Rule

- The ALLOWQUOTE attribute in transaction rules has been deprecated.
- An attached business rule, QuoteScreen, now provides quoting functionality.

Utility Solution

The utility will automatically create an attached QuoteScreen rule for any transaction with the ALLOWQUOTE attribute that does not already have an attached QuoteScreen rule. It will also remove the attribute regardless of its value from the transaction rule where applicable.

2. Fund Enhancements

- The AsFundGroup table has been deprecated and replaced with AsFundRelation and AsFundRelationField tables.

Utility Solution

The utility will create the new table structure and migrate data from the old table to the new tables before deleting the old table structure.

3. PolicyScreen Rule

- The AllowNoPercent tag has been deprecated and the AllowPercent tag is used in its place.

Utility Solution

The utility will update all PolicyScreen rules, changing the AllowNoPercent tag to the AllowPercent tag and inverting the value of the tag. Functional behavior will remain the same as this is a syntax change only.

4. CopyToPendingActivityFields Rule

- The CopyToPendingActivityFields rule has been enhanced. The Fields element is now a child element of the ActivityFields element within the rule.

Utility Solution

The utility will update all CopyToPendingActivityFields rules to make them compliant with the new syntax.

5. PrecisionValues Rule

- The UnitValuePrecision rule has been deprecated and replaced with the PrecisionValues rule.

Utility Solution

The utility will implement the PrecisionValues rule to match the functionality of any existing UnitValuePrecision rules and then delete the UnitValuePrecision rules.

6. Database Schema Changes

- A variety of schema updates are required for this release including table, column, index, constraint and data changes.

Utility Solution

Schema changes are automatically applied. Instructions for tracking these changes are provided in the [Reviewing Results](#) section.

Note: Refer to the Backward Compatibility guide in the OTN library for release 9.5.0.0 for complete details on backward compatibility support. Navigate to <http://www.oracle.com/technetwork/documentation/insurance-097481.html#Policy> and select the library for the release you are using.

Compatibility Issues from 9.5.1.0 to 9.6.0.0

1. Comment Enhancements

- A variety of buttons will be removed from AsAuthTransactionButton table. The <AllowComments> element will be removed from existing configuration. The global version of the <CommentScreen> rule will be updated to include a <DefaultComment> element.

2. Unitized Funds

- The FundListForAllocation business rule will be modified. The existing transaction XML will be updated to add <FundLevels> parent element to all <FundLevel> elements.

Note: Refer to the Backward Compatibility guide in the OTN library for release 9.6.0.0 for complete details on backward compatibility support. Navigate to <http://www.oracle.com/technetwork/documentation/insurance-097481.html#Policy> and select the library for the release you are using.

Compatibility Issues from 9.6.0.0 to 9.7.0.0

There are no configuration compatibility issues between these two versions.

Compatibility Issues from 9.7.1.0 to 10.1.0.0

1. AgreementRoleClientType:

AgreementRoleScreen business rule is modified. The existing ClientType attribute of <AgreementRole> element will be removed. New optional <ClientTypes> tag with repeatable child elements <ClientType> will be added to the configuration. Each <ClientType> element will hold the client type code value .

2. AllowPercent :

AllowNoPercent attribute has been deprecated. We will introduced AllowPercent attribute

3. ClientStatus:

New column StatusCode is added to AsClient table. By default all the clients are Active

4. PlanSegment:

New Business rule is added for configuring Plan Segment Screen

5. Product:

The concept of plan Groups is deprecated and is replaced by the concept of product. The data conversion has been taken care of in upgrade Utility.

6. ProgramHistoryTypeCodeUpdate:

AsHistory table is updated for historytypecode 16 for program enteries

7. RequirementScreen:

- ▲ The RequirementScreen rule has been deprecated and replaced with the ActivityRequirementScreen rule.

8. Database Schema Changes

- ▲ A variety of schema updates are required for this release including table, column, index, constraint and data changes.

Compatibility Issues from 10.1.0.0 to 10.1.1.0

1 ClassGroupScreenModule:

Renames the <ClassGroups> to <ClassGroupTable>.Introduces a new tag <ClassGroups> (child of <ClassGroupScreen> element). The data conversion has been taken care of in upgrade Utility.

2 InquiryScreenSecurityModule:

InquiryScreen Security was available by 'Level' (Main, Client, or Policy),it was not restricted by Inquiry Name. After this implementation security can be differentiated by InquiryScreen Name/Rule.The data conversion has been taken care of in upgrade Utility.

3 MaintainRelationshipModule:

Adds a new global business rule MaintainRelationship

4 CreateClientsBusinessStatusCodeModule :

STATUSCODE Attribute in CreateClients BR has been updated to BUSINESSSTATUSCODE.The data conversion has been taken care of in upgrade Utility.

5. Database Schema Changes

- ⤴ A variety of schema updates are required for this release including table, column, index, constraint and data changes.

Compatibility Issues from 10.1.1.0 to 10.1.2.0

1. EnrollmentPlanSegmentModule

Links AsEnrollment rows with appropriate PlanSegmentName.

2. Database Schema Changes

- ⤴ A variety of schema updates are required for this release including table, column, index, constraint and data changes.

Compatibility Issues from 10.1.2.0 to 10.2.0.0

1. MaintainBillDetailReconciliationModule:

Removes SuspenseNumber and SuspenseType tags from MaintainBillDetailReconciliationRule.

2. BillDetailReconciliationSearchScreenModule:

Updates BillDetailReconciliationSearchScreen Rule by removing SuspenseNumber and SuspenseType if they are configured in search fields and result columns.

3. Database Schema Changes

- ⤴ A variety of schema updates are required for this release including table, column, index, constraint and data changes.

Database Changes Addressed With This Utility

Some data structures and content were modified between releases due to non-backward compatible features or to support new features. The utility will address these database changes, as well.

UPGRADE PROCESS OVERVIEW

Explanations of the high level steps involved in the upgrade process are provided below.

High Level Steps In Upgrade Process

1. Back up the target upgrade environment application database and IVS. **This is very important.** If any portion of the upgrade fails, then you will need to restore the current environment from this backup before re-running the upgrade utility.
2. Database user should have Create, Drop and update privileges on Database Tables and Stored Procedures. Once the running of upgrade utility is completed the create and drop privileges have to be revoked from the user.

Grant:

```
grant create view to <OIPA Username>;

grant create trigger to <OIPA UsernameUsername>;
grant create CREATE SYNONYM to <OIPA Username>;
grant create CREATE TABLE to <OIPA Username>;
grant create UNLIMITED TABLESPACE to <OIPA Username>;
```

Revoke:

```
REVOKE CREATE SYNONYM from <User>;
REVOKE create view from <User>;
REVOKE CREATE TABLE from <User>;
REVOKE create trigger from <User>;
```

3. Install the Rules Palette Web Application Utility. The Installation guide for your application server is included in the Documentation Library for the 10.2.0.0 release on the Oracle Technology Network (OTN) website.
4. Install the upgrade utility. The utility is located on the Oracle Software Delivery Cloud (<https://edelivery.oracle.com/>) in the Oracle Insurance Policy Administration 10.2.0.0 Media Pack. It is listed as a separate download.
 - a. Configure the Palette Web Application Utility.
 - b. Unzip the OIPA Version 10.2.0.0 Upgrade Utility.
 - c. Create the upgrade environment in the upgrade utility and Upgrade Utility login credentials (this is same as Rules Palette Credentials)
5. Execute the upgrade utility.
6. Review the results.

7. Install a new version of the Rules Palette application. (The Installation guide for your platform is included in the Documentation Library for the 10.2.0.0 release on the Oracle Technology Network (OTN) website).
8. Log in to the Rules Palette and run the Version Generator.
9. Install a new version of the OIPA application. (The Installation guide for your application server is included in the Documentation Library for the 10.2.0.0 release on the Oracle Technology Network (OTN) website).
10. Test the environment.

Note: Executing the upgrade utility will modify the rules and the database structure for the target environment only. Currently, the utility does not support release management, so it will have to be executed in all environments in your production pipeline.

UTILITY INSTALLATION

Utility installation consists of three main tasks. Each task is described in detail below.

Security Set Up

Upgrade Utility credentials are same as Rules Palette credentials. For a given environment, Very first user is created using Palette Web Application Utility (please see Palette web application utility setup document). Subsequent users can be created in Rules Palette.

Deploy the Upgrade Utility

The upgrade utility is delivered as a stand-alone java application packaged in a zip file, which includes the Windows Java runtime environment.

1. Locate the OIPAUtility.zip file in the OIPA 10.2.0.0 media pack on Oracle's Software Delivery Cloud. Open it using a standard zip utility (such as WinZip) and extract it to the directory of your choosing. This directory will be referred to later as <install_dir>. Download the Aspect 3rd party libraries and copy them to the utility's "ext" folder.
 - a. Navigate to <http://mvnrepository.com/artifact/org.aspectj>.
 - b. Download version 1.6.11 of both aspectjrt and aspectjtools.
 - c. Select the aspectjrt-1.6.11.jar and aspectjtools-1.6.11.jar files and copy them to the <install_dir>\OipaUtility\oipa_utility\modules\ext folder.
2. Download the swing-x 3rd party libraries and copy them to the ext folder for the utility.
 - a. Navigate to : <http://java.net/downloads/swingx/releases/1.0/>.
 - b. Right-click **swingx-1.0.zip** and select **Save** to save the zip file to your local machine.
 - c. Open the swingx-1.0.zip file and navigate to **swingx-1.0 > dist**.
 - d. Select the **swingx-1.0.jar** and **swingx-beaninfo-1.0.jar** files and copy them to the <install_dir>\OipaUtility\oipa_utility\modules\ext folder..
3. Launch the upgrade utility.
 - a. Navigate to <install_dir>\OIPAUtility\bin.
 - b. Double-click **oipa_utility.exe**.

Create the Upgrade Environment

With the upgrade utility deployed and launched, you are now ready to create an environment for the upgrade. Contact your release manager or system administrator for any unknown required fields.

1. In the UtilitiesExplorer Window, right-click and select **Create New Environment**. The environment wizard will launch.
2. Type the following information in the fields provided in step one of the wizard.
 - a. **Environment Alias**: type the name for the target environment (e.g. Development, DEV1, TEST, etc.).
 - b. **Configuration URL**: type the configuration URL. This URL contains the hostname and port information. This is the same Configuration URL used to access the Web Application Utility.
 - c. **Palette Config Username** and **Palette Config Password**: Type the Palette Config username and Palette Config password.

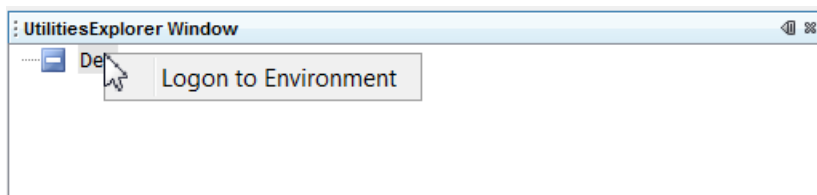
3. Click **Test Configuration Server**.
4. If successful, click **Next**. Otherwise, ensure the server, port, username and password are correct.
5. Enter database credentials for the OIPA application and IVS databases (these may be distinct).
6. Click **Test Connection** for each.
7. Click **Finish**.

EXECUTING THE UPGRADE

Executing an upgrade is an all-in-one task to incrementally move from one version to the next. In order to ensure rule and database compatibility, each portion of the upgrade must complete successfully in order for the environment to be considered upgraded to the desired version. The steps below explain how to execute the upgrade.

Steps to Run the Upgrade Utility

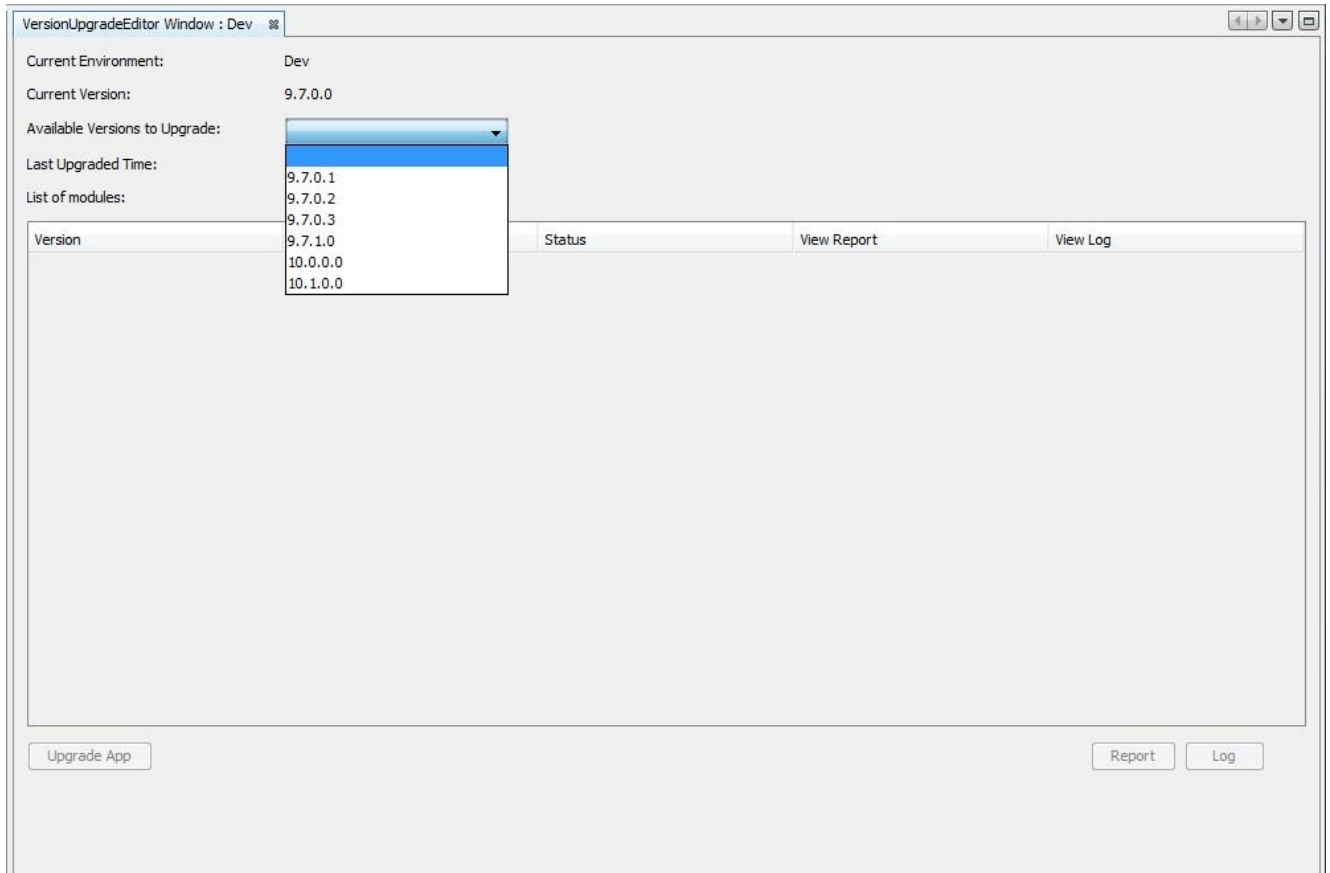
1. Launch the upgrade utility.
 - a. Navigate to <install_dir>\OIPAUtutility\bin.
 - b. Double-click **oipa_utility.exe**.
2. In the UtilitiesExplorer Window, right-click the target upgrade environment and select **Logon to Environment**. Login with the Palette Username and password which has Upgrade Utility privilege.



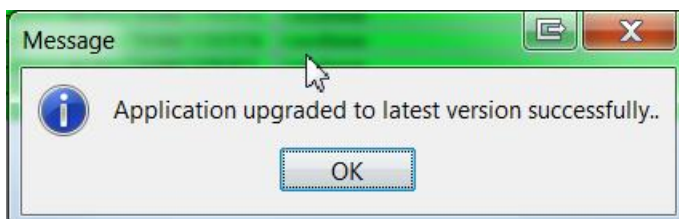
3. If this is the first time an upgrade is being performed in this environment, you will be shown the current system version. Select the version number corresponding to the version you are **upgrading from**.

Note: Current version will be the release version, not the hot fix version. E.g. if the Hot Fix version is 10.1.2.3 then current version will be shown as 10.1.2.0

4. The VersionUpgradeEditor Window will now appear. In the **Available Versions to Upgrade** drop down, select the version you are **upgrading to**.



5. The list of modules will populate, showing the upgrade actions to be performed.
6. Click **Upgrade App** to begin the upgrade. A progress window will appear letting you know that permanent changes are actively being applied to the database.
7. When the upgrade process is complete you will receive a confirmation message. Do not interrupt the process by closing the utility until a confirmation message is received.



8. In the case of an error, an error message will be shown and upgrade utility won't process further. Refer to the [Troubleshooting](#) section for additional details.
9. Click **OK** on the success confirmation window. In the VersionUpgradeEditor window, Current Version will reflect the database compatibility version of the target environment.
10. Installation of the new version of the OIPA application is complete and testing may now proceed.

Reviewing Results

There are multiple methods available to review the operations that the upgrade utility has performed on the database. The upgrade utility provides a front end for viewing these results.

Viewing Upgrade Logs in the Utility

After a successful upgrade, the VersionUpgradeEditor window list of modules shows each individual task the utility performed. For any task, you can click the **Log** button to view details of that task only. To view a comprehensive log of all changes for the upgrade, you can click the **Log** button on the lower right hand side of the VersionUpgrade editor window.

The screenshot shows the VersionUpgradeEditor window with the following details:

- Current Environment: UpgradeUtilityDemo(NO IVS)
- Current Version: 10.2.0.0
- Available Versions to Upgrade: (dropdown menu)
- Last Upgraded Time: Tue Apr 28 15:03:20 IST 2015
- List of modules: (table with columns for Version, Description, Status, View Re..., and View Log)

A modal window titled "Log : Liquibase Script to update Translation value for Benefit Screen" is open, displaying the following log content:

```

04/28/2015 15:03:17 Executing Module Liquibase Script to update Translation value for Benefit Screen
Executing Liquibase script: 2015-04-20_B06-20911671.xml
Attempting to run liquibase file: 2015-04-20_B06-20911671.xml
--- Generating SQL statements for the change sets ---
--- UPDATE ASTRANGLATION SET TRANSLATIONVALUE = 'Service Level' WHERE TRANSLATIONKEY = 'BenefitSearch.ServiceLevelCode' AND LOCALE = 'en-US'
--- Finished generating SQL statements for the change sets ---
Applying changes from the changeSets
Finished applying changes from the changeSets
Finished processing Liquibase file: 2015-04-20_B06-20911671.xml
04/28/2015 15:03:17 Finished module execution.
  
```

The table below represents the data visible in the "List of modules" section of the screenshot:

Version	Description	Status	View Re...	View Log
10.2.0.0	04/28/2015 15:03:17 Executing Module Liquibase Script to update Translation value for Benefit Screen	Processed	Rep...	Log
10.2.0.0	Executing Liquibase script: 2015-04-20_B06-20911671.xml	Processed	Rep...	Log
10.2.0.0	Attempting to run liquibase file: 2015-04-20_B06-20911671.xml	Processed	Rep...	Log
10.2.0.0	--- Generating SQL statements for the change sets ---	Processed	Rep...	Log
10.2.0.0	--- UPDATE ASTRANGLATION SET TRANSLATIONVALUE = 'Service Level' WHERE TRANSLATIONKEY = 'BenefitSearch.ServiceLevelCode' AND LOCALE = 'en-US'	Processed	Rep...	Log
10.2.0.0	--- Finished generating SQL statements for the change sets ---	Processed	Rep...	Log
10.2.0.0	Applying changes from the changeSets	Processed	Rep...	Log
10.2.0.0	Finished applying changes from the changeSets	Processed	Rep...	Log
10.2.0.0	Finished processing Liquibase file: 2015-04-20_B06-20911671.xml	Processed	Rep...	Log
10.2.0.0	04/28/2015 15:03:17 Finished module execution.	Processed	Rep...	Log
10.2.0.0		Processed	Rep...	Log
10.2.0.0	This liquibase updates the translation value for Widgets.	Processed	Rep...	Log
10.2.0.0	Update MaintanBilDetailReconciliationRule to remove SuspenseNumber and Suspense?	Processed	Rep...	Log
10.2.0.0	Update BilDetailReconciliationSearchScreen Rule to remove SuspenseNumber and Susp	Processed	Rep...	Log
10.2.0.0	Liquibase Script to update Translation value for Benefit Screen	Processed	Rep...	Log
10.2.0.0	Liquibase Script to rename EMAIL column to Email in the AsAddress and AsClient tables	Processed	Rep...	Log
10.2.0.0	Liquibase Script to insert Translation in ASTRANGLATION table for en-US locale	Processed	Rep...	Log

For each task, you can click on the **Report** button to view the execution status of the task.

Current Environment: UpgradeUtilityDemo(NO TXS)
 Current Version: 10.2.0.0
 Available Versions to Upgrade:
 Last Upgraded Time: Tue Apr 28 15:03:20 IST 2015

list of modules:

Version	Module Description	Status	View Re...	View Log
10.2.0.0	Liquibase script to create table ASTAG, ASUSERREFERENCE	Processed	Rep...	Log
10.2.0.0	Liquibase script to update AsCode table for codename AsCodePageLayout	Processed	Rep...	Log
10.2.0.0	Liquibase script to update SYSTEMINDICATOR as 'Y' in AsCode table specific to landing	Processed	Rep...	Log
10.2.0.0	Liquibase script to update Translation value for Benefit Screen	Processed	Rep...	Log
10.2.0.0	Liquibase script to update Translation value for Benefit Screen	Processed	Rep...	Log
10.2.0.0	Liquibase script to update Translation value for Benefit Screen	Processed	Rep...	Log
10.2.0.0	Liquibase script to update Translation value for Benefit Screen	Processed	Rep...	Log
10.2.0.0	Liquibase script to update Translation value for Benefit Screen	Processed	Rep...	Log
10.2.0.0	Liquibase script to update Translation value for Benefit Screen	Processed	Rep...	Log
10.2.0.0	This liquibase updates the translation value for Widgets.	Processed	Rep...	Log
10.2.0.0	Update MaintainBidDetailReconciliationRule to remove SuspenseNumber and SuspenseT	Processed	Rep...	Log
10.2.0.0	Update BidDetailReconciliationSearchScreenRule to remove SuspenseNumber and Sus	Processed	Rep...	Log
10.2.0.0	Liquibase script to update Translation value for Benefit Screen	Processed	Rep...	Log
10.2.0.0	Liquibase script to rename EMail column to email in the AsAddress and AsClient tables	Processed	Rep...	Log
10.2.0.0	Liquibase script to insert Translation in ASTRANSATION table for en-US locale	Processed	Rep...	Log

Upgrade App Report Log

Report : Liquibase Script to update Translation value for Benefit Screen
 04/28/2015 15:03:17 Executing Module Liquibase Script to update Translation value for Benefit Screen
 Executing Liquibase script:2015-04-20_B06-20911671.xml
 04/28/2015 15:03:17 Finished module execution.

Database Tables

A number of new tables are added to the OIPA schema in order to capture the current status of database compatibility and the results of running the upgrade utility.

- **AsSystemVersion**
 - Tracks the OIPA versions where the utility upgraded the database.
 - The current database compatibility version can be found by querying for the SystemVersion column that corresponds to the latest CompletedGMT column.
- **AsUpgradeModule**
 - Tracks the individual upgrade modules that have been executed on the database instance.
 - Modules may include database update scripts or Java modules executed within the utility for rule modification and complex database modification.
- **DatabaseChangeLog**
 - Tracks database script execution only.
 - Used by the utility to ensure database modification dependency integrity.

TROUBLESHOOTING

If the upgrade utility fails at any point during the upgrade, the database will be considered unusable. Failures could happen for a number of reasons. To understand the nature of the failure, click the **View Log** button for the module that failed in the VersionUpgradeEditor window.

Database Connection Failure

If the network connection to the database server is interrupted during the upgrade, it will fail and produce a message. The log file will indicate an error message relating to connectivity from the database driver.

Resolution: Restore the database from back-up and re-run the upgrade utility. Investigate network integrity between the utility execution machine and the database.

Incorrect Current System Version

If the current version of the database is not correctly set while logging in to the target environment the first time, then SQL scripts could fail to execute due to dependencies not being met. The log file will indicate a failure to execute SQL query or statement.

Resolution: Restore the database from the backup, recreate the environment in the utility with the correct current version, and re-run the upgrade utility.

Other Errors

Error information is captured in two primary locations. The first is in the database and is viewable within the utility, as explained in the **Reviewing Results** section.

If the utility produces a Java error, it will be captured in the utility logs. These are located in the `<user_directory>\Oracle\oipa_utility\OIPAUtility\dev\var\log` folder. On Windows Vista and newer machines, this directory is typically:

C:\Users\<user_name>\AppData\Roaming\Oracle\oipa_utility\OIPAUtility\dev\var\log\.

If you are unable to determine the cause of an error, please contact Oracle Support as indicated in the Introduction section of this document, and be prepared to provide the log files mentioned above.

IVS Scripts to be execute before using Upgrade Utility to Upgrade OIPA database to 10.x

NOTE: Below scripts contain queries to remove data from IVSSECURITYROLE and IVSSECURITYPRIVILEGES tables. So please take the backup of these table data and import it with the appropriate values for ENVIRONMENT and TRACK after upgrading it to 10.x

Rules Palette should be used to administer security for individual environments and tracks.

Scripts for Oracle Database

```
insert into IVSPRIVILEGE ( PRIVILEGEGUID, PRIVILEGENAME, DESCRIPTION ) values ('CB3A1963-60B9-4CF9-9031-CFFE11CE4F64', 'Upgrade Utility', 'Allows user to access Upgrade Utility Tool');
```

```
CREATE TABLE IVSDEPLOYMENTFLOW (DEPLOYMENTFLOWGUID CHAR(36 BYTE) NOT NULL,  
ENVIRONMENT VARCHAR(50 BYTE) NOT NULL, TRACK VARCHAR(50 BYTE) NOT NULL, SEQUENCE  
INTEGER NOT NULL);
```

```
ALTER TABLE IVSDEPLOYMENTFLOW ADD PRIMARY KEY (DEPLOYMENTFLOWGUID);
```

```
ALTER TABLE IVSDEPLOYMENTFLOW ADD CONSTRAINT IVSDEPLOYMENTFLOW_UK1 UNIQUE(  
SEQUENCE, ENVIRONMENT, TRACK);
```

```
ALTER TABLE IVSDEPLOYMENTFLOW ADD CONSTRAINT IVSDEPLOYMENTFLOW_UK2 UNIQUE(  
SEQUENCE, TRACK);
```

```
INSERT INTO IVSPRIVILEGE VALUES ('0EEA75BD-FD6C-4813-92F7-31197BF2ED53', 'Release Package -  
Rollback', null, 'Allow user to Roll back the deployed release package');
```

```
ALTER TABLE IVSSECURITY RENAME TO IVSUSER;
```

```
ALTER TABLE IVSUSER RENAME COLUMN SECURITYGUID TO USERGUID;
```

```
ALTER TABLE IVSUSER DROP COLUMN SECURITYROLEGUID;
```

```
DELETE FROM IVSSECURITYPRIVILEGES;
```

```
DELETE FROM IVSSECURITYROLE;
```

```
COMMIT;
```

```
ALTER TABLE IVSSECURITYROLE ADD(ENVIRONMENT VARCHAR2(50 BYTE), TRACK VARCHAR2 (50  
BYTE));
```

```
CREATE TABLE IVSUSERSECURITY (USERSECURITYGUID CHAR(36 BYTE) NOT NULL  
ENABLE,USERGUID CHAR(36 BYTE) NOT NULL,SECURITYROLEGUID CHAR(36 BYTE));
```

```
ALTER TABLE IVSUSERSECURITY ADD PRIMARY KEY (USERSECURITYGUID);
```

```
ALTER TABLE IVSUSERSECURITY ADD CONSTRAINT FK_USERSEC_USERID FOREIGN KEY  
(USERGUID) REFERENCES IVSUSER (USERGUID);
```

```
ALTER TABLE IVSUSERSECURITY ADD CONSTRAINT FK_USERSEC_SECURITYROLEGUID FOREIGN  
KEY (SECURITYROLEGUID) REFERENCES IVSSECURITYROLE (SECURITYROLEGUID);
```

```
ALTER TABLE IVSSECURITYROLE DROP CONSTRAINT UX_SECURITYROLENAMENAME;
```

```
DROP INDEX UX_SECURITYROLENAMENAME;
```

```
ALTER TABLE IVSSECURITYROLE ADD CONSTRAINT UX_NAMEENVTRACK UNIQUE(  
SECURITYROLENAMENAME, ENVIRONMENT, TRACK);
```

```
ALTER TABLE IVSUSERSECURITY ADD CONSTRAINT UX_USERROLEGUID UNIQUE ( USERGUID,  
SECURITYROLEGUID);
```

Add privilege script for product copy feature to upgrade OIPA Database to 10.2

Insert into IVSPRIVILEGE (PRIVILEGEGUID,PRIVILEGENAME,PRIVILEGETYPE,DESCRIPTION) values ('97DEE89C-8C81-4CC8-8C34-7B7121132340','Utilities-ProductCopy',null,'Allow access to Product Copy Tool');

Scripts for DB2 Database

```
INSERT INTO IVSPRIVILEGE ( PRIVILEGEGUID, PRIVILEGENAME, DESCRIPTION ) values ('CB3A1963-60B9-4CF9-9031-CFFE11CE4F64', 'Upgrade Utility', 'Allows user to access Upgrade Utility Tool');
CREATE TABLE IVSDEPLOYMENTFLOW (DEPLOYMENTFLOWGUID CHAR(36 BYTE) NOT NULL,
ENVIRONMENT VARCHAR(50 BYTE) NOT NULL, TRACK VARCHAR(50 BYTE) NOT NULL, SEQUENCE
INTEGER NOT NULL);
ALTER TABLE IVSDEPLOYMENTFLOW ADD PRIMARY KEY (DEPLOYMENTFLOWGUID);
ALTER TABLE IVSDEPLOYMENTFLOW ADD CONSTRAINT IVSDEPLOYMENTFLOW_UK1 UNIQUE(
SEQUENCE, ENVIRONMENT, TRACK);
ALTER TABLE IVSDEPLOYMENTFLOW ADD CONSTRAINT IVSDEPLOYMENTFLOW_UK2 UNIQUE(
SEQUENCE, TRACK);
INSERT INTO IVSPRIVILEGE VALUES ('0EEA75BD-FD6C-4813-92F7-31197BF2ED53', 'Release Package -
Rollback', null, 'Allow user to Roll back the deployed release package');
```

```
RENAME TABLE IVSSECURITY TO IVSUSER;
ALTER TABLE IVSUSER RENAME COLUMN SECURITYGUID TO USERGUID;
ALTER TABLE IVSUSER DROP COLUMN SECURITYROLEGUID;
DELETE FROM IVSSECURITYPRIVILEGES;
DELETE FROM IVSSECURITYROLE;
COMMIT;
```

```
ALTER TABLE IVSSECURITYROLE ADD ENVIRONMENT VARCHAR(50) NOT NULL WITH DEFAULT
ALTER TABLE IVSSECURITYROLE ADD TRACK VARCHAR(50) NOT NULL WITH DEFAULT
CREATE TABLE IVSUSERSECURITY (USERSECURITYGUID CHAR(36) NOT NULL ,USERGUID CHAR(36)
NOT NULL,SECURITYROLEGUID CHAR(36) NOT NULL);
ALTER TABLE IVSUSERSECURITY ADD PRIMARY KEY (USERSECURITYGUID);
CALL SYSPROC.ADMIN_CMD ('REORG TABLE IVSUSER');
CALL SYSPROC.ADMIN_CMD ('REORG TABLE IVSSECURITYROLE');
ALTER TABLE IVSUSER ADD PRIMARY KEY (USERGUID);
ALTER TABLE IVSUSERSECURITY ADD CONSTRAINT FK_USERSEC_USERID FOREIGN KEY
(USERGUID) REFERENCES IVSUSER (USERGUID);
ALTER TABLE IVSSECURITYROLE ADD PRIMARY KEY (SECURITYROLEGUID);
ALTER TABLE IVSUSERSECURITY ADD CONSTRAINT FK_USERSEC_SECURITYROLEGUID FOREIGN
KEY (SECURITYROLEGUID) REFERENCES IVSSECURITYROLE (SECURITYROLEGUID);
ALTER TABLE IVSSECURITYROLE ALTER COLUMN SECURITYROLENAME SET NOT NULL;
```

```
ALTER TABLE IVSSECURITYROLE ADD CONSTRAINT UX_NAMEENVTRACK UNIQUE(
SECURITYROLENAME, ENVIRONMENT, TRACK);
ALTER TABLE IVSUSERSECURITY ADD CONSTRAINT UX_USERROLEGUID UNIQUE ( USERGUID,
SECURITYROLEGUID);
```

Add privilege script for product copy feature to upgrade OIPA Database to 10.2

```
Insert into IVSPRIVILEGE (PRIVILEGEGUID,PRIVILEGENAME,PRIVILEGETYPE,DESCRIPTION) values
('97DEE89C-8C81-4CC8-8C34-7B7121132340','Utilities-ProductCopy',null,'Allow access to Product Copy
Tool');
```

Scripts for SqlServer Database

```
insert into IVSPRIVILEGE ( PRIVILEGEGUID, PRIVILEGENAME, DESCRIPTION ) values ('CB3A1963-60B9-
4CF9-9031-CFFE11CE4F64', 'Upgrade Utility', 'Allows user to access Upgrade Utility Tool');
CREATE TABLE IVSDEPLOYMENTFLOW (DEPLOYMENTFLOWGUID CHAR(36) NOT NULL,
ENVIRONMENT VARCHAR(50) NOT NULL, TRACK VARCHAR(50) NOT NULL, SEQUENCE INTEGER NOT
NULL);
ALTER TABLE IVSDEPLOYMENTFLOW ADD PRIMARY KEY (DEPLOYMENTFLOWGUID);
ALTER TABLE IVSDEPLOYMENTFLOW ADD CONSTRAINT IVSDEPLOYMENTFLOW_UK1 UNIQUE(
SEQUENCE, ENVIRONMENT, TRACK);
ALTER TABLE IVSDEPLOYMENTFLOW ADD CONSTRAINT IVSDEPLOYMENTFLOW_UK2 UNIQUE(
SEQUENCE, TRACK);
INSERT INTO IVSPRIVILEGE VALUES ('0EEA75BD-FD6C-4813-92F7-31197BF2ED53', 'Release Package -
Rollback', null, 'Allow user to Roll back the deployed release package');
SP_RENAME 'IVSSECURITY', 'IVSUSER'
SP_RENAME 'IVSUSER.SECURITYGUID', 'USERGUID', 'COLUMN'
ALTER TABLE IVSUSER DROP COLUMN SECURITYROLEGUID;
DELETE FROM IVSSECURITYPRIVILEGES;
DELETE FROM IVSSECURITYROLE;
COMMIT;
ALTER TABLE IVSSECURITYROLE ADD ENVIRONMENT VARCHAR(50);
ALTER TABLE IVSSECURITYROLE ADD TRACK VARCHAR(50);
CREATE TABLE IVSUSERSECURITY (USERSECURITYGUID UNIQUEIDENTIFIER NOT NULL ,USERGUID
UNIQUEIDENTIFIER NOT NULL,SECURITYROLEGUID UNIQUEIDENTIFIER NOT NULL);
ALTER TABLE IVSUSERSECURITY ADD PRIMARY KEY (USERSECURITYGUID);
ALTER TABLE IVSUSERSECURITY ADD CONSTRAINT FK_USERSEC_USERID FOREIGN KEY
(USERGUID) REFERENCES IVSUSER (USERGUID);
ALTER TABLE IVSUSERSECURITY ADD CONSTRAINT FK_USERSEC_SECURITYROLEGUID FOREIGN
KEY (SECURITYROLEGUID) REFERENCES IVSSECURITYROLE (SECURITYROLEGUID);
DROP INDEX IVSSECURITYROLE.UX_IVSSECURITYROLENAME;
```

```
ALTER TABLE IVSSECURITYROLE ADD CONSTRAINT UX_NAMEENVTRACK UNIQUE(  
SECURITYROLENAME, ENVIRONMENT, TRACK);  
ALTER TABLE IVSUSERSECURITY ADD CONSTRAINT UX_USERROLEGUID UNIQUE ( USERGUID,  
SECURITYROLEGUID);
```

Add privilege script for product copy feature to upgrade OIPA Database to 10.2

```
Insert into IVSPRIVILEGE (PRIVILEGEGUID,PRIVILEGENAME,PRIVILEGETYPE,DESCRIPTION) values  
( '97DEE89C-8C81-4CC8-8C34-7B7121132340','Utilities-ProductCopy',null,'Allow access to Product Copy  
Tool');
```