Technical Note: ACTIVE Governance™ Cloning

Introduction

An ACTIVE Governance instance consists of ACTIVE Governance and Business Objects (a reporting program), both of which run in a web browser. It works in concert with LogicalApps Embedded Agents, a set of applications that run within the Oracle Applications EBS environment. ACTIVE Governance may connect to multiple instances of Oracle Applications, each running its own instance of Embedded Agents.

One can "clone" an Oracle Applications instance — use Oracle procedures to reproduce a source installation and configuration on a clean destination instance. A source Oracle instance that includes Embedded Agents can be cloned as well, although some additional steps must be completed for Embedded Agents components to run correctly in the destination instance. (It's assumed that Embedded Agents patch levels are the same in both the source and destination environments.)

Owing to a restriction in Business Objects infrastructure requirements, neither ACTIVE Governance nor Business Objects can be cloned. Thus to reproduce an ACTIVE Governance configuration in a new instance, one would complete the following procedures:

- Clone each Oracle Applications instance that connects to the ACTIVE Governance instance, together with the Embedded Agents applications running within Oracle.
- Perform a fresh installation of ACTIVE Governance infrastructure in the new environment (only once per host, no matter how often ACTIVE Governance is refreshed on that host). This installs ACTIVE Governance and Business Objects program files.
- Refresh ACTIVE Governance on the destination host. This includes importing the ACTIVE Governance schema from source to destination instance; establishing connectivity between the destination ACTIVE Governance instance and the cloned Oracle EBS instances; copying Business Objects business view and reports from source to destination instance; and establishing connectivity between the destination Business Objects instance and the cloned Oracle EBS instances.

Embedded Agents Cloning

Embedded Agents components run on the database, forms, and concurrent manager servers on which Oracle EBS is installed. When an Oracle Applications instance includes Embedded Agents, a cloning procedure consists (in broad terms) of the following steps:

- Use Oracle cloning procedures to copy source-instance files onto a clean destination instance. Oracle procedures permit a user to determine what components to include in a cloning operation. Be sure to include the following:
  - The Embedded Agents database schema (conventionally called XXLAAPPS).
  - The LogicalApps Top (the file structure in which Embedded Agents program files are installed).
- Complete tasks on the concurrent manager server so that LogicalApps files run with Oracle. These tasks include:
  - Run a configuration script, laconfig.sh, in the LogicalApps Top.
  - Re-create soft links between fndcpesr and a set of LogicalApps .prog files: LAGENLIB.prog, LAMIGRATE.prog, LATKPROF.prog, and LAIMPORT.prog.
  - Verify that the Oracle environment file correctly sets the shell variable for the LogicalApps Top.
- Complete tasks on the forms server so that LogicalApps files run with Oracle. These tasks include:
  - Edit a file called LAFORMSGEN.prog to ensure that the environment file sources the correct environment for the forms server.
  - Regenerate forms libraries. These include LACHGCEN, LABRSQL, LACUSTOM, and CUSTOM.
  - Verify that the Oracle environment file correctly sets the shell variable for the LogicalApps Top.
- On the Oracle Apache server, ensure that the servlet properties file correctly sets the base path variable for the Embedded Agents application. This step is performed only for an instance that is to run in servlet mode.
- Ensure that the UTL (utility) path setting in the Embedded Agents application refers to a valid UTL directory on the database server file system.
- Ensure that LogicalApps migration is set up correctly.

Procedures for completing these steps appear in the following sections.

Concurrent Manager Server Product Top

Complete the following procedure on the LogicalApps Top directory of the concurrent manager server on the destination instance:

1 Open a UNIX shell to the concurrent manager server host.

2. Source the Oracle EBS environment to the shell.
3. Navigate to the LogicalApps Top/bin directory.
4. Modify the file permissions on a file called laconfig.sh to allow execution. Use this command:

   ```
   chmod +x laconfig.sh
   ```

5. Execute laconfig.sh.

   ```
   $ laconfig.sh
   ```

   Running the laconfig.sh file produces a series of command-line prompts. Respond to them as follows:

   a You are prompted to enter the LogicalApps application short name. If that name is other than XXLAAPPS, type it and press the Enter key. (Case is not significant.) If the short name is XXLAAPPS, simply press the enter key in response to the prompt.

   b A prompt displays a path to a Java executable; you must confirm that this is the path to the Java executable used by Oracle Applications. It is, if you sourced out the Oracle Applications shell environment before running the laconfig.sh file (no matter how many Java executables reside on your system). It may not be, if you did not source out the Oracle Applications shell environment and have more than one Java executable on your system.

   If the prompt displays the path to the Oracle Applications Java executable, type *Y* (for yes) and press the Enter key. If not, type *N* (for no) and press the Enter key, then type the full path to the Java executable used by Oracle Applications and press the Enter key again.

   c A prompt displays a path for a file that sets the Oracle Applications environment; you must confirm that it is correct. The default value is taken from the shell as $APPL_TOP/$APPLFENV, and this selection is always safe; to accept it, press *Y* (for yes) and press the Enter key. But what's really at issue is the file that sets the LogicalApps Top, which is a subsidiary file of $APPLFENV. You may wish to specify it instead; if so, type *N* (for no), then type the full path to the appropriate file and press the Enter key.

   d The following prompt appears:

   ```
   Choose your node configuration from below:
   1.  All servers (CM/Forms) share the same application top
       directory
   2.  Forms server has different application top file system
       than concurrent managers
   3.  Exit Program
   ```

   Enter 1 if all database, forms, and concurrent servers exist under a single application top, or 2 if each exists under its own application top (regardless of whether they reside on a single machine or more than one).

   e You are prompted to enter the number of distinct application tops used by forms servers. Type the number and press the Enter key.

f For each of the application tops you include in the count in step 5, you are prompted to select a method for transferring files to the application top directory. Enter one of the following and press the Enter key:

- 1 for secured shell (ssh)
- 2 for remote execution (rexec)
- 3 for telnet
- 4 for local file system (copy)
- 5 for manual

g For each application top, you are prompted for supporting information if you have selected any of the first four access methods. (Method 5, manual, requires no supporting information.)

- Server host name if you selected option 1, 2, 3, or 4
- Full path to LogicalApps binary files if you selected option 1, 2, 3, or 4
- User ID if you selected option 1, 2, or 3
- Password if you selected option 3

Entries are validated, so that if you enter incorrect supporting information you are prompted to try again.

6 Re-create the soft links to fndcpesr for the .prog files. Use the following commands:

```
$. ln -s $FND_TOP/bin/fndcpesr LAGENLIB
$. ln -s $FND_TOP/bin/fndcpesr LAMIGRATE
$. ln -s $FND_TOP/bin/fndcpesr LATKPROF
$. ln -s $FND_TOP/bin/fndcpesr LAIMPORT
```

7 Verify the Oracle EBS environment file to ensure that the base path shell variable sets the correct LogicalApps Top path. In most cases, the environment file can be located through use of the following command:

```
echo $APPL_TOP/$ALLPFENV
```

If the application short name for the LogicalApps product is XXLAAPPS, the base path shell variable XXLAAPPS_TOP. This variable should be set to point to the top directory of the LogicalApps application. For example:

```
XXLAAPPS_TOP="/oracle/bin/ebus115/appl/xxlaapps/11.5.0"
export XXLAAPPS_TOP
```

Forms Server Product Top

Complete the following procedure on the LogicalApps Top directory of the forms server on the destination instance:

1 Open a UNIX shell to the forms server host.

2 Source the Oracle EBS environment to the shell.

3 Navigate to the LogicalApps Top/bin directory.

4 In a text editor, open a file called LAFORMSGEN.prog to determine if the environment file sources the environment for the forms server. The correct environment would have FORMS60_PATH and ORACLE_HOME variables set to valid Oracle directories.

5 Regenerate the forms libraries:

- Delete plx libraries from $AU_TOP resource (LACHGCEN, LABRSQL, LACUSTOM, CUSTOM).
- Regenerate libraries in this order: LACHGCEN, LABRSQL, LACUSTOM, CUSTOM. The following is a sample command for library compilation:

```
f60gen module=LACHGCEN, user_id=apps/apps module_type=library
compile_all=special
```

6 Verify the Oracle EBS environment file to ensure that the base path shell variable sets the correct LogicalApps Top path. In most cases, the environment file can be located through use of the following command:

```
echo $APPL_TOP/$ALLPFENV
```

If the application short name for the LogicalApps product is XXLAAPPS, the base path shell variable is XXLAAPPS_TOP. This variable should point to the top directory of the LogicalApps application. For example:

```
XXLAAPPS_TOP="/oracle/bin/ebus115/appl/xxlaapps/11.5.0"
export XXLAAPPS_TOP
```

Apache Server Settings

Ensure that the base path variable of the LogicalApps application is set to the correct path in the servlet properties file. This step is critically important when the Oracle EBS instance is configured to run in servlet mode.

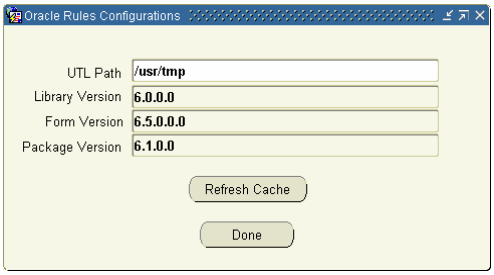
Setting the UTL Path

Make sure that the UTL path setup in the Embedded Agents configuration references a valid UTL directory for this environment:

1 Open the Embedded Agents application: In Oracle EBS, select the LogicalApps responsibility in the Navigator. In the application list under the Oracle Embedded Agent heading, click on the Form Rules link.

2 With the LogicalApps — Oracle Rules form displayed on screen, click on Tools in the menu bar and Oracle Rules Configurations in the Tools menu.

3 An Oracle Rules Configurations form appears:



In its UTL path field, confirm that the UTL path is set to a valid directory as per your database parameters configuration. If not, enter the path to a valid directory in the field; then click on File in the menu bar and Save in the File menu.

Note

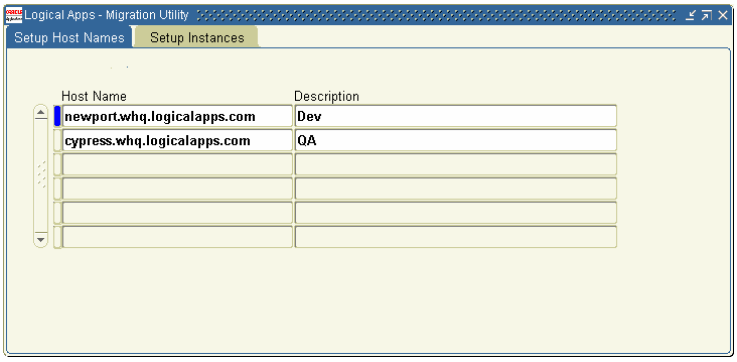
To verify that this UTL path is a valid one, you can run the following SQL query against your database. It should complete with no errors and show that a file called validutl.txt is created in the directory displayed in the UTL path field of the Oracle Rules Configurations form.

```
set serveroutput ON
declare
v_directory varchar2(240);
file_handle UTL_FILE.FILE_TYPE;
begin
SELECT utl_pathname
INTO v_directory
FROM la_br_configurations;
dbms_output.put_line(v_directory);
file_handle := utl_file.fopen(v_directory,'validutl.txt','W');

sys.utl_file.put_line(file_handle,'testing line1');
sys.utl_file.put_line(file_handle,'testing line2');
sys.utl_file.put_line(file_handle,'END;');

sys.utl_file.fclose(file_handle);
END;
```

Setting Up LogicalApps Migration

Set up the LogicalApps migration utility. You need to specify connection information in environments to and from which you plan to transmit data — in this case the source and destination instances involved in the cloning. You need to know the host name, instance, SID, and database instance port for each environment. This information is found in the TNSNAMES.ora file, which is located in *ORACLE_HOME*/ network/admin.

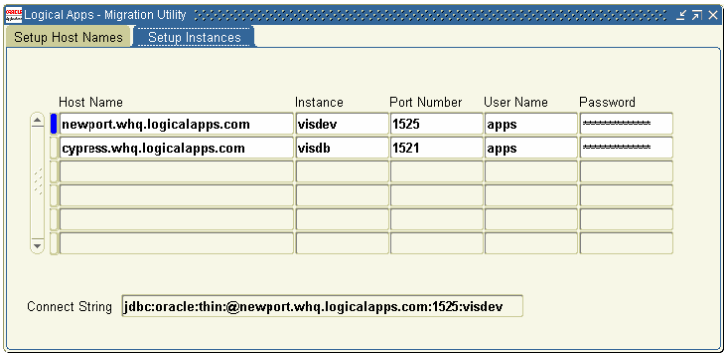
1. With the Embedded Agents application open, click on LogicalApps Utilities in the menu bar, then on Migration Setup in the Utilities menu. A Migration Utility form appears.



2. Ensure that the Setup Host Names tab is selected.
3. In the Host Name column, enter the host name (machine name) for each of the machines hosting the database and involved in the migration.

4 In the Description column, you may enter a description for each host name. (This step is optional.)

5 Click on the Setup Instances tab. The following form appears:



6 In the Host Name column, select the host name for each of the machines from the list of values. (The entries are those defined in the Setup Host Names tab.)

7 In the Instance and Port Name columns, type the instance name and port number that corresponds to each host name.

8 Under User Name, type the value *APPS* for each entry. Under Password, enter the password for the APPS user.

9 Click on File in the menu bar and Save in the File menu. When the configuration is saved, the system automatically generates and displays a connection string. Close the Migration Utility. Click on the × symbol in the upper right corner of the form.

Installing ACTIVE Governance Infrastructure

As noted earlier, you need install ACTIVE Governance infrastructure on a host machine only once, no matter how often ACTIVE Governance is refreshed on that host. To do so, refer to the *ACTIVE Governance Installation Guide*. (Use the version of the *Guide* appropriate to you: one describes installation on a Linux or UNIX server, and another on a Windows server.)

First, ensure that the destination host meets requirements. These are described in the following sections of chapter 1, “ACTIVE Governance Installation Overview”:

- Supported Operating Systems
- Hardware Requirements
- Software Requirement

Next, complete the procedures described in the following sections of the *Installation Guide*, in the order listed here. From chapter 2, “Installing Server Components”:

- Preparing to Install
- Installing Oracle Client
- Loading Files in the Staging Directory

- Installing ACTIVE Governance Infrastructure
- Configuring the Business Objects Server
- Accommodating Firewalls
- From "Installing the ACTIVE Governance Schema," complete only the following procedures:
  - Beginning the Process
  - Copying and Editing ACTIVE Governance Files

Finally from chapter 4, "Configuring ACTIVE Governance," refer to the section titled "Configuring Licenses." Complete only the steps pertaining to a Crystal Reports license.

Refreshing ACTIVE Governance on the Destination Instance

Once the ACTIVE Governance Infrastructure is installed on the destination instance, you can move ACTIVE Governance and Business Objects data from the source instance to the destination instance. Broadly, this involves four steps:

- Copy the ACTIVE Governance schema from source to destination instance.
- Connect the destination instance of ACTIVE Governance to cloned Oracle EBS instances, and configure properties for it.
- Copy business views and reports from source to destination instance.
- Configure data connections between the destination instance of Business Objects and cloned Oracle EBS instances.

Copying the Schema

First, use a database import/export utility to export the ACTIVE Governance schema from the source instance to the destination instance. If this is not the first time you are reproducing an ACTIVE Governance configuration, ensure that the destination ACTIVE Governance schema contains no data before importing from the source.

Setting ACTIVE Governance Data Connections and Properties

Log on to the destination instance of ACTIVE Governance to establish connectivity with data sources and to set properties. You do both from the Administration tab of the ACTIVE Governance Platform:

- Configure a data connection between ACTIVE Governance and each of the cloned Oracle EBS instances. Use the procedure described in the section titled "Configuring Data Sources," which is in chapter 4 ("Configuring ACTIVE Governance") of the *ACTIVE Governance Installation Guide*.
- Ensure that properties are set properly for the destination host. Use the procedure described in the section titled "Setting Properties," which is in chapter 4 ("Configuring ACTIVE Governance") of the *ACTIVE Governance Installation Guide*. In particular, set the following properties as indicated:

Property	Value
businessObjects.enterpriseDirectoryName	enterprise115
businessObjects.InfoViewPath	businessobjects/enterprise115/desktoplaunch/InfoView
businessObjects.password	Supply the password for the Business Objects Administrator user. You created this during infrastructure installation, while completing the "Configuring the Business Objects Server" section of the *ACTIVE Governance Installation Guide*.
businessObjects.reportSecurity	true
businessObjects.server	Supply the ACTIVE Governance server host name.
businessObjects.serverPort	6400, if you accepted default port values during infrastructure installation. If not, supply the value you set for CMS_PORT.
businessObjects.username	Administrator

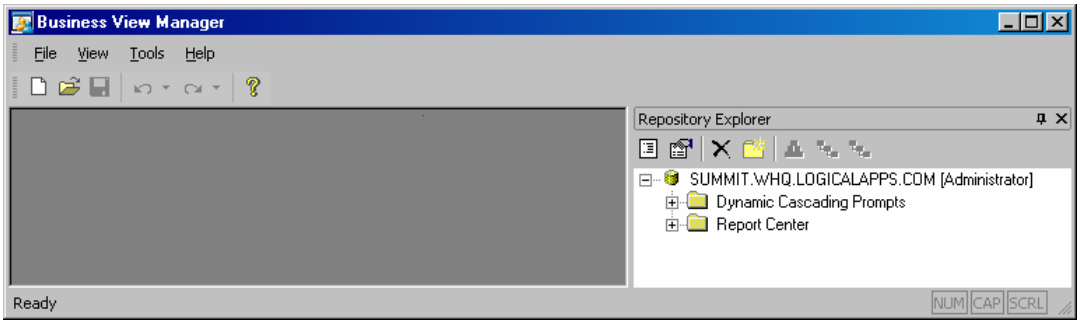
Copying Business Views and Reports

A typical ACTIVE Governance installation involves installing Business View Manager (a Business Objects component) on a Windows client and using it to import "business views" and to "publish" reports. If you are installing ACTIVE Governance on a destination instance in order to duplicate the installation on a source instance, you can forgo this process and instead import reports on the destination instance, from the source.

Deleting Business View and Reports from a Destination Instance

If reports exist on the destination instance (because an earlier version of ACTIVE Governance had been installed), delete them before importing the new reports. (If not, skip ahead to "Importing Business Views and Reports to a Destination Instance" on page 10.)

1. From the Business Objects folder under Windows Start, log on to the Business View Manager on the Windows client system. Use the following logon values:
   - System: The host name of the destination ACTIVE Governance server
   - User Name: *Administrator*
   - Password: The password created for your destination instance
   - Authentication: *Enterprise*
2. In the Repository Explorer, right-click on the Report Center folder. A pop-up menu appears; click on its Delete option.

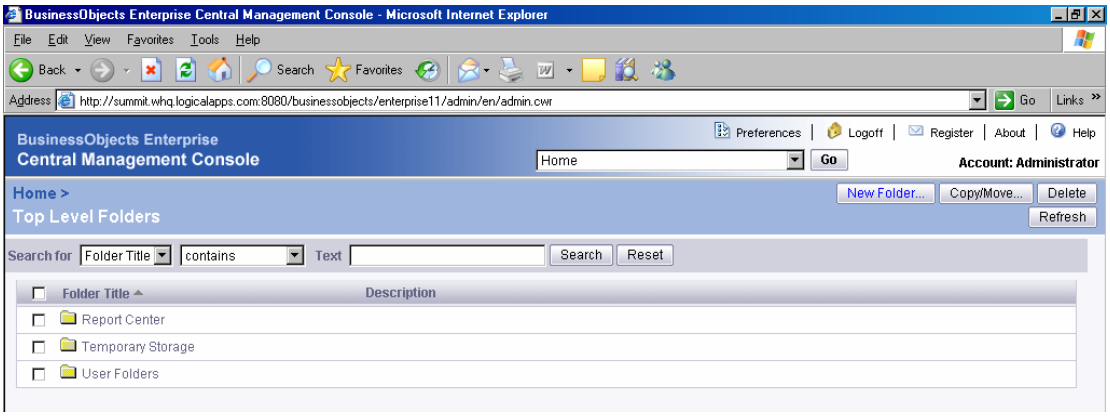


3 Open the Central Management Console in a web browser. Use the following URL:

`http://HostName:PortNumber/businessobjects/enterprise115/admin/en/admin.cwr`

Replace *Hostname* and *PortNumber* with the values appropriate for the destination instance of ACTIVE Governance.

4 Log in to the Central Management Console. Use *Administrator* as the user name and supply the password for your site.



5 Select the check box for the Report Center folder and click on the Delete button.

Importing Business Views and Reports to a Destination Instance

To copy business views and reports from a source to a destination instance, you use an Import Wizard, which is accessible from the Business Objects folder under Windows Start, on the Windows client system on which Business View Manager is installed.

1 From the initial Wizard dialog, click on the Next button.

2 In a Specify Source Environment panel, enter or select the following values:

- Source: *BusinessObjects Enterprise XI*
- CMS Name: The host name and port number of the server from which you want to copy files, separated by a colon. For example, *aspen:6400*
- User Name: *Administrator*
- Password: The password created for your source instance

Then click on the Next button.

3 In a Specify Destination Environment panel, enter the following values:

- CMS Name: The host name and port number of the server to which you want to copy files, separated by a colon. For example, *cobra:6400*
- User Name: *Administrator*
- Password: The password created for your destination instance

Then click on the Next button.

4 In a Choose Objects to Import panel, select the following check boxes:

- Import users and groups
- Import application rights
- Import corporate categories
- Import folders and objects
- Import repository objects

Ensure that all other check boxes are cleared.

5 Click on Next buttons until you come to an Import Object Principals Option panel. In it, make sure that an Enforce Rights Fidelity check box is selected, and click on the Next button.

6 In a Choose an Import Scenario panel, select the lower radio button ("I want to update the destination system by using the source system as a reference") and the check box associated with it ("Automatically rename objects if an object with that title already exists in the destination folder").

7 Click on Next buttons until you reach a Select Users and Groups panel. In it, ensure that:

- In the Groups field, all check boxes are cleared.
- In the Subgroups and Users field, the Administrator and Everyone check boxes are selected, and all others are cleared.

Then click on the Next button.

8 In a Select Folders and Objects panel, select the Report Center folder. (Ensure that this folder appears below an entry identifying your source instance. This should be the default.) Then click on the Next button.

9 In an Import Repository Objects Options panel, select the Import All Repository Objects radio button. Then click on the Next button.

10 In an Information Collection Complete panel, click on the Finish button.

Setting Business Objects Connectivity

Using Business View Manager, connect to the destination instance (see logon settings on page 9) and update data connections to your cloned Oracle EBS instances. For the procedure, see the section titled "Establishing Data Connections" in chapter 3 ("Deploying Reports") of the *ACTIVE Governance Installation Guide*.

When you have finished doing so, restart ACTIVE Governance.