Governance, Risk, and Compliance Controls Suite

Upgrade Guide

AppsRules 6.5 to GRC Controls Suite 7.2.2.1

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Governance, Risk, and Compliance Controls Suite Upgrade Guide

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Contents

Preface

Upgrading Apps Rules to ACTIVE Governance

Oracle Governance, Risk, and Compliance Controls Suite (known formerly as ACTIVE Governance) implements business controls, enabling users to demonstrate regulatory compliance and to promote operational efficiency. It consists of an ACTIVE Governance Platform, which documents controls and displays reports, and modules that enforce controls — ACTIVE Access Governor and ACTIVE Policy Governor.

ACTIVE Governance incorporates Business Objects Enterprise XI Release 2, a third-party software package that provides its reporting capability.

ACTIVE Governance also works with Embedded Agents, a set of applications that run within the Oracle ERP environment and enable ACTIVE Governance to apply controls there. ACTIVE Governance may connect to multiple instances of Oracle Applications, each running its own instance of the Embedded Agents.

The Embedded Agents are developed from an earlier set of applications known collectively as AppsRules.

An organization that uses AppsRules version 6.5.*x* can upgrade to ACTIVE Governance version 7.2. It's a multiphase process:

- First, for each instance of Oracle Applications that is to be subject to control by ACTIVE Governance, upgrade AppsRules version 6.5.*x* to AppsRules version 7.1. (Any of AppsRules versions 6.5.3–6.5.8 can be upgraded to version 7.1.) Book 1 of this upgrade guide provides detailed procedures for doing so.

- Next, upgrade each AppsRules 7.1 instance to the Embedded Agents version 7.2. Once again, Book 1 of this upgrade guide provides detailed procedures for doing so; it begins on page 3.
- Finally, install ACTIVE Governance and Business Objects on a Linux, UNIX, or Windows server, and configure them to communicate with Oracle Applications instances and their "companion" Embedded Agents instances. Book 2 of this installation guide provides detailed procedures for doing so; it begins on page 37.

Each instance of AppsRules/Embedded Agents has its own database — typically, a distinct schema in the Oracle database used by the companion Oracle Applications instance. The upgrade process involves running scripts that enable the original 6.5.*x* database to work with the upgraded 7.2 applications, thus preserving the database and the data it contains.

Moreover, each of ACTIVE Governance and Business Objects requires its own Oracle database.

This guide is intended for readers qualified to perform system-administration operations such as configuration change at the operating-system level, the creation of users, the granting of permissions to users and directories, or the installation of operating system patches on the machines that host ACTIVE Governance and the Embedded Agents.

Book 1

Embedded Agents Upgrade

Chapter 1

Embedded Agents Upgrade Overview

Embedded Agents are a set of applications that run within the Oracle Applications ERP environment in support of ACTIVE Governance. Each is derived from an AppsRules application:

- In version 7.2, the 6.5.*x* AppsAccess application has become an internal engine for ACTIVE Access Governor, an ACTIVE Governance application.
- ACTIVE Data Governor 7.2 replaces AppsControl 6.5.*x*. It applies change control to Oracle Applications fields.
- Form Rules 7.2 replaces AppsForm 6.5.*x*. It modifies the security, navigation, field, and data properties of Oracle Applications forms.
- Flow Rules 7.2 replaces AppsFlow 6.5.*x*. It works with Oracle Applications Workflows to define and implement business processes.
- Audit Rules 7.2 replaces AppsAudit 6.5.*x*. It tracks changes to database field values and displays reports that present information about changes to each field.

These applications are installed on the database and forms servers on which Oracle Applications run. The installation process implements the following architecture:

- Database Schema: As you upgrade from one version to the next, use the database schema created from the earlier version, for which the recommended name is XXLAAPPS. (It's known as the "LogicalApps schema.")
- Tablespace: There must be a tablespace for indexes used by AppsRules/Embedded Agent database objects. As you upgrade from one version to the next, use the tablespace created for the earlier version.

- Database Objects: Embedded Agents make use of database tables, packages, sequences, and workflows, which are placed in the XXLAAPPS (or user-specified) schema. All Embedded Agent table names begin with the prefix *LA*.
- Application Server Objects: Embedded Agents use custom forms, which are installed on the application server. Custom forms are located in the $XXLAAPPS_TOP/forms/US directory.
- Program Executables: Embedded Agents use program executables to report on, migrate, and compile business rules. Reports, programs, and Java files are installed on the concurrent manager server (typically the database server). Custom programs are located in the $XXLAAPPS_TOP/forms/US directory; some executable programs may also reside in the $XXLAAPPS_TOP/bin directory.

Two comprehensive Installer programs place AppsRules/Embedded Agents applications on the database and forms servers. (They also upgrade a rules engine that provides functionality to the applications.) For each version, there is a database-server Installer and a forms-server Installer. Each may be run in either of two modes, and a third mode is available for the version-7.2 Installers:

- GUI: The Installer programs present a series of windows that prompt for information necessary for the installation. Each window also provides access to a help window. As you progress through the windows, you can return to windows you had completed earlier in order to review or change the entries in them. (The Installers retain any entry you don't change, even if you return to a step earlier than the one in which such an entry was made.) GUI mode is the default.
- Console: The Installer programs present a series of prompts in a command console, in response to which you provide information necessary for the installation. Console mode prompts for the same information as GUI mode, but does not enable you to return to earlier prompts and does not provide help screens.
- Silent: For the version-7.2 upgrade, the Installer programs can read parameters from properties files, and then run without user interaction.

To run each Installer program, you would type its name — ladbinstall.bin or lafrminstall.bin — at the command prompt. The name alone launches GUI mode if no properties files are present, or silent mode if properties files are present; the name along with the argument *–i console* launches the console mode.

Preparatory Procedures

Although the following preparatory procedures were most likely completed when version 6.5.*x* was installed, you may wish to confirm that they have been completed as you upgrade to version 7.2:

- Grant the following APPS schema objects the execute privilege to the LogicalApps schema:
  - FND_FILE — Package Spec and Body
  - FND_PROFILE — Package Spec and Body

- Confirm that Java is in your path. Type the following at the command prompt:

  ```
  which java
  ```

- Verify that you use Java version 1.3 or higher. Type the following at the command prompt:

  ```
  java -version
  ```

  If more than one copy of Java exists on your system, verify the version of the copy in the opt directory (for example, /usr/opt1.3/bin/java).

- Ensure that the Oracle Advanced Security product is installed. (DBMS_ Obfuscation is used for encrypting the password.) Type the following at the command prompt:

  ```
  adapters
  ```

  Look for Oracle Security Server Authentication Adapter among the return values.

- Each of your database server, forms server, and concurrent manager server may run on its own host machine. If so, complete the following tasks to confirm that the host machines communicate properly:

  – Send a file via FTP from the database server to the concurrent manager server, and from the concurrent manager server to the forms server.

  – Perform a remote execution of the shell file, by any of the following methods: Enable rsh (remote shell), enable ssh (secured shell), have a common mount point, manual.

Sizing Considerations

Ensure that your forms server has 100 megabytes (MB) of disk space for Embedded Agents files, and that the database server has 100 MB of disk space for Embedded Agents executable files.

Moreover, the LogicalApps schema requires the following amounts of disk space:

- 100 MB for most Embedded Agents database tables.
- An additional 1 gigabyte (GB) for two temp tables used in Audit Rules processing — LAAD_AUDIT_KEYS and LAAD_AUDIT_VALUES.
- An additional amount for two tables that hold Access Governor "user conflicts." The space requirement varies according to the number of conflicts a system may generate. The first table, LAA_USER_CONFLICT_ENTITIES, holds the most recent "snapshot," or set of conflicts; the other, LAA_USER_CONFLICT_ENTITIES_H, is a history table that holds archived snapshots. So one would, in effect, want to allow for double the number of conflicts that may be generated. The largest LogicalApps clients generate approximately 5,000,000 conflicts and so need to allow for 10,000,000, and 2 GB of disk space meets this requirement.

The LogicalApps schema also requires space to encompass shadow tables used by Audit Rules — one-third of the space taken by each audited table.

Software Requirements

Each instance of the Embedded Agents runs with an instance of Oracle Applications. For version 7.2, versions 11.5.9 and 11.5.10 of Oracle are preferred, but versions 11.5.7 (FND patch H) and 11.5.8 are also supported.

The following operating systems are preferred for version 7.2 of the Embedded Agents:

- Red Hat Linux AS/ES 3.0
- Red Hat Linux AS/ES 4.0
- Solaris 8/9/10

The following operating systems are also supported:

- Suse Linux Enterprise Server 9.0
- AIX
- HP-UX

Each version 7.2 instance of the Embedded Agents requires an Oracle 9i (or later) database.

Obtaining Installation Files

In your Oracle media pack, locate the Governance, Risk, and Compliance Controls Suite Disk 1. From its dist directory, copy the following files to a temporary directory on your local system:

- ag_712_oracle_ebs_agent_.zip. From it, extract the ladbinstall.bin and lafrminstall.bin files you will use to upgrade AppsRules from version 6.5.*x* to version 7.1.
- ag_7221_oracle_ebs_agent_.zip. From it, extract the ladbinstall.bin and lafrminstall.bin files you will use to upgrade AppsRules version 7.1 to Embedded Agents version 7.2. If you intend to use the silent installation mode, also extract the two files from which the Installers read parameters — ladbinstall.properties and lafrminstall.properties.
- ag_oracle_ebs_agent_migration_710_to_721.zip. From this file, extract the following three files: la_ae_conv_pkg_spec.sql, la_ae_conv_pkg_body.sql, and LAA_SIM_ MIGRATION_72.sql.

Preparing Properties Files

If you intend to run the Installer programs in silent mode as you upgrade from version 7.1 to version 7.2, you need first to edit the two properties files you extracted from the ag_7221_oracle_ebs_agent_.zip, inserting information specific to your installation. (If you intend to use GUI or console mode, you don't need the properties files, and you can ignore this section.)

To insert values in the files, use a text editor such as vi. Each file consists of a series of name-value statements, each of which sets a parameter name equal to a value and each of which is preceded by an explanatory comment. (Each comment begins with a # symbol.) In each statement, edit information to the right of an equals sign; do not (with one exception, discussed below) modify text to the left of the equals sign.

You insert into the files exactly the same information as you would supply in response to prompts if you were to run the Installers in GUI mode. For detailed descriptions of that information, see Chapter 2, "Upgrading AppsRules/Embedded Agents."

The two properties files — ladbinstall.properties (database) and lafrminstall.properties (forms) — share many parameters, which correspond as follows to the GUI prompts discussed in Chapter 2:

- CUST_NAME and LICENSE_KEY: Prompts in the License Key window, step 1 on page 13 (database), or step 1 on page 17 (forms).
- #STAGE_DIR: Prompt in the Staging window, step 2 on page 13 (database), or step 2 on page 17 (forms).

  This statement is the exception, noted above, to the rule that you should leave parameter names (to the left of the equals sign) intact. In the assumption you will want the Installers to set default staging directories, this statement is commented out in the properties file. To use the statement, you must not only supply a staging directory path to the right of the equals sign, but also delete the # symbol at the beginning of the statement.
- DB_HOST_NAME, DB_SID, and DB_PORT: Prompts in the Database Host window, step 3 on page 14 (database), or step 3 on page 17 (forms).
- DB_XXLAAPPS_SCHEMA_NAME, DB_XXLAAPPS_PASS, DB_APPS_SCHEMA_NAME, and DB_APPS_PASS: Prompts in the Database Schema window, step 4 on page 14 (database), or step 4 on page 17 (forms).

  Another exception: The database-installation window does not prompt for the Oracle Applications schema name, although the forms-installation window does. The properties file requires it (typically APPS) as the value for the DB_APPS_SCHEMA_NAME parameter.
- XXLAAPPS_SHORT_NAME and APPL_TOP: Prompts in the Application TOP window, step 5 on page 14 (database), or step 5 on page 18 (forms).
- ENVFILE and ADOVARS: Prompts in the Environment window, step 6 on page 15 (database), or step 6 on page 18 (forms).

The ladbinstall.properties file contains one parameter — INDEX_TABLESPACE — that does not appear in lafrminstall.properties. This parameter corresponds to the Index Table Space prompt in step 4 on page 14.

The lafrminstall.properties file contains two parameters that do not appear in the ladbinstall.properties file. These two parameters correspond as follows to the GUI prompts discussed in Chapter 2:

- APPSORA: The final prompt in the Environment window, step 6 on page 18.
- CUSTOM_CHOICE: The prompt in the CUSTOM.pll window, step 7 on page 19. In the properties file, any value other than No (case-sensitive) is equivalent to Yes.

Finally, both files contain a parameter that does not correspond to any GUI prompt. For you to run the Installers in silent mode, an INSTALLER_UI parameter must be set to the value silent. This is the default; don't change it.

Chapter 2

Upgrading AppsRules/Embedded Agents

In broad terms, the AppsRules-to-Embedded-Agents upgrade process involves these steps:

1. Determine the names of the tablespace for Embedded Agent indexes, the database user/schema, and the database password established for AppsRules 6.5.*x*. (Conventionally, the database user name is XXLAAPPS.) You need to supply these as you upgrade from 6.5.*x* to 7.1, and again as you upgrade from 7.1 to 7.2.
2. Run the Installer that upgrades the database server from version 6.5.*x* to version 7.1. Then run the Installer that upgrades the forms server from version 6.5.*x* to version 7.1. The database server upgrade must precede the forms server upgrade.
3. Run the Installer that upgrades the database server from AppsRules 7.1 to Embedded Agents 7.2. Then run the Installer that upgrades the forms server from AppsRules 7.1 to Embedded Agents 7.2. Again, the database server upgrade must precede the forms server upgrade.
4. Configure a remote compilation feature, which makes libraries resident on the concurrent server available to the forms server. This is required only for the 7.1-to-7.2 upgrade, not for the 6.5.*x*-to-7.1 upgrade.
5. Run upgrade scripts that prepare what was originally the AppsRules 6.5.*x* database for use with Embedded Agents 7.2. This also is required only after the 7.1-to-7.2 upgrade, not for the 6.5.*x*-to-7.1 upgrade.
6. Finally, complete several postinstallation tasks. These also are required only for the 7.1-to-7.2 upgrade, not for the 6.5.*x*-to-7.1 upgrade.

Thus, complete "Installing Database Server Components" and "Installing Forms Server Components" (pages 12–21) to upgrade from 6.5.*x* to 7.1. Then repeat these sections to upgrade from 7.1 to 7.2. Only at that point, move on to "Configuring the Remote Compilation" (page 22) and complete this chapter.

Installing Database Server Components

To install Embedded Agents database server components, run the file ladbinstall.bin. As you upgrade AppsRules from 6.5.*x* to 7.1, use the version of this file extracted from the ag_712_oracle_ebs_agent_.zip file. As you upgrade AppsRules 7.1 to Embedded Agents 7.2, use the version of this file extracted form the ag_722_oracle_ebs_agent.zip file.

1. Transfer the ladbinstall.bin file to the database server, via FTP in binary mode. Use the applmgr account.
2. Use applmgr to log in to the database server. Ensure that the user (login ID) has write and read privileges on $APPL_TOP.
3. Execute the environment file, if it is not included in the profile:

   ```
   $. $APPL_TOP/$APPLFENV
   ```

4. Set the execute permission on ladbinstall.bin:

   ```
   $ chmod +x ladbinstall.bin
   ```

5. Execute ladbinstall.bin.

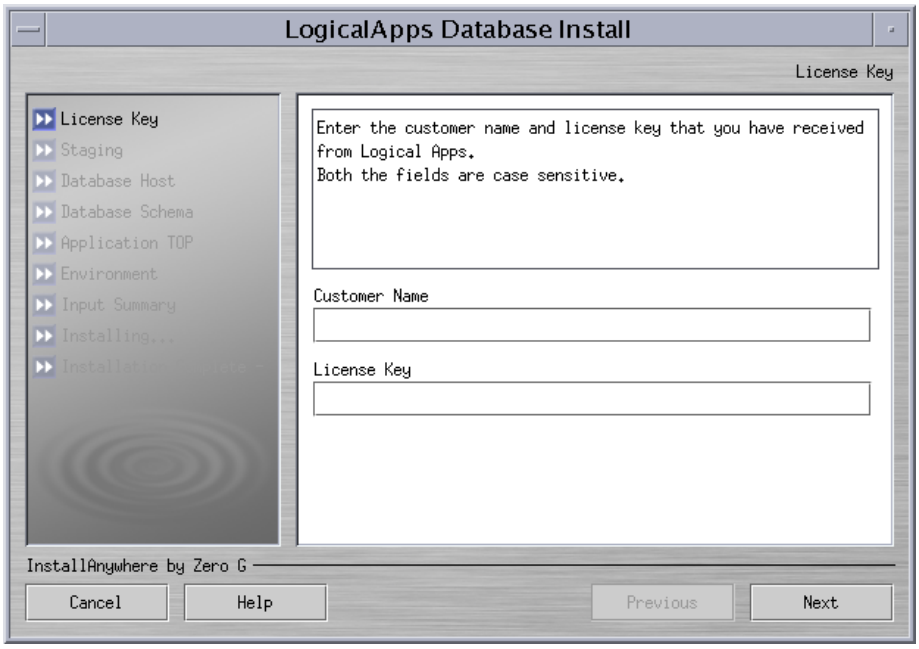
   - To run in GUI or console mode, ensure that ladbinstall.properties is absent from the directory where ladbinstall.bin resides. To run in silent mode (for the 7.1-to-7.2 upgrade only), be sure that both files are in the same directory.
   - Use the name *ladbinstall.bin* as the command to run in GUI or silent mode. Add the argument *–i console* to run in console mode.

All three Installer modes require the same information; GUI and console prompt for it, and silent reads it from files. If you choose GUI mode (as shown in the following procedure), you can perform these operations in each of the windows:

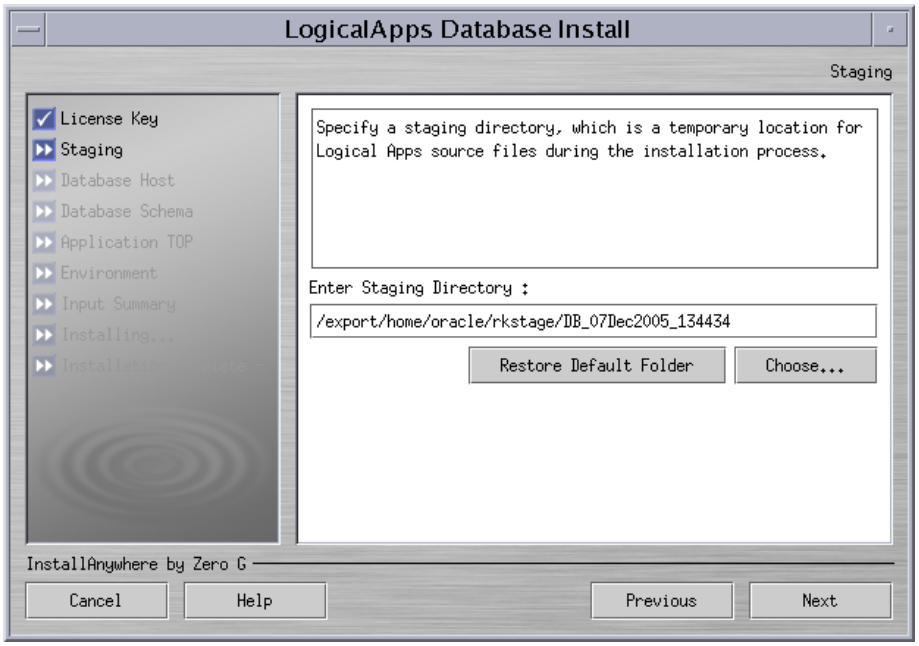
- Review a brief description of the information you need to provide.
- Click on the Help button to open a window that provides a more expansive description of the information you need to provide. (After you review this information, click on the Close button to exit the Help window.)
- Type installation information in the labeled text boxes (or accept default values).
- When you complete one window, click on the Next button to move from it to the next window.
- Click the Previous button if you wish to return to a window you completed earlier.
- Note that titles of windows you have completed appear in black along the left of each window; those yet to be completed are shown in grey.

To complete the database server installation:

1. In the License Key window, enter *Oracle* as the Customer Name and the following case-sensitive value as License Key: 6MR6457YE5RJO1C8T3JhY2xl. A message displays the applications you can install; click the OK button to clear it.

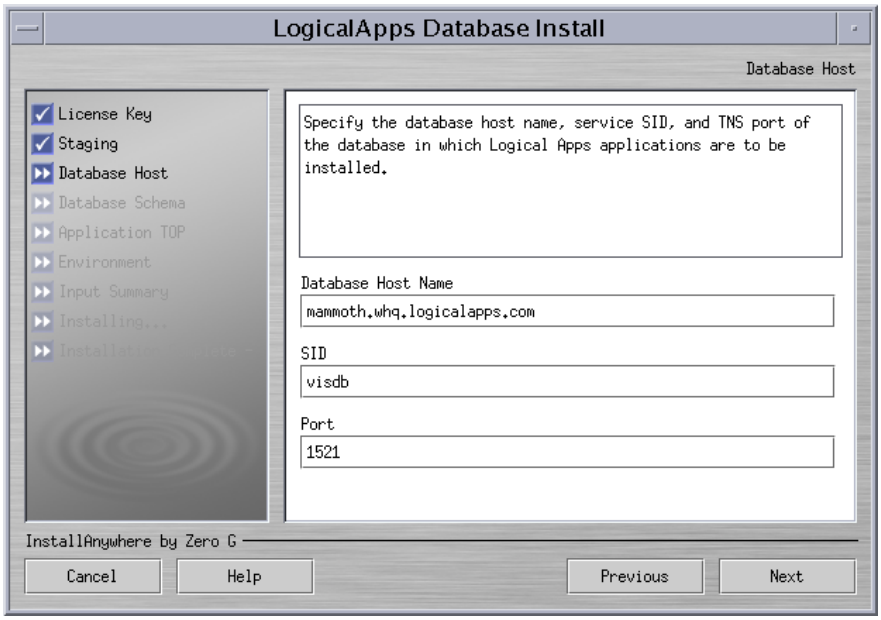


2. Specify a staging directory — a temporary location for source files:

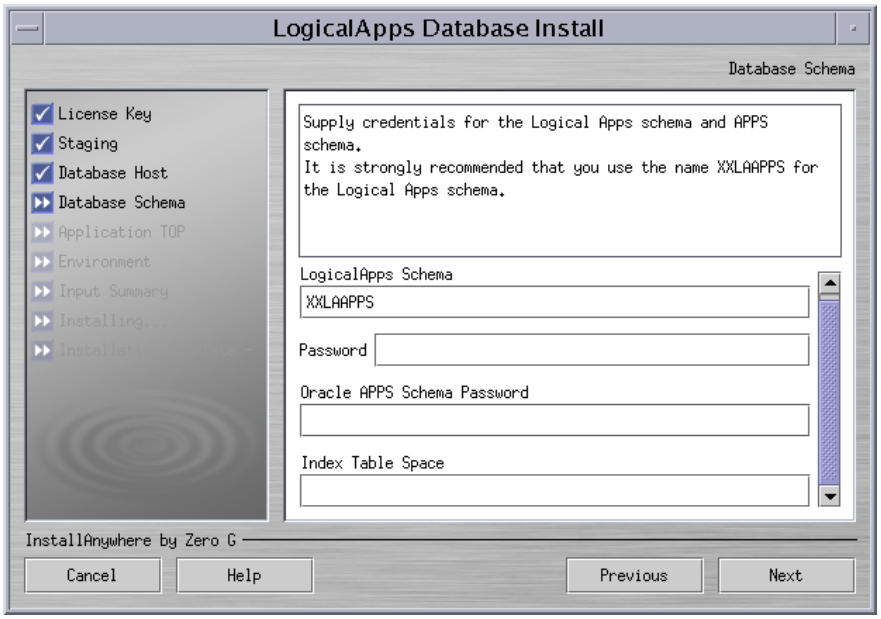


The Installer suggests a default directory; its name is a timestamp for the moment you perform the upgrade, with *DB* (for database). You may select another directory: Click the Choose button and, in a Select a Folder window, navigate to the directory you want. If you specify a nonexistent directory, the Installer creates it. To return to the default, click on the Restore Default Folder button.

3 Verify the default values for the host name, SID (service identifier), and network port of the Oracle Applications database server, which the Installer takes from the shell environment. If the defaults are not correct, enter correct values.



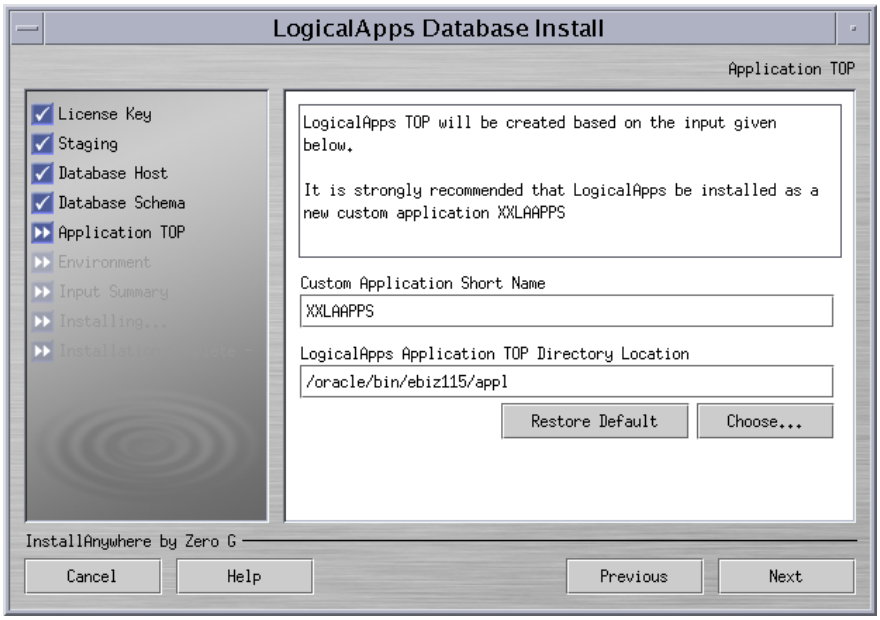
4 Supply log-on values for the LogicalApps and Oracle Applications (APPS) schemas. As you upgrade from one version to the next, enter values already established for the earlier version in the LogicalApps Schema, Password, and Index Table Space fields. Also enter the password for the Oracle APPS schema in its field.



5 Establish the LogicalApps TOP — the high-level directory for the storage of Embedded Agents files. As you upgrade from one version to the next, enter values that defined the LogicalApps TOP in the version from which you are upgrading:

- In the LogicalApps Application TOP Directory Location field, specify a directory that is the parent of the LogicalApps TOP.

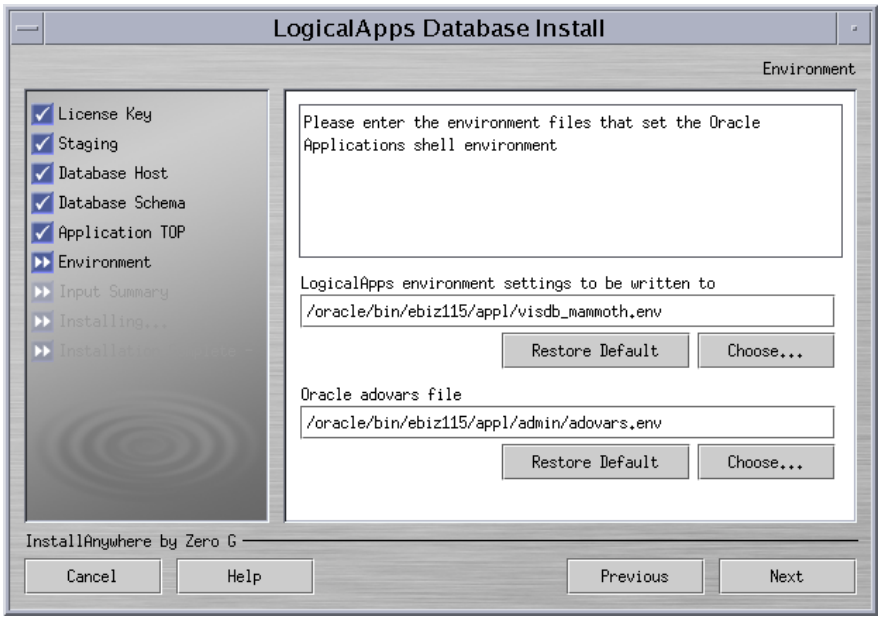
- In the Custom Application Short Name field, specify a short name that is appended to the parent directory to form the LogicalApps TOP directory.



If you need to select a parent directory other than the default, click on the Choose button and, in a Select Folder window, navigate to the directory you want. To return to the default directory, click the Restore Default button.

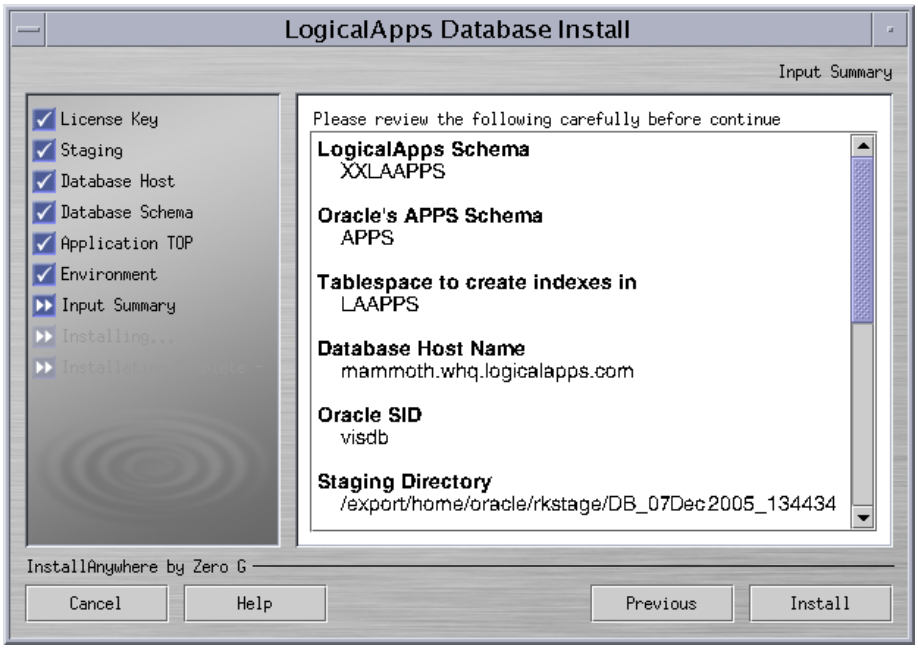
Because you are selecting an application short name that is already in use, the Installer displays a warning message when you click the Next button. You are presented with three options: Enter Again, Continue, and Abort. Select Continue.

6 Specify paths to files that contain environment variables for the Oracle Applications shell. (The installation appends LogicalApps-specific entries to these files.)



Accept the defaults, or click a Choose button and, in a Select a Folder window, navigate to a directory you want. If you enter the name of a nonexistent directory, the Installer creates that directory. To return to the default directory, click the Restore Default button.

7 Review your selections in the Input Summary form:



If you determine that any entry is inappropriate, you can click on the Previous button until you reach the form in which you selected the entry, and change it. (The Installer retains any entries you don't change, even if you pass by them as you return to an earlier step in the installation process.)

8 In the Input Summary form, the label for the button at the lower right has changed from *Next* to *Install*. When you are satisfied with your selections in earlier forms, click on the Install button to complete the database server installation.

The Installer displays error messages (if any are warranted) upon completing the upgrade of each AppsRules/Embedded Agents application, and overall status upon completing the upgrade of all applications. If the overall status is Success, the upgrade has finished with no errors.

Errors or overall status may be classified as Warning, Nonfatal, or Fatal. The Installer recovers (restores the system to its state prior to the installation) only for Fatal errors. For details about errors and the upgrade process, navigate to the directory from which the Installer ran and review two log files: LADB_LOG_*timestamp*.log and LADB_ERROR_*timestamp*.log, where *timestamp* is the date and time at which the Installer ran.

Installing Forms Server Components

To install Embedded Agents forms server components, run the file lafrminstall.bin. As you upgrade AppsRules from 6.5.*x* to 7.1, use the version of this file extracted

from the ag_712_oracle_ebs_agent.zip file. As you upgrade AppsRules 7.1 to Embedded Agents 7.2, use the version of this file extracted form the ag_722_oracle_ebs_agent.zip file.

1. If the database and forms servers run on the same host, re-source the environment by opening a new shell.
2. Transfer the lafrminstall.bin file to the forms server, via FTP in binary mode. Use the applmgr account.
3. Use applmgr to log in to the forms server. Ensure that the user (login ID) has write and read privileges on $APPL_TOP.
4. Execute the environment file, if it is not included in the profile:

   ```
   $. $APPL_TOP/$APPLFENV
   ```

5. Set the execute permission on lafrminstall:

   ```
   $ chmod +x lafrminstall.bin
   ```

6. Execute lafrminstall.bin:

   - To run in GUI or console mode, ensure that lafrminstall.properties is absent from the directory where lafrminstall.bin resides. To run in silent mode (for the 7.1-to-7.2 upgrade only), be sure that both files are in the same directory.
   - Use the name *lafrminstall.bin* as the command to run in GUI or silent mode. Add the argument *–i console* to run in console mode.

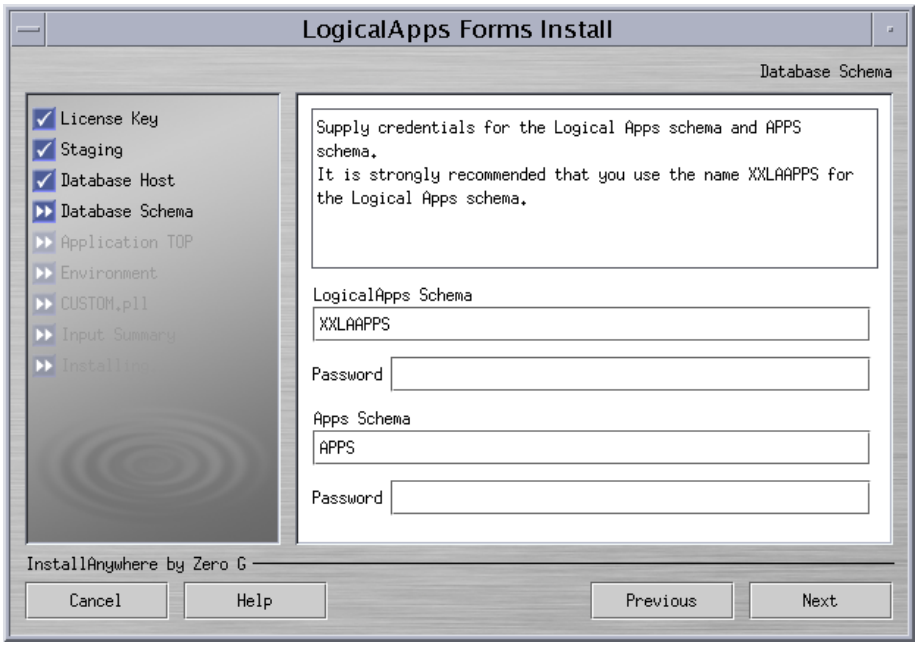
Most windows (or console prompts) for the forms installation are identical to those for the database installation. If you select GUI mode, each window enables you to perform the same operations as you could in the database-server Installer (see page 12).

To complete the forms server installation:

1. In the License Key window, enter *Oracle* as the Customer Name and the following case-sensitive value as License Key: 6MR6457YE5RJO1C8T3JhY2xl. (These are the same as the values for database-server installation.) A message displays the applications you can install; click the OK button to clear it.
2. In the Staging form, once again select a directory for the temporary placement of source files. The Installer once again suggests a default — its name a timestamp for the moment you perform the installation, along with *FRM* (for forms).

   If you wish to select another directory, click on the Choose button. In a Select a Folder window, navigate to the directory you want. If you specify a nonexistent directory, the Installer creates that directory. If you want to return to the default directory after having navigated away from it, click on the Restore Default Folder button.
3. In the Database Host form, select the database host name used where the database installation has been run, and the appropriate SID and port values.
4. In the Database Schema window, there is no longer an Index Table Space field (as it would be inapplicable to forms installation), but where the database-server

Installer requested only a password for the Oracle Applications schema, the forms-server Installer asks for a name as well:



For the Apps Schema field, accept the default value, APPS. (This needs to match the database-server value, which is hard-coded.) For each of the remaining fields, enter the same value as you entered for the database installation. Once again, as you upgrade from one version to the next, enter the values already established for the earlier version in the LogicalApps Schema and Password fields.

5 In the Application TOP form, establish the LogicalApps TOP for the forms server — the highest-level directory for the storage of Embedded Agents files. Again, as you upgrade from one version to the next, enter values that defined the LogicalApps TOP in the version from which you are upgrading:

- In the LogicalApps Application TOP Directory Location field, specify a directory that is the parent of the LogicalApps TOP.
- In the Custom Application Short Name field, specify a short name that is appended to the parent directory to form the LogicalApps TOP directory. The short name for the forms server must be the same as the short name for the database server.

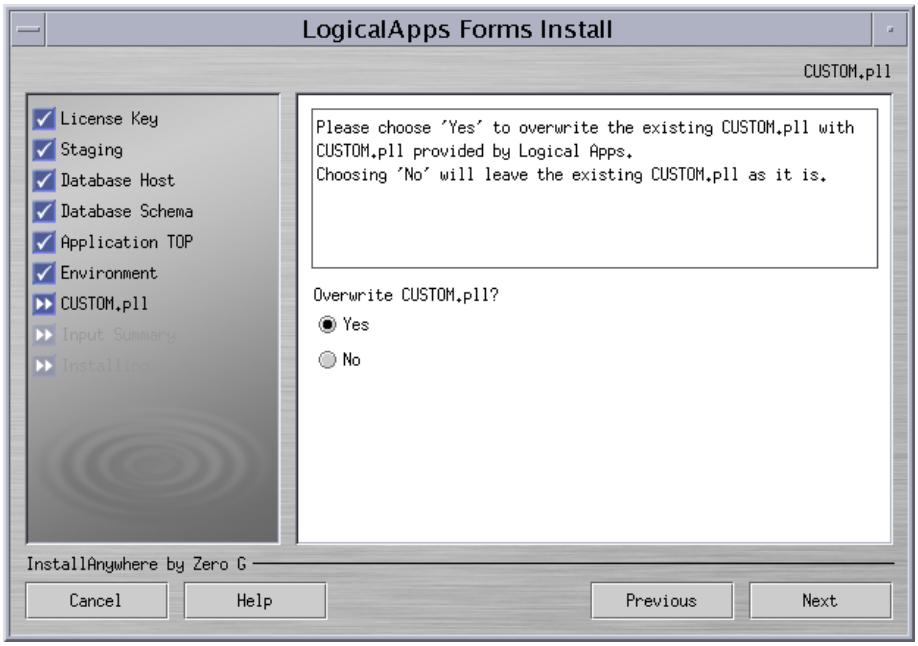
If you need to select a parent directory other than the default, click on the Choose button and, in a Select Folder window, navigate to the directory you want. To return to the default directory, click on the Restore Default button.

Because you are selecting an application short name that is already in use, the Installer displays a warning message when you click the Next button. You are presented with three options: Enter Again, Continue, and Abort. Select Continue.

6 In the Environment form, specify paths to files that contain environment variables for the Oracle Applications shell (the first two prompts) and for forms paths (the APPSORA prompt). Accept the defaults, or click a Choose button and, in a

Select a Folder window, navigate to a directory you want. If you choose to return to the default directory, click the Restore Default button. In any case, select values appropriate for the forms server.

7 When you complete the Environment form, the forms server Installer presents a CUSTOM.pll form:



Forms server installation requires that an existing CUSTOM.pll file be modified so that it can link to an LACUSTOM.pll file. If you select Yes, the Installer backs up your existing CUSTOM.pll, and then overwrites the original with a modified copy that contains the necessary links to LACUSTOM.pll. (The backup copy has a time-stamp appended to the .pll file extension.) If your existing CUSTOM.pll contained any customization, a Yes selection in this form would require you to copy your customizations manually from the backup file to the new version of CUSTOM.pll.

If you select No, the Installer retains your existing CUSTOM.pll. In this case, you need to edit the file to insert links to LACUSTOM.pll (see below).

8 In the Input Summary form, review the selections you have made. If you determine that any entry is inappropriate, you can click on the Previous button until you reach the form in which you selected the entry, and change it. (The Installer retains any entries you don't change, even if you pass by them as you return to an earlier step in the installation process.)

9 When you are satisfied with the selections you have made in preceding forms, click on the Install button in the Input Summary form to complete the forms server installation.

The Installer displays error messages (if any are warranted) upon completing the upgrade of each AppsRules/Embedded Agents application, and overall status upon completing the upgrade of all products. If the overall status is Success, the upgrade has finished with no errors.

Errors or overall status may be classified as Warning, Nonfatal, or Fatal. The Installer recovers (restores the system to its state prior to the installation) only for Fatal errors. For details about errors and the upgrade process, navigate to the directory from which the Installer ran and review two log files: LAFRM_LOG_*timestamp*.log and LAFRM_ERROR_*timestamp*.log, where *timestamp* is the date and time at which the Installer ran.

CUSTOM.pll Modifications

If you chose (in step 7) not to overwrite your CUSTOM.pll file, edit the CUSTOM.pll file. (If you selected Yes in step 7, ignore this section and skip ahead to "Configuring the Remote Compilation.")

1 In place of the existing code for *Procedure Event(event_name varchar2)*, substitute the following:

```
PROCEDURE event(event_name varchar2) is

  form_name      varchar2(30) := name_in('system.current_form');
  block_name     varchar2(30) := name_in('system.cursor_block');
  field_name     varchar2(30) := name_in('system.current_item');
  function_name  varchar2(30);
  parameters     varchar2(2000);

begin
  if (event_name = 'ZOOM') then
    la_enhncmtmgr_pkg.la_zooms(form_name,block_name,
        function_name,parameters);
      if function_name is not NULL
      then
        if parameters is null then
          fnd_function.execute(function_name,'Y','N');
        elsif 'ZOOMSPECIAL' = substr(parameters,1,11) then
          lacustom.event('ZOOMSPECIAL'); -----new code 081903
      else
        parameters := lazoom.zoom_event(parameters);
        fnd_function.execute(function_name,'Y','N',parameters);
      end if;
  end if;
-----------------------------------WNF
  elsif (event_name='WHEN-NEW-FORM-INSTANCE') then
   lacustom.event('WNF');
--------------------------WNB
  elsif (event_name = 'WHEN-NEW-BLOCK-INSTANCE') then
   lacustom.event('WNB');
-----------------------------WNI
  elsif (event_name = 'WHEN-NEW-ITEM-INSTANCE') then
   lacustom.event('WNI');
------------------------WNR
  elsif (event_name = 'WHEN-NEW-RECORD-INSTANCE') then
   lacustom.event('WNR');
------------------------WNV
  elsif (event_name = 'WHEN-VALIDATE-RECORD') then
   lacustom.event('WVR');
----------------------
  elsif (substr(event_name,1,7) = 'SPECIAL') then
   execute_menu(event_name);
```

```
-----------------------------------------
   else lacustom.event(event_name);   --put other events here
   end if;
end event;
```

2 In place of the code for *Function zoom_available*, substitute the following:

```
FUNCTION zoom_available return boolean is
    v_enabled  varchar2(20);
  begin   --x
    v_enabled := lazoom.zoom_enabled;
    IF v_enabled = 'TRUE' THEN
      return TRUE;
    else
      return FALSE;
    end if;
  RETURN NULL;
  end zoom_available;
```

3 Attach the following libraries. (Remove the path when attaching the libraries.)

- LACUSTOM.pll
- LABRSQL.pll

4 Compile the file and ensure there are no compilation errors.

Servlet Mode

If the forms server runs in servlet mode, you must edit a file to enable Oracle to recognize the LogicalApps TOP you selected during installation (see step 5 on page 18).

To determine whether the forms server runs in servlet mode, identify the file set by the Oracle environment variable $FORMS60_WEB_CONFIG_FILE. Open that file and search for its serverURL entry. If that entry is set to the value */forms/formservlet*, the forms server runs in servlet mode. If the entry is blank, the forms server runs in socket mode, in which case you need not complete the following procedure.

If the forms server runs in servlet mode:

1 Using a text editor, open a file called formservlet.ini. The file is located either in $APACHE_TOP/Jserv/etc or in $IAS_ORACLE_HOME/Apache/Jserv/etc.

2 In the formservlet.ini file, look for a block of entries bounded by the lines *#Begin Customization* and *#End Customization*.

3 Add the following entry anywhere between the Begin and End Customization lines:

```
XXLAAPPS_TOP=$APPL_TOP/xxlaapps/11.5.0
```

Note, however, that the value *XXLAAPPS* is correct in this entry only if you have accepted the default application short name during installation. If not, then in each of the two places that the value *XXLAAPPS* appears in this entry (whether in upper or lower case), substitute the short name you created in step 5 on page 18.

4 Save and close the file.

Configuring the Remote Compilation

After running Installers for the 7.1-to-7.2 upgrade, perform remote compilation, which makes libraries resident on the concurrent server available to the forms server.

1. Log on to the database server.
2. Source out the Oracle Applications shell environment.
3. Navigate to the $XXLAAPPS_TOP/bin directory (a subdirectory, called bin, of the LogicalApps TOP directory, which you established in step 5 of the database installation process).
4. Grant the execute permission on a file called laconfig.sh:

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

5. Run the laconfig.sh file:

   ```
   $ laconfig.sh
   ```

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

1. 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.
2. A prompt displays a path to a Java executable; confirm it 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. 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.
3. A prompt displays a path for a file that sets the Oracle Applications environment; confirm that it is correct. The default, taken from the shell as $APPL_TOP/$APPLFENV, 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.
4. 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).

5. You are prompted to enter the number of distinct application TOPs used by forms servers. Type the number and press the Enter key.
6. 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
7. 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 Embedded Agents 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.

Once you have finished executing the laconfig.sh file, verify that these files exist:

- Database server (under $XXLAAPPS_TOP/bin): LAGENLIB.prog, LAMIGRATE.prog, LAIMPORT.prog
- Forms server: LAFORMSGEN.prog

Finally, if you want to enable migration (the ability to port Embedded Agents configurations from one instance to another) with password security:

1. Navigate to \\System Administrator Responsibility\Profile\System.
2. Query for the LAAPPS: Enable Migration Security profile option.
3. Set the value to Yes at site level. (This can be controlled further at the responsibility and user levels.)

Running Database Upgrade Scripts

Run the three upgrade scripts extracted from the ag_oracle_ebs_agent_migration_710_to_721.zip (see page 8). Log on to any SQL editor as the APPS user and run the following:

- la_ae_conv_pkg_spec.sql
- la_ae_conv_pkg_body.sql
- LAA_SIM_MIGRATION_72.sql

Bouncing the Servers

When you finish the remote compilation and run the upgrade scripts, bounce both the forms server and the concurrent manager server.

Postinstallation Tasks

Once the upgrade to version 7.2 is complete, you must perform additional tasks. Some are required in any case, and others only if you run particular versions of Oracle Applications or if other special circumstances apply.

SQL Rule Compilation

From within Embedded Agents, you must run an option to compile SQL rules:

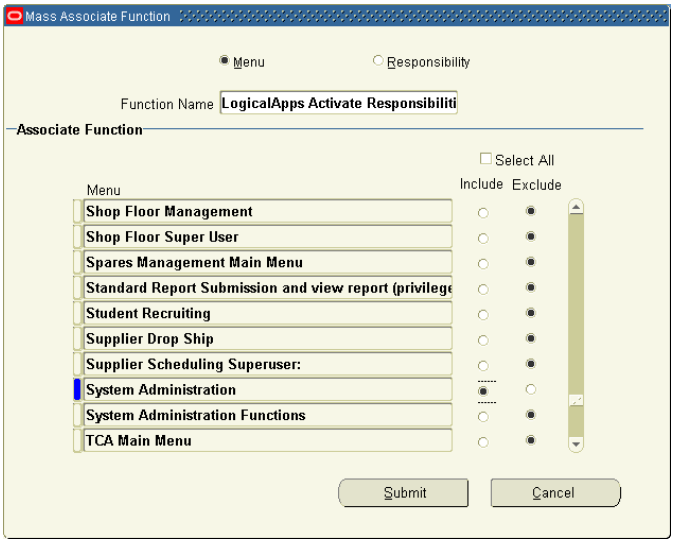
1. Log on to the LogicalApps responsibility in Oracle Applications. In that responsibility, select Form Rules.
2. A LogicalApps—Oracle Rules form opens. Select its Form Rules tab.
3. Click on Tools in the menu bar, and then Oracle Form Rules Compile All Active SQL Rules in the Tools menu.
4. A pop-up message informs you of an ID number for the concurrent request that executes the SQL rule compilation. Make a note of the number, and then click on the OK button to close the message.
5. Optionally, verify that the request has been completed successfully.
   a. Click on View in the menu bar, then on Requests in the View menu.
   b. A Find Requests form opens. In it, click on the Specific Request radio button. Type the ID number of your concurrent request in the Request ID field, and click on the Find button.
   c. A Requests form opens. In the row displaying information about your request, ensure that the entry in the Phase field is *Completed* (you may need to click the Refresh Data button), and the entry in the Status field is *Normal*.
   d. Click on the × symbol in the upper right corner of the Requests form to close it.

Associate a LogicalApps Function

ACTIVE Access Governor inserts an Activate Responsibilities option in the Actions menu of the Oracle Users form. (This option permits segregation-of-duties rules to be evaluated when a user's responsibilities are modified in the Users form.) To activate this menu option, associate a function called LogicalApps Activate Responsibilities with either responsibilities or menus from which administrators will open the Users form:

1. In the LogicalApps—Oracle Rules form, ensure that either the Form Rules or Flow Rules tab is selected.

2 Click on LogicalApps Utilities in the menu bar, and then on Mass Associate Function in the Utilities menu. A Mass Associated Function form appears.



3 Click on the Menu or Responsibility radio button (to determine which type of item you will associate with the function).

4 In the Function Name field, select LogicalApps Activate Responsibilities.

5 Select the Include radio button for each menu or responsibility you want to associate with the function you've selected. By default, the Include radio button is selected for all items in the Associate Function list. You can:

- Deselect or select all menus or responsibilities. Click the Select All check box; it changes to read "Deselect All." Click on it again; this selects all the Exclude radio buttons, clears all the Include radio buttons, and restores the "Select All" check box label. Click on it again to select all Include radio buttons, clear all Exclude radio buttons, and change the check box label back to "Deselect All."
- Deselect individual included menus or responsibilities by clicking on the Exclude radio button for each.
- Select individual excluded menus or responsibilities by clicking on the Include radio button for each.

6 When you are satisfied with your selection, click on the Submit button. Users with access to the newly associated menus or assigned the newly associated responsibilities then have access to the function.

ACTIVE Data Governor

In ACTIVE Data Governor, a Change Control Wizard enables users to write rules that impose change control on Oracle Applications fields. In order for the Wizard to be used, you must run a Create Audit Rules Objects option:

1 In the LogicalApps—Oracle Rules form, ensure that either the Form Rules or Audit Rules tab is selected.

2. Click on LogicalApps Utilities in the menu bar, and then Create Audit Rules Objects in the LogicalApps Utilities menu.
3. A pop-up message indicates that a concurrent request has been run. Make a note of its number, and then click on the OK button to close the message.
4. Optionally, verify that the request has been completed successfully. (See step 5 on page 24.)

Oracle Applications Version 11.5.8

If you run Oracle Applications version 11.5.8, you may regularly run a concurrent program called "Synchronize WF LOCAL Tables" to coordinate aspects of the Oracle workflow. If this is the case, you are advised to run this concurrent program immediately after installing Embedded Agents so that the Flow Rules application is properly synchronized with Oracle workflow.

This applies only to version 11.5.8 of Oracle Applications at certain patch levels; other versions are able to perform this synchronization automatically. If your Oracle configuration does not require you to run the Synchronize WF LOCAL Tables program regularly, then omit this step as you install the Embedded Agents.

Oracle Applications Version 11.5.10.2

If you run Oracle Applications version 11.5.10.2, you need to edit an .xml file known as a "context file" in order for Oracle Applications to source the Embedded Agents environment correctly. (This sourcing is done through the use of a .env file; the context file serves as a template for the generation of the .env file. In earlier versions, a shell script served as the template, and the Embedded Agents installer was able to work with the shell script to set values. Thus, complete the following procedure if you run Oracle Applications 11.5.10.2 or later; omit it if you run an earlier version.)

1. Using an xml editor, open the file $APPL_TOP/admin/*sid_host*.xml. In this file name, replace *sid* with the system identifier for the APPS database and *host* with the host name of the machine on which the APPS database resides.
2. In the file, search for the value *ZX_TOP*.
3. Add the following line immediately beneath the ZX_TOP row.

   ```
   <XXLAAPPS_TOP oa_var="s_xxlaappstop" oa_type="PROD_TOP"
   oa_enabled="FALSE">$APPL_TOP/xxlaapps/11.5.0</XXLAAPPS_TOP>
   ```

   Note the following:

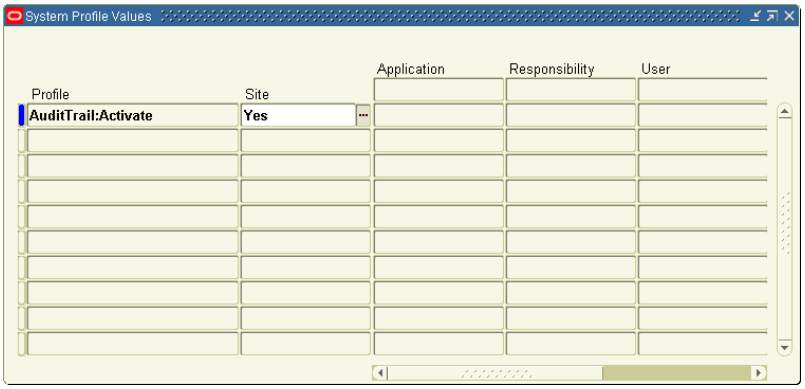
   - The value *XXLAAPPS* is correct in this line only if you accepted the default LogicalApps application short name during installation. If not, then in each of the four places that the value *XXLAAPPS* appears in this line (whether in upper or lower case), substitute the short name you created in step 5 on page 14.
   - In place of the value *$APPL_TOP*, supply the actual full path to the Oracle Applications TOP directory.
4. Save the file.

Audit Rules

Audit Rules provides database-auditing capability not only directly to users, but also to other applications that depend upon it. These include ACTIVE Data Governor, which provides Oracle field-level change control, and Access Monitoring, which audits the activities of users granted temporary access to duties they do not ordinarily fulfill. To prepare the auditing functionality for use, complete the following tasks.

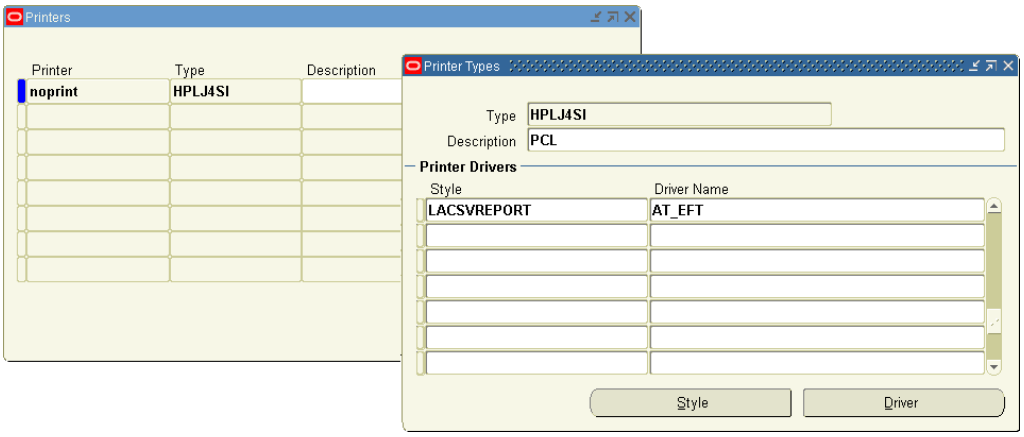
First, set an AuditTrail:Activate profile option to Yes:

1. Log on to the System Administrator responsibility in Oracle Applications.
2. In the Navigator, select Profile, then System.
3. In the Find System Profile Values form, select AuditTrail:Activate in the Profile list of values. Then click on the Find button.
4. Ensure that the AuditTrail:Activate option is set to Yes at the Site level:



Second, add the LACSVREPORT style to the printer you will use for Audit Rules:

1. In the System Administrator responsibility, select Install, then Printer, then Register.
2. A Printers form appears. In its Printer list of values, select the printer you wish to use with Audit Rules. Note the value that appears in the Type field when you select the printer, and then click on the Printer Types button.
3. A Printer Types form appears. In its Type field, query for the Type you noted in step 2. (Press the F11 key; enter the Type value in the Type field; press Ctrl+F11.)
4. In the Style list of values, select LACSVREPORT; the software automatically supplies an associated value under Driver Name.



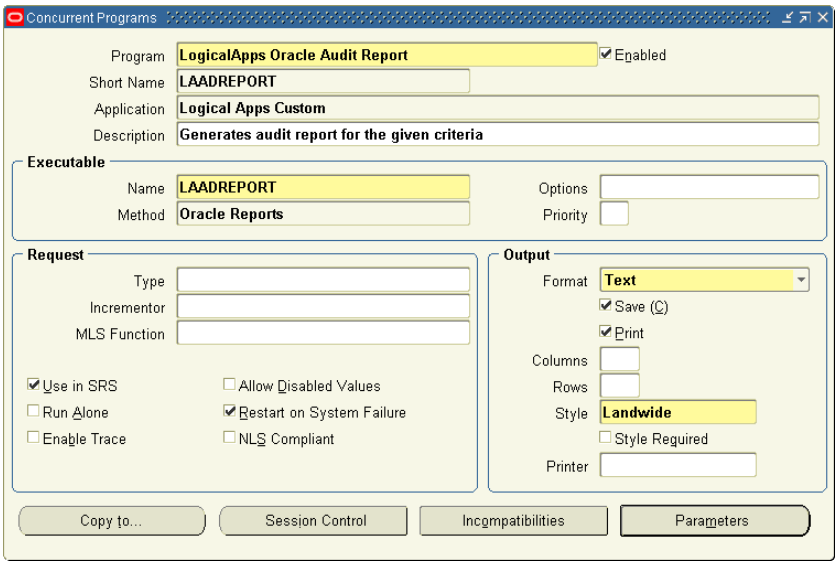
5 Click on File in the menu bar, then on Save in the File menu.

Third, modify the report style:

1 As System Administrator, select Concurrent, then Program, then Define.

2 A Concurrent Programs form appears. In its Program field, query for LogicalApps Oracle Audit Report. (Press the F11 key; select *LogicalApps Oracle Audit Report* in the Program field; press Ctrl+F11.)

3 The Style field displays the value *Landwide*. Change this to *Landscape*.



4 Click on File in the menu bar, then on Save in the File menu.

Last, schedule a concurrent-request program called Audit: Dequeue Process to be run periodically. This enables reports for the Audit Rules, ACTIVE Data Governor (change control), and Access Monitoring applications to display current data, so the period at which you schedule the running of this concurrent program depends upon the frequency with which you expect to run these reports. To schedule the program:

1 Switch to the LogicalApps responsibility. (Use the Switch Responsibility icon, sixth from the left on the tool bar.)

2 In the Navigator, select Requests: Run under the Administration heading.

3 In the Submit a New Request form, select Single Request and click the OK button.

4 In the Submit Request form, select Audit: Dequeue Process in the Name field (the program takes no parameters). Then click on the Schedule button.

5 In the Schedule form, select the Periodically radio button. In related fields, select values appropriate for the schedule you want to set. Click on the OK button.

6 In the Submit Request form, click on the Submit button.

Different Hosts

If the database server and concurrent manager server are on different hosts, make the following changes to the Tkprof script (LATKPROF.prog), which is located in the

Embedded Agents binary directory on the concurrent manager server. (The changed lines are shown in boldface.) The value <db_login> is the database server name, and the value <db_hostname> is the user name to log on to the database server.

```
#!/bin/sh
oracle_login=$1
tempfile=$$latkprof.txt
temptrc=$$latkprof.trc
echo Temp file $tempfile
echo tkprof directory "$5"
pwd
tkfiles='ssh <db_login>@<db_hostname> ls $5'
for i in $tkfiles
do
echo processing $i
scp <db_login>@<db_hostname>:$i /tmp/$temptrc
tkprof /tmp/$temptrc /tmp/$tempfile explain=$1
cat /tmp/$tempfile
rm /tmp/$tempfile
rm /tmp/$temptrc
done
```

If you have multiple APPS schemas, the LA_ENHNCMTMGR_PKG must be created as a synonym under each of these schemas. To perform this operation, run the following command:

```
create synonym LA_ENHNCMTMGR_PKG for apps.LA_ENHNCMTMGR_PKG
```

If this is not set, the following error message appears when a user attempts to log on to a read-only or MRC (multiple reporting currency) responsibility:

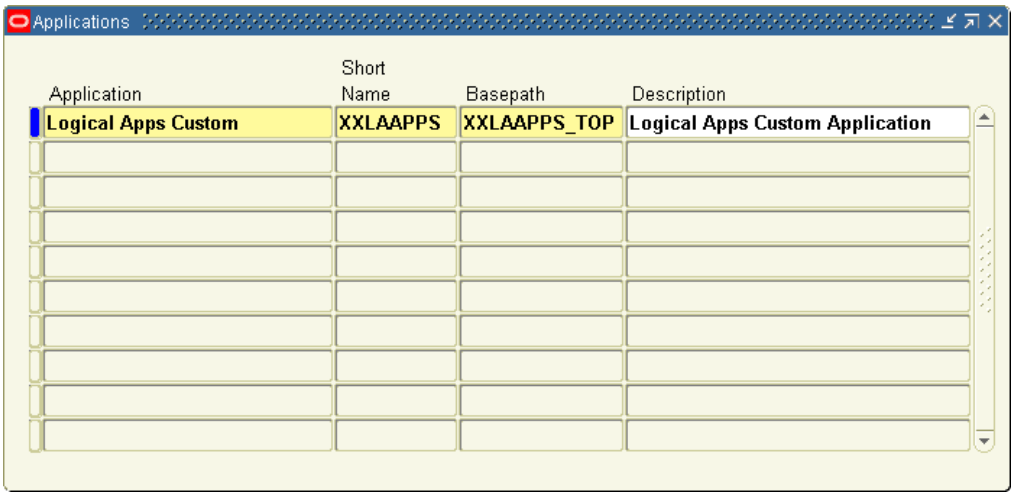
```
la_enhncmtmgr_pkg not declared
```

Chapter 3

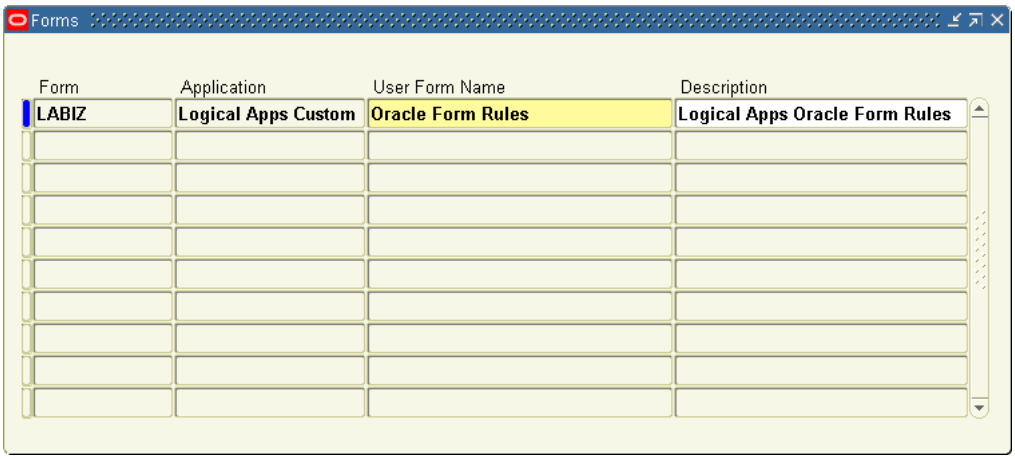
Validation

As a part of the upgrade process, the Installer programs complete several "behind-the-scenes" tasks. Open Oracle Applications forms to confirm that these tasks have been completed. (As you perform these validation steps, you may be instructed to "query for" a value. If so, press the F11 key, type the specified value in a specified field, and then press Ctrl+F11.)

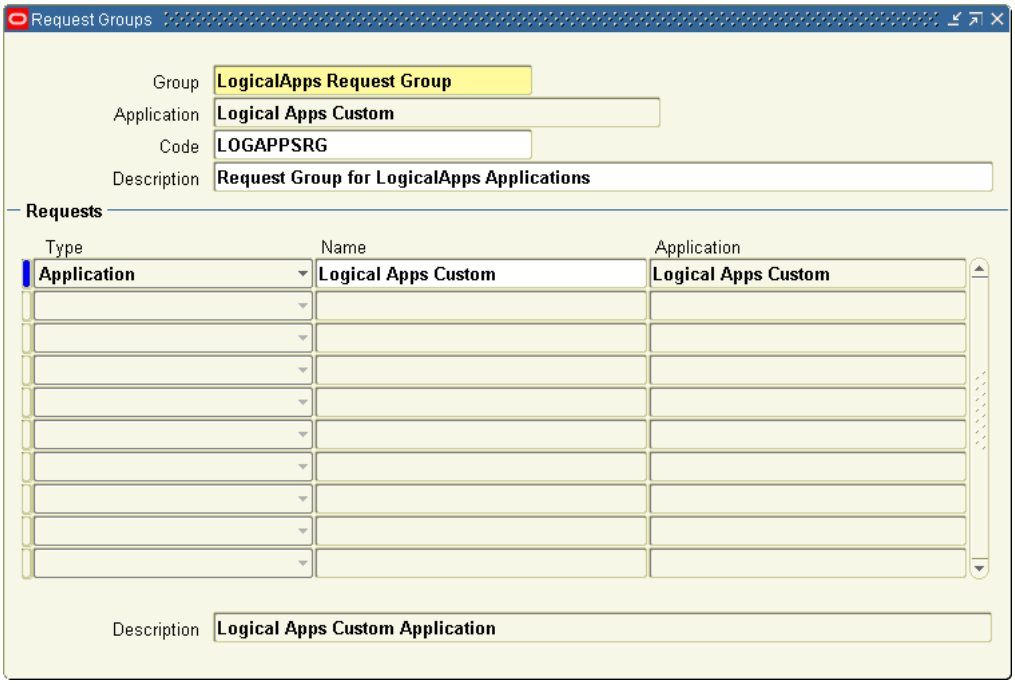
1. Log on to the System Administrator responsibility in Oracle Applications.
2. Select Application, then Register.
3. In the Application field, query for Logical Apps Custom. The form should contain the following values:



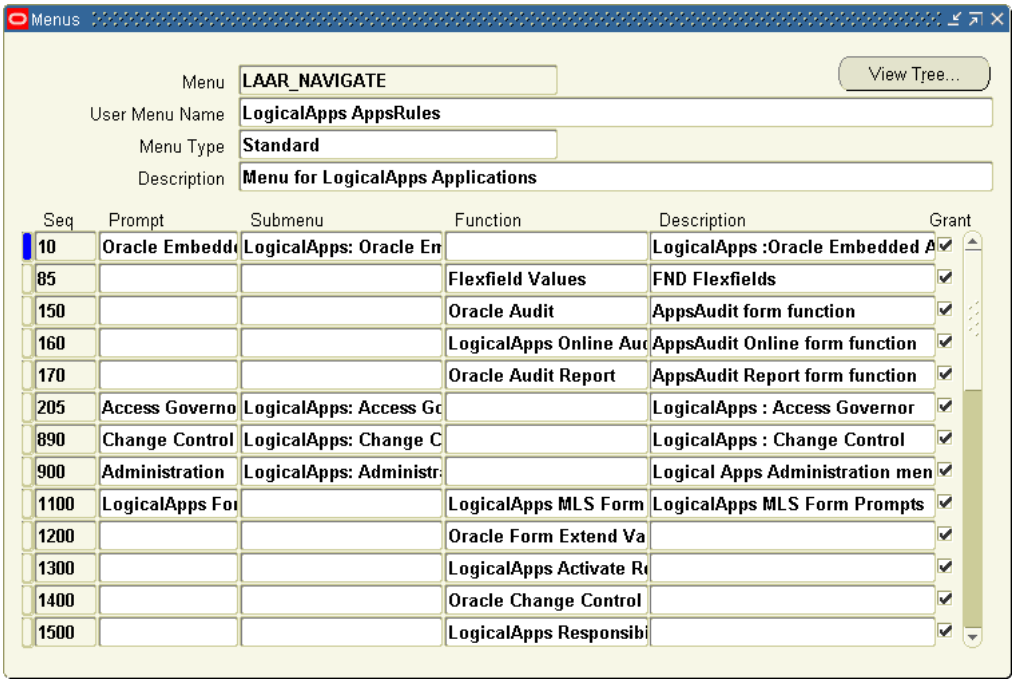
4 Switch to the Application Developer responsibility. (Select File in the menu bar, then Switch Responsibility in the File menu. A Responsibilities list appears; in it, select Application Developer.) In the Application Developer Navigator, double-click on Application, then Form. In the Form field, query on LABIZ. The form should contain the following values:



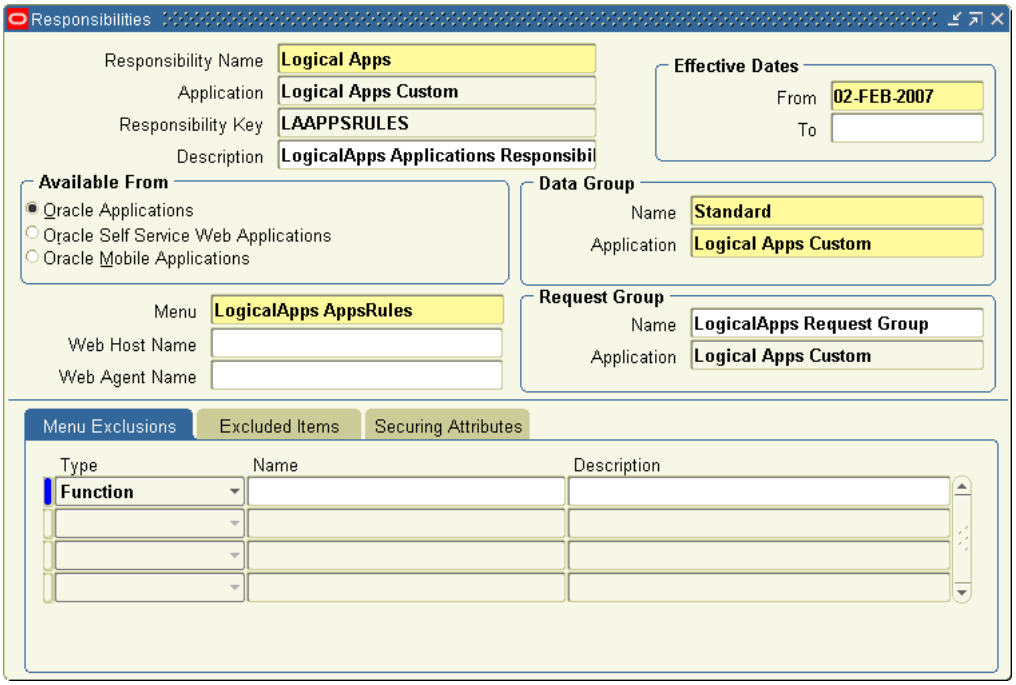
5 Switch back to the System Administrator responsibility. In its Navigator, select Security, then Responsibility, then Request. In the Request Groups form, query for the LogicalApps Request Group. The form should contain the following values:



6 Still in the System Administrator responsibility, select Application, then Menu in the Navigator. In the Menus form, query for LAAR_NAVIGATE and confirm the values shown in the following illustration. (The illustration is a composite, showing all the entries in the Menus form. Use the scroll bar to view the last few.)

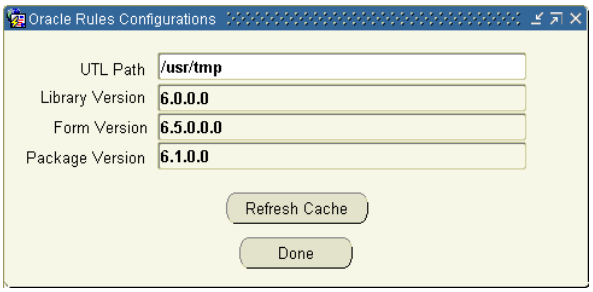


7 In the System Administrator Navigator, select Security, then Responsibility, then Define. In the Responsibilities form, query for Logical Apps. (This is the responsibility you would assign to Oracle Applications users so that they can use Embedded Agents applications.)



Switch to the LogicalApps responsibility and, in the LogicalApps Navigator, select Oracle Embedded Agents, and then Form Rules. Then do the following:

1. Select Tools in the menu bar, then Oracle Rules Configurations in the Tools menu.
2. An Oracle Rules Configuration form appears. Confirm that a value is displayed in the UTL Path field:

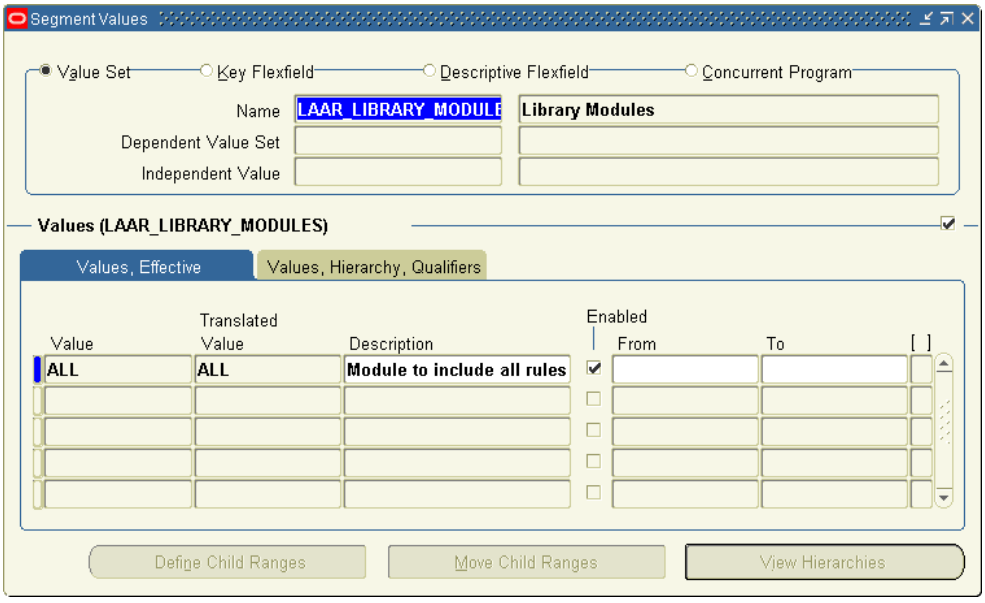


3. The UTL Path field value should match the name of one of the directories set for UTL_PATH in your environment. To confirm that it does, run the following SQL Query to generate a list of those directories:

```
select value from gv$parameter where name='utl_file_dir'
```

Finally, confirm that appropriate values have been set for LogicalApps libraries:

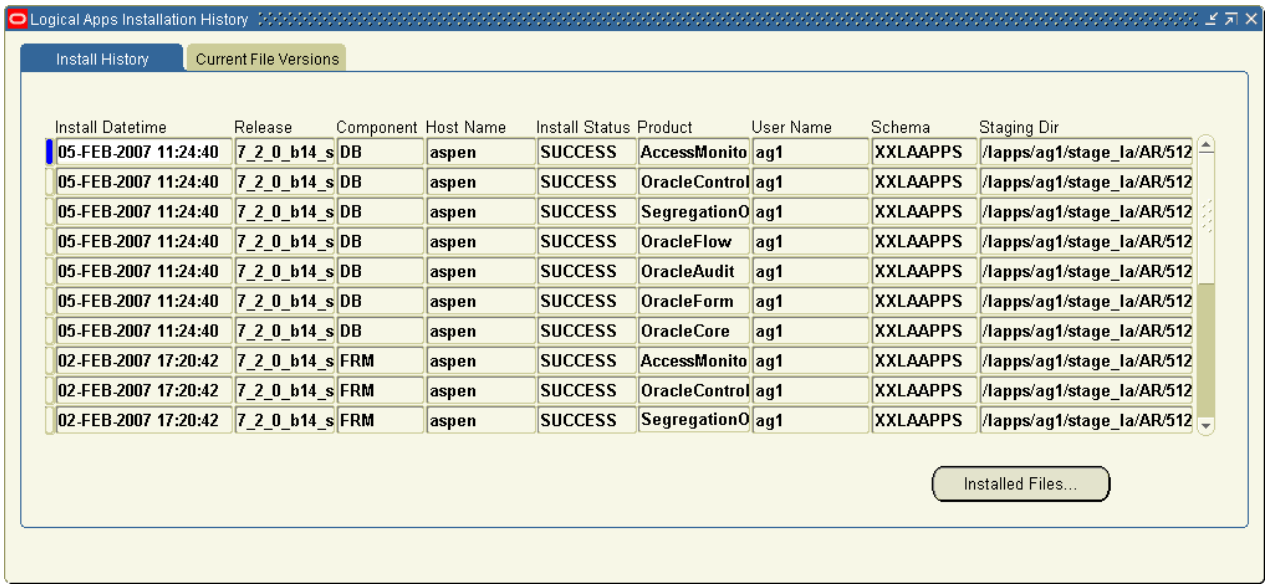
1. With Form Rules open, click on LogicalApps Utilities in the menu bar, then on Oracle Rules Library in the LogicalApps Utilities menu.
2. With a LogicalApps Libraries form open, click on Tools in the menu bar, then on Value Sets in the Tools menu.
3. In the Name field of the Find Value Set form, enter the value *LA%* and click on the Find button.
4. Select (one at a time) the LAAC_CATEGORY, LAAR_LIBRARY_MODULES, and LAAR_LIBRARY_ THEME entries. For each, confirm that a Segment Values form displays *ALL* in the Values field for the Values, Effective tab. For example:



Installation History

You can review information about the installation of files for your Embedded Agents implementation. To do so:

1. Log on to the LogicalApps responsibility in Oracle Applications.
2. In the Navigator, select Administration, and then Install History. The Installation History form appears:

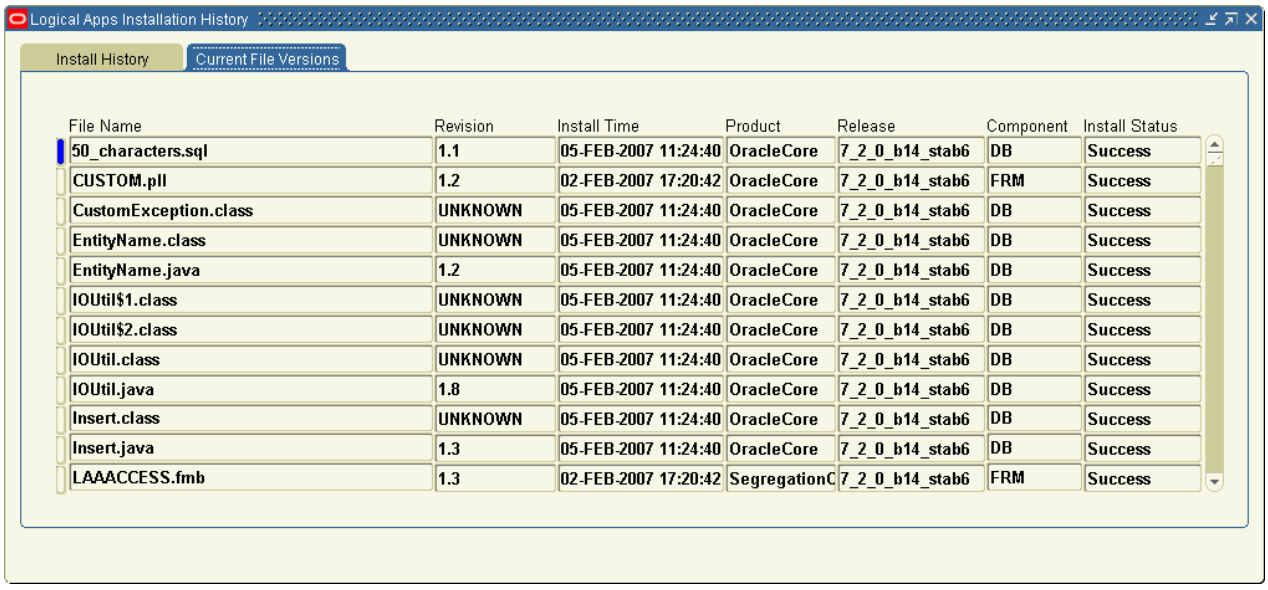


Each row provides information about the installation of a program element — for example, the top row in this illustration shows that the Access Monitoring element for version 7.2 of the database server was successfully installed. Because there are several elements for each of the forms and database servers, a single installation fills multiple rows in the grid— for example, the top seven rows in this figure pertain to an installation performed on February 5.

3. To view a list of the files installed for a given element, click on the row for that element and then on the Installed Files button. The following form appears:

Click on the Close button to clear this form.

4 Finally, to review information about all currently installed files (regardless of whether they were added in the most recent installation), click on the Current File Versions tab:



File Name	Revision	Install Time	Product	Release	Component	Install Status
50_characters.sql	1.1	05-FEB-2007 11:24:40	OracleCore	7_2_0_b14_stab6	DB	Success
CUSTOM.pll	1.2	02-FEB-2007 17:20:42	OracleCore	7_2_0_b14_stab6	FRM	Success
CustomException.class	UNKNOWN	05-FEB-2007 11:24:40	OracleCore	7_2_0_b14_stab6	DB	Success
EntityName.class	UNKNOWN	05-FEB-2007 11:24:40	OracleCore	7_2_0_b14_stab6	DB	Success
EntityName.java	1.2	05-FEB-2007 11:24:40	OracleCore	7_2_0_b14_stab6	DB	Success
IOUtil$1.class	UNKNOWN	05-FEB-2007 11:24:40	OracleCore	7_2_0_b14_stab6	DB	Success
IOUtil$2.class	UNKNOWN	05-FEB-2007 11:24:40	OracleCore	7_2_0_b14_stab6	DB	Success
IOUtil.class	UNKNOWN	05-FEB-2007 11:24:40	OracleCore	7_2_0_b14_stab6	DB	Success
IOUtil.java	1.8	05-FEB-2007 11:24:40	OracleCore	7_2_0_b14_stab6	DB	Success
Insert.class	UNKNOWN	05-FEB-2007 11:24:40	OracleCore	7_2_0_b14_stab6	DB	Success
Insert.java	1.3	05-FEB-2007 11:24:40	OracleCore	7_2_0_b14_stab6	DB	Success
LAAACCESS.fmb	1.3	02-FEB-2007 17:20:42	SegregationC	7_2_0_b14_stab6	FRM	Success

5 To close the Installation History form, click on its × symbol.

Book 2

ACTIVE Governance Installation

Chapter 4

ACTIVE Governance Installation Overview

You may install ACTIVE Governance on a Linux, UNIX, or Windows server (see "Supported Operating Systems," below). The installation procedure varies somewhat depending upon the operating system you choose.

You begin by preparing your system for the installation, loading installation files to a staging directory, and installing Business Objects, Tomcat application server, and ACTIVE Governance components on your server: If you are installing on Linux or UNIX, follow directions in Chapter 5 to complete these tasks, and skip Chapter 6. If you are installing on Windows, follow directions in Chapter 6 and skip Chapter 5.

No matter what operating system you use, you continue the installation by "publishing" reports and complete it by configuring ACTIVE Governance. Chapter 7 provides detailed procedures for reports publication, and Chapter 8 for ACTIVE Governance configuration.

Finally, Chapter 9 describes a diagnostics program that tests the connectivity of the ACTIVE Governance web application to its supporting components.

Supported Operating Systems

ACTIVE Governance can run under any of the following operating systems:

Windows 2000 Server with Service Pack 4.

Windows 2003 Server with Service Pack 1.

Red Hat Enterprise Linux 4.0. Minimum operating system installation.

Red Hat Advanced Server 4.0. Minimum operating system installation.

SUSE Linux Enterprise Server 9.0. Minimum operating system installation plus XFree86-4.3.99.902-43.22.i586.rpm, XFree86-libs-4.3.99.902-43.22.i586.rpm. Higher patches are supported.

Solaris 8. Minimum operating system installation plus the following packages:

- SUNWgzip
- SUNWzlib
- SUNWscpu
- SUNWbash
- SUNWbcp
- SUNWxcu4 (XCU4 Utilities)
- SUNWxwfnt
- SUNWxwplt
- SUNWlibC
- SUNWeuluf (UTF-8 L10N For Language Environment User Files)
- SUNWuiu8 (Iconv modules for UTF-8 Locale)
- SUNWulcf (UTF-8 Locale Environment Common Files)
- SUNWmfrun
- SUNWxwice
- Solaris 8 Recommended Patch Cluster including:
  - kernel patch, 108528-24 or higher
  - C++ run-time, 108434-13 or higher
  - linker patch, 109147-26 or higher
  - Misc loc have errors in CTYPE and lv colln monetary, 109778-13 or higher
  - gzip patch, 112668-01 or higher
  - libz patch, 112611-02 or higher
  - tar patch, 110951-04 or higher
  - sh family patch, 109324-05 or higher
  - en_UTF-8 patch, 114059-02 or higher
- Additionally, thread, c and other library patch, 108993-32 or higher. Note that patch 108993-32 require the following to be installed first:
  - mntfs patch 111023-03
  - init patch 111317-05
  - mount patch 113648-03
  - netstrategy patch 115827-01
  - uadmin patch 116602-01

Solaris 9. Minimum operating system installation plus the following packages:

- SUNWgzip
- SUNWzlib
- SUNWscpu
- SUNWbash
- SUNWbcp
- SUNWxcu4(XCU4 Utilities)
- SUNWxwfnt
- SUNWxwplt
- SUNWlibC
- SUNWeu8os (American English/UTF-8 L10N For OS User Files)
- SUNWeuluf (UTF-8 L10N For Language Environment User Files)
- SUNWuiu8 (Iconv modules for UTF-8 Locale)
- SUNWulcf (UTF-8 Locale Environment Common Files)
- SUNWmfrun
- SUNWxwice
- Solaris 9 Recommended Patch Cluster including:
  - kernel patch, 112233-11 or higher
  - libc, 112874-16 or higher
  - C++ run-time, 111711-06 or higher
  - linker patch, 112963-10 or higher
  - zlib patch, 115754-02 or higher
  - Higher patches are supported.
  - November 2003 C++ Runtime PTF => xlC.aix50.rte 6.0.0.10 (Note that this PTF requires Runtime of Level 6.0.0.0 to be installed prior to installing the PTF)
  - Higher patches are supported

Solaris 10. Minimum operating system installation plus the following packages. (Higher patches are also supported.)

- SUNWgzip
- SUNWzlib
- SUNWscpu
- SUNWbash
- SUNWbcp
- SUNWxcu4 XCU4 Utilities
- SUNWxwfnt

- SUNWxwplt
- SUNWlibC
- SUNWeu8os American English/UTF-8 L10N For OS Environment User Files
- SUNWeuluf UTF-8 L10N For Language Environment User Files
- SUNWuiu8 Iconv modules for UTF-8 Locale
- SUNWulcf UTF-8 Locale Environment Common Files
- SUNWmfrun
- SUNWxwice

Hardware Requirements

A Solaris, Linux, or Windows server should meet the following requirements to run ACTIVE Governance and Business Objects:

- Random-access memory (RAM): 3 gigabytes (GB)
- Hard-disk space: For a single-node installation, 40 GB of space on mirrored SCSI disks — 8 GB for a staging directory, 4 GB for an ACTIVE Governance web tier, 26 GB for a Business Objects reports tier, and 2 GB for database metadata.

If you use Red Hat Enterprise Linux 4.0 or SUSE Linux Enterprise Server 9.0, your system must have at least Dual CPU (Xeon preferred), 2.5 GHz or faster.

If you use Solaris 8, 9, or 10, your system must have at least SPARC v8plus.

Requirements for the ACTIVE Governance application server and database include:

- Database: At least 1.5 GB of storage for tables for the ACTIVE Governance schema.
- 2 GB of disk space reserved for temporary data generated by segregation-of-duties analytics. (This is in addition to the 40 GB of space noted above. It is space shared by all databases that run on a server, so you may already have allowed for it.)

Software Requirements

Oracle Applications versions 11.5.9 and 11.5.10 are preferred. Versions 11.5.7 (FND Patch H) and 11.5.8 are also supported.

Oracle Client version 9.2.0.1 or greater is required for connectivity among various Oracle databases.

Each of ACTIVE Governance and Business Objects requires an Oracle 9i (or later) database.

Apache Tomcat 5.0 is the only supported application server. It is bundled with the Business Objects installation.

Internet Explorer 5.5, 6.0, or 7.0 may be used to display the ACTIVE Governance client.

Chapter 5

Installing Linux/UNIX Server Components

If you are installing ACTIVE Governance on a Linux or UNIX server, complete the procedures in this chapter, and omit Chapter 6. (If you are installing on Windows, omit this chapter and skip ahead to Chapter 6.) Once server components are installed, proceed to Chapter 7.

Ensure that the Embedded Agents are upgraded in at least one instance of Oracle Applications. Then, begin to install ACTIVE Governance: Load files to a staging directory and use them to install "infrastructure," which consists of Business Objects components and the Tomcat application server. Configure the Business Objects server, and then install the ACTIVE Governance program files and schema.

Preparing to Install

Before installing ACTIVE Governance, complete the following steps:

1. Ensure that an Oracle database exists for use by ACTIVE Governance, and create a database user for it; the recommended name is XXLAAPPS_AG. Do the same for Business Objects; the recommended user name is XXLAAPPS_BO. Ensure that these users have the CONNECT and RESOURCE roles, that these roles are set to DEFAULT, and that the ACTIVE Governance user has access privileges to the v$instance table.
2. Determine the following values, which you will need during the installation:
   - The host name of the SMTP server your company uses for sending email.
   - The host name, port number, SID, user (schema) name, and password for each of the ACTIVE Governance and Business Objects databases.

- The host name, port number, SID, user (schema) name, and password for the database used by an Oracle Applications instance in which the Embedded Agents have been installed to run.

3. Ensure that the machine to be used as the ACTIVE Governance host does not run Business Objects. (A single host should not run two Business Objects installations.) To check, run the following command:

   ```
   ps -ef | grep bobje
   ```

   The grep process should be the only one with "bobje" in it. Any others would indicate that an instance of Business Objects is running.

4. Determine whether ports 6400, 8005, 8080, and 8443 are available on the ACTIVE Governance host. (The installation procedure uses these ports by default. If any are already in use, you'll need to substitute for them during installation.)

5. Install Oracle Client 9.2.0.1 or greater, if it is not already installed (see below).

6. Create a LogicalApps user on the host Linux or UNIX operating system. The recommended name is lapps. The user need not belong to any group. As you complete the prodedures in this chapter, log on as the LogicalApps user.

7. Create the following directories on the ACTIVE Governance host. Ensure that the LogicalApps user owns these directories and has read and write permissions to them.

   - A base directory. In this document, the name $LAPPS_BASE represents the full path to this directory (for example, /opt/lapps).
   - A staging directory, which is an immediate subdirectory of $LAPPS_BASE. In this document, the name $LAPPS_STAGE represents the full path to this directory (for example, /opt/lapps/stage).
   - A home directory, which is an immediate subdirectory of $LAPPS_BASE. In this document, the name $LAPPS_AG_HOME represents the full path to this directory (for example, /opt/lapps/ag).
   - Temporary directories: $LAPPS_BASE/tmp and $LAPPS_BASE/tmpdir. These could be links to any designated temporary directory on the host.

Installing Oracle Client

Oracle Client 9.2.0.1 or greater must be installed on the server that hosts ACTIVE Governance, enabling it to connect to Oracle databases that have the ACTIVE Governance, Embedded Agent, and Business Objects schemas. Refer to Oracle documentation for further details on Oracle Client installation.

In this document, ORACLE_HOME represents the entire path to the directory in which you have installed Oracle Client.

Open the file ORACLE_HOME/network/admin/tnsnames.ora. For each of the ACTIVE Governance, Embedded Agent, and Business Objects databases, create an entry that specifies the host, dbport, and dbsid. Save the file.

Loading Files in the Staging Directory

To prepare the files you will use to install ACTIVE Governance:

1. Locate the Governance, Risk, and Compliance Controls Suite Disk 1 in your Oracle media pack. In its dist directory, locate the file ag_7221_server.zip, copy the file to your $LAPPS_STAGE directory, and extract its contents there. (This creates several subdirectories of $LAPPS_STAGE, among them lib_stage and ags_infrastructure/bobje.)
2. Locate the Governance, Risk, and Compliance Controls Suite Disk 3 in your Oracle media pack. Copy its contents — two zip files — to your $LAPPS_STAGE/ags_infrastructure/bobje directory, and extract their contents there. This creates four subdirectories of $LAPPS_STAGE/ags_ infrastructure/bobje — DISK_1, DISK_2, DISK_3, and cd — and populates them with files.
3. ACTIVE Governance requires certain open-architecture files. To acquire them, download files from the following sites to your $LAPPS_STAGE/lib_stage directory.

   ```
   http://downloads.sourceforge.net/hibernate/hibernate-3.0.5.zip
   ?modtime=1117034763&big mirror=1
   http://team.andromda.org/maven2/org/jbpm/jbpm/3.0/jbpm-3.0.jar
   http://team.andromda.org/maven2/org/jbpm/jbpm-identity/3.0/
   jbpm-identity-3.0.jar
   http://downloads.sourceforge.net/junit/junit3.8.1.zip?modtime=
   1031097600&big mirror=0
   http://www.ibiblio.org/maven/mule/dependencies/xpp3/1.1.3.4d_
   b4_min/xpp3-1.1.3.4d_b4_min.jar
   ```

4. After this download, run the script preinstall.sh from your $LAPPS_ STAGE directory.

Editing and Running the Environment File

To source your environment, edit and run an ag.env file. (In steps 1, 7, and 8, substitute actual paths for the environment variables.)

1. Navigate to the infrastructure directory:

   ```
   cd $LAPPS_STAGE/ags_infrastructure
   ```

2. Using a text editor, open the ag.env file in the infrastructure directory.
3. Locate the LAPPS_BASE, LAPPS_ STAGE, and LAPPS_AG_HOME entries and set them to the full paths to the base, staging, and home directories you've created (see step 7 on page 44). Locate the ORACLE_HOME entry and set it equal to the full path to the directory in which Oracle Client is installed (see page 44).

   In each case, the path ends in a semicolon, which is followed by a phrase consisting of the word *export*, the environment-variable name, and another semicolon. Be sure to retain these elements. For example, if the base directory is /opt/lapps, the base-directory entry in the ag.env file would read:

   ```
   LAPPS_BASE=/opt/lapps; export LAPPS_BASE;
   ```

4. Locate two entries that begin ". $BOBJEDIR." Comment out these entries (type a # symbol, followed by a space, at the beginning of each.)

5 Locate two entries that set aliases; one begins "alias start" and the other "alias stop." Comment out these entries as well.

6 Save and close the file.

7 Copy ag.env to your home directory:

```
cp ag.env $LAPPS_AG_HOME
```

8 Navigate to the home directory and run the file:

```
cd $LAPPS_AG_HOME
. ag.env
```

Installing Infrastructure

Installing "infrastructure" involves placing Business Objects and Tomcat files on the server, configured so that they will connect to databases and other components.

1 Navigate to the following directory and run an installation program:

```
cd $LAPPS_STAGE/ags_infrastructure/bobje/DISK_1
./install.sh
```

2 A language-selection screen appears. Choose the language in which you want to work. (English is the default.) Press Enter.

3 An Install Type screen appears. Press Enter to accept the default, New Installation.

4 A license-agreement screen appears. Press *Y* to accept its terms.

5 When prompted for an installation directory, enter the full actual path to $LAPPS_AG_HOME.

6 Press Enter to accept the default installation type, User.

7 Press Enter to accept the default installation type, New.

8 A database-selection prompt appears. Choose 1 (Use an existing database). A list of databases then appears; select 2 (Oracle).

New prompts appear; at them, provide the host name, port number, SID, database user name, and password for the Oracle database used by Business Objects. (The user is the one you created in step 1 on page 43.) Press Enter.

9 In an application-server screen, press Enter to install Tomcat. (This is the default; Tomcat is the only supported application server.)

10 Review default port assignments for Tomcat. These should match the following values; change only those (if any) already used by other applications.

- CMS_PORT, 6400
- TOMCAT_PORT, 8080
- TOMCAT_REDIRECT_PORT, 8443
- TOMCAT_SHUTDOWN_PORT, 8005

11 Press Enter to complete the installation.

Stopping and Starting Services

At several points as you complete the remaining installation procedures, you will need to stop and then start Business Objects services. To stop the services:

1. Execute the following commands on the host server:

   ```
   $LAPPS_AG_HOME/bobje/tomcatshutdown.sh
   $LAPPS_AG_HOME/bobje/stopservers
   ```

2. Pause a few minutes to allow Business Objects services to stop. Then run the following command to ensure that they have:

   ```
   ps –ef | grep bobje
   ```

   The grep process should be the only one with "bobje" in it. If any other processes are returned, rerun the stopservers command, pause again, and rerun the ps command to ensure that servers have stopped.

To restart the services, execute the following commands on the host server:

```
$LAPPS_AG_HOME/bobje/startservers
$LAPPS_AG_HOME/bobje/tomcatstartup.sh
```

Installing a Business Objects Patch

Update Business Objects with a required patch.

1. Stop the Business Objects services. (See the preceding section, "Stopping and Starting Services.")

2. Enter the following commands:

   ```
   cd $LAPPS_STAGE/ags_infrastructure/bobje/cd/DISK_1
   ./install.sh –i $LAPPS_AG_HOME/bobje –g en
   ```

The execution of these commands installs the patch and restarts the Business Objects services; on this occasion you do not need to restart them manually.

Setting the Business Objects Rowcount

As users run ACTIVE Governance reports, they may select parameters. The maximum number of parameters that Business Objects displays by default may be insufficient. That number is controlled by a MaxRowcountRecords property. Complete the following steps to increate the value of MaxRowcountRecords to 100,000:

1. Copy a file called LOVKey.tar.gz from your staging directory to a Business Objects subdirectory:

   ```
   cp $LAPPS_STAGE/ags_infrastructure/post-install/LOVKey.tar.gz
   $LAPPS_AG_HOME/bobje/data/.bobj/registry/software/business objects/
   suite 11.5/
   ```

2 Navigate to the directory into which you've copied the LOVKey.tar.gz file.

3 Untar the file:

```
tar -xvfz LOVKey.tar.gz
```

Configuring the Business Objects Server

Use the Business Objects Central Management Console (CMC) to configure the Business Objects components you've installed. To log on to the CMC:

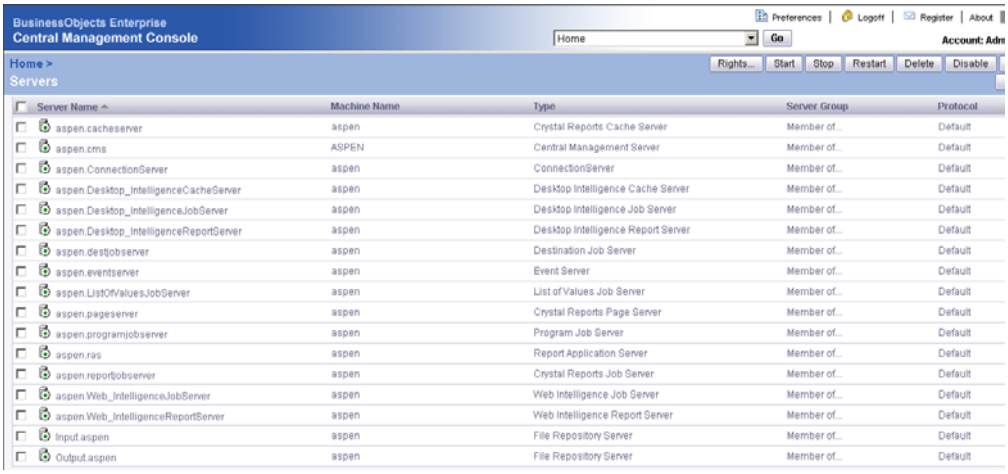
1 Open a web browser and, in its address field, enter the following URL:

`http://host:8080/businessobjects/enterprise115/admin/en/admin.cwr`

In this URL, replace *host* with the name of the host system on which you installed the ACTIVE Governance infrastructure. If, during installation, you chose a substitute for port 8080, change the value *8080* in the URL to the correct number for your substitute port.

2 A log-in form appears. To log in for the first time, type *Administrator* in the User Name field and leave the Password field blank. (A read-only System field is set to the host name you specified in step 1. Accept the default value, *Enterprise*, for Authentication Type.) Click the Log On button.

3 In the Home panel, in a section labeled Organize, click on Servers:

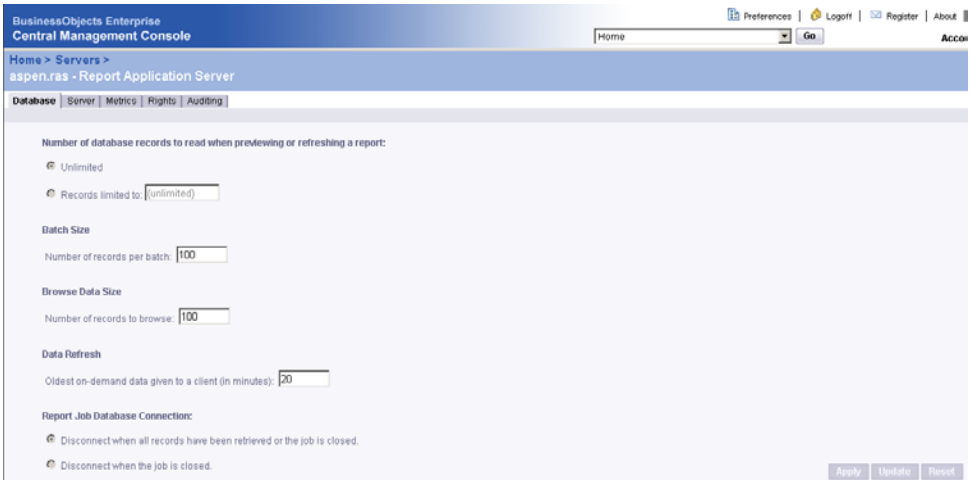


4 In the Servers panel, examine icons accompanying servers whose names contain the host name of the system to which you've logged on:

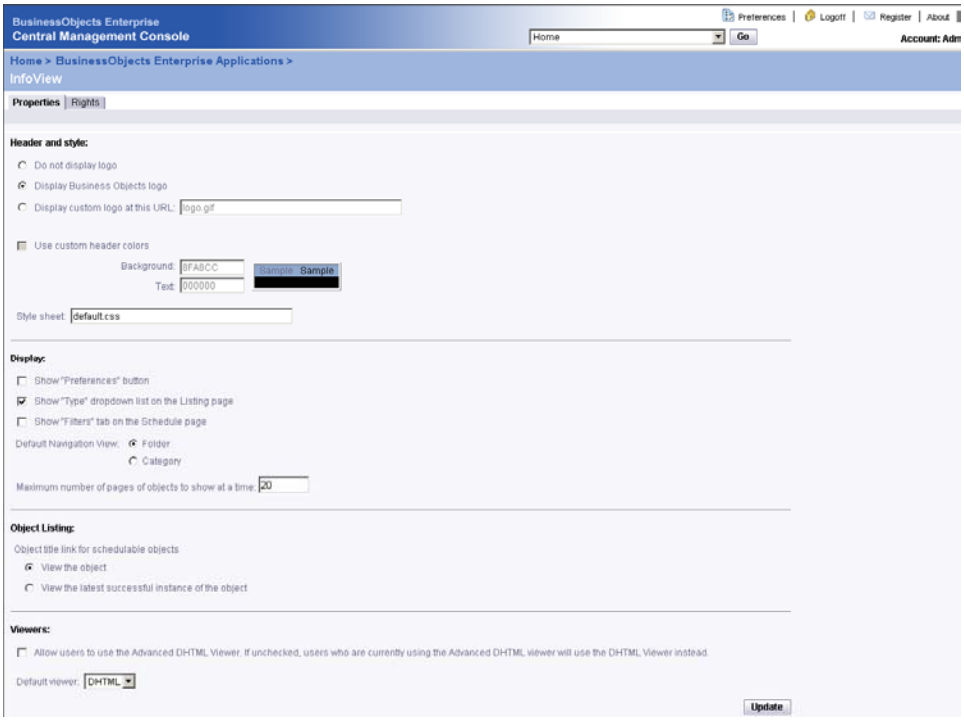
- If any shows a downward-pointing red arrow, close the CMC. Navigate to $LAPPS_AG_HOME/bobje/logging and check log files — boe-cmsd*.log and ccm*.log — for errors. Call Customer Support.
- If, however, all display upward-pointing green arrows, proceed to the next step.

5 In the Servers panel, locate the server named *hostname*.ras, in which *hostname* is the name of the host system to which you've logged on. Single-click on the name.

6 A Report Application Server panel opens for the server you've selected, with its Database tab active. Under the heading "Number of database records to read when previewing or refreshing a report," select the Unlimited radio button. Accept defaults for other fields, and click the Update button.



7 In the "breadcrumb trail" (*Home* > *Servers* > in the illustration above), click the Home link. In the Home panel, locate the Manage section; in it click on Business Objects Enterprise Applications. In a list of applications, click on InfoView. An InfoView panel opens:



8 Make these edits:

- In the Viewers section, ensure that the check box labeled "Allow users to use the Advanced DHTML Viewer…." is cleared. Then, in the Default Viewer list box, select DHTML.

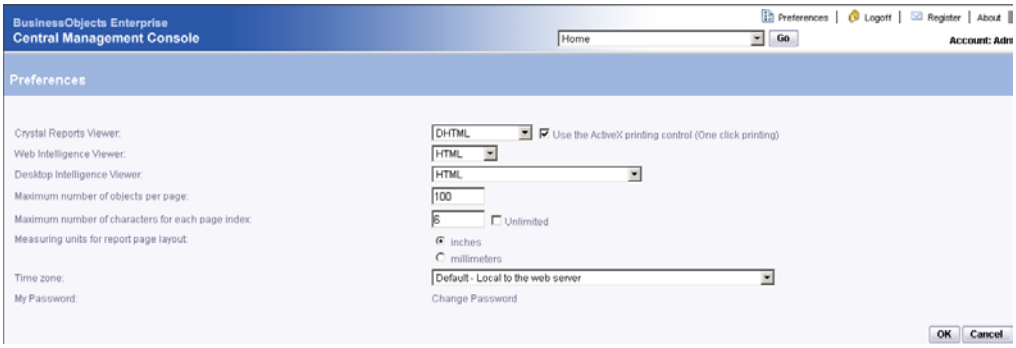
- In the Display section, clear the check boxes labeled "Show 'Preferences' button" and "Show 'Filters' tab on the Schedule page."
- Accept default values for the remaining fields and click on the Update button.

9 Click on BusinessObjects Enterprise Applications in the breadcrumbs trail and then, in the list of applications, click on Central Management Console.

10 In a Central Management Console panel, click on the Rights tab. It presents a list of users. Locate the Everyone user and click on its Advanced entry.

11 An Advanced Rights panel opens. In it, select the Not Specified radio button for the row labeled "Log on to the CMC and view this object in the CMC." Then click on the OK button.

12 The Central Management Console panel returns. Click on Home in the bread-crumb trail, and then on Preferences in a line of links along the upper right edge of the CMC.

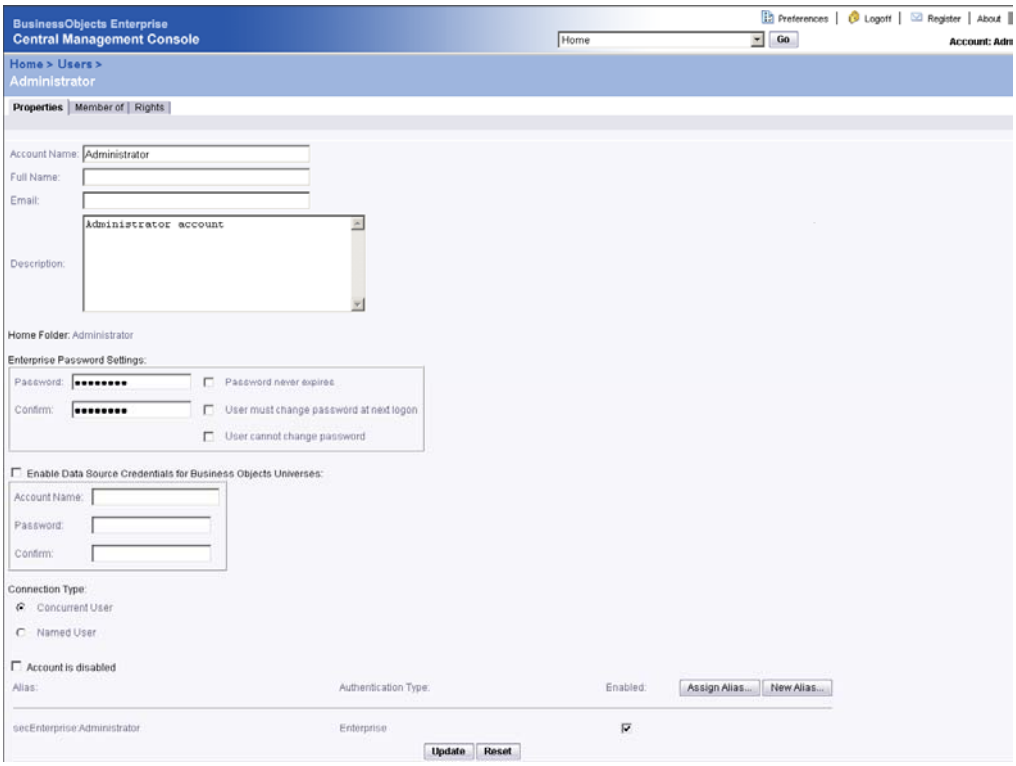


13 Make these edits:

- In the Crystal Reports Viewer list box, select DHTML.
- Select the check box labeled "Use the ActiveX printing control."
- Accept default values for the remaining fields and click on the OK button. The CMC returns to its Home panel.

14 In the Organize section on the Home panel, click on Users. An All Users panel presents a list of users; click on Administrator.

15 An Administrator panel opens. In its Enterprise Password Settings area, create a personalized password for the Administrator user. Enter a password in both the Password and Confirm fields, and click on the Update button.



16 Click on the Logoff link along the upper right edge of the CMC.

17 To apply the updates, stop and then restart Business Objects services. See "Stopping and Starting Services" (page 46).

Accommodating Firewalls

If your company has a firewall that blocks internal traffic, complete these steps:

1 Open two new ports on the machine that hosts the ACTIVE Governance server. Typically these ports are dynamically assigned, but because the firewall blocks dynamically assigned ports, they must be assigned statically.

2 Shut down the services, using the shutdown procedure described in "Stopping and Starting Services" on page 46.

3 Navigate to the bobje directory:

```
cd $LAPPS_AG_HOME/bobje
```

4 Using a text editor, open the file ccm.config. Perform the following edits:

- Locate the line that starts with the phrase *cmsLAUNCH*=. After the equals sign, insert the phrase *–requestport xxxx*, replacing the *xxxx* with one of the port numbers from step 1.

- Locate the line that starts with the phrase *input*LAUNCH=. After the equals sign, insert the phrase *–requestport yyyy*, replacing the *yyyy* with the other of the port numbers from step 1. (This port number must differ from the cmsLAUNCH port.)

5 Save the file and exit from it.

6 Restart the services, using the startup procedure described in "Stopping and Starting Services" on page 46.

Re-editing and Rerunning the Environment File

At this point, you must edit ag.env to set environment variables involving directories that did not exist before insfrastructure was installed.

1 Navigate to your home directory:

```
cd $LAPPS_AG_HOME
```

2 The home directory contains your previously edited copy of the ag.env file. Use a text editor to open it.

3 Locate the two entries that begin ". $BOBJEDIR." Activate them by deleting from each the comment symbol (#) you added earlier (page 45).

4 Save and close the file.

5 Execute the following command:

```
. ag.env
```

Installing the ACTIVE Governance Schema

To create ACTIVE Governance schema objects and seeded data, complete some additional Business Objects setup. Then copy and edit ACTIVE Governance files. Extract and configure ACTIVE Governance schema-installation files, and then actually execute the schema installation.

Setting Up Business Objects

To configure Business Objects setup properties:

1 Navigate to a bo_setup subdirectory of your staging directory:

```
cd $LAPPS_STAGE/bo_setup
```

2 Using a text editor, open the file BusinessObjectsConfiguration.properties. The file contains the following prompts; set each to the indicated value.

- businessObjects.server: Supply the ACTIVE Governance server host name.
- businessObjects.serverPort: Use 6400 if you accepted default port values during installation. Otherwise, supply the value you set for CMS_PORT (page 46).
- businessObjects.username: Always use the value *Administrator*.

- businessObjects.password: Supply the password you set for the Business Objects Administrator user in step 15 on page 51.
- businessObjects.home: Supply the directory in which Business Objects is installed, which is $LAPPS_AG_HOME/bobje/enterprise115. As you enter this value, replace the environment variable with the full path to the directory you created as $LAPPS_AG_HOME (see page 44).
- businessObjects.commit: For the time being, set this value to *false*.

Save and close the file.

3 Set execution permissions on a removeAuthenticationRestrictions.sh file, and run the file:

```
chmod +x removeAuthenticationRestrictions.sh
./removeAuthenticationRestrictions.sh
```

4 If there are no exceptions, reopen the BusinessObjectsConfiguration.properties file and reset the businessObjects.commit property to *true*. Save and close that file, and then rerun removeAuthenticationRestrictions.sh.

Copying and Editing ACTIVE Governance Files

Complete these steps to put ACTIVE Governance files in place and prepare them:

1 Shut down the Tomcat application server:

```
$LAPPS_AG_HOME/bobje/tomcatshutdown.sh
```

2 Copy ACTIVE Governance files from subdirectories of the staging directory to subdirectories of the home directory. Execute the following commands. (In the second command, a .war file name contains italicized placeholders that stand for version, schema, and build numbers. Replace these with the actual numbers, which you can determine by viewing a directory listing for the staging directory.)

```
rm –rf $LAPPS_AG_HOME/bobje/tomcat/webapps/ags
cp $LAPPS_STAGE/ags_7_2_n_snn_bnn_ga.war
$LAPPS_AG_HOME/bobje/tomcat/webapps/ags.war
cp $LAPPS_STAGE/ags_infrastructure/post-install/ags.xml
$LAPPS_AG_HOME/bobje/tomcat/conf/Catalina/localhost
cp $LAPPS_STAGE/ags_infrastructure/post-install/*.jar
$LAPPS_AG_HOME/bobje/tomcat/common/lib/
cp $LAPPS_STAGE/ags_infrastructure/post-install/tomcats*.sh
$LAPPS_AG_HOME/bobje
```

3 Navigate to the directory containing the ags.xml file:

```
cd $LAPPS_AG_HOME/bobje/tomcat/conf/Catalina/localhost
```

4 Using an xml editor, open ags.xml and perform the following edits. Each entry goes between <value> and </value> tags corresponding to each parameter.

- Locate the section headed <ResourceParams name="mail/Session">. In it, locate the mail.smtp.host parameter and, for its value, insert the host name of the SMTP server your company uses for sending email.

- Locate the section headed <ResourceParams name="jdbc/onecenterDS">. In it, locate the following parameters and supply these values for them:

  driverClassName parameter. Insert the following string:
  `oracle.jdbc.driver.OracleDriver`

  url parameter. Insert the following string, with actual values for the ACTIVE Governance database in place of the *Hostname*, *Port*, and *SID* placeholders:
  `jdbc:oracle:thin:@Hostname:Port:SID`

  username parameter. Supply the user name for the ACTIVE Governance database. It must match the name you created in step 1 on page 43.

  password parameter. Supply the password for the ACTIVE Governance database user identified by the username parameter.

- Locate the section headed <ResourceParams name="jdbc/appsaccessDS">. In it, locate the following parameters and supply these values for them:

  driverClassName parameter. Insert the following string:
  `oracle.jdbc.driver.OracleDriver`

  url parameter. Insert the following string. In place of the *Hostname*, *Port*, and *SID* placeholders, insert actual values for the database used by an Oracle Applications instance in which Embedded Agents have been installed to run:
  `jdbc:oracle:thin:@Hostname:Port:SID`

  username parameter. Supply the user name for the database used by the Oracle Applications instance in which Embedded Agents have been installed to run. (Conventionally, this is APPS.)

  password parameter. Supply the password for the database used by the Oracle Applications instance in which Embedded Agents have been installed to run.

Save and close the file.

Preparing Schema Installation Files

To configure ACTIVE Governance schema installation properties:

1 Navigate to an installation subdirectory of your $LAPPS_STAGE directory, and set permissions within it:

```
cd $LAPPS_STAGE/ags_install
chmod +x permissions.sh
./permissions.sh
```

2 Navigate to the ACTIVE Governance installation configuration subdirectory. In it, create a copy of a generic properties file so that the copy can be customized. (In the second command, replace the value *host* with the host name for your ACTIVE Governance server.)

```
cd config
cp filters-bundle-oracle.properties filters-host.properties
```

3 Using a text editor, open the filters-*host*.properties file and edit the following. (Accept default values for all properties not listed here.)

- hibernate.connection.url: Supply the connect string that ACTIVE Governance will use to connect to its database. Use the following, but provide actual values for the *Host*, *Port*, and *SID* placeholders.

  `jdbc:oracle:thin:@Host:Port:SID`

- hibernate.connection.username: Supply the user name for the ACTIVE Governance database. It must match the name you created in step 1 on page 43.
- hibernate.connection.password: Supply the password for the ACTIVE Governance database.
- businessObjects.server: Supply the ACTIVE Governance server host name.
- businessObjects.serverPort: Use 6400 if you accepted default port values during installation. Otherwise, supply the value you set for CMS_PORT (see page 46).
- businessObjects.username: Always use the value *Administrator*.
- businessObjects.password: Supply the password you set for the Business Objects Administrator user in step 15 on page 51.
- log4j.filepath: Supply the value *ags.log*, with no path. This is a log file that records errors in processing during installation of the ACTIVE Governance schema.
- appserver.hostname: Enter the host name and port number for the ACTIVE Governance server, separated by a colon. If you accepted default port values during installation, the port value here is 8080; if not, supply the value you set for TOMCAT_PORT (see page 46).
- callbackhost: Enter the following value. In place of the *host* and *port* placeholders, substitute the same host name and port values as you used for the appserver.hostname value:

  `http://host:port/ags`

Save and close the file.

4 Navigate back to the ACTIVE Governance installation directory:

```
cd $LAPPS_STAGE/ags_install
```

5 Using a text editor, open the build.properties file. In its first line — *config*=*bundle* — replace *bundle* with the same host name you used when you edited the filters-*host*.properties file (step 3). Save and close the file.

Completing the Schema Installation

To complete the ACTIVE Governance schema-installation process:

1 If you have not yet shut down the Tomcat application server, do so:

```
$LAPPS_AG_HOME/bobje/tomcatshutdown.sh
```

Even if you have, you should confirm that Tomcat is not running. Execute the following command; Tomcat is not running if it produces no results:

```
run ps –ef | grep tomcat
```

2 Execute the ACTIVE Governance installation script. Execute the following command, and answer *yes* to a prompt to continue executing the script.

```
everything.sh
```

3 When the script finishes running, restart the Tomcat application server. Execute the following command:

```
$LAPPS_AG_HOME/bobje/tomcatstartup.sh
```

Setting Up the ACTIVE Governance Log

Finally, create a log, maintained by Tomcat, that records errors in ACTIVE Governance processing:

1 Copy a logging properties file from your staging directory to a directory on your ACTIVE Governance server. Execute this command:

```
cp $LAPPS_STAGE/ags_infrastructure/post-install/log4j.properties
$LAPPS_AG_HOME/bobje/tomcat/webapps/ags/WEB-INF/classes
```

2 Navigate to the directory containing the log4j.properties file:

```
cd $LAPPS_AG_HOME/bobje/tomcat/webapps/ags/WEB-INF/classes
```

3 Using a text editor, open log4j.properties. In it, locate a property called log4j.appender.file.File. Set it equal to the following path and file name:

```
$LAPPS_AG_HOME/bobje/tomcat/logs/ags.log
```

4 Optionally, also set a series of log4j.logger.com.logicalapps.onecenter properties to values that determine the level of detail in log entries. From least to greatest, options are ERROR, WARN, INFO, and DEBUG (the default).

At any time, you can execute the following command to look for errors in the ags.log file:

```
grep –i ERR $LAPPS_AG_HOME/bobje/tomcat/logs/ags.log
```

Chapter 6

Installing Windows Server Components

If you are installing ACTIVE Governance on a Windows server, complete the procedures in this chapter and then proceed to Chapter 7; you should have omitted Chapter 5. (If you are installing on Linux or UNIX, this chapter does not apply to you; use procedures in Chapter 5 instead, and then proceed to Chapter 7.)

Ensure that the Embedded Agents are upgraded in at least one instance of Oracle Applications. Then, begin to install ACTIVE Governance: Load files to a staging directory and use them to install "infrastructure," which consists of Business Objects components and the Tomcat application server. Configure the Business Objects server, and then install the ACTIVE Governance program files and schema.

Preparing to Install

Before installing ACTIVE Governance, complete the following steps:

1. Ensure that an Oracle database exists for use by ACTIVE Governance, and create a database user for it; the recommended name is XXLAAPPS_AG. Do the same for Business Objects; the recommended user name is XXLAAPPS_BO. Ensure that these users have the CONNECT and RESOURCE roles, that these roles are set to DEFAULT, and that the ACTIVE Governance user has access privileges to the v$instance table.
2. Determine the following values, which you will need during the installation:
   - The host name of the SMTP server your company uses for sending email.
   - The host name, port number, SID, user (schema) name, and password for the ACTIVE Governance and Business Objects databases.

- The host name, port number, SID, user (schema) name, and password for the database used by an Oracle Applications instance in which the Embedded Agents have been installed to run.

3. Ensure that the machine to be used as the ACTIVE Governance host does not run Business Objects. (A single host should not run two Business Objects installations.)
4. Determine whether ports 6400, 8005, 8080, and 8443 are available on the ACTIVE Governance host. (The installation procedure assigns these ports by default. If any of these ports are already in use, you'll need to substitute for them during installation.)
5. Install Oracle Client 9.2.0.1 or greater, if it is not already installed (see "Installing Oracle Client," below).
6. Create a LogicalApps user on the host Windows operating system. The recommended name is lapps. The user must have Administrator privileges. As you complete the prodedures in this chapter, log on as the LogicalApps user.
7. Create the following folders on the ACTIVE Governance host. Ensure that the lapps user owns these folders and has read and write permissions to them.
   - A staging folder, into which you will download installation files. Although you can specify any folder you wish, a typical choice is C:\LappsStage.
   - A LogicalApps home folder. ACTIVE Governance and Business Objects are installed in, and run from, this folder and subfolders of it. Although you can specify any folder you wish, a typical choice for the LogicalApps home folder is C:\Program Files\LogicalApps.

Installing Oracle Client

Oracle Client 9.2.0.1 or greater must be installed on the server that hosts ACTIVE Governance, enabling it to connect to Oracle databases that have the ACTIVE Governance, Embedded Agent, and Business Objects schemas. Refer to Oracle documentation for further details on Oracle Client installation.

From the folder in which you have installed Oracle Client, open the file ./network/admin/tnsnames.ora. For each of the ACTIVE Governance, Embedded Agent, and Business Objects databases, create an entry that specifies the host, dbport, and dbsid. Save the file.

Loading Files in the Staging Folder

To prepare the files you will use to install ACTIVE Governance:

1. Locate the Governance, Risk, and Compliance Controls Suite Disk 1 in your Oracle media pack. In its dist folder, locate the file ag_7221_server.zip, copy the file to your staging folder, and extract its contents there. (This creates several

subdirectories of the staging folder, among them lib_stage and ags_infrastructure\bobje.)

2. Locate the Governance, Risk, and Compliance Controls Suite Disk 2 in your Oracle media pack. Copy its contents — two zip files — to the ags_infrastructure\bobje subfolder of your staging folder, and extract their contents there. This creates four subfolders — DISK_1, DISK_2, DISK_3, and cd — and populates them with files.
3. ACTIVE Governance requires certain open-architecture files. To acquire them, download files from the following sites to lib_stage subfolder of your staging folder.

```
http://downloads.sourceforge.net/hibernate/hibernate-3.0.5.zip
?modtime=1117034763&big mirror=1
http://team.andromda.org/maven2/org/jbpm/jbpm/3.0/jbpm-3.0.jar
http://team.andromda.org/maven2/org/jbpm/jbpm-identity/3.0/
jbpm-identity-3.0.jar
http://downloads.sourceforge.net/junit/junit3.8.1.zip?modtime=
1031097600&big mirror=0
http://www.ibiblio.org/maven/mule/dependencies/xpp3/1.1.3.4d_
b4_min/xpp3-1.1.3.4d_b4_min.jar
```

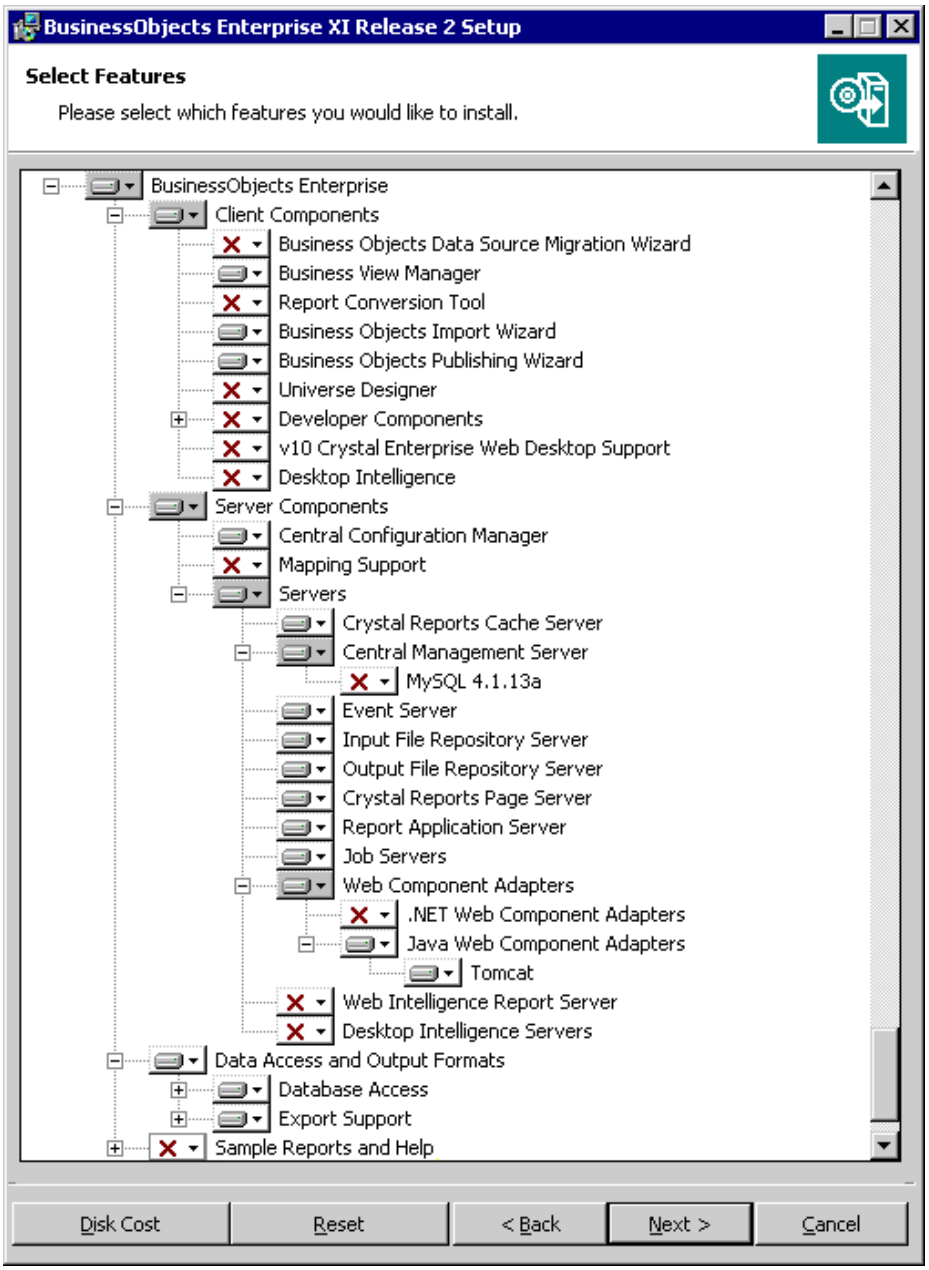
4. After downloading these files, run the file preinstall.bat from your staging folder.

Installing Infrastructure

Installing "infrastructure" involves placing Business Objects and Tomcat files on the server, configured so that they will connect to databases and other components.

1. Navigate to the ags_infrastructure\bobje\DISK_1 subfolder of your staging folder. In it, run the Setup.exe file.
2. A language-selection window appears. In its list box, choose the language in which you want to work. (English is the default.) Click on the OK button.
3. A Welcome window appears. Click on its Next button.
4. A license-agreement window appears. Click on its acceptance radio button, and then on the Next button.
5. A Select Client or Server Installation window appears. Select its Perform Server Installation radio button and click on the Next button.
6. A User Information window appears. Its Full Name and Organization fields display values for the current user — in this case, the lapps user. Leave the Install Performance Management check box cleared, and click on the Next button.
7. A Directory Selection window appears. In its Destination Folder field, enter the full path to the LogicalApps home folder. Then click on the Next button.
8. An Install Type window appears. Select its Custom radio button and click on the Next button.

9 A Select Features window appears, with all features selected. Click on features to deselect them until your configuration matches the one in the following illustration; then click the Next button. A feature is selected when its icon looks like a box and is deselected when its icon looks like a red × symbol.



10 A CMS Clustering window appears. Select its Yes radio button. Be sure the "Enable servers upon install" check box is selected. Click on the next button.

11 A CMS Database Information window appears. Select the Oracle radio button. Then set these values for the Oracle database you will use for Business Objects:

- In the Server field, enter the alias for the Business Objects database instance as it is configured in the tnsnames.ora file.

- In the Username and Password fields, enter the user name and password for the Business Objects database. (This is the user created in step 1 on page 57.)

Click on the Next button.

12 A Choose Web Component Adapter Type window appears. Select the check box labeled "Java application server," and beneath it select the radio button labeled "Install Tomcat application server." Click on the Next button.

13 A Configure Tomcat window appears:

- Review the default installation folder for the Java application server (a sub-folder, called Tomcat, of your LogicalApps home folder).
- Review default port assignments: 8080 for connection port, 8005 for shut-down port, and 8443 for redirect port. Change only those used by other applications. (A CMS port, set in the background to 6400, cannot be changed here.)

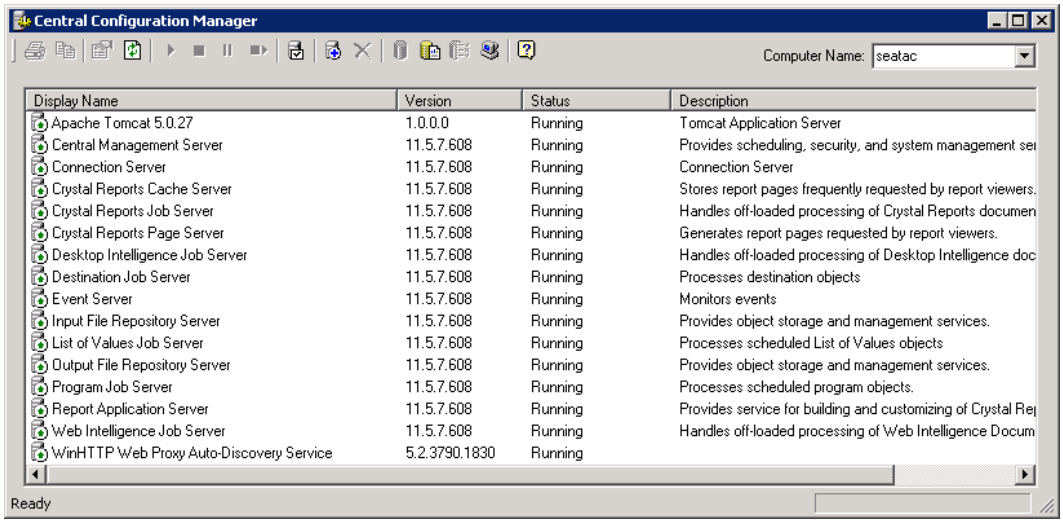
Click on the Next button.

14 A Start Installation window appears. Click on its Next button. When installation is complete, the window displays a Finish button. Click on it.

Stopping and Starting Services

At several points as you complete the remaining installation procedures, you will need to stop and then start Business Objects services. Here's how.

From the Windows Start menu, click on Programs, then BusinessObjects XI Release 2, then BusinessObjects Enterprise, then Central Configuration Manager. The following window opens:



If the icons accompanying the listed services display upward-pointing green arrows, the services are running. To stop them:

1 Select the services (click on the first, hold down the shift key, and click on the last).

2 Click on the stop icon, a square located sixth from the left in the tool bar near the top of the window.

If the icons accompanying the listed services display down-pointing red arrows, the services are stopped. To start them:

1 Select the services.

2 Click on the start icon, a rightward-pointing triangle located fifth from the left in the tool bar.

Installing a Business Objects Patch

Update Business Objects with a required patch.

1 Stop the Business Objects services (see the preceding section, "Stopping and Starting Services").

2 Navigate to the C:\LappsStage\ags_infrastructure\bobje\cd folder.

3 Run the Setup.exe file. Respond to its prompts.

The completion of this procedure installs the patch and restarts Business Objects services; on this occasion you do not need to restart them manually.

Modifying Tomcat Settings

Default memory allocations for the Tomcat application server on Windows are not adequate for ACTIVE Governance reporting functions. To adjust these allocations:

1 From Windows Start, click on Programs/Tomcat/Tomcat Configuration.

2 An Apache Tomcat Properties window opens. In it, select the Java tab.

3 A Java Options field displays several lines of text that define parameters. Add the following three lines. (You may insert them anywhere among the lines that are already present.)

```
-XX:MaxPermSize=256m
-Xms512m
-Xmx1024m
```

4 Set the Initial Memory Pool field to 512.

5 Set the Maximum Memory Pool field to 1024.

6 Click on the OK button.

Setting the Business Objects Rowcount

As users run ACTIVE Governance reports, they may select parameters. The maximum number of paramaters that Business Objects displays by default may be

insufficient. It's recommended that you reset this valut to at least 100,000. To do so, create a registry key:

1. Click on the Start button, and then on Run in the Start menu. In the Run dialog, type *regedit* in the Open field, and click the OK button. The Registry Editor opens.
2. The left column of the Registry Editor displays a list of "keys," in a tree format. Here, you will create HKEY_LOCAL_MACHINE\SOFTWARE\Business Objects\Suite 11.5\Crystal Reports\DatabaseOptions\LOV.

   Elements of this key exist already on your system. Navigate along this path as far as it exists, and click on its last child object. Then create the remaining child keys: select Edit in the menu bar, then New in the Edit menu, and then Key in the New submenu. A write-enable value, *New Key #1*, appears; overwrite this value with the name of the new key you want to create.

   Suppose, for example, that to begin with the key HKEY_LOCAL_MACHINE\SOFTWARE\Business Objects\Suite 11.5 exists. You would click on the Suite 11.5 key and from it, create the Crystal Reports key; you would then click on the Crystal Reports key and from it, create the DatabaseOptions key; and you would then click on the DatabaseOptions key and from it, create the LOV key.
3. Click on the LOV key. Then select Edit in the menu bar, New in the Edit menu, and String Value in the New submenu. A new field appears in the right panel of the Registry Editor, labeled *New Value #1*. This entry is write-enabled; change the name to *MaxRowsetRecords*.
4. Double-click on the MaxRowsetRecords entry. An Edit String dialog box appears. In its Value Data field, enter 100000 (or a larger value). Then close the dialog box; click on its OK button. The value you entered now appears in the Data column for the MaxRowsetRecords entry in the right panel of the Registry Editor.
5. Close the Registry Editor: Click on the × symbol in its upper right corner.

Configuring the Business Objects Server

Use the Business Objects Central Management Console (CMC) to configure the Business Objects components you've installed. To log on to the CMC:

1. Open a web browser and, in its address field, enter the following URL:

   `http://host:8080/businessobjects/enterprise115/admin/en/admin.cwr`

   In this URL, replace *host* with the name of the host system on which you installed the ACTIVE Governance infrastructure. If you chose a substitute for port 8080, change the value *8080* in the URL to the correct number for your substitute port.
2. A log-in form appears. To log in for the first time, type *Administrator* in the User Name field and leave the Password field blank. (A read-only System field is set to the host name you specified in step 1. Accept the default value, *Enterprise*, for Authentication Type.) Click the Log On button.

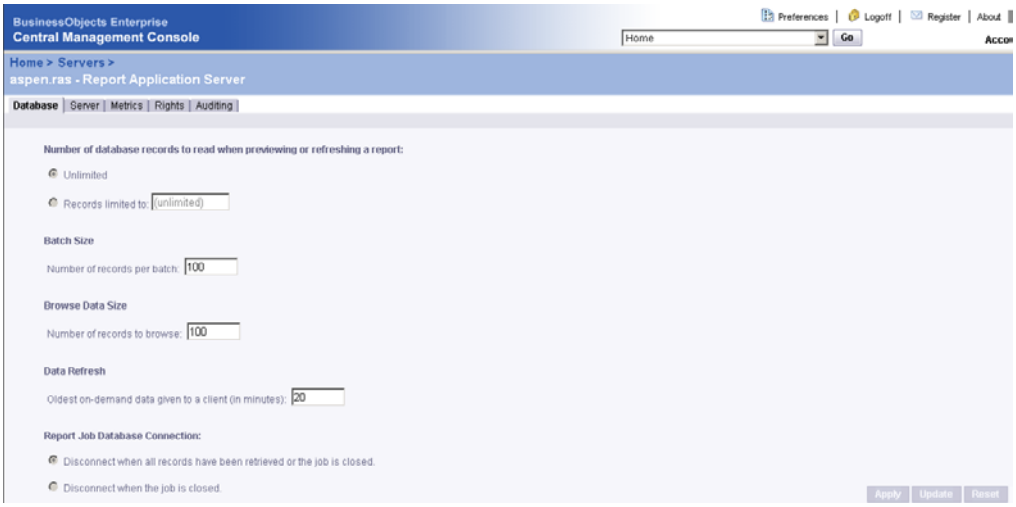
3 In the Home panel, in a section labeled Organize, click on Servers:

4 In the Servers panel, examine icons accompanying servers whose names contain the host name of the system to which you've logged on:

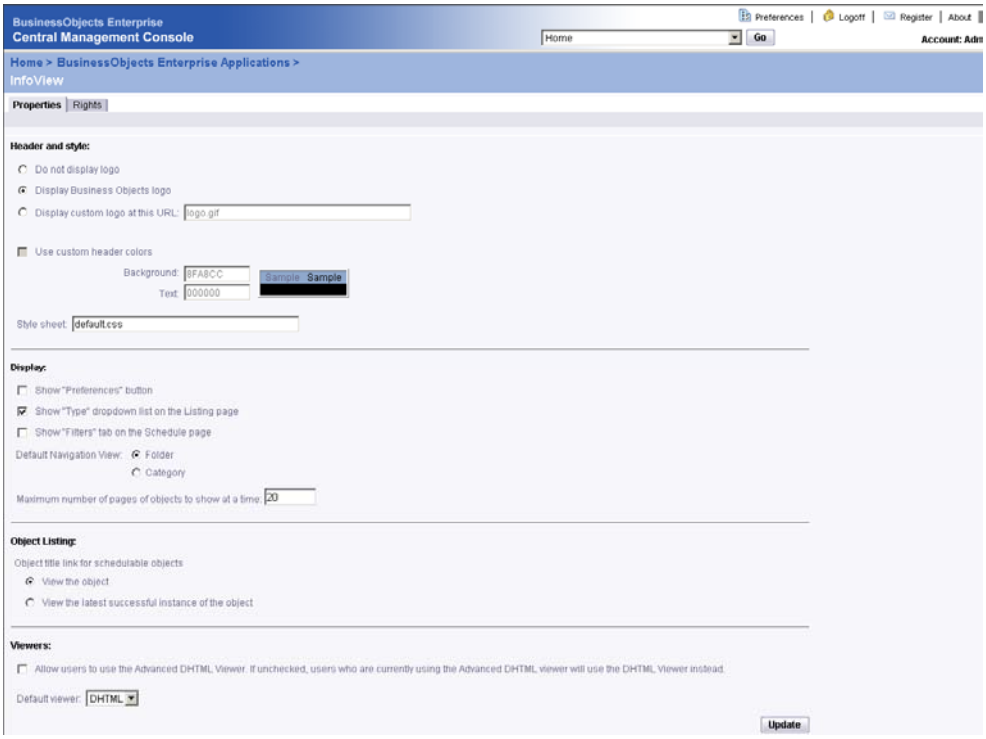
- If any shows a downward-pointing red arrow, close the CMC. Navigate to $LAPPS_AG_HOME/bobje/logging and check log files — boe-cmsd*.log and ccm*.log — for errors. Call Customer Support.
- If, however, all display upward-pointing green arrows, proceed to the next step.

5 In the Servers panel, locate the server named *hostname*.ras, in which *hostname* is the name of the host system to which you've logged on. Single-click on the name.

6 A Report Application Server panel opens for the server you've selected, with its Database tab active. Under the heading "Number of database records to read when previewing or refreshing a report," select the Unlimited radio button. Accept defaults for other fields, and click the Update button.



7 In the "breadcrumb trail" (*Home* > *Servers* > in the illustration above), click on the Home link. In the Home panel, locate the Manage section; in it, click on Business Objects Enterprise Applications. In a list of applications, click on InfoView. An InfoView panel opens (as shown at the top of the next page).



8 Make these edits:

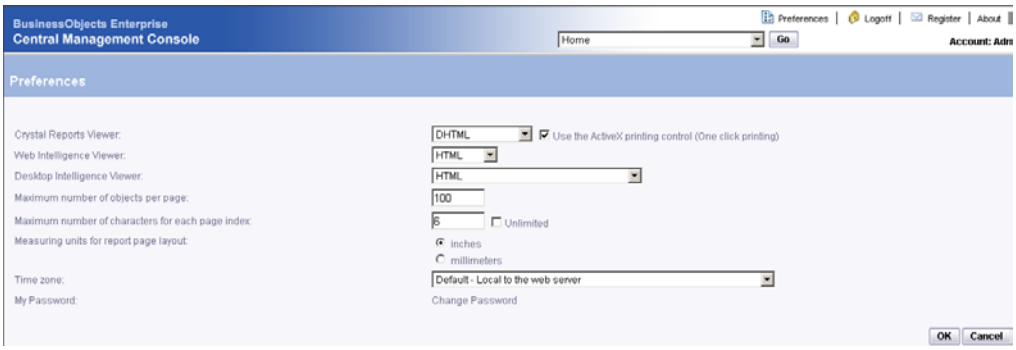
- In the Viewers section, ensure that the check box labeled "Allow users to use the Advanced DHTML Viewer…." is cleared. Then, in the Default Viewer list box, select DHTML.
- In the Display section, clear the check boxes labeled "Show 'Preferences' button" and "Show 'Filters' tab on the Schedule page."
- Accept default values for the remaining fields and click on the Update button.

9 Click on BusinessObjects Enterprise Applications in the breadcrumbs trail and then, in the list of applications, click on Central Management Console.

10 In a Central Management Console panel, click on the Rights tab. It presents a list of users. Locate the Everyone user and click on its Advanced entry.

11 An Advanced Rights panel opens. In it, select the Not Specified radio button for the row labeled "Log on to the CMC and view this object in the CMC." Then click on the OK button.

12 The Central Management Console panel returns. Click on Home in the bread-crumb trail, and then on Preferences in a line of links along the upper right edge of the CMC.

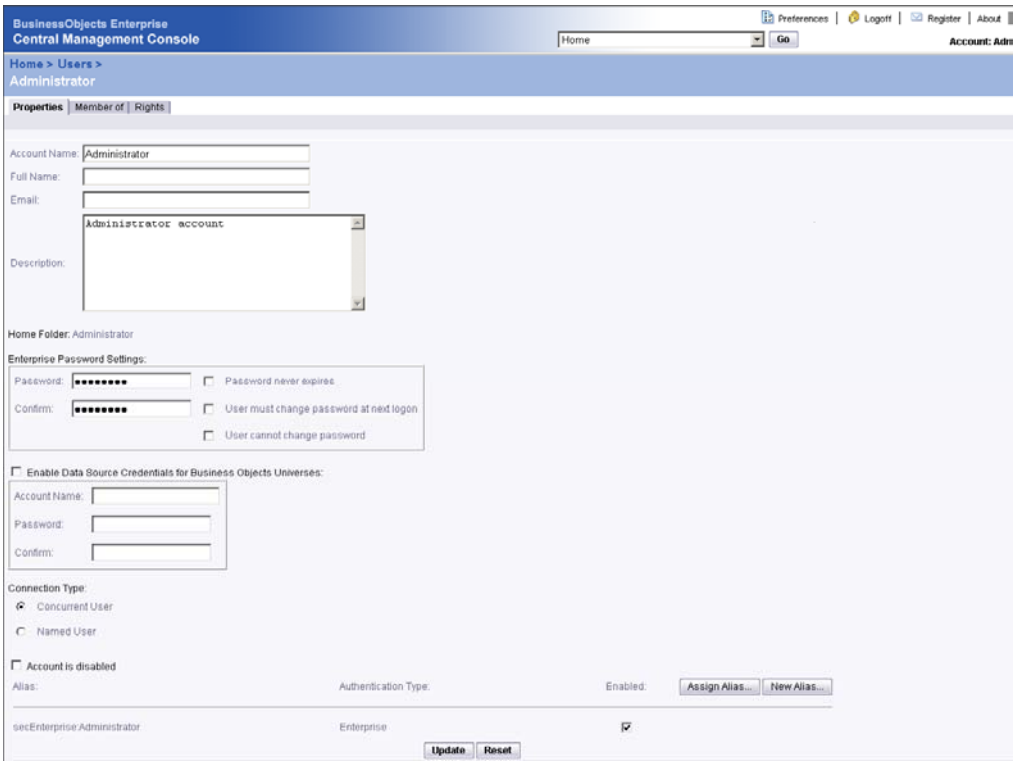


13 Make these edits:

- In the Crystal Reports Viewer list box, select DHTML.
- Select the check box labeled "Use the ActiveX printing control."
- Accept default values for the remaining fields and click on the OK button. The CMC returns to its Home panel.

14 In the Organize section on the Home panel, click on Users. An All Users panel presents a list of users; click on Administrator.

15 An Administrator panel opens. In its Enterprise Password Settings area, create a personalized password for the Administrator user: Enter a password in both the Password and Confirm fields, and click on the Update button.



16 Click on the Logoff link along the upper right edge of the CMC.

17 Stop and then restart Business Objects services. (See "Stopping and Starting Services" on page 61.)

Accommodating Firewalls

If your company has a firewall that blocks internal traffic, complete these steps:

1 Open two new ports on the machine that hosts the ACTIVE Governance server. Typically these ports are dynamically assigned, but because the firewall blocks dynamically assigned ports, they must be assigned statically.

2 Shut down the services. (See "Stopping and Starting Services" on page 61.)

3 Using a text editor such as Notepad, open the file ccm.config, which is located in the \bobje subfolder of your LogicalApps home folder. Make the following edits:

- Locate the line that starts with *cmsLAUNCH*=. After the equals sign, insert the phrase *–requestport xxxx*, replacing the *xxxx* with one of the port numbers from step 1.
- Locate the line that starts with *inputLAUNCH*=. After the equals sign, insert the phrase *–requestport yyyy*, replacing the *yyyy* with the other of the port numbers from step 1. (This port number must differ from the cmsLAUNCH port.)

4 Save the file and exit from it.

5 Restart the services. (See "Stopping and Starting Services" on page 61.)

Installing the ACTIVE Governance Schema

To create ACTIVE Governance schema objects and seeded data, complete additional Business Objects setup. Then copy and edit ACTIVE Governance files. Next extract and configure ACTIVE Governance schema-installation files; then execute the schema installation. Note the following as you complete the next several sections:

- Replace the term *LaHome* in commands with the full path to your LogicalApps home folder, for example C:\Program Files\LogicalApps.
- Replace the term *LaStage* in commands with the full path to your LogicalApps staging folder, for example C:\LappsStage.
- Recognize that although commands are written to be executed in the Command Prompt window, you can use Windows Explorer instead to complete tasks.

Setting Up Business Objects

To configure Business Objects setup properties:

1 Navigate to a bo_setup subfolder of your staging folder:

```
cd LaStage72x/bo_setup
```

2. Using a text editor, open the file BusinessObjectsConfiguration.properties. The file contains the following prompts; set each to the indicated value.
   - businessObjects.server: Supply the ACTIVE Governance server host name.
   - businessObjects.serverPort: Assuming you have accepted default port values during installation, use 6400.
   - businessObjects.username: Use the value *Administrator*.
   - businessObjects.password: Supply the password you set for the Business Objects Administrator user in step 15 on page 66.
   - businessObjects.home: Supply the folder in which Business Objects is installed, which is a \bobje\enterprise subfolder of your LogicalApps home folder. As you enter this value, supply the full path to the folder, and use two backslashes wherever a Windows path would ordinarily use one. For example:

     C:\\Program Files\\LogicalApps\\bobje\\enterprise\\
   - businessObjects.commit: For the time being, set this value to *false*.

   Save and close the file.
3. From the \bo_setup subfolder of your staging folder, run a file called removeAuthenticationRestrictions.bat— double-click on it in Windows Explorer, or type its name and press the Enter key in the Command Prompt window.
4. If there are no exceptions, reopen the BusinessObjectsConfiguration.properties file and reset the businessObjects.commit property to *true*. Save and close that file, and then rerun removeAuthenticationRestrictions.bat.

Copying and Editing ACTIVE Governance Files

Complete these steps to put ACTIVE Governance files in place and prepare them.

1. Shut down the Tomcat application server by running a shutdown.bat file. Enter this command:

   ```
   LaHome\bobje\tomcat\bin\shutdown.bat
   ```
2. An ags subfolder may be located several levels below your LogicalApps home folder. If so, remove it and its contents.

   ```
   rmdir /s LaHome\bobje\tomcat\webapps\ags
   ```
3. Copy ACTIVE Governance files from subfolders of the staging folder to subfolders of the home folder.

   ```
   copy LaStage\ags_7_2_n_snn_bnn_ga.war
   LaHome\bobje\tomcat\webapps\ags.war

   copy LaStage\ags_infrastructure\post-install\ags.xml
   LaHome\bobje\tomcat\conf\Catalina\localhost

   copy LaStage\ags_infrastructure\post-install\*.jar
   LaHome\bobje\tomcat\common\lib\
   ```
4. Navigate to the folder containing the ags.xml file:

   ```
   cd LaHome/bobje/tomcat/conf/Catalina/localhost
   ```

5 Using an xml editor, open ags.xml and perform the following edits. Each entry goes between <value> and </value> tags corresponding to each parameter.

- Locate the section headed <ResourceParams name="mail/Session">. In it, locate the mail.smtp.host parameter and, for its value, insert the host name of the SMTP server your company uses for sending email.
- Locate the section headed <ResourceParams name="jdbc/onecenterDS">. In it, locate the following parameters and supply these values for them:

  driverClassName parameter. Insert the following string:
  `oracle.jdbc.driver.OracleDriver`

  url parameter. Insert the following string, with actual values for the ACTIVE Governance database in place of the *Hostname*, *Port*, and *SID* placeholders:
  `jdbc:oracle:thin:@`*`Hostname`*`:`*`Port`*`:`*`SID`*

  username parameter. Supply the user name for the ACTIVE Governance database. It must match the name you created in step 1 on page 57.

  password parameter. Supply the password for the ACTIVE Governance database user identified by the username parameter.
- Locate the section headed <ResourceParams name="jdbc/appsaccessDS">. In it, locate the following parameters and supply these values for them:

  driverClassName parameter. Insert the following string:
  `oracle.jdbc.driver.OracleDriver`

  url parameter. Insert the following string. In place of the *Hostname*, *Port*, and *SID* placeholders, insert actual values for the database used by an Oracle Applications instance in which Embedded Agents have been installed to run:
  `jdbc:oracle:thin:@`*`Hostname`*`:`*`Port`*`:`*`SID`*

  username parameter. Supply the user name for the database used by the Oracle Applications instance in which Embedded Agents have been installed to run. (Conventionally, this is APPS.)

  password parameter. Supply the password for the database used by the Oracle Applications instance in which Embedded Agents have been installed to run.

Save and close the file.

Preparing Schema Installation Files

To configure ACTIVE Governance schema installation properties:

1 Navigate to an installation configuration subfolder of your staging folder:

```
cd LaStage72x\ags_install\config
```

2 Make a copy of a generic properties file, called filters-bundle-oracle.properties. Call the copy filters-*host*.properties, replacing the value *host* with the host name for your ACTIVE Governance server.

3. Using a text editor, open the filters-*host*.properties file and edit the following. (Accept default values for all properties not listed here.)

   - hibernate.connection.url: Supply the connect string that ACTIVE Governance will use to connect to its database. Use the following, but provide actual values for the *Host*, *Port*, and *SID* placeholders.

     `jdbc:oracle:thin:@Host:Port:SID`

   - hibernate.connection.username: Supply the user name for the ACTIVE Governance database. It must match the name you created in step 1 on page 57.
   - hibernate.connection.password: Supply the password for the ACTIVE Governance database.
   - businessObjects.server: Supply the ACTIVE Governance server host name.
   - businessObjects.serverPort: Assuming you have accepted default port values during installation, use 6400.
   - businessObjects.username: Always use the value *Administrator*.
   - businessObjects.password: Supply the password you set for the Business Objects Administrator user in step 15 on page 66.
   - log4j.filepath: Supply the value *ags.log*, with no path. This is a log file that records errors in processing during installation of the ACTIVE Governance schema.
   - appserver.hostname: Enter the host name and port number for the ACTIVE Governance server, separated by a colon. If you accepted default port values during installation, the port value here is 8080; if not, supply the value you set for the connection port (see step 13 page 61).
   - callbackhost: Enter the following value. In place of the *host* and *port* placeholders, substitute the same host name and port values as you used for the appserver.hostname value:

     `http://host:port/ags`

   Save and close the file.

4. Navigate back to the ags_install folder (the parent of the folder in which you are currently working):

   `cd..`

5. Using a text editor, open the build.properties file. In its first line — *config*=*bundle* — replace *bundle* with the same host name you used when you edited the filters-*host*.properties file (step 3). Save and close the file.

Completing the Schema Installation

To complete the ACTIVE Governance schema-installation process:

1. If you have not yet shut down the Tomcat application server, do so:

   `LaHome\bobje\tomcat\bin\shutdown.bat`

2. Execute the ACTIVE Governance installation script. Execute the following command, and answer *yes* to a prompt to continue executing the script.

   ```
   LaStage\ags_install\everything.bat
   ```

3. When the script finishes running, restart the Tomcat application server. Execute the following command:

   ```
   LaHome\bobje\tomcat\bin\startup.bat
   ```

Setting Up the ACTIVE Governance Log

Finally, create a log, maintained by Tomcat, that records errors in ACTIVE Governance processing:

1. Copy a logging properties file from your staging directory to a directory on your ACTIVE Governance server. Execute this command:

   ```
   copy LaStage\ags_infrastructure\post-install\log4j.properties
   LaHome\bobje\tomcat\webapps\ags\WEB-INF\classes
   ```

2. Navigate to a folder containing the log4j.properties file:

   ```
   cd LaHome\bobje\tomcat\webapps\ags\WEB-INF\classes
   ```

3. Using a text editor, open log4j.properties. In it, locate a log4j.appender.file.File property, and set it equal to the following path and file name. (Be sure to replace the term *LaHome* with the full path to your LogicalApps home folder, and to include two backslashes wherever a Windows path would ordinarily require one.)

   ```
   LaHome\\bobje\\tomcat\\logs\\ags.log
   ```

4. Optionally, also set a series of log4j.logger.com.logicalapps.onecenter properties to values that determine the level of detail in log entries. From least to greatest, options are ERROR, WARN, INFO, and DEBUG (the default).

At any time, you can open the ags.log file to look for errors or other information. The log is located at a path you established earlier:

```
LaHome\bobje\tomcat\logs\ags.log
```

Chapter 7

Deploying Reports

To deploy ACTIVE Governance reports and "business views" that support them, use Business Objects tools run from a Windows client system.

Setting Up

To install Business Objects components on your Windows client system:

1. Create a staging folder on the Windows client.
2. Obtain installation files. These are the same as the files one would use for Business Objects installation on a Windows server. Thus, as before, locate the Governance, Risk, and Compliance Controls Suite Disk 2 in your Oracle media pack. Copy its contents — two zip files — to your client staging folder. This creates four subfolders — DISK_1, DISK_2, DISK_3, and cd — and populates them with files.
3. Navigate to the DISK_1 subfolder of your staging folder and, in it, run the Setup.exe file.
4. A language-selection window appears. In its list box, choose the language in which you want to work. (English is the default.) Click on the OK button.
5. A Welcome window appears. Click on its Next button.
6. A license-agreement window appears. Click on its acceptance radio button, and then on the Next button.

7 A Select Client or Server Installation window appears. Select its Perform Client Installation radio button and click on the Next button.

8 Accept default values for all remaining issues.

9 Install a required Business Objects patch on the client system: Navigate to the cd subfolder of the client staging folder and, in it, run the Setup.exe file. Respond to its prompts.

In your Oracle media pack, locate the Governance, Risk, and Compliance Controls Suite Disk 1. From its dist directory, copy the file ag_7221_report_center.zip to your staging directory. Extract the contents of the file. This creates a Reports Center folder and, beneath it, a Business Views folder and other folders containing reports.

Finally, ensure that Oracle Client is installed on the Windows machine, and that aliases in the tnsnames.ora file for this instance of Oracle Client match those configured for the Oracle Client instance on the ACTIVE Governance server.

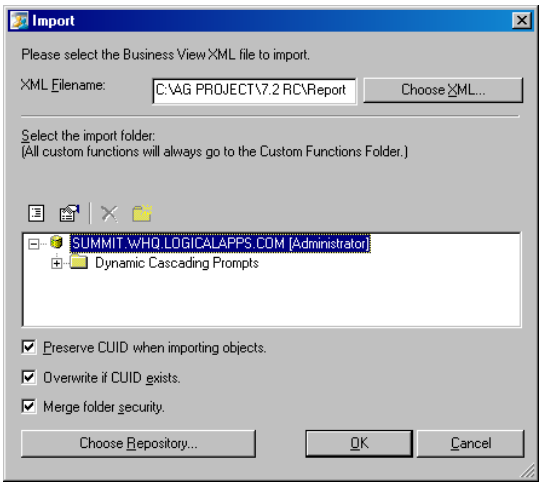
Importing Business Views

Use a Business View Manager to import "business views" — a set of .xml files:

1 Open Business View Manager from a Business Objects folder under Windows Start. As you log on, supply these values, and then click the OK button:

- System: The host name and CMS_PORT number of the ACTIVE Governance server, separated by a colon. Omit the port number (and delimiting colon) if you accepted the default value, 6400, for CMS_PORT (page 46 or 61).
- User Name: The value *Administrator*.
- Password: The Administrator password created in the Central Management Console (page 51 or 66).
- Authentication: The value *Enterprise*.

2 Click on Tools in the Business View Manager menu bar, and then on Import in the Tools menu. The following Import dialog appears.



3 In the large white field, ensure that the line displaying the server host and domain name is selected.

4 Click on the Choose XML button. A navigation dialog opens; in it, navigate to the Report Center/Business Views subdirectory in your staging directory. Select any of the business views and click on the Open button in the navigation dialog. The path to the business-view xml file you selected should appear in the XML Filename field of the Import dialog.

5 Ensure that the three checkboxes near the bottom of the form are selected. These are labeled "Preserve CUID when importing objects," "Overwrite if CUID exists," and "Merge folder security."

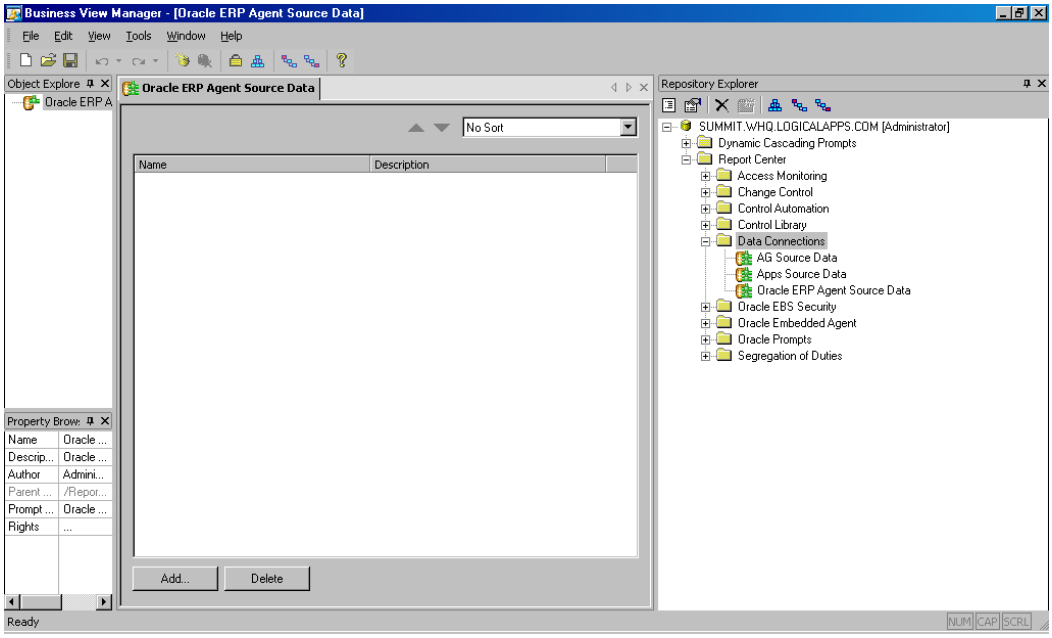
6 Click on the OK button. Choose to overwrite if there is any existing content. Business View Manager creates a Report Center directory, imports the business-view xml file into it, and displays the result in the large white field of the Import dialog.

7 Repeat steps 4–6 for each of the .xml files remaining in the Report Center/ Business Views subdirectory of your staging directory.

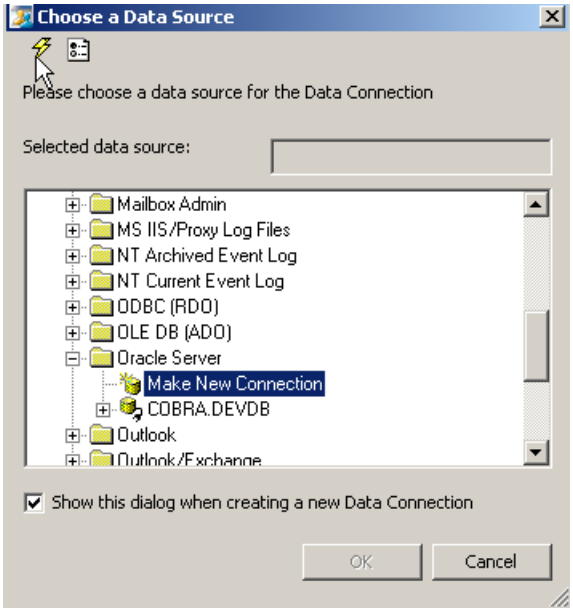
Establishing Data Connections

Next, set up static data connections to the databases for ACTIVE Governance and Embedded Agents instances, and then include each in one of two dynamic data connections.

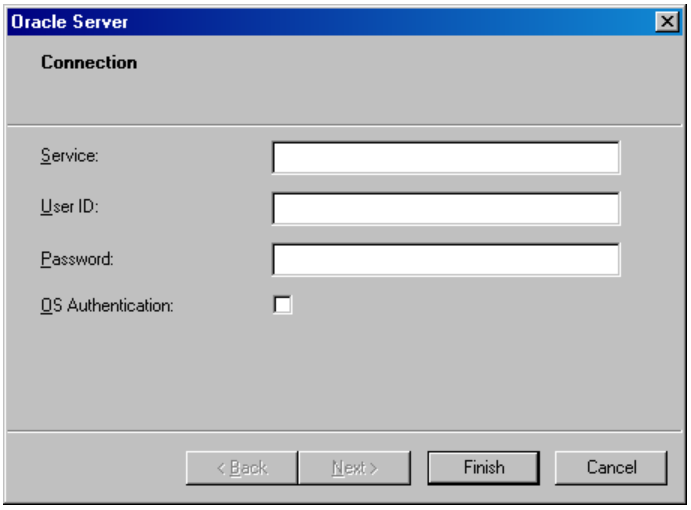
1 In the Repository Explorer, click on the Data Connections folder under Report Center. Descending from its entry, you should you should see dynamic data connections, among them AG Source Data and Oracle ERP Agent Source Data.



2 Click on File in the menu bar, then on New in the File menu, and then on Data Connection in the New submenu. A Choose a Data Source dialog opens:

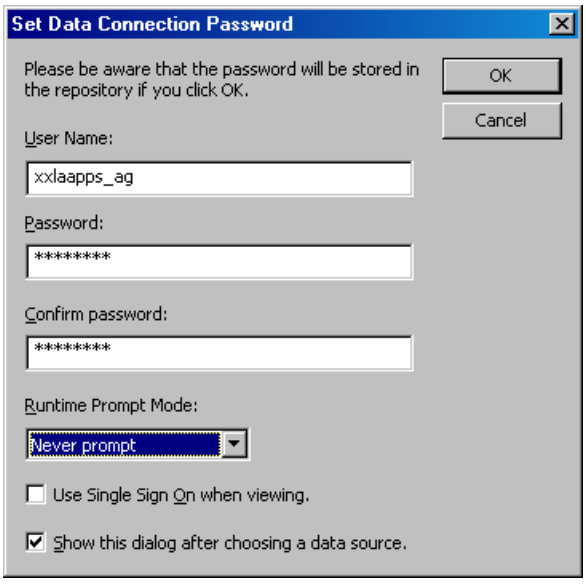


3 In its list, click on Oracle Server. If no data connections yet exist, a Connection dialog opens. If connections exist, they are listed beneath the Oracle Server entry, along with a Make New Connection option. Click on that option to open the Connection dialog.



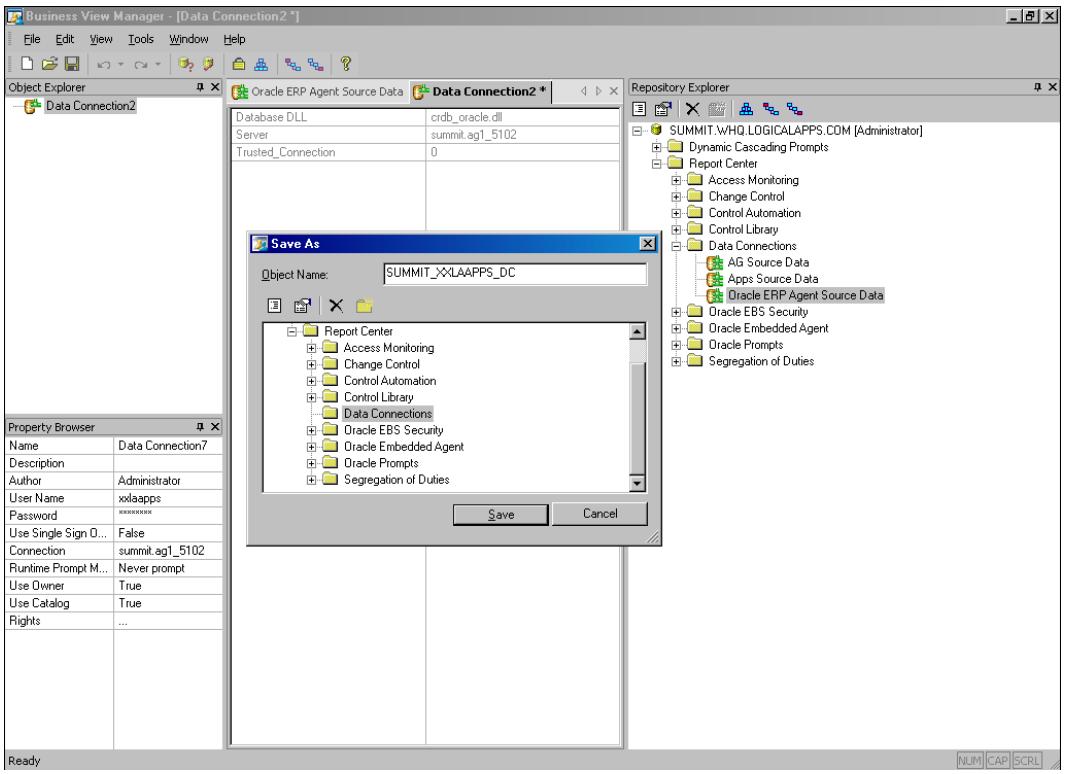
4 Fill in the Connection fields with values for your ACTIVE Governance database. For Service, supply the alias for the database instance as it is configured in the tnsnames.ora file. For User ID, supply the database user (schema) name; for Password, supply the database password. Leave the OS Authentication check box cleared.

5 Click on the Finish button. A Set Data Connection Password dialog opens:



6 In the User Name field, type the same database user (schema) name as you did in step 4; in the Password and Confirm Password fields, type the same password. In the Runtime Prompt Mode list box, select the value *Never Prompt*. Ensure that the "Use Single Sign On when viewing" check box is cleared. Click on the OK button.

7 The Business View Manager once again becomes active, displaying values you've set for the data connection both in the central panel and in Property Browser area along the left column.



8 Save the data connection: Click on File in the menu bar and then Save in the file menu. A Save As dialog appears. In it, enter a name for the data connection in the Object Name field, and in the larger white field click on the Data Connections folder beneath the Report Center folder. Click on the Save button.

The Repository Explorer displays an entry for the static data connection you've configured, descending from the Data Connections folder. (To distinguish a static connection from a dynamic one, look at their icons. One green pipe symbol indicates a static connection, and two indicate a dynamic connection.)

9 Repeat steps 2–8 to create static data connections for Embedded Agent data sources. There should be one connection for each of the Embedded Agent instances with which ACTIVE Governance is to work.

10 Associate the static data connections with the appropriate dynamic data connections.

Under Data Connections in the Repository Explorer, double click on the AG Source Data dynamic connection. A window for that connection opens in the central panel of the Business View Manager. Drag the ACTIVE Governance data connection you configured from the Repository Explorer to the central panel. Click on File in the menu bar and then on Save in the File menu.

Then, under Data Connections in the Repository Explorer, double click on the Oracle ERP Agent Source Data dynamic connection. A window for that connection opens in the central panel of the Business View Manager. Drag each of the Embedded Agents data connections you configured from the Repository Explorer to the central panel. Click on File in the menu bar and then on Save in the File menu.

Publishing Reports

To publish reports, use a Publishing Wizard, which is accessible from the Business Objects folder under Windows Start.

1 From the initial Publishing Wizard screen, click on the Next button.

2 Enter the following logon values, then click on the OK button.

- System: The host name and CMS_PORT number of the ACTIVE Governance server, separated by a colon. Omit the port number (and delimiting colon) if you accepted the default value, 6400, for CMS_PORT (page 46 or 61).
- User Name: The value *Administrator*.
- Password: The Administrator password created in the Central Management Console (page 51 or 66).
- Authentication: The value *Enterprise*.

3 A Select Files panel of the Publishing Wizard opens. Click on its Add Folder button.

This opens a Browse for Folder dialog; in its "Choose folder…" field, navigate to and click on the Report Center directory, which is a subdirectory of your stag-

ing directory. Select the Include Subfolders check box (click on it so that a check mark appears). Confirm that the list box near the bottom of the dialog displays the value *Report (*.rpt)*, which should be the default. Click on the OK button.

This closes the Browse for Folder dialog, and the Select Files panel once again becomes active, displaying a list of reports from the folders you've selected. Click on its Next button.

4. A Specify Location panel of the Publishing Wizard opens. In it, a large field displays the name of your ACTIVE Governance instance. (The Publishing Wizard uses the values you entered in step 2 to point to this instance.) Click on this value, and then on the New Folder icon (the leftmost of three above the large field; it looks like a folder). A New Folder entry appears, in editable mode, below the entry for your ACTIVE Governance instance; change its name to *Report Center*. Click on the Next button.
5. A Specify Folder Hierarchy panel of the Publishing Wizard opens. In it ensure that the radio button labeled *Duplicate the folder hierarchy* is selected. In the list box near the bottom of the panel, select the value *include none*. Click on the Next button.
6. A Confirm Location panel of the Publishing Wizard opens. It displays the file names below the folder in which they will be published. Confirm that the values are correct, and click on the Next button.
7. In the next several Publishing Wizard panels, you need do nothing. Click on the Next button in each until you reach the Specify Repository Refresh panel. That panel lists the reports you are publishing; in it, click on the Enable All button. Then click on the Next button.
8. In the next several Publishing Wizard panels, you need do nothing. Click on the Next button in each until you reach the Reading Files panel. When the Wizard finishes reading files, another panel lists the reports you are publishing. Click on the Next button. This commits the objects; finally, click on the Finish button.

Configuring Access to Reports

Within ACTIVE Governance, each user is assigned a "primary application role" and any number of "reporting roles." Each of the reporting roles specifies a selection of reports the user is able to open and review. After publishing a new set of reports, you must correlate each report to its reporting roles by completing the following steps on the ACTIVE Governance server:

1. If you have a Linux or UNIX server, source the ACTIVE Governance environment. Navigate to the home directory, which contains the ag.env file. Ensure the file has been edited correctly (see pages 45 and 52), and then run it. (If you have a Windows server, this step does not apply.)
2. Navigate to the bo_setup subdirectory of the staging directory on your ACTIVE Governance server.

3. Using a text editor, open the BusinessObjectsConfiguration.properties file. In it, ensure that the businessObjects.commit property is set to *true*. Save the file and close it.
4. Execute a file called loadAccessRights.sh (on a Linux or UNIX server) or loadAccessRights.bat (on a Windows server). The file is also located in the bo_setup subdirectory. If you have a Linux or UNIX server, first use the chmod command with the +x switch to set execute permissions on the file.

Restarting Services

To activate the newly installed ACTIVE Governance and Business Objects components, you must stop and then restart the ACTIVE Governance and Business objects services. Use the stop- and start-services procedures appropriate for your operating system. For Linux or UNIX, see page 47; for Windows, see page 61.

Chapter 8

Configuring ACTIVE Governance

Once ACTIVE Governance is installed, several configuration steps remain. These steps include:

- Configuring licenses.
- Setting properties.
- Configuring data sources.
- Importing control monitors.
- Running background programs that set up ACTIVE Access Governor for use. (This also involves creating an ACTIVE Governance user with permissions to run the background programs.)
- Creating database users, and enabling database tables for auditing, to prepare the Access Monitoring feature of ACTIVE Access Governor for use.
- Assigning a user to a default workflow routing, and activating the routing.

Configuring Licenses

To run ACTIVE Governance components, you need to install license files. These include not only an ACTIVE Governance Platform license, but also individual licenses for ACTIVE Access Governor, ACTIVE Data Governor, and ACTIVE Policy Governor.

To implement the ACTIVE Governance licenses:

1. Log on to the ACTIVE Governance Platform. Use the following URL:

   `http://Host:Port/ags`

   Replace *Host* with the host name of your ACTIVE Governance server. Replace *Port* with the value *8080* if you accepted default port values during installation. Otherwise, supply the value you set for TOMCAT_PORT on a Linux or UNIX server (page 46) or connection port on a Windows server (page 61).

2. Log on as a System Administrator, for which the user name and password are both *admin*.

3. Click on the Administration Tab and, in the Administration Home page, the Manage Licenses link.

4. In the Organization Name field, type *Oracle*.

5. In your Oracle media pack, locate the Governance, Risk, and Compliance Controls Suite Disk 1. Insert it in the drive of the computer from which you are working.

6. For each license you choose to implement, enter the path and name for the license file in the appropriate License Information field. License files are located in the licenses directory of the Governance, Risk, and Compliance Controls Suite disk. Their names are as follows:

   - platform.lic for the ACTIVE Governance Platform
   - accessGovernor.lic for ACTIVE Access Governor
   - dataGovernor.lic for ACTIVE Data Governor
   - policyGovernor.lic for ACTIVE Policy Governor

   You can either type the path and name for each license file, or select the Browse button and navigate to the file.

7. Click on the Save button.

Setting Properties

From the Administration Home of the ACTIVE Governance Platform, you can also select a Manage Configuration Properties link to view or set properties for the application. Generally, you can accept default values, but you may choose to confirm that values are set correctly, or reset some values.

Several properties are set automatically to values you chose while completing server-installation procedures. You need not change them. These include the following:

- adminUser
- appserver.hostname

- businessObjects.enterpriseDirectoryName
- businessObjects.InfoViewPath
- businessObjects.reportSecurity
- businessObjects.server
- businessObjects.serverPort
- businessObjects.username
- callbackhost

The following properties can take the following values:

- businessObjects.password: property defaults to the Business Objects Administrator password created during installation (see page 51 or 66); as a part of this installation procedure, do not change it. In future, however, if you change this password in the Central Management Console, you must also change it here.
- datasources.connection.pool.min.size and datasources.connection.pool.size: These two properties combine to designate the number of simultaneous connections that ACTIVE Governance opens to its database. The number of connections is always at least the number set by the "min.size" property. Additional connections open on demand, up to the number set by the "size" property (and so it must always be set to a larger number than the "min.size" value).

  In effect, these properties set the number of users who retrieve data from or save data to the ACTIVE Governance database at once, each using a connection only for the brief time required to complete one of those operations. The number of users employing connections at a given moment is much smaller than the number logged on to ACTIVE Governance. The default values — 3 for the "min.size" property and 10 for the "size" property —typically need not be changed.
- email.returnAddress: This sets the "from" address used in email messages sent by the ACTIVE Governance workflow system to users notifying them that approval tasks have been assigned to them.
- exception.link.show: This determines whether error messages contain a link that activates a display of detailed information about database errors. Valid values are *true* (the default) and *false*.
- Licensee: This must be set to the same value as the Organization Name field on the Manage Licenses panel. (See the preceding section, "Configuring Licenses.")
- pagination.show.all: In ACTIVE Governance, lists of items are presented in grids, the footer row of which contains a Show Results list box that determines how many rows a grid displays at once. (The grid entries are divided into pages, each of which consists of the number of rows chosen for display.) In the Show Results list box, one can choose the value *All*. Because an attempt to display all records, no matter how many, in a single page can harm performance, the pagination.show.all parameter sets a limit on the number of records returned when a user selects the Show All Results option in a list. The default value is 1,000.

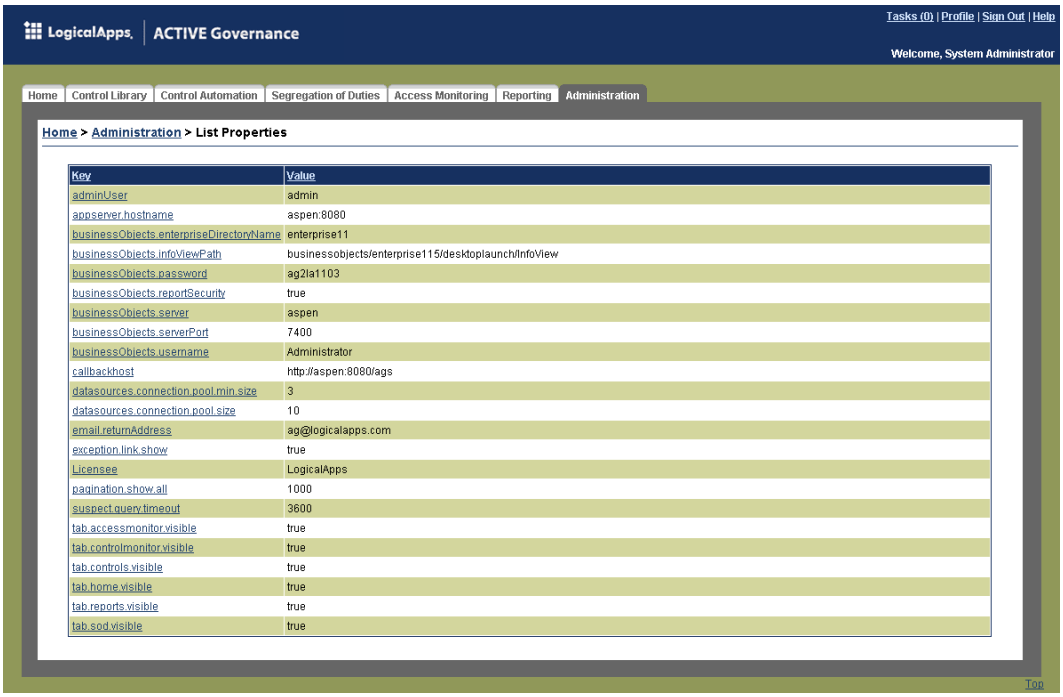
- suspect.query.timeout: This property sets the amount of time a control monitor may run before it times out. If control monitors fail to return suspects, try setting a larger value for suspect.query.timeout — its unit of measurement is seconds, and its default value is 3600. (This property is introduced in version 7.2.1.)

The ACTIVE Governance Platform contains tabs that activate panels in which one works with various features. The remaining properties determine which tabs are available for selection. Valid values are *true* (the default for each), which presents the tab to all users, and *false*, which hides the tab from all users. Property names correspond to tab names as follows:

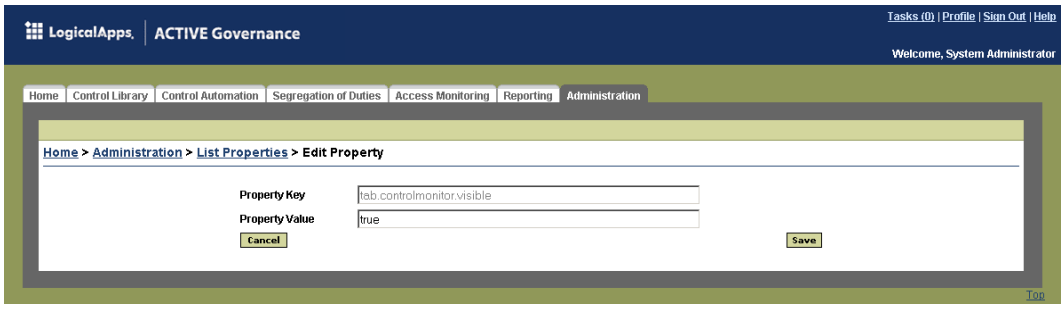
- tab.accessmonitor.visible: Access Monitoring
- tab.controlmonitor.visible: Control Automation
- tab.controls.visible: Control Library
- tab.home.visible: Home
- tab.reports.visible: Reporting
- tab.sod.visible: Segregation of Duties

To set properties:

1. In the ACTIVE Governance Platform, click on the Administration tab.
2. In the Administration home, click on the Manage Configuration Properties link. A List Properties panel opens:



3 Locate the property you want to set, and click on its name in the Key column. An Edit Property panel opens.



4 Enter a new value in the Property Value field, and click on the Save button. The focus returns to the List Properties panel, with the new setting displayed.

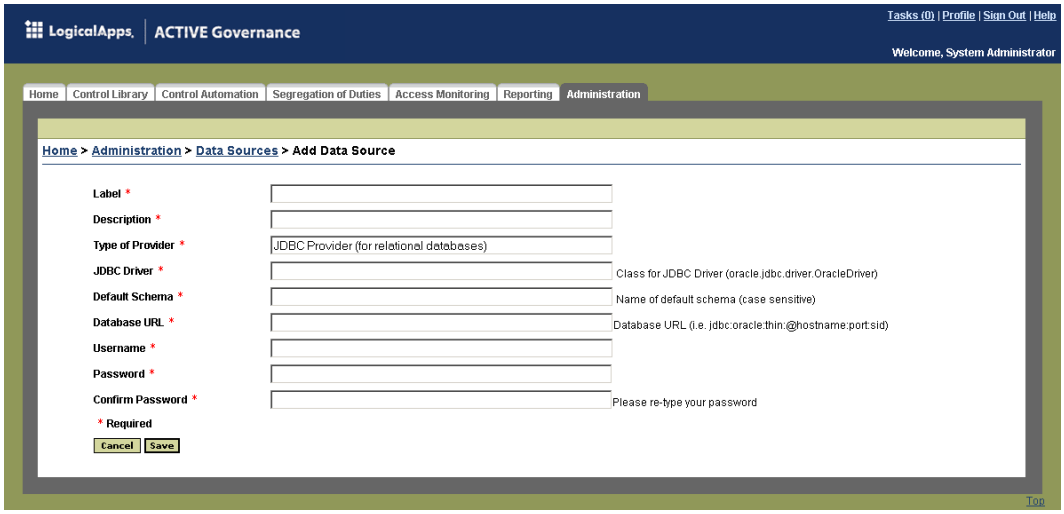
Configuring Data Sources

During server installation, you supplied information required for ACTIVE Governance to connect to an APPS database for an instance of Oracle Applications in which the Embedded Agents run. You need now to use a Data Sources feature of the ACTIVE Governance Platform to supply the information again. You can also use this feature to set up additional Oracle Applications/ Embedded Agents data sources. The information you enter in the Data Sources panels is used by the Segregation of Duties and Access Monitoring features.

1 In the ACTIVE Governance Platform, click on the Administration tab.

2 In the Administration home, click on the Manage Data Sources link.

3 A Data Sources panel opens. To create a new data source, click on the Add Data Source button; an Add Data Source panel (shown below) opens. To edit an existing data source, click on its name; a View Data Source panel opens, in which you would click on an Edit Data Source button. An Edit Data Source panel opens; it's identical to the Add Data Source panel, except that it displays current values for the selected data source.



4 Supply these values:

- Label and Description. Provide entries that name and describe the data source. The label will appear in a list box from which users can select data sources when they use the Segregation of Duties and Access Monitoring features.
- Type of Provider. Accept the default:

  `JDBC Provider (for relational databases)`
- JDBC Driver. Always supply the following value:

  `oracle.jdbc.driver.OracleDriver`
- Default Schema. Provide the schema name of the APPS database for the instance of Oracle Applications in which the Embedded Agents run. Because this would be an Oracle database, this value should be the same as the value you will supply in the Username field (see below), and is conventionally *APPS*.
- Database URL. Provide the JDBC connect string that ACTIVE Governance will use to connect to the APPS database for an instance of Oracle Applications in which the Embedded Agents run. This entry takes the following form, with actual values replacing the *Hostname*, *Port*, and *SID* placeholders:

  `jdbc:oracle:thin:@`*`Hostname`*`:`*`Port`*`:`*`SID`*
- Username. Supply the user name for the APPS database cited in the Database URL field. Conventionally, this value is *APPS*.
- Password and Confirm Password. Supply the password configured for the database user identified by the Username entry.

5 Click on the Save button. The focus shifts to the View Data Source panel, which displays the values you've saved. In that panel, click on the Test Data Source button. A message either reports that the test is successful or reports errors; in the latter case, click on the Edit Data Source button to correct the errors.

Importing Control Monitors

In ACTIVE Governance, a control monitor employs one or more statements, written in structured query language (SQL), that define actions subject to control. It establishes a sequence in which the statements are evaluated and the records they return are designated as "suspect tasks." Each monitor is configured in ACTIVE Policy Governor, and is attached to a control definition written in the ACTIVE Governance Platform.

A set of "prepackaged" control monitors comes with Policy Governor. To import them:

1 In your Oracle media pack, locate the Governance, Risk, and Compliance Controls Suite Disk 1. In its content/Transaction Controls Governor directory, locate the file ag_7221_monitors_oracle_ebs_11i.zip. Copy the file to the staging directory on your ACTIVE Governance server.

2 Use an import feature in the ACTIVE Governance Platform to extract control monitors from this file and to import them into ACTIVE Policy Governor.

See the *ACTIVE Policy Governor User's Guide* for the complete procedure. In the ACTIVE Governance Platform, click on the Help link (which is located near the upper right corner of every panel on the Platform). A Help home page opens; in it, click on the link for ACTIVE Policy Governor. The *Policy Governor User's Guide* opens; in its contents panel, click on the link for Prepackaged Control Monitors.

Running Background Programs

If your company uses ACTIVE Access Governor, you'll need to prepare it by running one or more "background program."

- In Access Governor, SOD rules specify two or more responsibilities or functions that should not be assigned simultaneously to an individual person. Some rules permit conflicting responsibilities or functions to be assigned if they are approved, and so each rule designates an approver. For this purpose, a Populate WF Roles Table program filters workflow roles, as they are defined in Oracle Applications, to select those appropriate to serve as SOD-rule approvers, and places the filtered selection of roles in a table that supplies values to an Approver field on an Add SOD Rules panel. You must run this program.
- If you intend to run Oracle EBS Security reports — which list responsibilities, menus, and functions available to individual users — you would first run a program called Populate User Access Data Table. It updates a database table that contains information about users' assignments and provides that information to the reports.
- Moreover, you may choose to import SOD rules contained in a "content spreadsheet," first editing them to contain values appropriate for your site, and then uploading them all at once. If so, you would run a Load SOD Conflict Rules program. (There are two content spreadsheets — one containing SOD rules for use with Oracle Release 12 and the other for use with earlier versions. Both are contained on the Governance, Risk, and Compliance Controls Suite Disk 1, in a content/Application Access Controls Governor Oracle EBS directory.)

You are currently logged on as a System Administrator, a "primary application role" that does not have rights to run background programs. The System Administrator can, however, create users at other roles, and so you must create an ACTIVE Governance user with permission to run the programs — one whose primary application role is AG Super User, SOD Super User, Author, Manager, or Rule Builder. You would then log on as that user to run the background programs.

Refer to ACTIVE Governance user's guides for appropriate procedures. In the ACTIVE Governance Platform, click on the Help link. The Help home page opens. In it, do the following:

- For information on creating users, open the *ACTIVE Governance Platform User's Guide*: In the Help home page, click on the ACTIVE Governance Platform link. The *User's Guide* opens; in its contents panel, click on the User Administration link.

- For information on running background programs, open the *ACTIVE Access Governor User's Guide*: In the Help home page, click on the ACTIVE Access Governor link. The *Access Governor User's Guide* opens; in its contents panel, click on the link for Background Programs.

Preparing Access Monitoring

Access Monitoring enables ACTIVE Governance users to request temporary access to database tables or to Oracle responsibilities. Requests are subject to approval, and once they are approved, the access is continually audited. Access Monitoring maintains a set of user IDs for responsibility-access requests; as each user's access expires, his ID can be reused. However, a distinct set of IDs applies to database-table access, and a database administrator must create these database user IDs.

Each database user ID must begin with the letters *LAAG*. IDs may otherwise follow any format, but the recommended format is LAAGDB*x*, where *x* is a unique number.

After the IDs are created, a concurrent request called "Access Monitor — DB Users Synchronization Process" must be run in the LogicalApps responsibility of Oracle Applications; this enables Access Monitoring to recognize the IDs and display them so that they are available for selection. The request takes no parameters.

For Access Monitoring to work, database tables must be audit-enabled, regardless of whether they are to be accessed directly or through a responsibility. To enable tables for auditing, one uses an Access Monitoring Content form — one of the Embedded Agents. A set of tables is typically audit-enabled during system installation; afterwards users may use the Access Monitoring Content form to determine which tables (and columns) are already audit-enabled, and add to them.

For information on enabling database tables for auditing, open the *ACTIVE Access Governor User's Guide*: In the ACTIVE Governance Platform, click on the Help link. In the Help home page, click on the ACTIVE Access Governor link. The *Access Governor User's Guide* opens; in its contents panel, click on the link for Access Monitoring.

Preparing the Default Workflow Routing

ACTIVE Governance controls and "control-library" objects must be approved after being created or modified. Each access request generated through the Access Monitoring feature must be approved before it is granted. And suspects generated by control monitors must be reviewed. To define sequences in which review requests are sent to users, groups, or both, ACTIVE Governance implements workflows.

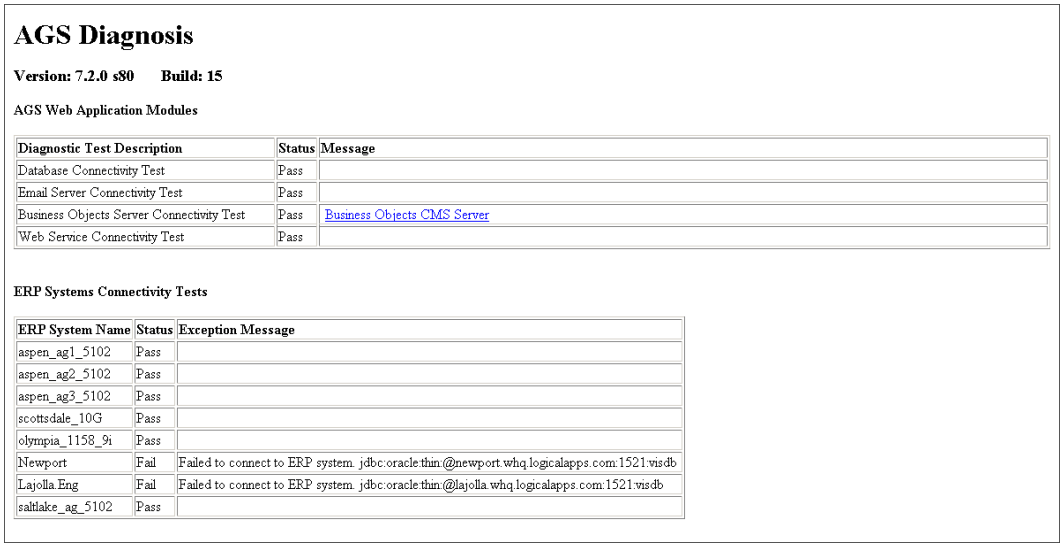
ACTIVE Governance comes with a Default Approval Workflow so broadly defined that it can route for review any control-library object, access request, or suspect that is not captured by any other workflow that users may configure. Initially it is at an Editing status, and it does not specify any user to perform reviews. As an installation step, you must designate a user who belongs to this workflow, and then activate it. You can use the admin user that came already created on ACTIVE Governance, or you can create another user for this purpose.

As already noted (on page 87), you can consult the *ACTIVE Governance Platform User's Guide* for information on creating users. The "Creating Workflows" chapter of that guide (and in particular the section of that chapter titled "Editing a Workflow Routing") provides instructions for adding a user to a workflow and activating a workflow. Once again, the *User's Guide* is accessible from the Help link of the ACTIVE Governance Platform.

Chapter 9

Diagnostics

A Diagnostics program tests the connectivity of the ACTIVE Governance web application to its supporting components:



AGS Diagnosis

Version: 7.2.0 s80 Build: 15

AGS Web Application Modules

Diagnostic Test Description	Status	Message
Database Connectivity Test	Pass	
Email Server Connectivity Test	Pass	
Business Objects Server Connectivity Test	Pass	Business Objects CMS Server
Web Service Connectivity Test	Pass	

ERP Systems Connectivity Tests

ERP System Name	Status	Exception Message
aspen_ag1_5102	Pass	
aspen_ag2_5102	Pass	
aspen_ag3_5102	Pass	
scottsdale_10G	Pass	
olympia_1158_9i	Pass	
Newport	Fail	Failed to connect to ERP system. jdbc:oracle:thin:@newport.whq.logicalapps.com:1521:visdb
Lajolla.Eng	Fail	Failed to connect to ERP system. jdbc:oracle:thin:@lajolla.whq.logicalapps.com:1521:visdb
saltlake_ag_5102	Pass	

To run the program, enter the following URL in the Address field of a web browser:

`http://`*`host`*`:8080/ags/diagnosis`

Replace *host* with the name of the host on which you installed ACTIVE Governance. Retain the value *8080* if you accepted default port values during installation. Other-

wise, supply the value you set for TOMCAT_PORT on a Linux or UNIX server (page 46) or connection port on a Windows server (page 61).

If you are already logged on to ACTIVE Governance, the Diagnosis panel opens immediately. If not, an ACTIVE Governance logon dialog appears; enter your username and password, then click on the Sign In button to open the Diagnosis panel.

Each row of both grids displays the result of a test to determine whether the ACTIVE Governance web application communicates properly with one of the following components. In each case, the Status field displays either Pass or Fail. For each test, the Message field displays information about a failure, and for all but one is blank when a test is passed.

The upper grid reports the results of the following tests:

- Database Connectivity Test indicates whether the web application is connected to the ACTIVE Governance database.
- Email Server Connectivity Test indicates whether the web application is connected to the SMTP server your company uses for sending email, and which you specified in the ags.xml file (see page 53 or 69).
- Business Objects Server Connectivity Test reports whether the web application is connected to the Business Objects server.
- For this test only, the Message field displays an entry when the test is passed: A link to the Business Objects Central Management Console. If you select this link, the CMC opens in a distinct web browser instance. You will need to log on to the CMC; you can use the Administrator username and the password you created for that user (page 51 or 66).
- Web Service Connectivity Test reports whether the web application communicates with a Web Services application program interface (API). Through this API, a client user-provisioning system can make use of segregation-of-duties features provided by ACTIVE Access Governor. (See the *Technical Note: LogicalApps Web Services*.)

In the lower grid, each row reports on the connectivity between the ACTIVE Governance web application and the database for one of the Oracle Applications instances in which the LogicalApps Embedded Agents have been installed, and which has been configured as a data source in ACTIVE Governance (see page 85).