

ACTIVE Governance™

Installation Guide

Software Version 7.2

© 2007 LogicalApps

All rights reserved. Printed in USA.

Restricted Rights Legend

This software and associated documentation contain proprietary information of LogicalApps. It is provided under a license agreement containing restrictions on use and disclosure and it is also protected by copyright law. Reverse engineering of this software is prohibited.

The information contained in this document is subject to change without notice. LogicalApps does not warrant that this document is error free. No part of this document may be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without the express written permission of LogicalApps.

LogicalApps provides on-site support as well as remote phone and web support to ensure quick and effective product implementation. To request support, to suggest product enhancements, or to comment on LogicalApps software or documentation, send email to support@logicalapps.com, or contact us at the address or phone number given below.

ACTIVE Governance, ACTIVE Access Governor, ACTIVE Data Governor, ACTIVE Policy Governor, Audit Rules, Form Rules, and Flow Rules are trademarks of LogicalApps. All trademarks and registered trademarks are the property of their respective owners.

Document Version AG006-722E

1/4/08

LogicalApps
15420 Laguna Canyon, Suite 150
Irvine, CA 92618
949.453.9101

Contents

- Preface: Installing ACTIVE Governance 1**
- Embedded Agents Installation Overview 5**
 - Preparatory Procedures 6
 - Sizing Considerations 7
 - Software Requirements 8
 - Obtaining Installation Files..... 8
 - Preparing Properties Files 8
- Installing Embedded Agents 11**
 - Creating a User and Tablespace 11
 - Oracle Applications Release 12..... 12
 - Installing Database Server Components..... 13
 - Installing Forms Server Components 18
 - CUSTOM.pll Modifications 21
 - Servlet Mode 23
 - Configuring the Remote Compilation..... 23
 - Bouncing the Servers 25

Postinstallation Tasks	27
SQL Rule Compilation.....	27
Associate a LogicalApps Function.....	28
ACTIVE Data Governor	29
Oracle Applications Version 11.5.8	29
Oracle Applications Version 11.5.10.2	29
Audit Rules	30
Different Hosts	32
Validation	33
Installation History	37
ACTIVE Governance Installation Overview	41
Supported Operating Systems.....	41
Hardware Requirements	44
Software Requirements	44
Installing Linux/UNIX Server Components.....	45
Preparing to Install	45
Installing Oracle Client	46
Loading Files in the Staging Directory	47
Editing and Running the Environment File	47
Installing Infrastructure	48
Stopping and Starting Services.....	49
Installing a Business Objects Patch.....	49
Setting the Business Objects Rowcount.....	49
Configuring the Business Objects Server.....	50
Accommodating Firewalls	53
Re-editing and Rerunning the Environment File.....	54
Installing the ACTIVE Governance Schema	54
Setting Up Business Objects	54
Copying and Editing ACTIVE Governance Files	55
Preparing Schema Installation Files	56
Completing the Schema Installation	57
Setting Up the ACTIVE Governance Log	58
Running a Reporting Script.....	58
Installing Windows Server Components	61
Preparing to Install	61
Installing Oracle Client	62

Loading Files in the Staging Folder	62
Installing Infrastructure.....	63
Stopping and Starting Services	65
Installing a Business Objects Patch	66
Modifying Tomcat Settings.....	66
Setting the Business Objects Rowcount	66
Configuring the Business Objects Server	67
Accommodating Firewalls	71
Installing the ACTIVE Governance Schema	71
Setting Up Business Objects.....	71
Copying and Editing ACTIVE Governance Files.....	72
Preparing Schema Installation Files.....	73
Completing the Schema Installation.....	74
Setting Up the ACTIVE Governance Log.....	75
Running a Reporting Script	75
Deploying Reports.....	77
Setting Up.....	77
Importing Business Views	78
Establishing Data Connections	79
Publishing Reports	82
Configuring Access to Reports	83
Restarting Services	84
Configuring ACTIVE Governance	85
Configuring Licenses	85
Setting Properties	86
Configuring Data Sources.....	89
Importing Control Monitors	90
Running Background Programs.....	91
Preparing Access Monitoring.....	92
Preparing the Default Workflow Routing.....	92
Diagnostics	95

Installing ACTIVE Governance

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 another three modules that enforce controls — ACTIVE Access Governor™, ACTIVE Policy Governor™, and ACTIVE Data Governor™.

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

ACTIVE Governance also incorporates Business Objects Enterprise XI R2, a third-party software package that provides its reporting capability.

Thus, the installation of ACTIVE Governance is a two-phase process:

- First, for each instance of Oracle Applications that is to be subject to control by ACTIVE Governance, install the Embedded Agents. Book 1 of this installation guide provides detailed procedures for doing so; it begins on page 3.
- Second, place ACTIVE Governance and Business Objects files (as well as a Java application server) on a UNIX, Linux, or Windows server; use Business Objects tools on a Windows client to deploy reports; and complete permissions, licensing, connectivity, and other configuration steps on the server. Book 2 of this installation guide provides detailed procedures for doing so; it begins on page 39.

Each instance of the Embedded Agents has its own database — typically, a distinct schema in the Oracle database used by the “companion” Oracle Applications instance. Moreover, each of ACTIVE Governance and Business Objects also 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.

Embedded Agents Installation

Embedded Agents Installation Overview

Embedded Agents are a set of applications that run within the Oracle Applications ERP environment in support of ACTIVE Governance. One agent serves as an engine for ACTIVE Access Governor, and would not be used directly. Of the rest:

- ACTIVE Data Governor applies change control to Oracle Applications fields. It can monitor change, require a reason for a change, or require approval for a change.
- A Form Rules application modifies the security, navigation, field, and data properties of Oracle Applications forms.
- A Flow Rules application works with Oracle Applications Workflows to define and implement business processes.
- An Audit Rules application tracks changes to the values of fields in database tables 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: Installation requires the identification of a schema for use by Embedded Agent applications (known as the “LogicalApps schema”). You are strongly advised to create a new schema named `XXLAAPPS`. However, if you have already established a schema for third-party products, you may choose to use that schema instead.
- Tablespace: You are advised to create a tablespace for indexes used by Embedded Agent database objects. (An already established tablespace may be used.)

- **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 `$XXLAAPPS_TOP/forms/US` directory.
- **Program Executables:** Embedded Agents use program executables to report on, migrate, and compile business rules. The following objects are installed on the concurrent manager server (typically the database server): reports, programs, and Java files. Custom programs are located in the `$XXLAAPPS_TOP/forms/US` directory; some executable programs may also reside in the `$XXLAAPPS_TOP/bin` directory.

Two comprehensive Installer programs place Embedded Agents applications on the database and forms servers. (They also install AppsCore, a rules engine that provides functionality to the applications.) Each Installer may be run in any of three modes:

- **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:** The Installer programs 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

Before installing Embedded Agents, ensure the following:

- 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 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 (XXLAAPPS or user-specified) 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. 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. For version 7.2.2 and above, Oracle version 12 is also supported.

The following operating systems are preferred for 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 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. In its dist directory, locate the file `ag_722_oracle_ebs_agent.zip`, and copy the file to a temporary directory on your local system. From it, extract the two files — `ladbinstall.bin` and `lafrminstall.bin` — you will run for database and forms installation. If you intend to use the silent installation mode, also extract the two files from which the Installers will read parameters — `ladbinstall.properties` and `lafrminstall.properties`.

Preparing Properties Files

If you intend to run the Installer programs in silent mode, you need first to edit the two properties files you extracted from `ag_722_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, “Installing 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 14 (database), or step 1 on page 18 (forms).
- `#STAGE_DIR`: Prompt in the Staging window, step 2 on page 14 (database), or step 2 on page 19 (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 15 (database), or step 3 on page 19 (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 15 (database), or step 4 on page 19 (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 16 (database), or step 5 on page 19 (forms).
- `ENVFILE` and `ADOVARS`: Prompts in the Environment window, step 6 on page 17 (database), or step 6 on page 20 (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 15.

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 20.
- `CUSTOM_CHOICE`: The prompt in the `CUSTOM.pll` window, step 7 on page 20. 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.

Installing Embedded Agents

In broad terms, the Embedded Agents installation process involves four steps:

- 1** Create a tablespace for Embedded Agent indexes, and a custom database user/schema. The user/schema name `XXLAAPPS` is strongly recommended.
- 2** Run the Installer program to place Embedded Agent tables, packages, sequences, and workflows on the database server. All the table names begin with the prefix `LA`, and all tables reside in the Embedded Agents schema (typically `XXLAAPPS`). The database server installation must precede the forms server installation.
- 3** Run the Installer program to place Embedded Agent forms on the forms server. All custom forms are located in the `$XXLAAPPS_TOP/forms/US` directory.
- 4** Configure a remote compilation feature, which makes libraries resident on the concurrent server available to the forms server.

Creating a User and Tablespace

After extracting installation files from `ag_722_oracle_ebs_agent.zip` and editing the properties files if you intend to use silent mode (see “Downloading Installation Files” and “Preparing Properties Files” on page 8), create the Embedded Agent tablespace and database user/schema. The latter must be granted the connect and resource privileges in the Oracle Applications database. You are strongly advised to use the name `XXLAAPPS` for the new user, and to create all Embedded Agent database objects in the `XXLAAPPS` schema.

The following is a sample SQL script that can be used to create the user:

```
CREATE USER XXLAAPPS
IDENTIFIED BY XXLAAPPS
DEFAULT TABLESPACE &DEF_TSPACE
TEMPORARY TABLESPACE &TMP_TSPACE
QUOTA UNLIMITED ON &DEF_TSPACE
QUOTA 0K ON SYSTEM;

GRANT CONNECT TO XXLAAPPS;
GRANT RESOURCE TO XXLAAPPS;
```

If you are installing the Embedded Agents on an instance of Oracle Applications Release 12, the user-creation script should also include these commands:

```
GRANT SELECT ON GV$INSTANCE TO APPS;
GRANT SELECT ON ALL_OBJECTS TO XXLAAPPS;
GRANT SELECT ON DBA_OBJECTS TO XXLAAPPS;
GRANT SELECT ON ALL_TABLES TO XXLAAPPS;
GRANT SELECT ON ALL_VIEWS TO XXLAAPPS;
GRANT CREATE VIEW TO XXLAAPPS;
```

Allocate a minimum of 80 MB of space, 40 on the tmp directory and 40 on the file system from which the installer is to be launched.

Oracle Applications Release 12

If you are installing the Embedded Agents on an instance of Oracle Applications Release 12, complete the following steps before running the installation programs. If you are installing on an earlier Oracle Applications version, omit these steps and skip ahead to the next section, “Installing Database Server Components.”

- 1 Execute the environment file, if it is not included in the profile:

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

- 2 At the operating-system command prompt, use the make directory command to create a custom application top (the high-level directory for the storage of Embedded Agents files). Its form must be the full path to the Oracle APPL_TOP; then, as a subdirectory, the Embedded Agent database user name; and finally, as a subdirectory at the next level, the value *12.0.0*. For example, if the Oracle APPL_TOP were */oracle/bin/ebiz12/appl* and the Embedded Agent database user name were *XXLAAPPS*, the following command would create the custom application top:

```
mkdir /oracle/bin/ebiz12/appl/xxlaapps/12.0.0
```

- 3 Export the custom application top path in the environment file (which is named for the database SID and host name, with a *.env* extension, and is located in the Oracle APPL_TOP directory). If the path in step 1 were the custom top, the environment-file entry would look like this:

```
XXLAAPPS_TOP="/oracle/bin/ebiz12/appl/xxlaapps/12.0.0"
export XXLAAPPS_TOP
```

- 4 In the directory *\$APPL_TOP/admin*, locate *topfile.txt*; open it for editing. Add an entry that sets the relationship of the Embedded-Agent-database-user-name subdirectory to the APPL_TOP directory. In the current example:

```
xxlaapps      /oracle/bin/ebiz12/appl/
```

- 5 In the directory `$APPL_TOP/admin`, create the file `applcust.txt`. Open it for editing, and insert the same entry as you did in step 4.
- 6 Navigate to the `$ADMIN_SCRIPTS_HOME` directory and, from it, run the following three scripts. Each will prompt either for the APPS password or the APPS username and password.
 - `adstpall.sh`
 - `adautocfg.sh`
 - `adstrtal.sh`

Installing Database Server Components

To install Embedded Agents database server components, run the file `ladbininstall.bin`:

- 1 Transfer the `ladbininstall.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 `ladbininstall`:

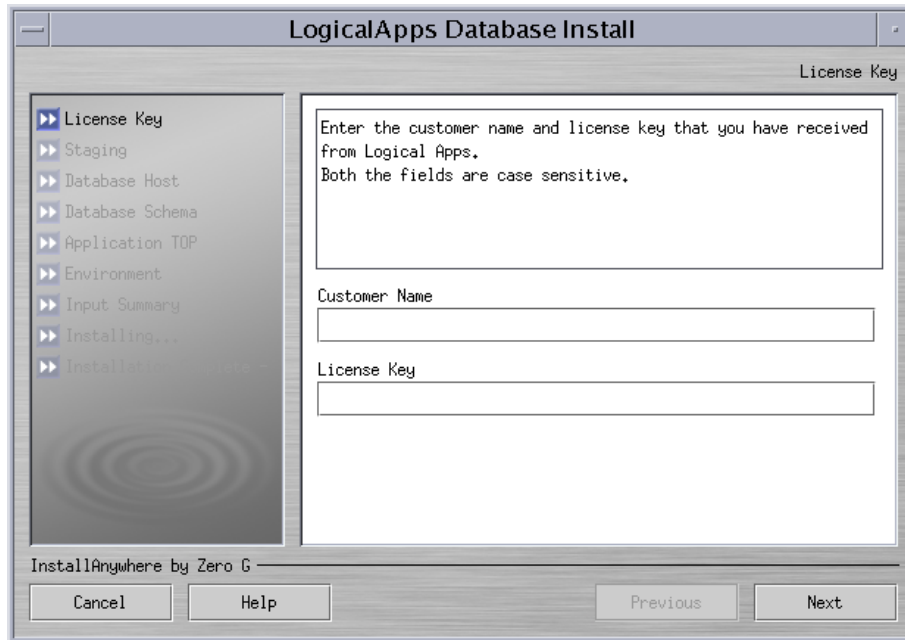

```
$ chmod +x ladbininstall.bin
```
- 5 Execute `ladbininstall.bin`:
 - To run in GUI or console mode, ensure that `ladbininstall.properties` is absent from the directory where `ladbininstall.bin` resides. To run in silent mode, be sure that both files are in the same directory.
 - Use the name `ladbininstall.bin` 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:

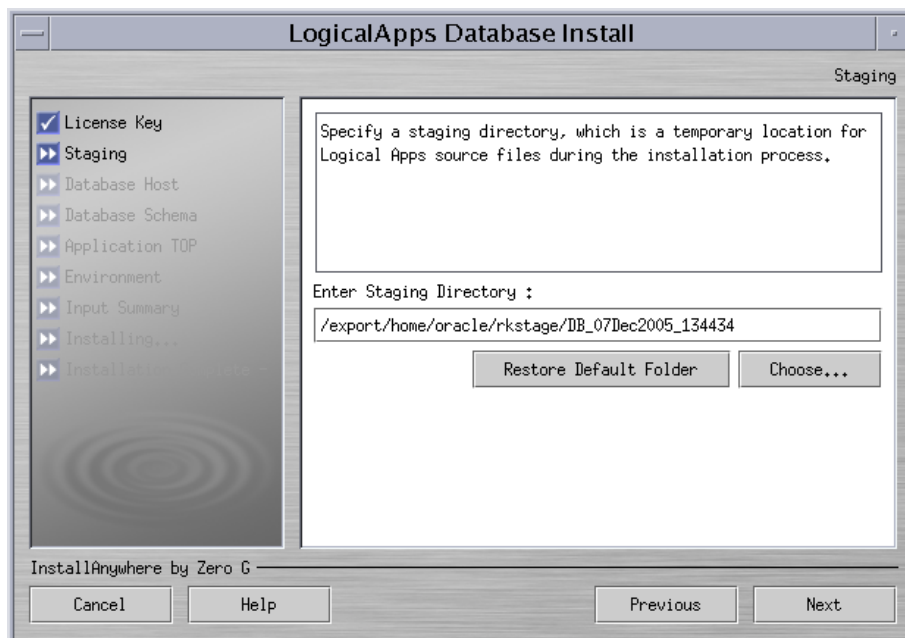
- Review a brief description of the information you need to provide.
- Click on the Help button to open a window that provides a more expansive description of the information you need to provide. (After you review this information, click on the Close button to exit the Help window.)
- Type installation 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 installation, with *DB* (for database). If you wish to 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 that directory. If you navigate away from the default directory and want to return to it, 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.

The screenshot shows the 'LogicalApps Database Install' wizard at the 'Database Host' step. The left sidebar shows a tree view with 'Database Host' selected. The main area contains a text box with instructions: 'Specify the database host name, service SID, and TNS port of the database in which Logical Apps applications are to be installed.' Below this are three input fields: 'Database Host Name' (containing 'mammoth.whq.logicalapps.com'), 'SID' (containing 'visdb'), and 'Port' (containing '1521'). At the bottom, there are 'Cancel', 'Help', 'Previous', and 'Next' buttons.

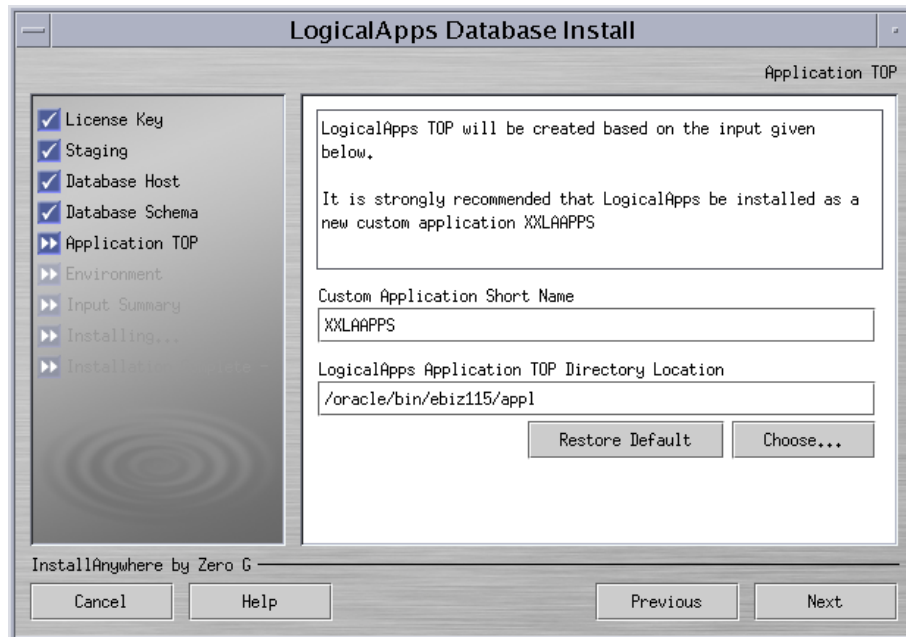
- 4 Supply log-on values for the LogicalApps and Oracle Applications (APPS) schemas:

The screenshot shows the 'LogicalApps Database Install' wizard at the 'Database Schema' step. The left sidebar shows a tree view with 'Database Schema' selected. The main area contains a text box with instructions: 'Supply credentials for the Logical Apps schema and APPS schema. It is strongly recommended that you use the name XXLAAPPS for the Logical Apps schema.' Below this are four input fields: 'LogicalApps Schema' (containing 'XXLAAPPS'), 'Password', 'Oracle APPS Schema Password', and 'Index Table Space'. At the bottom, there are 'Cancel', 'Help', 'Previous', and 'Next' buttons.

As noted earlier, the creation of a dedicated schema called XXLAAPPS is strongly recommended. The Installer provides this value by default. If you follow the recommendation, accept the default; otherwise, replace it with the name of the schema you will use for Embedded Agent database objects. Also enter the

passwords for the LogicalApps and Oracle APPS schemas, and the name of the tablespace for indexes used by Embedded Agent database objects.

- 5 Establish the LogicalApps TOP — the high-level directory for the storage of Embedded Agents files. Specify a directory that is the parent of the LogicalApps TOP and an application short name that is appended to the parent directory to form the LogicalApps TOP directory.



By default, the Installer selects the Oracle Applications TOP as the parent directory and XXLAAPPS as the application short name. These are the recommended values, but you can change them. If you are installing on Oracle Release 12, these values must match the APPL_TOP and immediate subdirectory you configured earlier (see page 12), but not the 12.0.0 value.

To select another parent directory, click on the Choose button and, in a Select a Folder window, navigate to the 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.

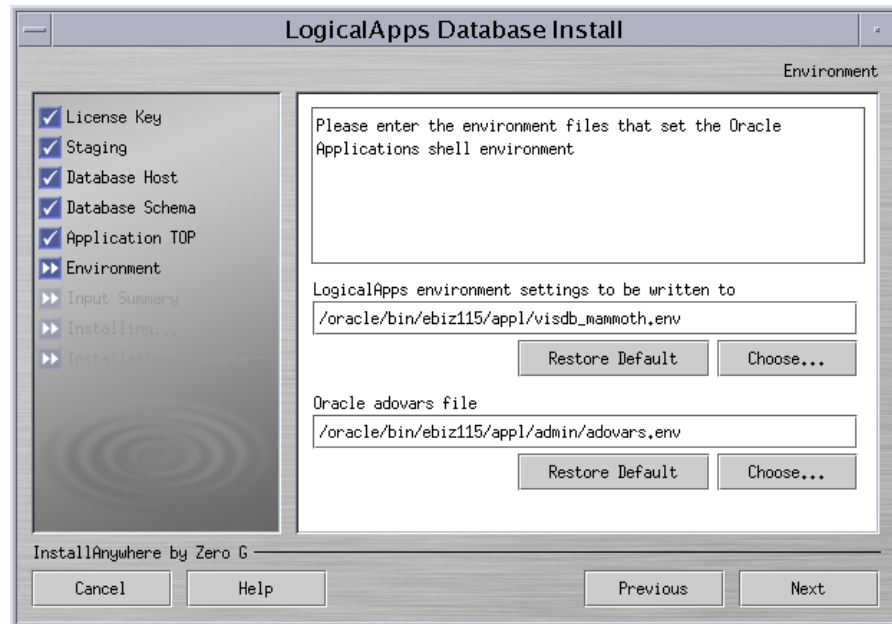
No matter what case you use to enter values, the Installer saves the short name as all uppercase (and adds the uppercase _TOP to create a top shell variable), and the directory location as all lowercase. (However, for a reinstallation, the Installer does not change the case of an existing application TOP.)

If you have selected an application short name that is already in use, the Installer displays a warning message when you click the Next button:

To respond to this warning:

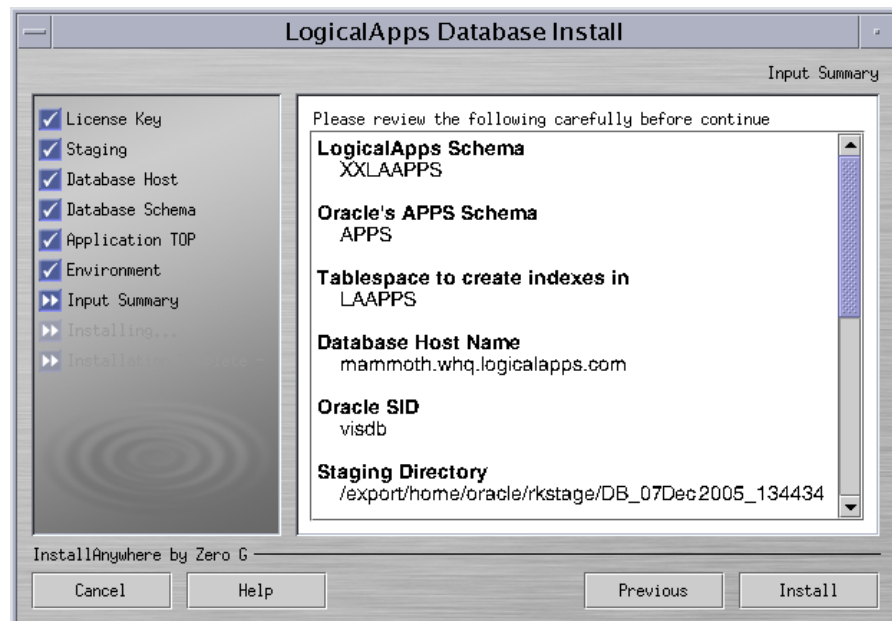
- Click Enter Again to return to the Application TOP form and set a new value.
- Click Continue to accept the duplicate application short name. Doing so, however, would cause Embedded Agents and another application to share the name, with the risk that files for one application or the other might be overwritten.
- Click Abort to abandon the Embedded Agents installation.

- 6 Specify paths to files that contain environment variables for the Oracle Applications shell. (The installation adds Embedded Agent-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 installation of each Embedded Agents application, and displays an overall status upon completing the installation of all products. If the overall status is Success, the installation has finished with no errors.

If errors occur, they or the overall status may be classified as Warning, Nonfatal, or Fatal, depending on severity. The Installer recovers (restores the system to its state prior to the installation) for Fatal errors, but not for Warning or Nonfatal errors. For details about errors and the installation 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`:

- 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 `aplmgr` account.
- 3 Use `aplmgr` 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, be sure 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 navigate away from the default directory and want to return to 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, the creation of a dedicated schema called XXLAAPPS is recommended. To follow this recommendation, accept the default value; otherwise replace it with the name of the schema you will use for Embedded Agents database objects. Also enter the passwords for the LogicalApps and Oracle APPS schemas.

- 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. Specify a parent directory of the LogicalApps TOP, and an application short name that is appended to the parent directory to form the LogicalApps TOP directory.

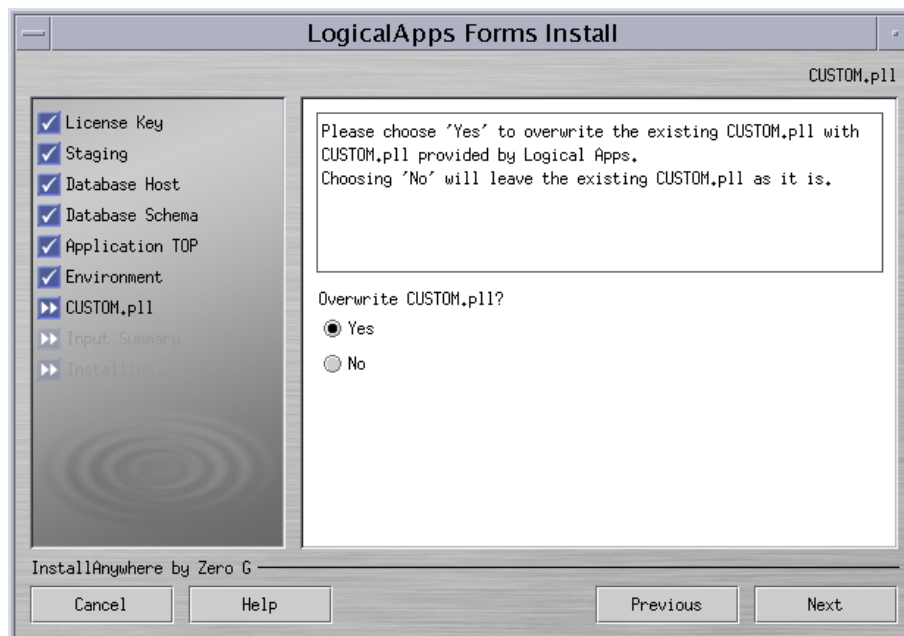
The Installer defaults to the forms-server-specific Oracle Applications TOP as the parent directory and XXLAAPPS as the application short name. These values are recommended.

Ensure that the application short name for the forms server is the same as the database server's. If you wish to select another parent directory, click on the Choose button and, in a Select a Folder window, navigate to the 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.

No matter what case you use to enter values, the Installer saves the short name as all uppercase (and adds the uppercase `_TOP` to create a top shell variable), and the directory location as all lowercase. (However, for a reinstallation, the Installer does not change the case of an existing application TOP.)

The forms-server Installer, like its database-server counterpart, presents a warning if you select an application short name that is already in use and it presents the same response options:

- Click Enter Again to return to the Application TOP form and set a new value.
 - Click Continue to accept the duplicate application short name. Doing so, however, would cause Embedded Agents and another application to share the name, with the risk that files for one application or the other might be overwritten.
 - Click Abort to abandon the Embedded Agents installation.
- 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 enter the name of a nonexistent directory, the Installer creates that directory. To return to the default directory, click the Restore Default button. In any case select values that are 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 installation of each Embedded Agents application, and displays an overall status upon completing the installation of all products. If the overall status is Success, the installation has finished with no errors.

If errors occur, they or the overall status may be classified as Warning, Nonfatal, or Fatal, depending on severity. The Installer recovers (restores the system to its state prior to the installation) for Fatal errors, but not for Warning or Nonfatal errors. For details about errors and the installation 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;
  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 19).

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 19.

- 4 Save and close the file.

Configuring the Remote Compilation

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

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

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

- 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 the following 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.)

Bouncing the Servers

When you finish configuring the remote compilation feature, bounce both the form server and the concurrent manager server.



Note:

If you are installing version 7.2.2 or later, do not delete the staging directory for the database server after completing the Embedded Agents installation. It contains a script you'll need to run after you install ACTIVE Governance.

Postinstallation Tasks

Once the installation 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. Ensure that its Form Rules tab is selected.
- 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 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.

Menu	Include	Exclude
Shop Floor Management	<input checked="" type="radio"/>	<input type="radio"/>
Shop Floor Super User	<input checked="" type="radio"/>	<input type="radio"/>
Spares Management Main Menu	<input checked="" type="radio"/>	<input type="radio"/>
Standard Report Submission and view report (privilege	<input checked="" type="radio"/>	<input type="radio"/>
Student Recruiting	<input checked="" type="radio"/>	<input type="radio"/>
Supplier Drop Ship	<input checked="" type="radio"/>	<input type="radio"/>
Supplier Scheduling Superuser:	<input checked="" type="radio"/>	<input type="radio"/>
System Administration	<input checked="" type="radio"/>	<input type="radio"/>
System Administration Functions	<input checked="" type="radio"/>	<input type="radio"/>
TCA Main Menu	<input checked="" type="radio"/>	<input type="radio"/>

- 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 on the Select All check box so that it changes to read “Deselect All.” Then click on it again; this selects all the Exclude radio buttons and clears all the Include radio buttons, and it changes the check box label back to “Select All.” Click on it once

again; this selects all the Include radio buttons and clears all the Exclude radio buttons, and it changes 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 Click 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 27.)

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, and the context file serves as a template for the generation of the .env file. In earlier versions, a shell script served as the template; the Embedded Agents installer was able to work

with the shell script to set values automatically. 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_bost.xml`. In this file name, replace `sid` with the system identifier for the APPS database and `bost` 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:

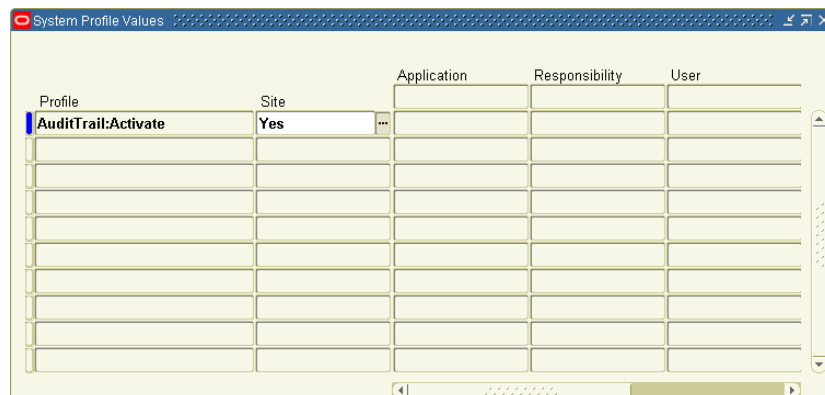
- The value `XXLAAPPS` is correct in this line only if you accepted the default LogicalApps application short name during installation. If not, then in each of the four places that the value `XXLAAPPS` appears in this line (whether in upper or lower case), substitute the short name you created in step 5 on page 16.
 - 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.

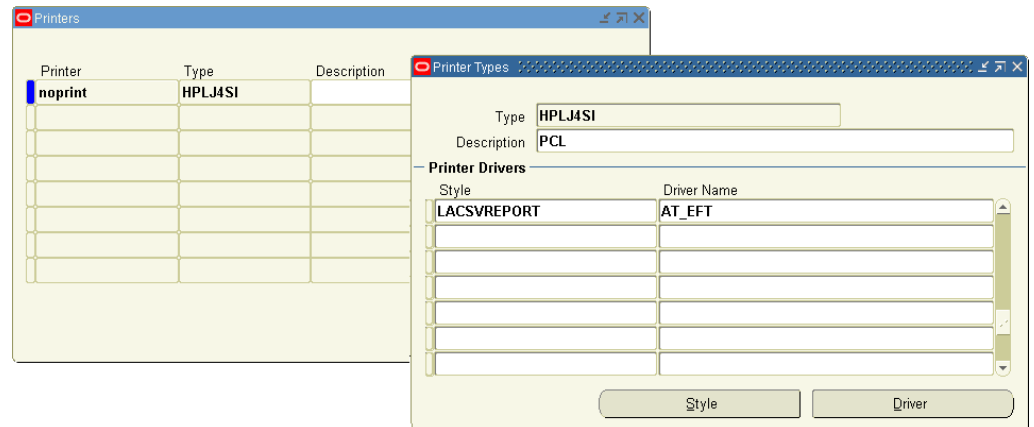
First, set an AuditTrail:Activate profile option to Yes:

- 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:

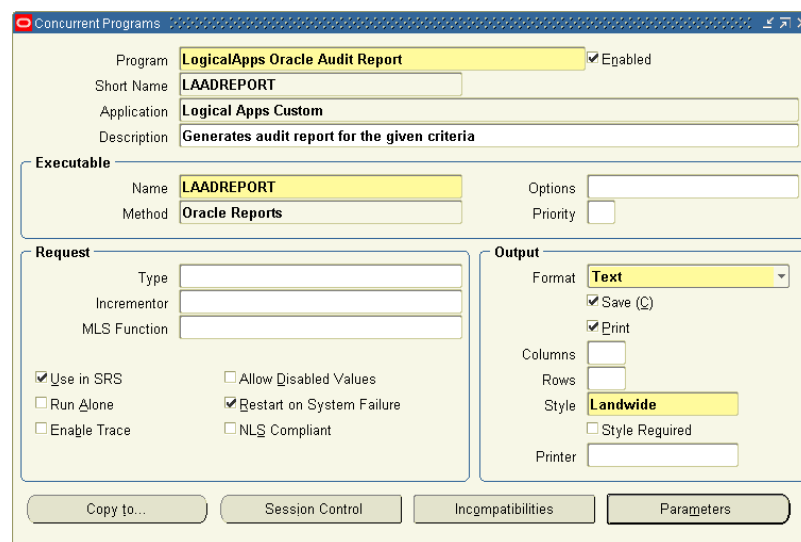
- 1 In the System Administrator responsibility, select Install, then Printer, then Register.
- 2 A Printers form appears. In its Printer field, select the printer you wish to use with Audit Rules. Note the value that appears in the Type field when you select the printer, and then click on the Printer 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 *Landscape*. 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=$1
tempfile=${1}atkprof.txt
temptrc=${1}atkprof.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 schema. To perform this operation, run the following command:

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

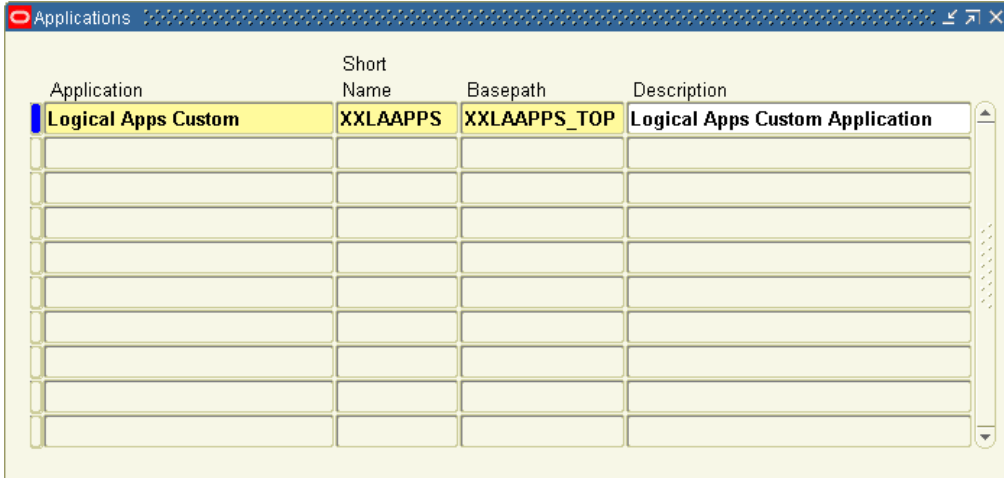
If this is not set, the following error message appears when a user attempts to log on to a read-only or MRC (multiple reporting currency) responsibility:

```
la_enhncmtmgr_pkg not declared
```

Validation

As a part of the installation 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:



Application	Short Name	Basepath	Description
Logical Apps Custom	XXLAAPPS	XXLAAPPS_TOP	Logical Apps Custom Application

- 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:

Form	Application	User Form Name	Description
LABIZ	Logical Apps Custom	Oracle Form Rules	Logical Apps Oracle Form Rules

- 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:

Group: LogicalApps Request Group

Application: Logical Apps Custom

Code: LOGAPPSRG

Description: Request Group for LogicalApps Applications

Type	Name	Application
Application	Logical Apps Custom	Logical Apps Custom

Description: Logical Apps Custom Application

- 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.)

The screenshot shows the Oracle Menus form with the following configuration:

- Menu: LAAR_NAVIGATE
- User Menu Name: LogicalApps AppsRules
- Menu Type: Standard
- Description: Menu for LogicalApps Applications

Seq	Prompt	Submenu	Function	Description	Grant
10	Oracle Embedd	LogicalApps: Oracle En		LogicalApps :Oracle Embedded A	<input checked="" type="checkbox"/>
85			Flexfield Values	FND Flexfields	<input checked="" type="checkbox"/>
150			Oracle Audit	AppsAudit form function	<input checked="" type="checkbox"/>
160			LogicalApps Online Auc	AppsAudit Online form function	<input checked="" type="checkbox"/>
170			Oracle Audit Report	AppsAudit Report form function	<input checked="" type="checkbox"/>
205	Access Govern	LogicalApps: Access Gc		LogicalApps : Access Governor	<input checked="" type="checkbox"/>
890	Change Control	LogicalApps: Change C		LogicalApps : Change Control	<input checked="" type="checkbox"/>
900	Administration	LogicalApps: Administr		Logical Apps Administration men	<input checked="" type="checkbox"/>
1100	LogicalApps For		LogicalApps MLS Form	LogicalApps MLS Form Prompts	<input checked="" type="checkbox"/>
1200			Oracle Form Extend Va		<input checked="" type="checkbox"/>
1300			LogicalApps Activate R		<input checked="" type="checkbox"/>
1400			Oracle Change Control		<input checked="" type="checkbox"/>
1500			LogicalApps Responsibi		<input checked="" type="checkbox"/>

- 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.)

The screenshot shows the Oracle Responsibilities form with the following configuration:

- Responsibility Name: Logical Apps
- Application: Logical Apps Custom
- Responsibility Key: LAAPSRULES
- Description: LogicalApps Applications Responsibi
- Effective Dates: From 02-FEB-2007
- Available From: Oracle Applications
- Data Group: Name Standard, Application Logical Apps Custom
- Request Group: Name LogicalApps Request Group, Application Logical Apps Custom
- Menu: LogicalApps AppsRules
- Web Host Name:
- Web Agent Name:

Menu Exclusions:

Type	Name	Description
Function		

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:

Oracle Rules Configurations

UTL Path: /usr/tmp

Library Version: 6.0.0.0

Form Version: 6.5.0.0.0

Package Version: 6.1.0.0

Refresh Cache

Done

- 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:

Segment Values

Value Set Key Flexfield Descriptive Flexfield Concurrent Program

Name: LAAR_LIBRARY_MODULES Library Modules

Dependent Value Set:

Independent Value:

Values (LAAR_LIBRARY_MODULES)

Values, Effective | Values, Hierarchy, Qualifiers

Value	Translated Value	Description	Enabled			
			From	To		
ALL	ALL	Module to include all rules	<input checked="" type="checkbox"/>			
			<input type="checkbox"/>			
			<input type="checkbox"/>			
			<input type="checkbox"/>			
			<input type="checkbox"/>			

Define Child Ranges | Move Child Ranges | View Hierarchies

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:

Install Datetime	Release	Component	Host Name	Install Status	Product	User Name	Schema	Staging Dir
05-FEB-2007 11:24:40	7_2_0_b14_s	DB	aspen	SUCCESS	AccessMonito	ag1	XXLAAPPS	/lapps/ag1/stage_la/AR/512
05-FEB-2007 11:24:40	7_2_0_b14_s	DB	aspen	SUCCESS	OracleControl	ag1	XXLAAPPS	/lapps/ag1/stage_la/AR/512
05-FEB-2007 11:24:40	7_2_0_b14_s	DB	aspen	SUCCESS	Segregation0	ag1	XXLAAPPS	/lapps/ag1/stage_la/AR/512
05-FEB-2007 11:24:40	7_2_0_b14_s	DB	aspen	SUCCESS	OracleFlow	ag1	XXLAAPPS	/lapps/ag1/stage_la/AR/512
05-FEB-2007 11:24:40	7_2_0_b14_s	DB	aspen	SUCCESS	OracleAudit	ag1	XXLAAPPS	/lapps/ag1/stage_la/AR/512
05-FEB-2007 11:24:40	7_2_0_b14_s	DB	aspen	SUCCESS	OracleForm	ag1	XXLAAPPS	/lapps/ag1/stage_la/AR/512
05-FEB-2007 11:24:40	7_2_0_b14_s	DB	aspen	SUCCESS	OracleCore	ag1	XXLAAPPS	/lapps/ag1/stage_la/AR/512
02-FEB-2007 17:20:42	7_2_0_b14_s	FRM	aspen	SUCCESS	AccessMonito	ag1	XXLAAPPS	/lapps/ag1/stage_la/AR/512
02-FEB-2007 17:20:42	7_2_0_b14_s	FRM	aspen	SUCCESS	OracleControl	ag1	XXLAAPPS	/lapps/ag1/stage_la/AR/512
02-FEB-2007 17:20:42	7_2_0_b14_s	FRM	aspen	SUCCESS	Segregation0	ag1	XXLAAPPS	/lapps/ag1/stage_la/AR/512

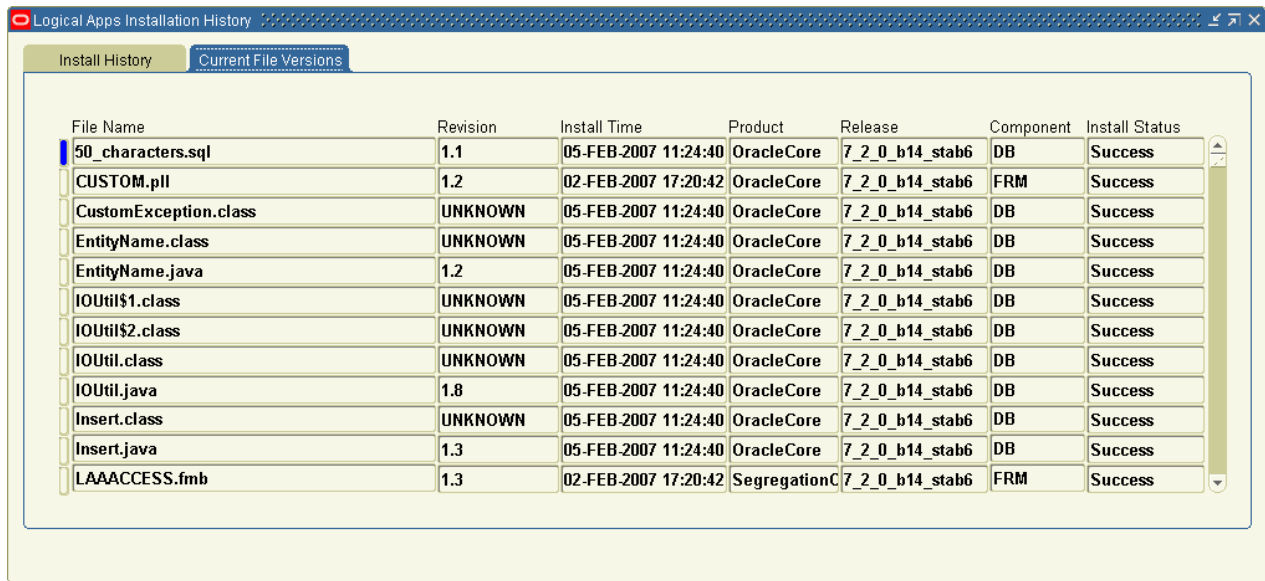
Each row provides information about the installation of a program element — for example, the top row in this illustration shows that the Access Monitoring element for version 7.2 of the database server was successfully installed. Because there are several elements for each of the forms and database servers, 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:

Product	Filename	Revision	Install Status
AccessMonitor	database.drv	1.3	Success
AccessMonitor	la_appsgps_alter_table.sql	1.3	Success
AccessMonitor	la_appsgps_conc_programs.sql	1.3	Success
AccessMonitor	la_appsgps_create_dbuser.sql	1.2	Success
AccessMonitor	la_appsgps_lock_user.sql	1.3	Success
AccessMonitor	la_appsgps_queue.sql	1.2	Success
AccessMonitor	la_appsgps_sequences.sql	1.2	Success
AccessMonitor	la_appsgps_synonyms.sql	1.2	Success
AccessMonitor	la_appsgps_table.sql	1.3	Success
AccessMonitor	la_appsgps_userlist_initialize.sql	1.3	Success

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.

ACTIVE Governance Installation

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 6 to complete these tasks, and skip Chapter 7. If you are installing on Windows, follow directions in Chapter 7 and skip Chapter 6.

No matter what operating system you use, you continue the installation by “publishing” reports and complete it by configuring ACTIVE Governance. Chapter 8 provides detailed procedures for reports publication, and Chapter 9 for ACTIVE Governance configuration.

Finally, Chapter 10 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)
- SUNWxwfont
- SUNWxwpl
- SUNWlibC
- SUNWweuluf (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)
- SUNWxfnt
- 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
- SUNWxfnt

- SUNW`xwplt`
- SUNW`libC`
- SUNW`eu8os` American English/UTF-8 L10N For OS Environment User Files
- SUNW`eu1uf` UTF-8 L10N For Language Environment User Files
- SUNW`uiu8` Iconv modules for UTF-8 Locale
- SUNW`wlcf` UTF-8 Locale Environment Common Files
- SUNW`mfrun`
- SUNW`xwice`

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

ACTIVE Governance 7.2.2 supports Oracle Release 12. For ACTIVE Governance 7.2.2, 7.2.1, or 7.2.0, releases 11.5.9 and 11.5.10 of Oracle are preferred, and 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.

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 7. (If you are installing on Windows, omit this chapter and skip ahead to Chapter 7.) Once server components are installed, proceed to Chapter 8.

Ensure that the Embedded Agents are installed 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 procedures 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_722_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 46). Locate the `ORACLE_HOME` entry and set it equal to the full path to the directory in which Oracle Client is installed (see page 46).

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 45.) 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 increase 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:

Server Name	Machine Name	Type	Server Group	Protocol
aspens.cacheserver	aspens	Crystal Reports Cache Server	Member of...	Default
aspens.cms	ASPEN	Central Management Server	Member of...	Default
aspens.ConnectionServer	aspens	ConnectionServer	Member of...	Default
aspens.Desktop_IntelligenceCacheServer	aspens	Desktop Intelligence Cache Server	Member of...	Default
aspens.Desktop_IntelligenceJobServer	aspens	Desktop Intelligence Job Server	Member of...	Default
aspens.Desktop_IntelligenceReportServer	aspens	Desktop Intelligence Report Server	Member of...	Default
aspens.destjobserver	aspens	Destination Job Server	Member of...	Default
aspens.eventserver	aspens	Event Server	Member of...	Default
aspens.ListOfValues.JobServer	aspens	List of Values Job Server	Member of...	Default
aspens.pageserver	aspens	Crystal Reports Page Server	Member of...	Default
aspens.programjobserver	aspens	Program Job Server	Member of...	Default
aspens.ras	aspens	Report Application Server	Member of...	Default
aspens.reportjobserver	aspens	Crystal Reports Job Server	Member of...	Default
aspens.Web_IntelligenceJobServer	aspens	Web Intelligence Job Server	Member of...	Default
aspens.Web_IntelligenceReportServer	aspens	Web Intelligence Report Server	Member of...	Default
Input.aspens	aspens	File Repository Server	Member of...	Default
Output.aspens	aspens	File Repository Server	Member of...	Default

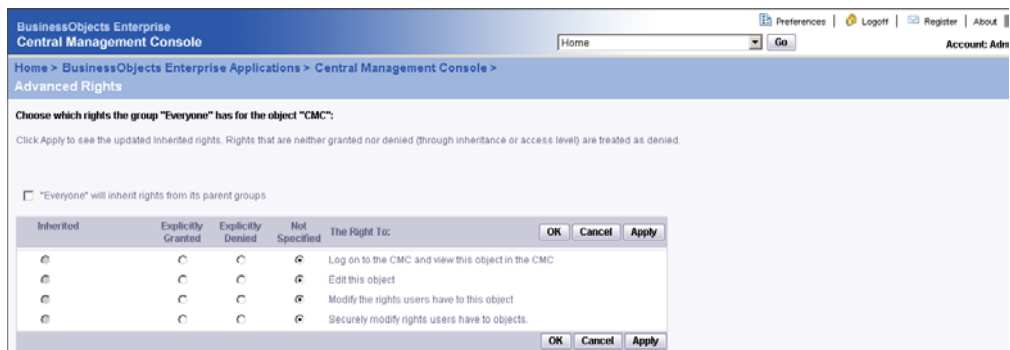
- 4 In the Servers panel, examine icons accompanying servers whose names contain the host name of the system to which you've logged on:
 - If any shows a downward-pointing red arrow, close the CMC. Navigate to `$LAPPS_AG_HOME/bobje/logging` and check log files — `boe-cmsd*.log` and `ccm*.log` — for errors. 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.

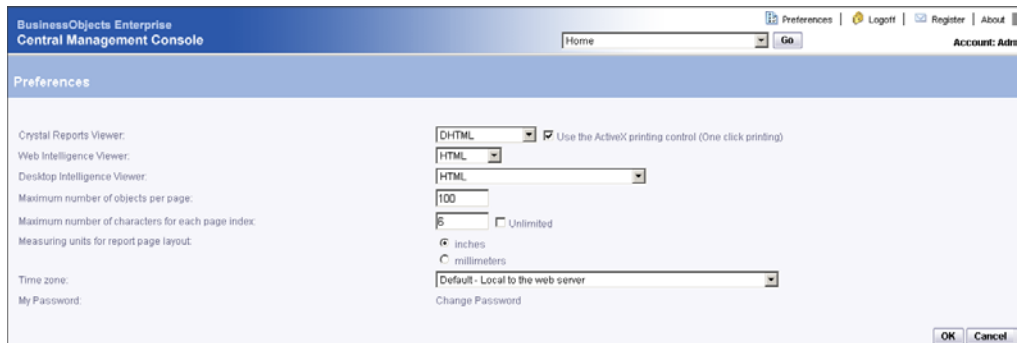
- 7 In the "breadcrumb trail" (*Home > Servers >* in the illustration above), click the Home link. In the Home panel, locate the Manage section; in it click on Business Objects Enterprise Applications. In a list of applications, click on InfoView. An InfoView panel opens:

- 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 breadcrumb 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.

The screenshot shows the BusinessObjects Enterprise Central Management Console (CMC) interface. The top navigation bar includes 'Home > Users > Administrator'. The main content area is divided into several sections:

- Properties:** Includes fields for Account Name (Administrator), Full Name, Email, and Description (Administrator account).
- Home Folder:** Administrator
- Enterprise Password Settings:** Contains password input fields (Password and Confirm) and checkboxes for 'Password never expires', 'User must change password at next login', and 'User cannot change password'.
- Enable Data Source Credentials for Business Objects Unverses:** Includes sub-fields for Account Name, Password, and Confirm.
- Connection Type:** Radio buttons for 'Concurrent User' (selected) and 'Named User'.
- Account is disabled:** A checkbox that is currently unchecked.
- Authentication Type:** Enterprise (checked).
- Buttons:** 'Update' and 'Reset' buttons are visible at the bottom.

- 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 49).

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 49.
- 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 xxxxx`, replacing the `xxxxx` with one of the port numbers from step 1.

- Locate the line that starts with the phrase *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.)
- 5 Save the file and exit from it.
 - 6 Restart the services, using the startup procedure described in “Stopping and Starting Services” on page 49.

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 infrastructure 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 47).
- 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 48).
 - *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 53.
- `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 46).
- `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 45.
 - `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 45.
 - `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 48).
 - `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 53.
 - `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 48).
 - `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
```

Running a Reporting Script

If you are installing ACTIVE Governance 7.2.2 or later, you must run a script in each instance of the Embedded Agents that is to be controlled by the ACTIVE Governance instance you have just installed. This script creates database synonyms without which two reports, introduced in version 7.2.2, cannot run. This script itself cannot run until the ACTIVE Governance schema is created, which is why it must be run now rather than during Embedded Agents installation.

In each Embedded Agents instance:

- 1** In step 2 of the database-server installation procedure, you created a staging directory (see page 14). Navigate to the following subdirectory of that staging directory:
`AppsAccess\db\sql`
- 2** Using a SQL tool, connect to the Oracle Applications database, supplying the username and password for the APPS user. For example, if the tool were SQLPlus:
`connect apps/apps`
- 3** Run the script `la_apps_access_synonyms_bo_ddl.sql`. You will be prompted for a parameter; in response, provide the Embedded Agents database username. For example:
`@la_apps_access_synonyms_bo_ddl.sql`
Enter value for 1: `XXLAAPPS`
- 4** Log off the SQL tool.

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 8; you should have omitted Chapter 6. (If you are installing on Linux or UNIX, this chapter does not apply to you; use procedures in Chapter 6 instead, and then proceed to Chapter 8.)

Ensure that the Embedded Agents are installed 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 procedures 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_722_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
```

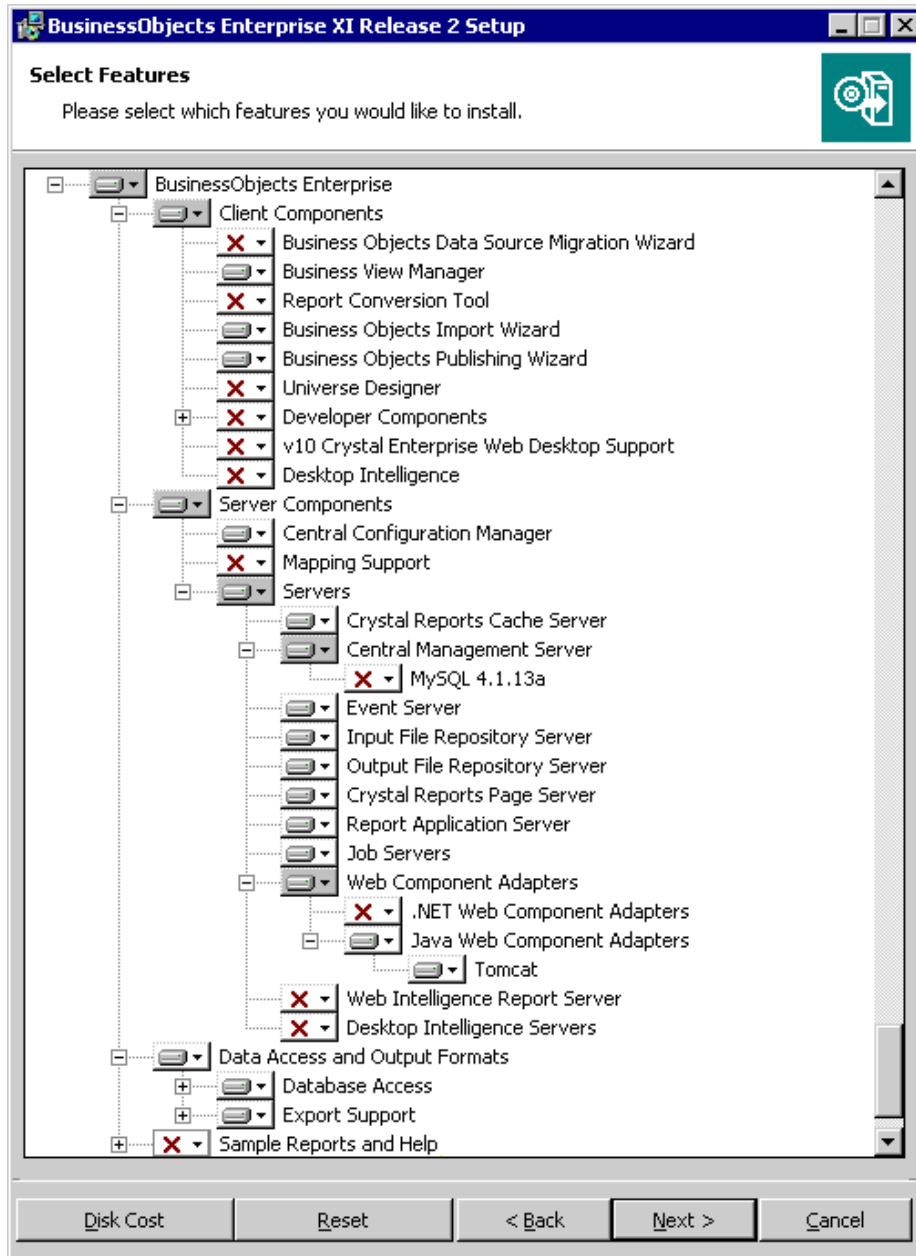
```
http://www.ibiblio.org/maven/mule/dependencies/xpp3/1.1.3.4d_b4_min/xpp3-1.1.3.4d_b4_min.jar
```
- 4** After downloading these files, run the file preinstall.bat from your staging folder.

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 X 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 61.)

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 subfolder, 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.)

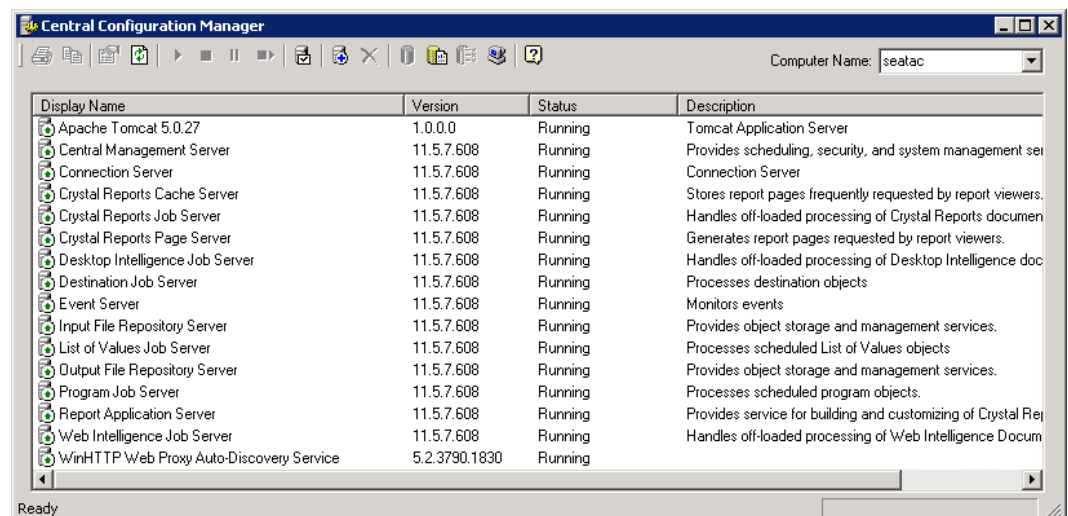
Click on the Next button.

- 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\bojce\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 parameters that Business Objects displays by default may be

insufficient. It's recommended that you reset this value 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-able 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:

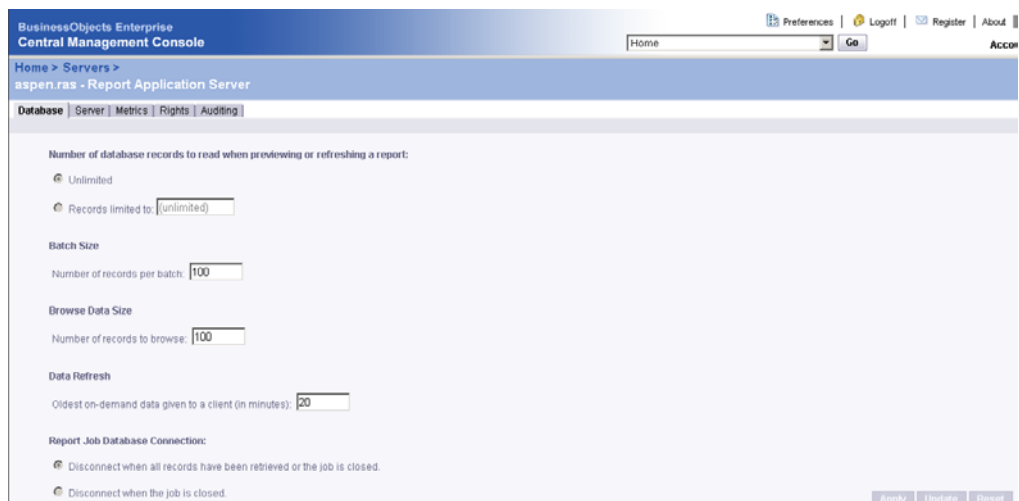


- 4 In the Servers panel, examine icons accompanying servers whose names contain the host name of the system to which you’ve logged on:

- 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).

BusinessObjects Enterprise
Central Management Console

Home > BusinessObjects Enterprise Applications > InfoView

Properties | Rights

Header and style:

Do not display logo
 Display Business Objects logo
 Display custom logo at this URL:

Use custom header colors
 Background:
 Text:

Style sheet:

Display:

Show "Preferences" button
 Show "Type" dropdown list on the Listing page
 Show "Filters" tab on the Schedule page
 Default Navigation View: Folder
 Category
 Maximum number of pages of objects to show at a time:

Object Listing:

Object title link for schedulable objects
 View the object
 View the latest successful instance of the object

Viewers:

Allow users to use the Advanced DHTML Viewer. If unchecked, users who are currently using the Advanced DHTML viewer will use the DHTML Viewer instead.
 Default viewer:

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.

BusinessObjects Enterprise
Central Management Console

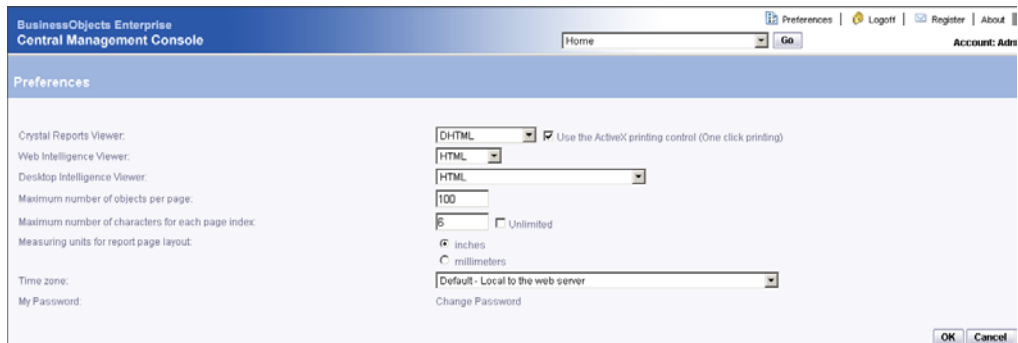
Home > BusinessObjects Enterprise Applications > Central Management Console > Advanced Rights

Choose which rights the group "Everyone" has for the object "CMC":
 Click Apply to see the updated Inherited rights. Rights that are neither granted nor denied (through inheritance or access level) are treated as denied.

"Everyone" will inherit rights from its parent groups

Inherited	Explicitly Granted	Explicitly Denied	Not Specified	The Right To:
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Log on to the CMC and view this object in the CMC
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Edit this object
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Modify the rights users have to this object
<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Securely modify rights users have to objects.

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

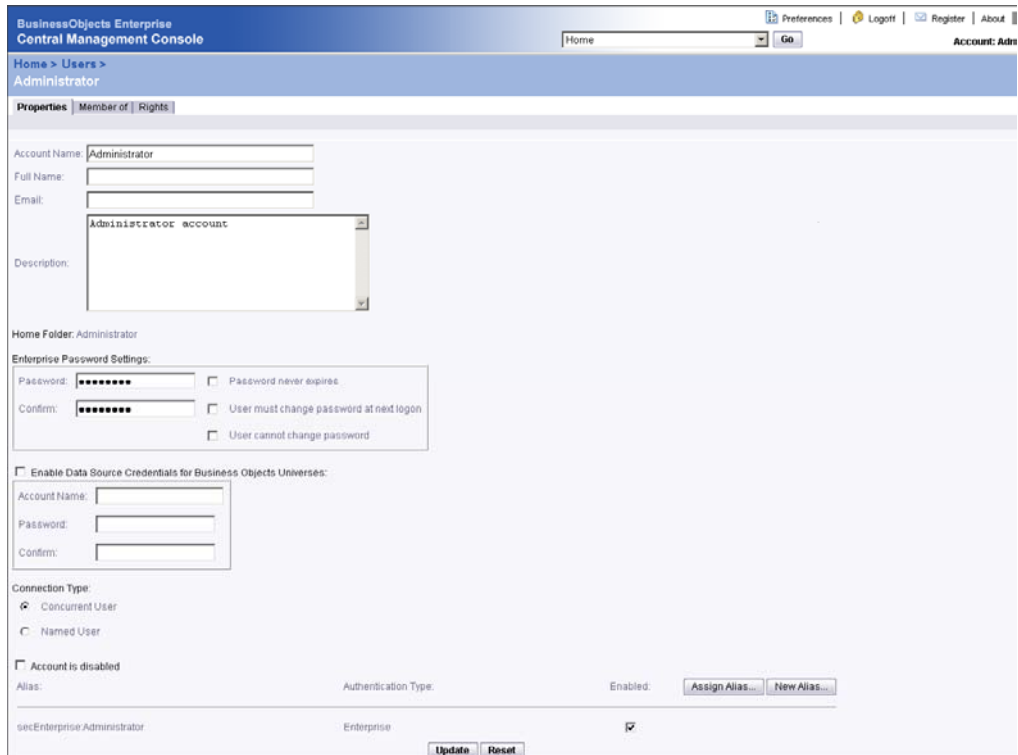


- 13** Make these edits:

- 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 65.)

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 65.)
- 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 xxxxx`, replacing the `xxxxx` 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 65.)

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 70.
 - `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 61.
 - 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 61.
 - `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 70.
 - `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 65).
 - `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\bojje\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
```

Running a Reporting Script

If you are installing ACTIVE Governance 7.2.2 or later, you must run a script in each instance of the Embedded Agents that is to be controlled by the ACTIVE Governance instance you have just installed. This script creates database synonyms without which two reports, introduced in version 7.2.2, cannot run. This script itself cannot run until the ACTIVE Governance schema is created, which is why it must be run now rather than during Embedded Agents installation.

In each Embedded Agents instance:

- 1 In step 2 of the database-server installation procedure, you created a staging directory (see page 14). Navigate to the following subdirectory of that staging directory:


```
AppsAccess\db\sql
```

- 2** Using a SQL tool, connect to the Oracle Applications database, supplying the username and password for the APPS user. For example, if the tool were SQLPlus:

```
connect apps/apps
```
- 3** Run the script `la_apps_access_synonyms_bo_ddl.sql`. You will be prompted for a parameter; in response, provide the Embedded Agents database username. For example:

```
@la_apps_access_synonyms_bo_ddl.sql  
Enter value for 1: XXLAAAPPS
```
- 4** Log off the SQL tool.

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.

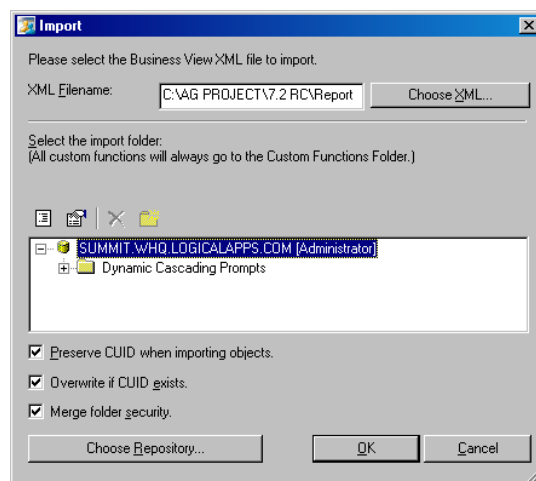
In your Oracle media pack, locate the Governance, Risk, and Compliance Controls Suite Disk 1. From its dist directory, copy the file `ag_722_report_center.zip` to your staging directory. Extract the contents of the file. This creates a Reports Center folder and, beneath it, a Business Views folder and 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 48 or 65).
 - User Name: The value *Administrator*.
 - Password: The Administrator password created in the Central Management Console (page 53 or 70).
 - 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.

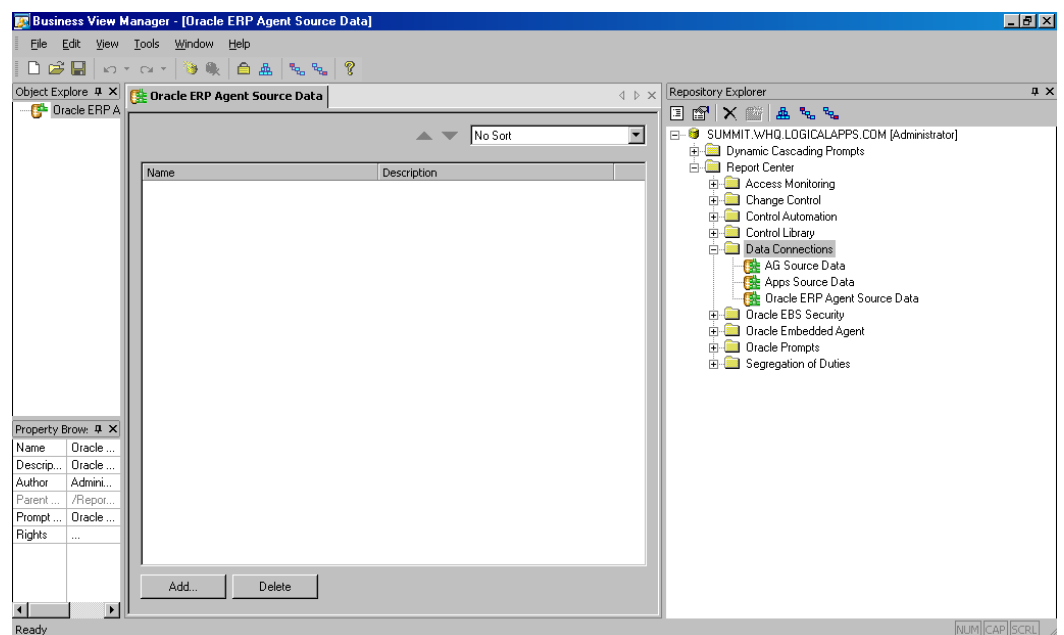


- 3 In the large white field, ensure that the line displaying the server host and domain name is selected.
- 4 Click on the Choose XML button. A navigation dialog opens; in it, navigate to the Report Center/Business Views subdirectory in your staging directory. Select any of the business views and click 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.

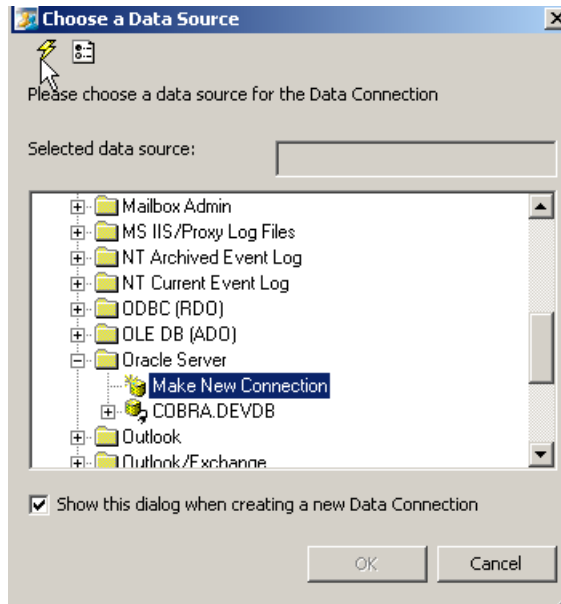
Establishing Data Connections

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.

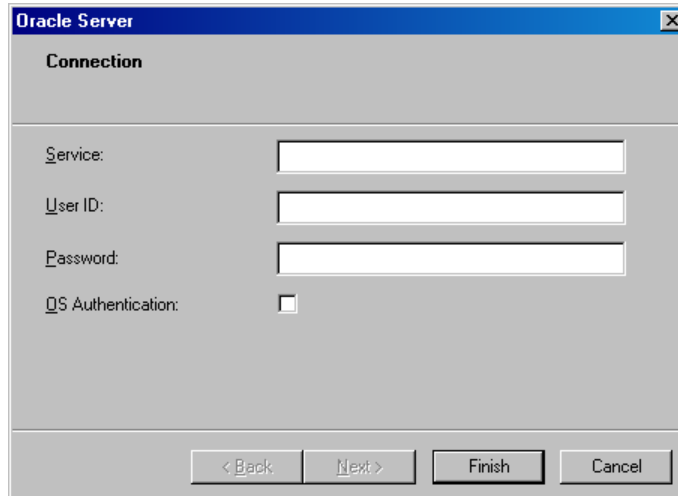
- 1 In the Repository Explorer, click on the Data Connections folder under Report Center. Descending from its entry, you should see dynamic data connections, among them AG Source Data and Oracle ERP Agent Source Data.



- 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:

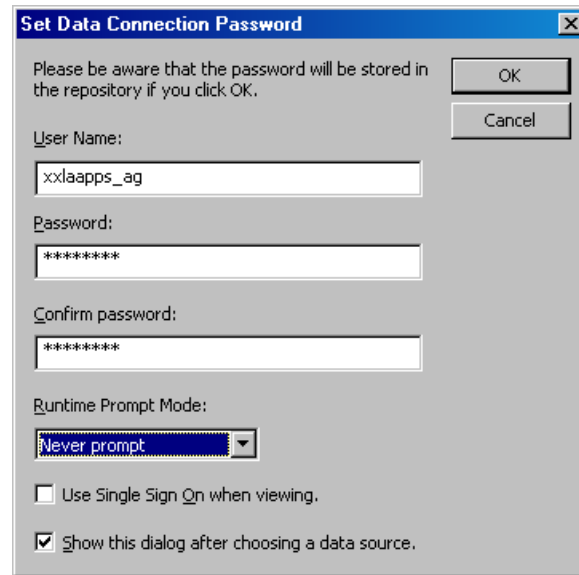


- In its list, click on Oracle Server. If no data connections yet exist, a Connection dialog opens. If connections exist, they are listed beneath the Oracle Server entry, along with a Make New Connection option. Click on that option to open the Connection dialog.



- 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.

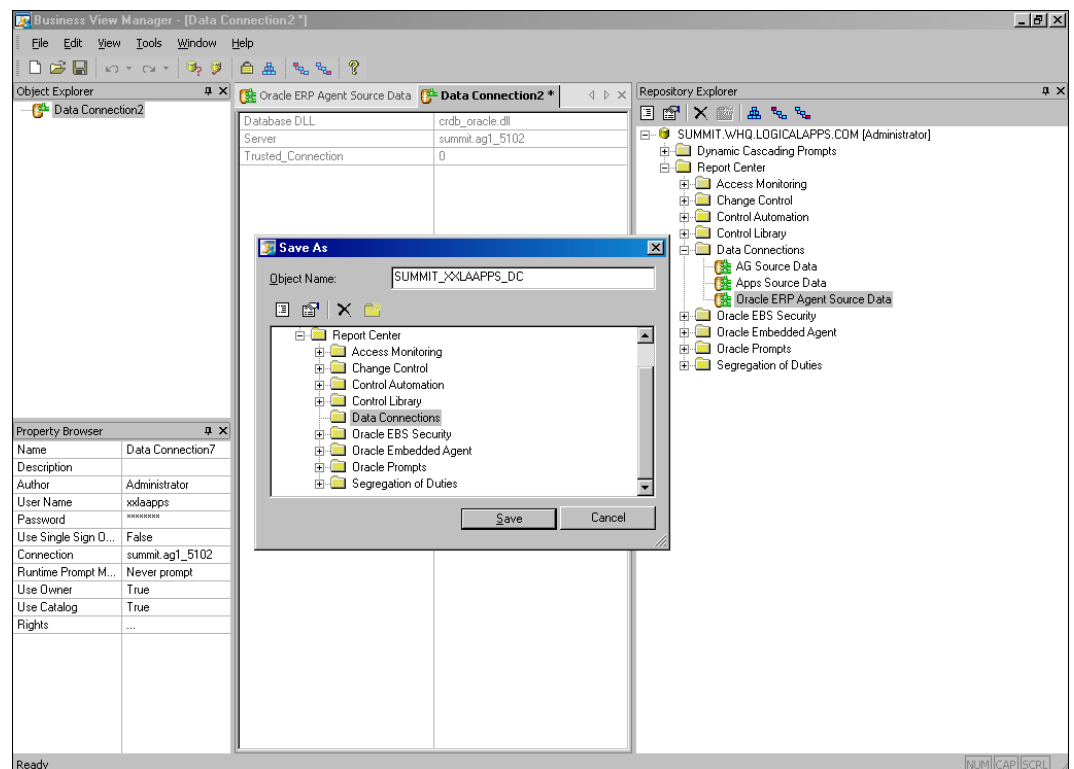
- 5 Click on the Finish button. A Set Data Connection Password dialog opens:



The dialog box titled "Set Data Connection Password" contains the following fields and options:

- A warning message: "Please be aware that the password will be stored in the repository if you click OK." with "OK" and "Cancel" buttons.
- User Name:
- Password:
- Confirm password:
- Runtime Prompt Mode:
- Use Single Sign On when viewing.
- Show this dialog after choosing a data source.

- 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 48 or 65).
 - User Name: The value *Administrator*.
 - Password: The Administrator password created in the Central Management Console (page 53 or 70).
 - 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 47 and 54), 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 49; for Windows, see page 65.

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 48) or connection port on a Windows server (page 65).
- 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 GovernorYou 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`: This property defaults to the Business Objects Administrator password created during installation (see page 53 or 70); 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.

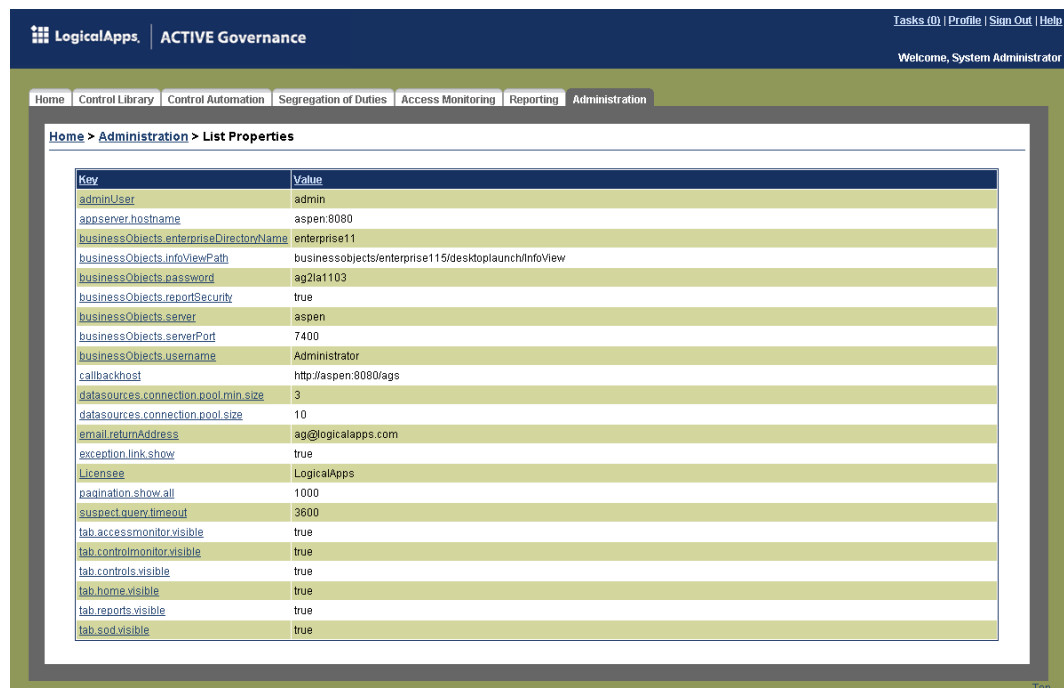
- `suspect.query.timeout`: This property sets the amount of time a control monitor may run before it times out. If control monitors fail to return suspects, try setting a larger value for `suspect.query.timeout` — its unit of measurement is seconds, and its default value is 3600. (This property is introduced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



The screenshot shows the ACTIVE Governance Administration interface. The top navigation bar includes the LogicalApps logo and the text "ACTIVE Governance". On the right, there are links for "Tasks (0)", "Profile", "Sign Out", and "Help", and a welcome message "Welcome, System Administrator". The main navigation tabs are Home, Control Library, Control Automation, Segregation of Duties, Access Monitoring, Reporting, and Administration. The Administration tab is selected, and the "List Properties" panel is open. The panel displays a table of configuration properties:

Key	Value
<code>adminUser</code>	admin
<code>appserver.hostname</code>	aspen:8080
<code>businessObjects.enterpriseDirectoryName</code>	enterprise11
<code>businessObjects.infoViewPath</code>	businessobjects/enterprise11/desktoplaunch/infoView
<code>businessObjects.password</code>	ag2ia1103
<code>businessObjects.reportSecurity</code>	true
<code>businessObjects.server</code>	aspen
<code>businessObjects.serverPort</code>	7400
<code>businessObjects.username</code>	Administrator
<code>callbackhost</code>	http://aspen:8080/ags
<code>datasources.connection.pool.min.size</code>	3
<code>datasources.connection.pool.size</code>	10
<code>email.returnAddress</code>	ag@logicalapps.com
<code>exception.link.show</code>	true
<code>Licensee</code>	LogicalApps
<code>pagination.show.all</code>	1000
<code>suspect.query.timeout</code>	3600
<code>tab.accessmonitor.visible</code>	true
<code>tab.controlmonitor.visible</code>	true
<code>tab.controls.visible</code>	true
<code>tab.home.visible</code>	true
<code>tab.reports.visible</code>	true
<code>tab.sod.visible</code>	true

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

LogicalApps | ACTIVE Governance

Tasks (0) | Profile | Sign Out | Help

Welcome, System Administrator

Home | Control Library | Control Automation | Segregation of Duties | Access Monitoring | Reporting | Administration

Home > Administration > List Properties > Edit Property

Property Key:

Property Value:

- 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.

LogicalApps | ACTIVE Governance

Tasks (0) | Profile | Sign Out | Help

Welcome, System Administrator

Home | Control Library | Control Automation | Segregation of Duties | Access Monitoring | Reporting | Administration

Home > Administration > Data Sources > Add Data Source

Label *

Description *

Type of Provider *

JDBC Driver *

Default Schema *

Database URL *

Username *

Password *

Confirm Password *

* Required

- 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_722_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 *LAAGDBx*, 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 91), 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.

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 48) or connection port on a Windows server (page 65).

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 55 or 73).
- 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 53 or 70.)
- 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 Embedded Agents have been installed, and which has been configured as a data source in ACTIVE Governance (see page 89).