Backing Up and Restoring ACTIVE Governance

Introduction

LogicalApps recommends that you back up your ACTIVE Governance installation regularly, so that you can restore it in the event of a system failure. An ACTIVE Governance instance consists of:

- An ACTIVE Governance Platform — a web-based application that both documents and enforces business controls.
- An ACTIVE Governance database schema, which stores controls documentation, some control enforcements, and other data required by the Platform. This schema runs in an Oracle database regardless of the version of ACTIVE Governance you use, and its conventional username is XXLAAPPS_AG.
- Business Objects, a third-party software package that provides reporting capability to the ACTIVE Governance Platform.
- A Business Objects schema, which stores report data. It may run in an Oracle or MySQL database if you use ACTIVE Governance version 7.1, but must run in an Oracle database if you use ACTIVE Governance version 7.2. Its conventional username is XXLAAPPS_BO.
- LogicalApps Embedded Agents — a set of applications that run within the Oracle Applications ERP environment and enable ACTIVE Governance to apply controls there. The Platform may connect to multiple instances of Oracle Applications, each running its own instance of the Embedded Agents.
- An Embedded Agents database schema, which stores rules created in Embedded Agent applications, segregation-of-duties rules and access requests created in the ACTIVE Governance Platform but actually implemented by access engines within the Embedded Agents, and other data used by the Embedded Agents. Each Embedded Agents instance has its own schema, for which the conventional username is XXLAAPPS.

It is assumed that your site has already established backup-and-recovery procedures for your applications and data, and that these procedures conform to backup-and-recovery procedures documented by Oracle. The purpose of this document is to provide guidelines for incorporating the backup and recovery of LogicalApps components into these procedures.

Backing Up ACTIVE Governance

To back up ACTIVE Governance and Business Objects, complete these procedures.

Shut Down the Server

To begin, shut down the ACTIVE Governance Server. If you run ACTIVE Governance on a Linux or UNIX operating system:

1. On the host server, execute the following commands. These source your environment (by running an ag.env file, which activates LogicalApps environment variables) and then run scripts located beneath the ACTIVE Governance home directory (which is represented by the environment variable $LAPPS_AG_HOME):

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

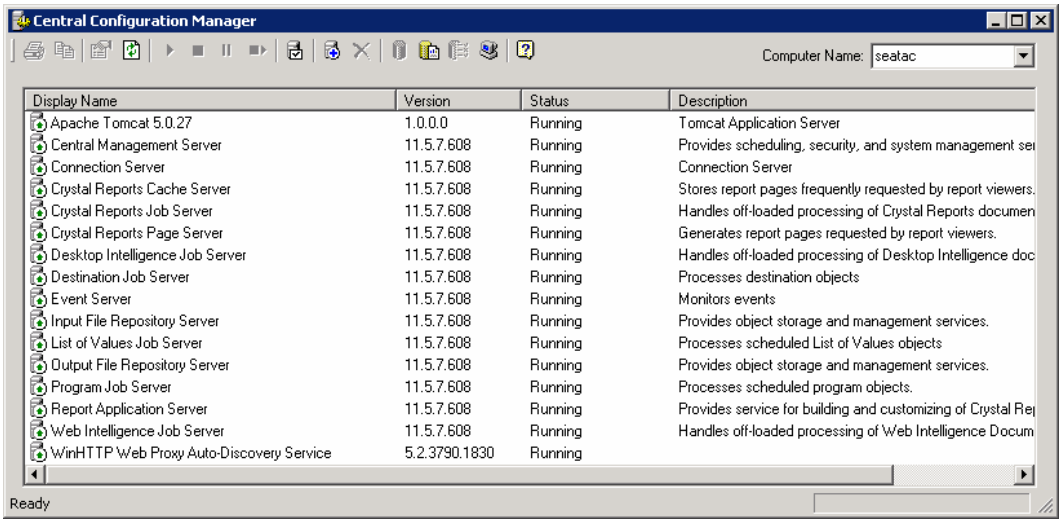
2. Pause a few minutes to allow Business Objects services to stop. Then run the following command to ensure that they have:

   ```
   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.

If you run ACTIVE Governance on the Windows operating system:

1. Open the Central Configuration Manager, which is available from a Business Objects group under the Windows Start menu. The following window opens:



2. Select the services (click on the first, hold down the shift key, and click on the last).
3. Click on the Stop icon, a square located sixth from the left in the tool bar near the top of the window. The services are stopped if the icons accompanying them display downward-pointing red arrows.

Back Up ACTIVE Governance and Business Objects

Perform a file system backup of the ACTIVE Governance Server home directory and all its subdirectories. This backs up both ACTIVE Governance and Business Objects files. You can use any backup process you want. The following examples show how to back up ACTIVE Governance and Business Objects to a tar file on a Linux or UNIX system, or a zip file on a Windows system.

If you run ACTIVE Governance on a Linux or UNIX operating system, the following commands would change to the ACTIVE Governance Server home directory and "tar" the ACTIVE Governance Server file system. (It's assumed that you've already run the ag.env file when you shut down the Server, and so your system will recognize the environment variable):

```
cd $LAPPS_AG_HOME
tar cvfz /backup/lapps_ag_server_backup.tar.gz *
```

If you run ACTIVE Governance on the Windows operating system, you can create a zip file rather than a tar file. Although several tools for creating zip files are available, the following procedure uses Windows Explorer:

1. Open Windows Explorer. (Right-click on the Start button, and select Explore in the menu that appears.)
2. Navigate to the parent folder of your ACTIVE Governance Server home folder. For example, if the home folder is C:\Program Files\LogicalApps, navigate to the C:\Program Files folder.
3. Click on File in the menu bar, then on New in the File menu, and then on Compressed (zipped) Folder in the New submenu.
4. A write-enabled entry — New Compressed (zipped) Folder.zip — appears in the active folder. Rename it, for example to AgBackup*MmDdYy*.zip. Be sure to retain the .zip extension.
5. Drag your ACTIVE Governance Server home folder into the zip folder.

Regardless of operating system, you would of course copy the tar or zip file to a machine other than your ACTIVE Governance Server, so that the backup would be available if your Server were to fail.

Export the ACTIVE Governance and Business Objects Schemas

Use the exp command, available from Oracle Client, to perform a database export of the ACTIVE Governance and Business Objects schemas.

The following examples provide the username, password, and SID for each schema as parameters to the exp command, and generate "dump" (.dmp) export files. It's important to specify distinct names for each .dmp file, so that one does not overwrite the other:

```
server2:oracle > exp AgUsername/AgPassword@<SID>
Export: Release 9.2.0.6.0 - Production on Tue Sep 25 23:01:00 2007
Copyright (c) 1982, 2002, Oracle Corporation. All rights reserved.
Connected to: Oracle9i Enterprise Edition Release 9.2.0.6.0 -
```

```
Production
With the Partitioning, OLAP and Oracle Data Mining options
JServer Release 9.2.0.6.0 – Production
Enter array fetch buffer size : 4096 >
Export file: expdat.dmp > /backup/xxlapps_ag_db_backup.dmp
(2)U(sers), or (3)T(ables): (2)U > U
Export grants (yes/no): yes >
Export table data (yes/no): yes >
Compress extents (yes/no): yes >
. . . .
server2:oracle > exp BoUsername/BoPassword@<SID>
Export: Release 9.2.0.6.0 – Production on Tue Sep 25 23:01:00 2007
Copyright (c) 1982, 2002, Oracle Corporation. All rights reserved.
Connected to: Oracle9i Enterprise Edition Release 9.2.0.6.0 –
Production
With the Partitioning, OLAP and Oracle Data Mining options
JServer Release 9.2.0.6.0 – Production
Enter array fetch buffer size : 4096 >
Export file: expdat.dmp > /backup/xxlapps_bo_db_backup.dmp
(2)U(sers), or (3)T(ables): (2)U > U
Export grants (yes/no): yes >
Export table data (yes/no): yes >
Compress extents (yes/no): yes >
. . . .
```

Restart the ACTIVE Governance Server

Finally, restart the ACTIVE Governance Server. If you run ACTIVE Governance on a Linux or UNIX operating system, execute the following commands on the host server. (Again, it's assumed you've already run the ag.env file, and so the server will recognize LogicalApps environment variables.)

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

If you run ACTIVE Governance on the Windows operating system:

1. Reopen the Central Configuration Manager (see page 2).
2. Select the services (click on the first, hold down the shift key, and click on the last).
3. Click on the Start icon, a rightward-pointing triangle located fifth from the left in the tool bar near the top of the window. The services are started if the icons accompanying them display upward-pointing green arrows.

Backing Up Embedded Agents

To back up Embedded Agents components, follow your standard procedures for backing up the Oracle EBS Environment in which the Embedded Agents have been installed. The backup must include all components that make up an Oracle EBS instance, including the APPL_TOP used by each web tier, application tier, concurrent manager tier, and Oracle EBS database tier. LogicalApps does not recommend the "dump" type of backup for the Embedded Agents repository.

Performing a Recovery

The procedure for performing a recovery depends on what has failed and therefore needs to be recovered.

If an Embedded Agents instance needs to be restored, the expectation is that you will recover the entire Oracle EBS instance in which the Embedded Agents have been installed. Follow procedures documented by Oracle for recovering an Oracle EBS environment, which typically involves not only restoring backed up data, but also using "redo logs" to recover changes to data made up to any point after the backup was taken.

If an ACTIVE Governance component fails, LogicalApps recommends that you restore all components (assuming that all have been backed up in a single procedure, as described in "Backing Up ACTIVE Governance") to ensure that all are synchronized with one another.

- Use the imp command, available from Oracle Client, to import the most recently exported ACTIVE Governance and Business Objects schemas.
- Restore the most recently backed-up ACTIVE Governance file system. Precisely how you do this will depend, of course, on how you backed it up.

  For example, if you used the tar command to back up files from a Linux or UNIX system, reuse the tar command to extract them.

  Or, if you created a zip folder to back up files from a Windows system, double-click on the zip folder and select the Extract All option from its File menu.