Oracle® Enterprise Performance Management System

Backup and Recovery Guide

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Oracle Enterprise Performance Management System Backup and Recovery Guide, Release 11.2

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About Backup and Recovery

Related Topics

- Assumed Knowledge
- Repositories, Databases, and File Systems
- Recovery Sequence

Assumed Knowledge

This guide is for administrators who install, configure, and manage Oracle Enterprise Performance Management System products. It assumes that you have the following skills and knowledge:

- Security and server administration skills
- Administration skills for your operating system (OS)
- Web application server administration skills
- A strong understanding of your organization's security infrastructure, including authentication providers such as Oracle Internet Directory, Lightweight Directory Access Protocol (LDAP), Microsoft Active Directory, and use of Secure Sockets Layer (SSL)
- Strong relational database management system (RDBMS) administration skills
- A strong understanding of your organization's database and server environments, including file systems
- A strong understanding of your organization's network environment and port usage

Repositories, Databases, and File Systems

Many Oracle Enterprise Performance Management System products use repositories, which contain items that the products require. Repository contents differ by product. Some product repositories use RDBMS, some use file systems, and some use both RDBMS and file systems.

Database Backup Types

You can use several types of database backup, depending on your computing environment.

See the Oracle Database Backup and Recovery User's Guide for more information on backup and recovery for Oracle databases.

Physical Backup

Physical backups are copies of physical database files. For example, a physical backup might copy database content from a local disk drive to another secure location.

A physical backup can be hot or cold:

- Hot backup—Users can modify the database during a hot backup. Log files of changes made during the backup are saved, and the logged changes are applied to synchronize the database and the backup copy. A hot backup is used when a full backup is needed and the service level does not allow system downtime for a cold backup.
- Cold backup—Users cannot modify the database during a cold backup, so the database and the backup copy are always synchronized. Cold backup is used only when the service level allows for the required system downtime.

You can perform a full or incremental physical backup:

> **Note:**
>
> Regular cold full physical backups are recommended.

- Full—Creates a copy of data that can include parts of a database such as the control file, transaction files (redo logs), archive files, and data files. This backup type protects data from application error and safeguards against loss by providing a way to restore original data. Perform this backup weekly, or biweekly, depending on how often your data changes. Making full backups cold, so that users cannot make changes during the backups, is recommended.

  > **Note:**
  >
  > The database must be in archive log mode for a full physical backup.

- Incremental—Captures only changes made after the last full physical backup. The files differ for databases, but the principle is that only transaction log files created since the last backup are archived. Incremental backup can be done hot, while the database is in use, but it slows database performance.

In addition to backups, consider using clustering or log shipping to secure database content. See the *Oracle Enterprise Performance Management System Installation and Configuration Guide* and the RDBMS documentation.

Logical Backup

A logical backup copies data, but not physical files, from one location to another. A logical backup is used to move or archive a database, tables, or schemas and to verify database structures.

A full logical backup enables you to copy these items across environments that use different components, such as operating systems:

- Entire applications
- Data repositories such as the Oracle Hyperion Shared Services Registry and Oracle Essbase cubes
- Individual artifacts such as scripts, data forms, and rule files

A logical export backup generates necessary Structured Query Language (SQL) statements to obtain all table data that is written to a binary file. A logical export backup does not contain database instance-related information, such as the physical

disk location, so you can restore the same data on another database machine. Periodic logical export backups (at least weekly) are recommended in case physical backups fail or the database machine becomes unavailable.

Backup with Lifecycle Management

You can use Oracle Hyperion Enterprise Performance Management System Lifecycle Management, which is provided with Oracle Hyperion Foundation Services, to perform logical backups. See the *Oracle Enterprise Performance Management System Lifecycle Management Guide*.

File System Backup Types

A complete file system backup includes an entire system directory. For example, backing up the EPM Oracle home directory backs up all installed EPM System products. You can also perform file-system backups of these types and frequencies:

- Post-installation—Directories created or modified if you reconfigure products
- Daily incremental—New directories or files or those modified since the previous day (including repository content and log files)
- Weekly full—All files in the directories for which you perform daily incremental backups
- As needed—Data that is modified infrequently

Recovery Sequence

Restore Oracle Hyperion Shared Services, and the components that you backed up for Shared Services, before restoring other products.

> **Caution:**
>
> It is imperative that backup and restore operations for Oracle Enterprise Performance Management System components be synchronized, because EPM System components continually read and write information to the Shared Services repository. When restoring Shared Services from a backup, for example, you must also restore registered EPM System components from backups that were made at the same time.

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Common Backup Tasks

Related Topics

- Preparing for Backup
- Database Backup
- File System Backup
- Backing Up OS Settings

Preparing for Backup

Complete these tasks before starting a cold backup:

- Stop products and ensure that all users have logged off.
- Stop all related services. See "Starting and Stopping EPM System Products" in the *Oracle Enterprise Performance Management System Installation and Configuration Guide*.
- Back up the Oracle Hyperion Foundation Services database.

> **Note:**
>
> You can also perform hot backups on Oracle Enterprise Performance Management System products, with some limitations for individual products as described later in this document. These backups must be performed at the same time.

Database Backup

Back up these databases:

- Databases that store Oracle Enterprise Performance Management System application data
- The Oracle Hyperion Shared Services repository

  The Shared Services repository contains the Oracle Hyperion Shared Services Registry, which stores most product configuration settings. It also contains Native Directory, provisioning information, and Oracle Hyperion Enterprise Performance Management Workspace preferences. Oracle recommends a physical full backup immediately after installation and configuration.

For instructions on backing up an individual EPM System component, see the section of this guide that is specific to the component. See EPM Workspace and Shared Services for instructions on backing up Oracle Hyperion Foundation Services.

Also back up any database, using the vendor documentation, that you use to store or extract data for use in product applications. Regular backups of database content are recommended for these EPM System components:

- Foundation Services
- Oracle Hyperion Calculation Manager
- Oracle Data Relationship Management
- Oracle Hyperion Financial Management
- Oracle Hyperion Financial Close Management
- Oracle Hyperion Planning
- Oracle Hyperion Profitability and Cost Management
- Oracle Hyperion Financial Data Quality Management, Enterprise Edition

These products do not use repository databases:

- Oracle Smart View for Office
- Oracle Hyperion Provider Services

File System Backup

Regular file system backups are recommended for these Oracle Enterprise Performance Management System products:

- Oracle Hyperion Foundation Services
- Oracle Data Relationship Management
- Oracle Hyperion Financial Management
- Oracle Hyperion Planning
- Oracle Hyperion Profitability and Cost Management

Oracle recommends daily backup of these items:

- *EPM_ORACLE_INSTANCE*`/config` (to back up the configuration and reconfiguration settings written to the Oracle Hyperion Shared Services Registry)
- *MIDDLEWARE_HOME*`/user_projects/domains/`*domain name* (EPM System WebLogic domain directory)

> **Note:**
>
> This item applies only to products that require a Web application server.

- *EPM_ORACLE_INSTANCE*`/import_export` (where Oracle Hyperion Enterprise Performance Management System Lifecycle Management content is located)
- Product applications and application data
- In Windows environments:
  - Windows registry: `HKEY_LOCAL_MACHINE` and all of its subkeys

> **Note:**
>
> For some EPM System components, you need only back up specific subkeys, as described in the procedures for backing up those components.

Backing up the Windows registry enables system recovery if Windows is reinstalled. See Backing Up OS Settings.

Not applicable for these products:

* Oracle Smart View for Office
* Oracle Hyperion Provider Services

See Backing Up OS Settings.

- `%CommonProgramFiles%/InstallShield/Universal`
- `%USERPROFILE%//oracle.instance`, which enables you to add, remove, reinstall, and upgrade products

- In environments:
  - `.oracle.instances`, which enables you to add, remove, reinstall, and upgrade products
  - `$HOME/InstallShield/Universal`
  - `$HOME/oraInventory`
  - Any files such as user profiles, kernel tuning parameters, or `.init` files that have been edited
  - `/etc` (system-level settings)
  - User home directories (user-level settings in hidden files and subdirectories)
  - `/usr`, `/lib`, and `/platform` (static system information)
  - `/var` (system logs and spool)

  You must back up user home directories and application-specific directories or file systems. Oracle recommends periodically testing the restoration procedure.

Back up the EPM Oracle home directory (to back up all installed products) if you install a new product or apply a patch.

Back up directories and files by copying them to another location. You can also use utilities provided with your OS (such as the Windows 2003 Backup Utility) or other third-party backup utilities. In case of failure, restore these directories and files by returning the copy to the original location.

Backing Up OS Settings

Windows registry settings and specific system variables in Windows and Linux environments should be backed up.

Backing Up Windows Registry Settings

Backing up the Windows registry (`HKEY_LOCAL_MACHINE` and its subkeys) enables system recovery if Windows is reinstalled.

> **Note:**
>
> For some Oracle Enterprise Performance Management System components, you need only back up specific subkeys, as described in the procedures for backing up those components.

You can use the Windows `regedit` command to create registry files to back up system and product components. If a failure occurs, you can run the registry files to restore the components.

> **Note:**
>
> The following procedure does not apply to Oracle Smart View for Office, or Oracle Hyperion Provider Services.

To back up a component with `regedit`:

1. Select **Start** and then **Run**.
2. Enter `regedit`, and click **OK**.
3. Right-click the subkey for the component in the left panel, and select **Export**.
4. Select a location for saving the registry file, enter a file name with the `.reg` extension, and click **Save**.

Example 2-1 System Variable Backup

Oracle recommends backing up the `HYPERION_HOME` and `EPM_ORACLE_HOME` system variables.t

> **Note:**
>
> This recommendation does not apply to Smart View.

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Foundation Services

Related Topics

- EPM Workspace and Shared Services
- Calculation Manager
- Smart View

EPM Workspace and Shared Services

Oracle Hyperion Enterprise Performance Management Workspace and Oracle Hyperion Shared Services share a file system and database.

> **Note:**
>
> You must synchronize Shared Services backups with product backups to preserve provisioning data.

Backing Up the File System

To back up the file system for EPM Workspace and Shared Services:

1. Copy these folders to a storage device or another network location after you install or reconfigure EPM Workspace.
   - *EPM_ORACLE_INSTANCE*
   - *MIDDLEWARE_HOME*`/user_projects/domains/`*domain name*

   > **Note:**
   >
   > This is a one-time backup of all Oracle Enterprise Performance Management System components that installed and configured on the machine.

2. Perform a weekly full or daily incremental backup of these subfolders of *EPM_ORACLE_INSTANCE*`/config`:
   - `FoundationServices`
   - `Foundation`

> **Note:**
>
> The `11.1.2.0` subfolder of *EPM_ORACLE_INSTANCE*`/config/foundation` contains `.reg.properties`, which is required for recovery.

3. **Optional:** Perform a monthly or weekly backup of *MIDDLEWARE_HOME*`/user_projects/domains/`*domain name*`/servers/`*managed server name*`/logs`, which contains only historical information.

Restoring EPM Workspace and Shared Services

To restore EPM Workspace and Shared Services after a failure:

1. Recover all components that you backed up, including Oracle Hyperion Shared Services Registry.

   Place the copied directories and files in their original locations.

2. Restart all products and related services. See "Starting and Stopping EPM System Products" in the *Oracle Enterprise Performance Management System Installation and Configuration Guide*.

Backing Up the Database

To back up the database for EPM Workspace and Shared Services:

1. Navigate to your database system tables.
2. Back up the Shared Services and EPM Workspace schema if you use Oracle RDBMS; otherwise, back up the SQL Server database.

Restoring the Database to a Different Server

If you back up a database from one server and restore it to a second server (for example, because the first database server is under maintenance), you must use the WebLogic Admin Console to update the data source and the `reg.properties` file:

To restore a database to a different server:

1. Update the data source:
   a. From the WebLogic Admin Console, select **Services**, then **dataSource**, and then **EPMSystemRegistry**.
   b. On the **Connection Pool** tab, specify the user name, password, and JDBC URL for the second server.
   c. Click **Save and Activate Changes**.
2. Open `reg.properties` with a text editor and update the user name, password, and JDBC server URL.

   The `reg.properties` file is in *EPM_ORACLE_INSTANCE*`/config/foundation/11.1.2.0`.

3. Start Shared Services.

Calculation Manager

To enable recovery after a failure, you need only back up the database that you use with Oracle Hyperion Calculation Manager, as described in the RDBMS documentation. Additional precautions that you can take:

- Back up the product components in *EPM_ORACLE_HOME*`/products/Foundation/CALC`.
- Perform a weekly full or daily incremental backup of *MIDDLEWARE_HOME*`/user_projects/domains/`*domain name*`/servers/`*managed server name*`/logs`.

Smart View

To enable recovery of Oracle Smart View for Office after a failure, copy the Microsoft Office documents containing Smart View data to another location.

Include these file types:

- XLS and XLSX (Excel)
- DOC and DOCX (Word)
- PPT and PPTX (PowerPoint)

To recover from a failure, replace the backed up Microsoft Office documents in their original locations.

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Essbase Components

Essbase backup and restore planning is required at both the application and instance level to have full flexibility to manage the life cycle of your Essbase instances, and also to provide disaster recovery. See Back Up and Restore Essbase for more information.

> **Note:**
>
> The file `ESS_ES_HOME/bin/essbase.properties` configured within the relevant servers should be backed up for EPM products using Java APIs (JAPI).

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Financial Performance Management Applications

Related Topics

- Planning
- Financial Management
- Tax Provision
- Financial Close Management
- Tax Governance
- Profitability and Cost Management

Planning

To enable Oracle Hyperion Planning recovery from a failure:

1. Back up related components, as described in Common Backup Tasks.

> **Note:**
>
> Be sure to back up the Planning system database as well as all individual application databases.

Backups of applications and related application databases must include these items:

- The application in Oracle Essbase
- The relational database for Planning
- Required Planning components

> **Tip:**
>
> Rather than back up the entire Windows registry, you can back up only these keys for Planning: `HKLM/Software/Oracle* nodes` and `HKLM/System/CurrentControlSet/Services/Oracle*`.

2. Back up the Essbase outline files for your applications.
3. Back up the full export of Essbase data.
4. Back up any calculation scripts and substitution variables associated with Essbase.
5. Back up the file system folder that contains Planning shared libraries:

- 32-bit: *EPM_ORACLE_HOME*`/products/Planning/lib`
- 64-bit: *EPM_ORACLE_HOME*`/products/Planning/lib64`

6. Linux: Back up custom scripts, such as startup files associated with Planning.
7. Back up common components in *EPM_ORACLE HOME*`/common/planning/11.1.2.0/lib`.
8. Ensure that the backup of *EPM_ORACLE_HOME*`/products/Planning` directory includes these files, and back them up manually if it does not:
   - `log4J.properties`
   - `essbase.properties`

To recover after a failure:

1. Stop all product and related services. See the *Oracle Enterprise Performance Management System Installation and Configuration Guide*.
2. Replace backed up files and directories in the original locations.
3. Restore the Planning databases.
4. Restart all servers and services.

See also Essbase Components.

Financial Management

Use the following procedure on every application and Web server to back up Oracle Hyperion Financial Management.

To enable recovery of Financial Management:

1. Perform a full database backup once per cycle:
   a. Stop Financial Management Web Service and Financial Management Java Service:
      - Oracle Hyperion Financial Management - Java Server (epmsystem1)
      - Oracle Hyperion HFM Server - Java Web Application (epmsystem1)
   b. Stop the related process `xfmdatasource.exe`.
2. Back up the Oracle Hyperion Shared Services Registry.
3. Back up any customized style sheets.

> **Note:**
>
> You must also back up Oracle Hyperion Shared Services.

To recover from an application server or Web server failure:

1. Reinstall and configure Financial Management on the failed application or Web server.

2. Stop all Financial Management processes and services on the newly configured server.
3. Restore the backed-up files to their original locations.
4. Restart the services.

To recover from a database server failure:

1. Stop all Financial Management processes and services on all application and Web servers.
2. Restore the database from the last full backup, applying transaction logs as needed.
3. Restart the database.
4. Restart the application and Web servers.

Tax Provision

To enable recovery of Oracle Hyperion Tax Provision, follow the procedures described in Financial Management.

Financial Close Management

To enable recovery Oracle Hyperion Financial Close Management data, back up the database. You can perform hot backups or cold backups. See Database Backup Types and your RDBMS documentation.

For additional details about how to clone a production environment in order to create a test environment, see Knowledge Article 1903665.1 on My Oracle Support (https://support.oracle.com/rs?type=doc&id=1903665.1), which provides instructions for a single node environment.

Tax Governance

To enable recovery of Oracle Hyperion Tax Governance, follow the procedures described in Financial Close Management.

Profitability and Cost Management

To enable Oracle Hyperion Profitability and Cost Management recovery from a failure:

1. Back up related components as described in Common Backup Tasks.
2. Back up the Profitability and Cost Management import staging area and the operational data store.

   Use the backup tools for your relational database. This could include using scripting or scheduler scripts.
3. Back up Oracle Essbase applications, databases, calculation scripts, and data filters.

   See Essbase Components, and the *Oracle Essbase Database Administrator's Guide*.

To recover from a failure, restore the backed-up components to their original locations and restore the database.

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Financial Reporting

Financial Reporting

Use Oracle Hyperion Enterprise Performance Management System Lifecycle Management to back up the Document Repository for Oracle Hyperion Financial Reporting.

To back up the Document Repository:

1. Log in to Oracle Hyperion Enterprise Performance Management Workspace.
2. From the **Navigate** menu, select **Administer**, and then select **Shared Services Console**.
3. In **Application Management**, expand the **Application Groups** node, and then expand **Default Application Group**.
4. Right-click **Document Repository** and then click **Explore**.
5. Select the repository objects you want to back up, and then click **Export**.
6. Enter a descriptive name in **File System Folder**, and then click **Export**.
7. In **Application Management**, expand the **File System** node, right-click the file you exported, and then click **Download**.

Back up the exported file with other artifacts as described in Common Backup Tasks.

You can download log files using the `ziplogs.bat` utility in the *EPM_ORACLE_INSTANCE*`\bin`.

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Data Management

Related Topics

- Data Relationship Management
- FDMEE

Data Relationship Management

Oracle Data Relationship Management uses separate databases and schemas for each application that you create.

To enable Data Relationship Management recovery from a failure:

1. Back up related components and application databases as described in Common Backup Tasks.
2. Regularly back up this files in *EPM_ORACLE_HOME*`/products/DataRelationshipManagement/server/config` to a storage device:

   `drm-config.xml`—Connection information for all Data Relationship Management applications that are hosted on the machine
3. Back up *EPM_ORACLE_HOME*`/products/DataRelationshipManagement/client/drm-client-application/Web.Config` whenever `Web.Config` is edited.
4. Back up scripts for the Data Relationship Management Batch Client that are used to run automated processes. The location of these files depends on the computer where the Batch Client program is run.
5. Back up XML files created by the Data Relationship Management Migration Utility (for archival purposes). The location of these files depends on the computer where the Migration Utility is run.

To recover after a failure:

1. Restore the copied database and configuration files to their original locations.
2. Reenter the passwords for the database in the configuration file.

FDMEE

To enable Oracle Hyperion Financial Data Quality Management, Enterprise Edition recovery after a crash, regularly back up the database schema that stores the mapping tables and data staging tables.

To recover after a failure, restore the directory to its original location and restore the database as described in the database vendor documentation.