

Oracle® Essbase Analytics Link for Hyperion Financial Management

Installation Guide

Release 11.1.1.4.002

Analytics Link Installation Guide, 11.1.1.4.002

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About Analytics Link Installation

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About this Guide

Use this guide to help plan your Oracle Essbase Analytics Link for Hyperion Financial Management installation and configuration.

Check the [Oracle Documentation Library](http://www.oracle.com/technology/documentation/epm.html) (<http://www.oracle.com/technology/documentation/epm.html>) on Oracle® Technology Network to see whether an updated version of this guide is available.

Assumed Knowledge

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

- Security and server administration skills
- Windows administration skills and or UNIX/Linux administration skills
- Web application server administration skills
- A strong understanding of your organization's security infrastructure, including authentication providers such as Oracle Internet Directory, LDAP, or Microsoft Active Directory, and use of SSL
- A strong understanding of your organization's database and server environments
- A strong understanding of your organization's network environment and port usage

Installation Documentation Roadmap

[Table 1](#) lists the tasks for installing and configuring Analytics Link.

Table 1 Documentation Roadmap

Task	Reference
Meeting system requirements and prerequisites	Chapter 2, “Preparing to Install Analytics Link”
Installing Analytics Link	Chapter 3, “Installing Analytics Link”
Configuring Analytics Link for Oracle WebLogic Server (for use with EPM System 11.1.2.0 and later product releases)	Chapter 4, “Configuring Analytics Link for EPM System Release 11.1.2.0 or 11.1.2.1”
Configuring Analytics Link for Apache Tomcat (for use with EPM System pre-11.1.2.0 product releases)	Chapter 5, “Configuring Analytics Link for EPM System Pre-11.1.2.0 Releases”
Enabling Analytics Link Administration Services Console Plug-in	Chapter 6, “Enabling Analytics Link Administration Services Console Plug-in”
Uninstalling Analytics Link	Chapter 7, “Uninstalling Analytics Link”

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Preparing to Install Analytics Link

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About Analytics Link

Analytics Link consists of these components:

- **Analytics Link Server**—A Web server that integrates Oracle Hyperion Financial Management applications with Oracle Essbase databases and manages all operations of Analytics Link.
- **Analytics Link Repository**—A relational database user/schema in which Analytics Link Server stores its internal data.
- **Analytics Link Data Synchronization Server**—Creates a database based on the data and metadata extracted from the Financial Management application. This database is a replica of the Financial Management application. As an aggregation engine, Data Synchronization Server performs data aggregation on demand.
- **Analytics Link Administration Services Console Plug-in**—The Analytics Link Server client, which provides the user interface for defining and managing Analytics Link Servers and bridges.
- **Analytics Link Financial Management Connector**—Enables Analytics Link Server to extract Financial Management application metadata.

Analytics Link System Requirements

Make sure that each computer on which you plan to install Analytics Link meets the system requirements in [Table 2](#).

Table 2 System Requirements

Category	Requirements
Operating System	(Windows: 32-bit or 64-bit; Linux: 64-bit only) <ul style="list-style-type: none">● Microsoft Windows 2008 Server● Microsoft Windows 2003 Standard Edition, SP 1 and SP 2● Microsoft Windows 2000 Server, SP 4 or later● Microsoft Windows 2000 Professional, SP 4 or later● Microsoft Windows XP Professional, SP 1a or later● Red Hat Enterprise Linux Release 5.3
Disk Space (Minimum)	217 MB required (which includes 71 MB for temporary files)
RDBMS	(32-bit or 64-bit) <ul style="list-style-type: none">● Oracle RDBMS 11_g● Oracle RDBMS 10_g● Microsoft SQL Server 2008¹● Microsoft SQL Server 2005¹
Web Application Server	<ul style="list-style-type: none">● WebLogic Server 11_g (10.3.2 or higher) (32-bit or 64-bit)²● Apache Tomcat (32-bit)³

¹When using Microsoft SQL Server as the Analytics Link repository and the Analytics Link Server is deployed on Apache Tomcat (which is the internal Web Application Server container), Microsoft SQL Server JDBC driver 2.0 (Type 4) must be installed on the computer where Analytics Link Server is installed. You must obtain the SQL Server JDBC driver from Microsoft.

²You must use WebLogic Server if you are using Analytics Link with 11.1.2.0 or later releases of EPM System.

³You must use Apache Tomcat if you are using Analytics Link with pre-11.1.2.0 releases of EPM System. Analytics Link automatically installs Apache Tomcat (32-bit).

Analytics Link Prerequisites

► Before you install Analytics Link:

- 1 Identify the computers on which you plan to install and configure Analytics Link components.
- 2 Verify that the computer on which you install Analytics Link meets the prerequisites for each component, as listed in [Table 3](#):

Table 3 Analytics Link Component Prerequisites

Analytics Link Component	Prerequisites
Analytics Link Server	<ul style="list-style-type: none"> ● WebLogic Server <p>If you are using Analytics Link with 11.1.2.0 or later releases of EPM System, only WebLogic Server is supported.</p> <p>Analytics Link Server must be installed on the same computer on which WebLogic Server runs.</p> <p>When using the Red Hat Enterprise Linux (64-bit) operating system, Analytics Link Server can only be deployed on WebLogic Server (64-bit).</p> <p>During the configuration process, deploy Analytics Link Server to the WebLogic Server EPMSysSystem domain.</p> <p>Analytics Link deploys Analytics Link Server based on the bitness (32-bit or 64-bit) of WebLogic Server.</p> <p>See Oracle Hyperion Foundation Services prerequisites in this table.</p> ● Apache Tomcat <p>If you are using pre-11.1.2.0 releases of EPM System, only Apache Tomcat is supported. Analytics Link automatically installs Apache Tomcat (32-bit).</p> <p>During the configuration process, Analytics Link Server is deployed to Apache Tomcat in 32-bit mode.</p>
Analytics Link Repository	<ul style="list-style-type: none"> ● Oracle RDBMS <p>Create a user using the following statements:</p> <pre>create user <EAL_user> identified by <password>; grant CREATE SESSION, CREATE VIEW, RESOURCE to <EAL_user>; ALTER USER <EAL_user> DEFAULT ROLE "RESOURCE";</pre> ● Microsoft SQL Server <p>Create a new database for the Analytics Link repository, and define a user (new or existing) as the owner of this database.</p> <p>If you plan to use Microsoft SQL Server as the Analytics Link repository and the Analytics Link Server is deployed on Apache Tomcat (which is the internal Web Application Server container), Microsoft SQL Server JDBC driver 2.0 (Type 4) must be installed on the computer where Analytics Link Server is installed. You must obtain the SQL Server JDBC driver from Microsoft.</p> <p>Caution! If you are installing this release of Analytics Link over a previous release of Analytics Link, you must clear the Analytics Link repository. See “Upgrading Analytics Link” on page 14.</p>
Foundation Services	<p>When Analytics Link Server is integrated with Foundation Services 11.1.2.0 or later releases, the EPM Oracle Instance in which the Foundation Services database is configured must exist on the computer where Analytics Link Server will be deployed. See “Configure Foundation Services” on page 28.</p> <ul style="list-style-type: none"> ● To configure Foundation Services in Analytics Link when using 11.1.2.0 or later releases of EPM System, you must know the name and password of a Foundation Services administrative user, EPM Instance Home, and, for the Foundation Services repository, the RDBMS type, host, port, user and password. ● To configure Foundation Services in Analytics Link when using pre-11.1.2.0 releases of EPM System, you must know the name of the computer on which Shared Services Server runs, the port number, and the name and password of a Oracle Hyperion Shared Services administrative user.
Analytics Link Data Synchronization Server	<p>Verify that the store directory for Data Synchronization Server has enough available disk space for the Financial Management applications that you plan to use with Analytics Link.</p>

Analytics Link Component	Prerequisites
Analytics Link Financial Management Connector	Install Analytics Link and configure Analytics Link Financial Management Connector on the computer on which the Financial Management Web Application is configured.
Analytics Link Administration Services Console Plug-in	Install Analytics Link and enable the Analytics Link Administration Services Console plug-in on each computer with an Oracle Essbase Administration Services client that you plan to use with Analytics Link.

Supported Upgrade Paths

Analytics Link requires a fresh installation.

See [“Upgrading Analytics Link” on page 14.](#)

Upgrading Analytics Link

► To upgrade your installation of Analytics Link:

1 Shut down the following service instances:

- Administration Services Console
- Data Synchronization Server
- Analytics Link Server

2 Uninstall Analytics Link using the version of the Oracle Universal Installer that was used to install the Analytics Link release you are uninstalling.

See [Chapter 7, “Uninstalling Analytics Link.”](#)

3 Install the newer version of Analytics Link.

See [Chapter 3, “Installing Analytics Link.”](#)

Caution! When upgrading Analytics Link from a previous release, you must clear the Analytics Link repository when you configure the Analytics Link repository, unregister Analytics Link Server from Shared Services when you configure Foundation Services, and reset Data Synchronization Server when you configure Data Synchronization Server.

Oracle Product Dependencies

Analytics Link requires the following Oracle products:

- Shared Services

- Financial Management
- Essbase
- Oracle Hyperion Provider Services (starting with Analytics Link release 11.1.1.3, using Provider Services to integrate Essbase and Financial Management through Analytics Link is optional)
- Administration Services

You can find EPM System installation documentation on the [Oracle Documentation Library](http://www.oracle.com/technology/documentation/epm.html) (<http://www.oracle.com/technology/documentation/epm.html>) on Oracle® Technology Network.

To install these EPM System products, see the following documentation:

- *Oracle Hyperion Enterprise Performance Management System Certification Matrix* (http://www.oracle.com/technology/software/products/ias/files/fusion_certification.html)
- *Oracle Hyperion Enterprise Performance Management System Installation Start Here*
- *Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide*

Release Compatibility

Analytics Link is compatible with the following EPM System products (see [Table 4](#)).

Table 4 Release Compatibility for Analytics Link

Compatible EPM System Products	Release
Shared Services	Releases: <ul style="list-style-type: none"> ● 11.1.2.1 ● 11.1.2.0 ● 11.1.1.3 ● 9.3.1.x
Financial Management	Releases: <ul style="list-style-type: none"> ● 11.1.2.1 ● 11.1.2.0 ● 11.1.1.3 ● 9.3.1.x
Essbase	Releases: <ul style="list-style-type: none"> ● 11.1.2.1 ● 11.1.2.0 ● 11.1.1.3 ● 9.3.1.x

Compatible EPM System Products	Release
Provider Services ¹	Releases: <ul style="list-style-type: none"> ● 11.1.2.1 ● 11.1.2.0 ● 11.1.1.3 ● 9.3.1.x
Administration Services	Releases: <ul style="list-style-type: none"> ● 11.1.2.1 ● 11.1.2.0 ● 11.1.1.3 ● 9.3.1.x

¹Starting with Analytics Link release 11.1.1.3, using Provider Services to integrate Essbase and Financial Management through Analytics Link is optional.

For Analytics Link, Oracle recommends using products from the same release; however, to use Analytics Link in a mixed-release environment, follow these guidelines:

- Essbase, Administration Services, and Provider Services (which is optional) must be from the same release.
- If Essbase and Financial Management are from different releases, Oracle recommends using separate installations of Shared Services: one for Essbase and one for Financial Management. For information on using Shared Services in a mixed-release environment, see the *Oracle Hyperion Enterprise Performance Management System Installation and Configuration Guide*.

Ports

For each Oracle product installed on a computer, the port number must be unique. (The same product on different computers can have the same port number.) If the default port is already in use on the computer, or if there is a port number conflict, resolve the issue before configuring Analytics Link.

With the exception of the Shared Services listen port, the ports listed in [Table 5](#) are configured using Analytics Link Configuration Tool.

Table 5 Ports

Port Type	Default Port Number
Analytics Link Server listen port	5423
Analytics Link Server shutdown port This port is used when deploying Analytics Link Server to the internal Web server container (Apache Tomcat).	5422
WebLogic EPMSys domain Admin Server port This port is used when deploying Analytics Link Server on WebLogic Server.	7001

Port Type	Default Port Number
Analytics Link Repository listen port	<ul style="list-style-type: none"> ● Oracle—1521 ● Microsoft SQL Server—1433
Analytics Link Data Synchronization Server listen port	5024
Port Data Synchronization Server uses to simulate the Essbase Server port	5025
Shared Services listen port This port is used when configuring Analytics Link Server.	<ul style="list-style-type: none"> ● 11.1.1.3 and later—28080 ● 9.3.1.x—58080

HFS_HOME Environment Variable

Analytics Link creates the *HFS_HOME* environment variable, which points to the directory where Analytics Link is installed.

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Installing Analytics Link

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About Installing Analytics Link in 32-bit or 64-bit Mode

The Analytics Link installation package supports installing all Analytics Link software components on supported 32-bit or 64-bit operating systems. During the installation and configuration process, when you configure the Analytics Link Server, the Web application server you choose determines whether Analytics Link is installed in 32-bit mode or 64-bit mode.

For example, if you use a 64-bit version of WebLogic Server, Analytics Link is installed in 64-bit mode. If you use Apache Tomcat, the 32-bit version of Tomcat is automatically installed and Analytics Link is installed in 32-bit mode. (Apache Tomcat is only supported when using Analytics Link with pre-11.1.2.0 releases of EPM System.)

Note: When using the Red Hat Enterprise Linux (64-bit) platform, Analytics Link Server can only be deployed on WebLogic Server (64-bit).

Installing Oracle Universal Installer 11.2

The installation and execution of Oracle Universal Installer must be done by the same user who installed EPM System.

Analytics Link is installed using Oracle Universal Installer 11.2. The Analytics Link installation package contains the installation package for Oracle Universal Installer 11.2.

The bitness of Oracle Universal Installer 11.2 depends on the operating system on which you are installing Analytics Link:

- **Windows:** Analytics Link is installed using Oracle Universal Installer 11.2 (32-bit), regardless of whether you are installing Analytics Link on a 32-bit or 64-bit Windows platform. Oracle Universal Installer 11.2 (32-bit) installs a version of Analytics Link that matches the bitness of the operating system.

- **Linux:** Analytics Link is installed using Oracle Universal Installer 11.2 (64-bit).

➤ To install Oracle Universal Installer 11.2:

- 1 **Create a directory in which to store the Analytics Link installation package.**

This directory is referred to as *download_location* in this procedure.

Note: Oracle recommends saving the installation package to a shared location.

- 2 **Unzip the Analytics Link installation package into *download_location*.**
- 3 **Navigate to the directory where the Oracle Universal Installer installation file is located.**

For example:

download_location/OracleUniversalInstaller_112000/Disk1/install

- 4 **Run the installation file for the platform you are using.**

- **Windows:** Run the `setup.exe` file.
- **Linux (64-bit):** Enter:
`./runInstaller.sh`

- 5 **On the Welcome page, click **Next**.**

Follow the instructions for the operating system on which you are installing Analytics Link:

- **Windows:** See [step 6](#).
- **Linux (64-bit):** See [step 7 on page 20](#).

- 6 **Windows:**

- a. On the Select Installation Type page, choose **Custom**. Then click **Next**.
- b. On the Specify Home Details page, specify the following information, and then click **Next**:
 - i. For **Name**, specify a new Home name for the Oracle Universal Installer 11.2 installation.
 - ii. For **Path**, specify the full path to the Oracle Universal Installer 11.2 installation location.
- c. On the Available Product Components page, all components should be selected with the exception of the **Oracle Software Packager**. Click **Next**.
- d. Review the information in the Summary page, and then click **Install**.

- 7 **Linux (64-bit):**

- a. On the Select Installation Type page, choose **Complete**. Then click **Next**.
- b. On the Specify Home Details page, specify the following information, and then click **Next**:
 - i. For **Name**, specify a new Home name for the Oracle Universal Installer 11.2 installation.

- ii. For **Path**, specify the full path to the Oracle Universal Installer 11.2 installation location.
- c. Review the information in the Summary page, and then click **Install**.

Running Oracle Universal Installer 11.2 to Install Analytics Link

The installation, configuration, and execution of Analytics Link must be done by the same user who installed EPM System.

You typically install EPM System products, including Analytics Link, in a distributed environment. Run Oracle Universal Installer on each computer on which you plan to install Analytics Link. All Analytics Link components are installed when you run the installation program.

► To install Analytics Link:

1 Run Oracle Universal Installer 11.2.

- **Windows:** From the **Start** menu, select **Programs**, then **Oracle-OUI_Home_Name**, then **Oracle Installation Products**, and then **Universal Installer**.
- **Linux (64-bit):** Change the root directory to `OUI_11.2_installation_location/oui/bin`; then enter:
`./runInstaller.sh`

Note: You must install Analytics Link from the Oracle Universal Installer 11.2 GUI. Installation of Analytics Link from the command prompt is not supported.

2 On the Welcome page, click **Next**.

3 On the Specify Source Location page, for **Path**, specify the full path to the Analytics Link `products.xml` file in `download_location/stage`. Then click **Next**.

4 On the Specify Home Details page, specify the following information, and then click **Next**:

- a. For **Name**, specify the Home name of the Oracle Universal Installer 11.2 installation.
 - **Windows:** See [step 6.b.i on page 20](#).
 - **Linux (64-bit):** See [step 7.b.i on page 20](#).
- b. The **Path** is automatically set to the Oracle Universal Installer 11.2 installation location.

5 On the Oracle Essbase Analytics Link Home Directory page, specify the path where Analytics Link should be installed, and then click **Next**.

See [“HFS_HOME Environment Variable” on page 17](#).

6 **Linux (64-bit) only:** On the Choose Directory page, specify the **EPM Instance Home**, and then click **Next**. For example:

`/opt/EPM/Middleware/user_projects/epmsystem1`

7 Review the information in the Summary page, and then click **Install**.

When the installation is complete, you must then configure each Analytics Link component. See [“Running Analytics Link Configuration Tool” on page 22](#).

Running Analytics Link Configuration Tool

Each Analytics Link component must be configured using Analytics Link Configuration Tool. Run the configuration tool on each computer hosting Analytics Link components to configure.

A log of Analytics Link Configuration Tool task output and error messages is written to `HFS_HOME\Work\config.log`.

► To configure Analytics Link:

1 Run Analytics Link Configuration Tool.

- **Windows:** When the installation is complete, Oracle Universal Installer automatically starts the Analytics Link Configuration Tool from the Configuration Tools page.

If you need to manually start the configuration tool, from the **Start** menu, select **Programs**, then **Oracle Analytics Link for Hyperion Financial Management**, and then **Start ConfigTool**.
- **Linux (64-bit):** Change the root directory to `HFS_HOME/bin`; then enter:

`./ConfigTool.sh`

Note: You must configure Analytics Link from the Analytics Link Configuration Tool GUI. Configuration of Analytics Link from the command prompt is not supported.

2 Review and complete each configuration page, clicking **Next** to move to the next page.

Follow the configuration instructions for the Web application server on which you are deploying Analytics Link:

- [Chapter 4, “Configuring Analytics Link for EPM System Release 11.1.2.0 or 11.1.2.1”](#)
- [Chapter 5, “Configuring Analytics Link for EPM System Pre-11.1.2.0 Releases”](#)

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Configuring Analytics Link for EPM System Release 11.1.2.0 or 11.1.2.1

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About the WebLogic Server EPMSystem Domain

If you are using Analytics Link with the 11.1.2.0 or 11.1.2.1 releases of EPM System, WebLogic Server is the supported Web application server.

The Analytics Link Server is deployed to the WebLogic Server EPMSystem domain.

The WebLogic Server EPMSystem domain was created when you installed EPM System products that use a Web application server, such as Shared Services, on WebLogic Server.

Each WebLogic Server domain has its own Admin Server.

Starting Oracle Services and Processes

Before continuing with configuring Analytics Link Server for deployment to WebLogic Server, start the following EPM System product services and processes:

- Shared Services

- WebLogic EPMSystem domain Admin Server

Components to Configure

Oracle Universal Installer installs all Analytics Link components on a given computer; however, if you are installing Analytics Link on multiple computers, you can configure only those components that you want to run on any given computer.

- Select the Analytics Link components that you want to configure on this computer and the components that you want to enable with Secure Sockets Layer (SSL) protocol.

1 Select the Analytics Link components that you want to configure:

- **Analytics Link Server**

See:

- [“Configure Analytics Link Server” on page 25](#)
- [“Configure Analytics Link Repository” on page 27](#)
- [“Configure Foundation Services” on page 28](#)
- [“Configure Financial Management Patch” on page 34](#)

- **Data Synchronization Server**

See:

- [“Configure Data Synchronization Server” on page 30](#)
- [“Configure Analytics Link Services” on page 32](#)

- **Financial Management Connector**

See:

- [“Configure Financial Management Connector” on page 33](#)
- [“Configure Financial Management Patch” on page 34](#)

2 In the **Enable SSL** group, select the components for which you want to enable an SSL connection:

- **Analytics Link Server and Data Synchronization Server**—Enables an SSL connection to all Analytics Link components.
- **RDBMS**—Enables an SSL connection to the RDBMS repositories to which Analytics Link connects.
- **Shared Services**—Enables SSL for Shared Services.

To configure and activate SSL, see [“Configure SSL” on page 25](#).

Use the configuration worksheets throughout this chapter to plan your configuration and to document the configuration steps for your company if required for disaster recovery.

Note the following about component selection:

- When running Analytics Link Configuration Tool for the first time on a computer, all Analytics Link components are selected by default. When running the configuration tool subsequent times on a computer, components that have been previously configured on the computer are selected.
- You can clear components that you either do not want to configure on this computer or that you want to configure later.
- You can rerun Analytics Link Configuration Tool to reconfigure previously configured components.
- The order of the configuration screens depends on the components that you are configuring at one time.

Configure SSL

Before you configure SSL, see [Appendix A, “Secure Sockets Layer \(SSL\) for Analytics Link.”](#)

For a list of the SSL certificates that you must import, see [“Configuring SSL When Configuring Analytics Link Server” on page 53](#) and [“Configuring SSL When Configuring Data Synchronization Server” on page 55.](#)

► To load certificates into Java Keystore:

- 1 Under **Analytics Link Server**, click **Import Certificates**.
- 2 On the **Import Certificates** dialog box, navigate to the directory where the required certificate is located.
- 3 Select a certificate file and then click **Import Certificates**.
- 4 Click **OK**.

The configuration tool imports the certificate into the correct certificate store.

► To load certificates into Oracle Wallet:

- 1 Under **Data Synchronization Server**, click **Import Certificates**.
- 2 On the **Import Certificates** dialog box, navigate to the directory where the required certificate is located.
- 3 Select the certificate file and then click **Import Certificates**.
- 4 Click **OK**.

The configuration tool imports the certificate into the correct certificate store.

Configure Analytics Link Server

Before you configure Analytics Link Server, see Analytics Link Server [“Analytics Link Prerequisites” on page 12](#) for WebLogic Server.

- Specify the settings for Analytics Link Server.

Table 6 describes the options for Analytics Link Server configuration.

Table 6 Configure Analytics Link Server Page

Field	Description	Your Information
Container	Select WebLogic Server . Note: If you are using Analytics Link with 11.1.2.0 or 11.1.2.1 releases of EPM System, you must select this option.	
Supported Essbase Version	Select 11.1.2 or 11.1.2.1 . Note: If you are running Analytics Link on Red Hat Enterprise Linux (64-bit), 11.1.2.1 is the only available option.	
Analytics Link Server Port	Specify the port number on which Analytics Link Server listens. The default port is 5423.	
Essbase Max Alias Tables	Specify the maximum number of alias tables for the Essbase database that Analytics Link creates. Maximum number of supported alias tables by Essbase release: <ul style="list-style-type: none">● 11.1.2.0 and 11.1.2.1–30● 9.3.1.x and 11.1.1.3–8	

Configure WebLogic Server

- Specify the settings for WebLogic Server.

Table 7 describes the options for WebLogic Server configuration:

Table 7 Configure WebLogic Server Page

Field	Description	Your Information
WebLogic Home	Specify the path to the WebLogic Home location. By default, the WebLogic Home location is: <i>MIDDLEWARE_HOME/wlserver_10.3</i>	
WebLogic User	Specify the name of the user for the WebLogic Server EPMSysAdmin domain Admin Server.	
WebLogic Password	Specify the password of the user.	

Field	Description	Your Information
WebLogic Host	This field is read only. <code>localhost</code> is automatically specified as the name of the computer on which WebLogic Server is located. Note: Analytics Link Server and WebLogic Server must be on the same computer.	
WebLogic Port	Specify the port number on which the WebLogic Server EPMSysSystem domain Admin Server listens. The default port is 7001.	
Analytics Link Server Name	Specify the name of the Analytics Link Server as defined in the WebLogic Server EPMSysSystem domain. For example: <code>EssbaseAnalyticsLink</code>	

Configure Analytics Link Repository

Before you configure the database for the Analytics Link repository, see [“Analytics Link Prerequisites” on page 12](#).

➤ Specify the settings for the Analytics Link repository database.

[Table 8](#) describes the options for Analytics Link repository configuration.

Table 8 Configure Analytics Link Repository Page

Field	Description	Your Information
RDBMS	Select a supported relational database type for the Analytics Link repository: <ul style="list-style-type: none"> ● Oracle If you select Oracle, there are two methods for entering the Oracle RDBMS connection description to the Analytics Link repository. See Connection Description in this table. Also see Clear DB in this table. ● Microsoft SQL Server 	
Database Host	Specify the host name of the database server on which the relational database is located.	
Database Port	Specify the port number on which the database server listens. <ul style="list-style-type: none"> ● Oracle default port—1521 ● Microsoft SQL Server default port—1433 	
Database Name	<ul style="list-style-type: none"> ● Oracle—Specify the Oracle database SID. ● Microsoft SQL Server—Specify the SQL Server database name. 	

Field	Description	Your Information
Database User	Specify the name of the Analytics Link repository user.	
Database Password	Specify the password of the Analytics Link repository user.	
JDBC Path	<p>Note: This option is enabled only if you selected Microsoft SQL Server as the Analytics Link repository in the RDBMS field.</p> <p>Click Browse or enter the full path to the Microsoft SQL Server JDBC 2.0 driver (Type 4) that is installed on the computer where the Data Synchronization Server is installed.</p> <p>Note: You must obtain the SQL Server JDBC driver from Microsoft.</p>	
Connection Description	<p>Note: This option is enabled only if you selected Oracle as the Analytics Link repository RDBMS. See RDBMS in this table.</p> <p>When Connection Description is selected:</p> <ul style="list-style-type: none"> The following fields are disabled on screen: Database Host, Database Port, and Database Name. In the Connection Description field, you must enter the Oracle RDBMS connection description to the Analytics Link repository. For example: <pre>(DESCRIPTION = (ADDRESS_LIST= (ADDRESS= (PROTOCOL=TCP) (HOST=oracleserver) (PORT=1521))) (CONNECT_DATA= (SERVICE_NAME=ORCL)))</pre> <p>When Connection Description is not selected, this field is disabled and the Database Host, Database Port, and Database Name fields are enabled. You must enter the appropriate Oracle RDBMS connection information in the Database Host, Database Port, and Database Name fields.</p>	
Clear DB	<p>Click to clear data from an existing Analytics Link repository. When prompted, click Yes to start the process and then click OK when the process is completed.</p> <p>Caution! If you are upgrading Analytics Link from a previous release, you must select Clear DB to clear the Analytics Link repository that was created in the previous Analytics Link release before you can use the Analytics Link repository in the release that you are currently installing. If you encounter an error message indicating that the database cannot be cleared, see “Analytics Link Repository: Cannot Clear Database Error Message” on page 59.</p>	

Configure Foundation Services

Before you configure Foundation Services, see [“Analytics Link Prerequisites” on page 12](#).

- Specify the settings for Foundation Services.

Table 9 describes the options for Foundation Services configuration.

Table 9 Configure Foundation Services Page

Field	Description	Your Information
Shared Services User	Specify the name of a Shared Services administrator.	
Shared Services Password	Specify the Shared Services administrator password.	
EPM Instance Home	Specify the path to EPM Instance Home. By default, the path is: <i>MIDDLEWARE_HOME\user_projects\empsystem1</i>	
Unregister Product from Shared Services	Click if you want to unregister this instance of Analytics Link Server from Foundation Services (Shared Services). Caution! If you are upgrading Analytics Link from a previous release, you must select Unregister Product from Shared Services to unregister the Analytics Link Server project from the previous release of Analytics Link before you can use Analytics Link Server in the release that you are currently installing. In Oracle Hyperion Shared Services Console, the Analytics Link Server project is listed as <i>LiveLink@server_name</i> under Application Groups .	
RDBMS	Select a supported relational database type for the Foundation Services repository: <ul style="list-style-type: none"> ● Oracle If you select Oracle, there are two methods for entering the Oracle RDBMS connection description to the Foundation Services repository. See Connection Description in this table. ● Microsoft SQL Server 	
Database Host	Specify the host name of the database server on which the active Foundation Services repository database is located. Note: Although Foundation Services must be installed on the same computer on which Analytics Link Server runs, if the Foundation Services instance that actively manages security in your environment runs on a different computer, specify the host name of the database server on which the active Foundation Services repository database is located.	
Database Port	Specify the port number on which the database server listens. The default port: <ul style="list-style-type: none"> ● Oracle default port—1521 ● Microsoft SQL Server default port—1433 	
Database Name	<ul style="list-style-type: none"> ● Oracle—Specify the Oracle database SID. ● Microsoft SQL Server—Specify the SQL Server database name. 	

Field	Description	Your Information
Database User	Specify the name of the Foundation Services repository database user.	
Database Password	Specify the password of the Foundation Services repository database user.	
Connection Description	<p>Note: This option is enabled only if you selected Oracle as the Foundation Services repository RDBMS. See RDBMS in this table.</p> <p>When Connection Description is selected:</p> <ul style="list-style-type: none"> The following fields are disabled on screen: Database Host, Database Port, and Database Name. In the Connection Description field, you must enter the Oracle RDBMS connection description to the Foundation Services repository. For example: <pre>(DESCRIPTION = (ADDRESS_LIST= (ADDRESS= (PROTOCOL=TCP) (HOST=<i>oracleserver</i>) (PORT=<i>1521</i>))) (CONNECT_DATA= (SERVICE_NAME=<i>ORCL</i>)))</pre> <p>When Connection Description is not selected, this field is disabled and the Database Host, Database Port, and Database Name fields are enabled. You must enter the appropriate Oracle RDBMS connection information in the Database Host, Database Port, and Database Name fields.</p>	

Configure Data Synchronization Server

Before you configure Data Synchronization Server, see [“Analytics Link Prerequisites” on page 12](#).

- Specify the settings for Data Synchronization Server.

[Table 10](#) describes the options for Data Synchronization Server configuration.

Table 10 Configure Data Synchronization Server Page

Field	Description	Your Information
Log File	Specify the full path where the Data Synchronization Server log file (<i>dss.log</i>) should be written.	
Data Store Dir	Specify the path to the directory where Data Synchronization Server stores data related to the Data Synchronization Server database.	

Field	Description	Your Information
Data Store Size	<p>Specify the maximum size (in MB) of disk space allocated to the Data Synchronization Server storage directory.</p> <p>Note: The store size must exceed the maximum memory size allocated to the Data Synchronization Server.</p>	
Job Units	<p>Specify the number of threads that Data Synchronization Server can use to process data.</p> <p>Note: The number of threads cannot exceed the number of CPU cores.</p>	
Query Units	<p>Specify the number of threads that Data Synchronization Server can use to process queries.</p> <p>Note: The number of threads cannot exceed double the number of CPU cores.</p>	
Max Memory Size	<p>Specify the maximum amount of memory (in MB) allocated to Data Synchronization Server processes.</p> <p>Note: The maximum memory size must be less than the store size.</p> <p>If the Data Synchronization Server is installed on a 32-bit Windows operating system, the maximum memory limit is 2600 MB. This is a limit of 32-bit Windows operating systems.</p>	
DSS Port	<p>Specify the port number on which Data Synchronization Server listens.</p> <p>The default port is 5024.</p>	
Essbase Port	<p>Specify the port number for the Analytics Link port that simulates the Essbase Server port.</p> <p>The default port is 5025.</p>	
Analytics Link Server Port	<p>Specify the port number on which Analytics Link Server listens.</p> <p>The default port is 5423.</p>	
Analytics Link Server Host	<p>Specify the name of the server on which Analytics Link Server is located.</p>	
Reset Data Synchronization Server	<p>Click to clear data from Data Synchronization Server.</p> <p>When prompted, click Yes to start the process and then click OK when the process is completed.</p> <p>Caution! If you are upgrading Analytics Link from a previous release, you must select Reset Data Synchronization Server to delete all Data Synchronization Server databases that were created in the previous release of Analytics Link before you can use Data Synchronization Server in the release that you are currently installing.</p>	

Configure Data Synchronization Server Administrator

- Specify the settings for the Data Synchronization Server Administrator.

Table 11 describes the options for the Data Synchronization Server Administrator configuration.

Table 11 Configure Data Synchronization Server Administrator Page

Field	Description	Your Information
User	Specify the name of the Data Synchronization Server administrator.	
Password	Specify the password of the Data Synchronization Server administrator.	

Configure Analytics Link Services

The Analytics Link components that are configured as Windows services depends on the components that you selected on the Components to Configure page:

- If you selected Analytics Link Server but did not select Data Synchronization Server, only Analytics Link Server is configured as a Windows service.
- If you selected Data Synchronization Server but did not select Analytics Link Server, only Data Synchronization Server is configured as a Windows service.
- If you selected Analytics Link Server and Data Synchronization Server, both components are configured as Windows services.

Windows service names:

- Hyperion Essbase Analytics Link Server - Web Application
- Oracle Analytics Link Data Synchronization Server

- Specify the settings for configuring Windows services.

Table 12 describes the options for Windows services configuration.

Table 12 Configure Analytics Link Services Page

Field	Description	Your Information
Run as Service	Select Run as Service to configure the Windows service.	

Field	Description	Your Information
Log on As	<p>If you are configuring Analytics Link Server only, or are configuring Analytics Link Server and Data Synchronization Server, select This Account.</p> <ul style="list-style-type: none"> Enter the name of the user who installed Analytics Link Server. Only this user has the proper permissions for all Analytics Link Server configuration files. This user must have permission to run Windows services. <p>The user name must be formatted as:</p> <p><i>domain\user_name</i></p> <ul style="list-style-type: none"> Enter the user password. <p>If you are configuring Data Synchronization Server only, you can enter the name and password of any user who has permission to run Windows services. Or you can select Local System Account.</p>	

Configure Financial Management Connector

Before you configure Analytics Link Financial Management Connector, see “[Analytics Link Prerequisites](#)” on page 12.

The Financial Management Application Server uses Microsoft IIS (Internet Information Services) Web Server.

Note: IIS6 Metabase Compatibility and IIS6 Scripting Tools roles must be installed as part of the IIS7 installation on Windows Server 2008. Without these roles, the Financial Management Connector component cannot be properly installed and configured.

➤ Specify the settings for Analytics Link Financial Management Connector.

[Table 13](#) describes the options for Analytics Link Financial Management Connector configuration.

Table 13 Configure Analytics Link Financial Management Connector Page

Field	Description	Your Information
Anonymous Access	<p>Select Anonymous Access, if the user wants to use the anonymous access method for accessing the Microsoft IIS Web site that Analytics Link creates to connect to Financial Management Server.</p> <p>Note: If you select Anonymous Access and you want to use the predefined credentials, do not specify a user and password.</p>	

Field	Description	Your Information
User	<p>Define the operation system user that will be used for anonymous access. The user name must be formatted as:</p> <p><i>domain\user_name</i></p> <p>Note: If you want to use the default IIS user, leave this field blank.</p>	
Password	<p>Define the password of the operation system user that will be used for anonymous access.</p> <p>Note: If you want to use the default IIS user, leave this field blank.</p>	

Configure Financial Management Patch

Automatic conversion of Financial Management Dynamic Accounts into Essbase is supported for the following versions of Financial Management:

- Financial Management 11.1.2.0 and later—Supported by default. No patch is required.
 - Financial Management 11.1.1.3—Requires that you install Financial Management Patch 9450270.
- Specify the setting for the Financial Management patch.
- **11.1.1.3-32-bit**—Select this option if you are using:
 - Financial Management 11.1.1.3 and you have installed Financial Management Patch 9450270
 - Financial Management 11.1.2.0 or later
 - **None**—Select this option if you are:
 - Using a Financial Management pre-11.1.1.3 release
 - Unsure whether a patch has been installed

Note: Analytics Link Configuration Tool does not install Financial Management patches for you. You must install Financial Management patches yourself.

Summary

- To complete the configuration process:
- 1 On the **Summary** page, review the information for the components that you configured in this session.
User passwords are encrypted for security.
 - 2 Click **Finish**.
 - 3 Review the *HFS_HOME\Work\config.log* file for error or exception messages.

4 On the next page, click **OK**.

Caution! During the configuration of Analytics Link Server, Analytics Link Configuration Tool checks for the existence of the *ESSBASEPATH* system variable. If *ESSBASEPATH* does not exist, Analytics Link creates the system variable. If *ESSBASEPATH* already exists, the configuration tool opens a pop-up window with a message indicating that *ESSBASEPATH* is already set globally and might interfere with creating a partition between the Data Synchronization Server and Essbase databases. If you encounter the pop-up window and a partition is not created during the creation of the Essbase database, contact Oracle Technical Support.

End of Installation

To exit the installation program, click **Exit**, and then **Yes**.



Configuring Analytics Link for EPM System Pre-11.1.2.0 Releases

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About Apache Tomcat (Internal Web Server)

If you are using Analytics Link with pre-11.1.2.0 releases of EPM System, Apache Tomcat is the supported Web application server.

Starting Oracle Services and Processes

Before continuing with configuring Analytics Link Server for deployment to Apache Tomcat, start Shared Services.

Components to Configure

Oracle Universal Installer installs all Analytics Link components on a given computer; however, if you are installing Analytics Link on multiple computers, you can configure only those components that you want to run on any given computer.

- Select the Analytics Link components that you want to configure on this computer and the components that you want to enable with Secure Sockets Layer (SSL) protocol.

1 Select the Analytics Link components that you want to configure:

- **Analytics Link Server**

See:

- [“Configure Analytics Link Server” on page 39](#)
- [“Configure Analytics Link Repository” on page 40](#)
- [“Configure Foundation Services” on page 41](#)
- [“Configure Financial Management Connector” on page 45](#)

- **Data Synchronization Server**

See:

- [“Configure Data Synchronization Server” on page 42](#)
- [“Configure Analytics Link Services” on page 44](#)

- **HFM Connector**

See:

- [“Configure Financial Management Connector” on page 45](#)
- [“Configure Financial Management Patch” on page 46](#)

2 In the **Enable SSL group, select the components for which you want to enable an SSL connection:**

- **Analytics Link Server and Data Synchronization Server**—Enables an SSL connection to all Analytics Link components.
- **RDBMS**—Enables an SSL connection to the RDBMS repositories to which Analytics Link connects.
- **Shared Services**—Enables an SSL connection to Shared Services.

To configure and activate SSL, see [“Configure SSL” on page 39](#).

Use the configuration worksheets throughout this chapter to plan your configuration and to document the configuration steps for your company if required for disaster recovery.

Note the following about component selection:

- When running Analytics Link Configuration Tool for the first time on a computer, all Analytics Link components are selected by default. When running the configuration tool subsequent times on a computer, components that have been previously configured on the computer are selected.
- You can clear components that you either do not want to configure on this computer or that you want to configure later.
- You can rerun Analytics Link Configuration Tool to reconfigure previously configured components.

- The order of the configuration screens depends on the components that you are configuring at one time.

Configure SSL

Before you configure SSL, see [Appendix A, “Secure Sockets Layer \(SSL\) for Analytics Link.”](#)

For a list of the SSL certificates that you must import, see “Configuring SSL When Configuring Analytics Link Server” on page 53 and “Configuring SSL When Configuring Data Synchronization Server” on page 55.

➤ To load certificates into Java Keystore:

- 1 Under **Analytics Link Server**, click **Import Certificates**.
- 2 On the **Import Certificates** dialog box, navigate to the directory where the required certificate is located.
- 3 Select a certificate file and then click **Import Certificates**.
- 4 Click **OK**.

The configuration tool imports the certificate into the correct certificate store.

➤ To load certificates into Oracle Wallet:

- 1 Under **Data Synchronization Server**, click **Import Certificates**.
- 2 On the **Import Certificates** dialog box, navigate to the directory where the required certificate is located.
- 3 Select the certificate file and then click **Import Certificates**.
- 4 Click **OK**.

The configuration tool imports the certificate into the correct certificate store.

Configure Analytics Link Server

Before you configure Analytics Link Server, see “[Analytics Link Prerequisites](#)” on page 12.

[Table 14](#) describes the options for Analytics Link Server configuration on Apache Tomcat.

Table 14 Configure Analytics Link Server Page

Field	Description	Your Information
Container	Select Internal Web Server . Note: You must select this option if you are using Analytics Link with pre-11.1.2.0 releases of EPM System.	
Supported Essbase Version	Select 9.3.1 and 11.1.1 .	

Field	Description	Your Information
Analytics Link Server Port	Specify the port number on which Analytics Link Server listens. The default port is 5423.	
Essbase Max Alias Tables	Specify the maximum number of alias tables for the Essbase database that Analytics Link creates. Essbase releases 9.3.1.x and 11.1.1.3 support 8 alias tables.	
Analytics Link Shutdown Port	Specify the shutdown port number for Analytics Link Server. The default port is 5422.	

Configure Analytics Link Repository

Before you configure the database for the Analytics Link repository, see [“Analytics Link Prerequisites” on page 12](#).

- Specify the settings for the Analytics Link repository database.

[Table 15](#) describes the options for Analytics Link repository configuration.

Table 15 Configure Analytics Link Repository Page

Field	Description	Your Information
RDBMS	Select a supported relational database type for the Analytics Link repository: <ul style="list-style-type: none"> ● Oracle <p>Note: If you select this option, you must provide information about how Oracle connects to the Analytics Link repository. See Connection Description in this table.</p> <ul style="list-style-type: none"> ● Microsoft SQL Server 	
Database Host	<p>Note: This option is displayed only if you selected Microsoft SQL Server as the Analytics Link repository in the RDBMS field. If you selected Oracle, see Connection Description in this table.</p> <p>Specify the host name of the database server on which the relational database is located.</p>	
Database Port	<p>Note: This option is displayed only if you selected Microsoft SQL Server as the Analytics Link repository in the RDBMS field. If you selected Oracle, see Connection Description in this table.</p> <p>Specify the port number on which the database server listens.</p> <ul style="list-style-type: none"> ● Oracle default port—1521 ● Microsoft SQL Server default port—1433 	

Field	Description	Your Information
Database Name	<p>Note: This option is displayed only if you selected Microsoft SQL Server as the Analytics Link repository in the RDBMS field. If you selected Oracle, see Connection Description in this table.</p> <ul style="list-style-type: none"> ● Oracle—Specify the Oracle database SID. ● Microsoft SQL Server—Specify the SQL Server database name. 	
Database User	Specify the name of the Analytics Link repository user.	
Database Password	Specify the password of the Analytics Link repository user.	
JDBC Path	<p>Note: This option is displayed only if you selected Microsoft SQL Server as the Analytics Link repository in the RDBMS field.</p> <p>Click Browse or enter the full path to the Microsoft SQL Server JDBC 2.0 driver (Type 4) that is installed on the computer where the Data Synchronization Server is installed.</p> <p>Note: You must obtain the SQL Server JDBC driver from Microsoft.</p>	
Connection Description	<p>Note: This option is displayed only if you selected Oracle as the Analytics Link repository RDBMS. See RDBMS in this table.</p> <p>When Oracle is selected as the Analytics Link repository RDBMS:</p> <ul style="list-style-type: none"> ● The following fields are disabled on screen: <ul style="list-style-type: none"> ○ Database Host ○ Database Port ○ Database Name ● In this field, you must provide the following information about how Oracle RDBMS connects to the Analytics Link repository: <pre>(DESCRIPTION = (ADDRESS_LIST= (ADDRESS= (PROTOCOL=TCP) (HOST=<i>oracleserver</i>) (PORT=1521))) (CONNECT_DATA= (SERVICE_NAME=ORCL)))</pre> 	
Clear DB	<p>Click to clear data from an existing Analytics Link repository. When prompted, click Yes to start the process and then click OK when the process is completed.</p> <p>Caution! If you are upgrading Analytics Link from a previous release, you must select Clear DB to clear the Analytics Link repository that was created in the previous Analytics Link release before you can use the Analytics Link repository in the release that you are currently installing.</p>	

Configure Foundation Services

Before you configure Foundation Services, see [“Analytics Link Prerequisites” on page 12](#).

- Specify the settings for Foundation Services.

Table 16 describes the options for Foundation Services configuration.

Table 16 Configure Foundation Services Page

Field	Description	Your Information
Shared Services Host	Specify the host name of the computer on which Shared Services Server is installed.	
Shared Services Port	Specify the port number on which Shared Services Server listens. The default port: <ul style="list-style-type: none">● 11.1.1.3 and later—28080● 9.3.1—58080	
Shared Services User	Specify the name of a Shared Services administrator.	
Shared Services Password	Specify the password of the Shared Services administrator.	
Unregister Product from Shared Services	Click if you want to unregister this instance of Analytics Link Server from Foundation Services (Shared Services). Caution! If you are upgrading Analytics Link from a previous release, you must select Unregister Product from Shared Services to unregister the Analytics Link Server project from the previous release of Analytics Link before you can use Analytics Link Server in the release that you are currently installing. In Oracle Hyperion Shared Services Console, the Analytics Link Server project is listed as <i>LiveLink@server_name</i> under Application Groups .	

Configure Data Synchronization Server

Before you configure Data Synchronization Server, see “[Analytics Link Prerequisites](#)” on page 12.

- Specify the settings for Data Synchronization Server.

Table 17 describes the options for Data Synchronization Server configuration.

Table 17 Configure Data Synchronization Server Page

Field	Description	Your Information
Log File	Specify the full path where the Data Synchronization Server log file (<i>dss.log</i>) should be written.	
Data Store Dir	Specify the path to the directory where Data Synchronization Server stores data related to the Data Synchronization Server database.	

Field	Description	Your Information
Data Store Size	<p>Specify the maximum size (in MB) of disk space allocated to the Data Synchronization Server storage directory.</p> <p>Note: The store size must exceed the maximum memory size allocated to the Data Synchronization Server.</p>	
Job Units	<p>Specify the number of threads that Data Synchronization Server can use to process data.</p> <p>Note: The number of threads cannot exceed the number of CPU cores.</p>	
Query Units	<p>Specify the number of threads that Data Synchronization Server can use to process queries.</p> <p>Note: The number of threads cannot exceed double the number of CPU cores.</p>	
Max Memory Size	<p>Specify the maximum amount of memory (in MB) allocated to Data Synchronization Server processes.</p> <p>Note: The maximum memory size must be less than the store size.</p> <p>If the Data Synchronization Server is installed on a 32-bit Windows operating system, the maximum memory limit is 2600 MB. This is a limit of 32-bit Windows operating systems.</p>	
DSS Port	<p>Specify the port number on which Data Synchronization Server listens.</p> <p>The default port is 5024.</p>	
Essbase Port	<p>Specify the port number for the Analytics Link port that simulates the Essbase Server port.</p> <p>The default port is 5025.</p>	
Analytics Link Server Port	<p>Specify the port number on which Analytics Link Server listens.</p> <p>The default port is 5423.</p>	
Analytics Link Server Host	<p>Specify the name of the server on which Analytics Link Server component is located.</p>	
Reset Data Synchronization Server	<p>Click to clear data from Data Synchronization Server.</p> <p>When prompted, click Yes to start the process and then click OK when the process is completed.</p> <p>Caution! If you are upgrading Analytics Link from a previous release, you must select Reset Data Synchronization Server to delete all Data Synchronization Server databases that were created in the previous release of Analytics Link before you can use Data Synchronization Server in the release that you are currently installing.</p>	

Configure Data Synchronization Server Administrator

- Specify the settings for the Data Synchronization Server Administrator.

Table 18 describes the options for the Data Synchronization Server Administrator configuration.

Table 18 Configure Data Synchronization Server Administrator Page

Field	Description	Your Information
User	Specify the name of the Data Synchronization Server administrator.	
Password	Specify the password of the Data Synchronization Server administrator.	

Configure Analytics Link Services

The components that are configured as Windows services depends on the components that you selected on the Components to Configure page:

- If you selected Analytics Link Server but did not select Data Synchronization Server, only Analytics Link Server is configured as a Windows service.
- If you selected Data Synchronization Server but did not select Analytics Link Server, only Data Synchronization Server is configured as a Windows service.
- If you selected Analytics Link Server and Data Synchronization Server, both components are configured as Windows services.

Windows service names:

- Oracle Essbase Analytics Link
- Oracle Analytics Link Data Synchronization Server

- Specify the settings for configuring Windows services.

Table 19 describes the options for Windows services configuration.

Table 19 Configure Analytics Link Server and Data Synchronization Server Windows Services Page

Field	Description	Your Information
Run as Service	Select Run as Service to configure the Windows service.	

Field	Description	Your Information
Log on As:	<p>If you are configuring Analytics Link Server only, or are configuring Analytics Link Server and Data Synchronization Server, select This Account.</p> <ul style="list-style-type: none"> Enter the name of the user who installed Analytics Link Server. Only this user has the proper permissions for all Analytics Link Server configuration files. This user must have permission to run Windows services. <p>The user name must be formatted as:</p> <p><i>domain\user_name</i></p> <ul style="list-style-type: none"> Enter the user password. <p>If you are configuring Data Synchronization Server only, you can enter the name and password of any user who has permission to run Windows services. Or you can select Local System Account.</p>	

Configure Financial Management Connector

Before you configure Analytics Link Financial Management Connector, see “[Analytics Link Prerequisites](#)” on page 12.

Analytics Link creates Microsoft IIS (Internet Information Services) Web site to connect to Financial Management Server.

➤ Specify the settings for Analytics Link Financial Management Connector.

[Table 20](#) describes the options for Analytics Link Financial Management Connector configuration.

Table 20 Configure Analytics Link Financial Management Connector Page

Field	Description	Your Information
Anonymous Access	<p>Select Anonymous Access, if the user wants to use the anonymous access method for accessing the Microsoft IIS Web site that Analytics Link creates to connect to Financial Management Server.</p> <p>Note: If you select Anonymous Access and you want to use the predefined credentials, do not specify a user and password.</p>	
User	<p>Define the operation system user that will be used for anonymous access. The user name must be formatted as:</p> <p><i>domain\user_name</i></p> <p>Note: If you want to use the default IIS user, leave this field blank.</p>	
Password	<p>Define the password of the operation system user that will be used for anonymous access.</p> <p>Note: If you want to use the default IIS user, leave this field blank.</p>	

Configure Financial Management Patch

Automatic conversion of Financial Management Dynamic Accounts into Essbase is supported for the following versions of Financial Management:

- Financial Management 11.1.2.0 and later—Supported by default. No patch is required.
 - Financial Management 11.1.1.3—Requires that you install Financial Management Patch 9450270.
- Specify the setting for the Financial Management patch.
- **11.1.1.3-32-bit**—Select this option if you are using:
 - Financial Management 11.1.1.3 and you have installed Financial Management Patch 9450270
 - Financial Management 11.1.2.0 or later
 - **None**—Select this option if you are:
 - Using a Financial Management pre-11.1.1.3 release
 - Unsure whether a patch has been installed

Note: Analytics Link Configuration Tool does not install Financial Management patches for you. You must install Financial Management patches yourself.

Summary

- To complete the configuration process:
- 1 On the **Summary** page, review the information for the components that you configured in this session.
User passwords are encrypted for security.
 - 2 Click **Finish**.
 - 3 Review the `HFS_HOME\Work\config.log` file for error or exception messages.
 - 4 On the next page, click **OK**.

End of Installation

To exit the installation program, click **Exit**, and then **Yes**.

6

Enabling Analytics Link Administration Services Console Plug-in

Before you enable the Analytics Link Administration Services Console plug-in, see [“Analytics Link Prerequisites” on page 12](#).

Before you can use Analytics Link, you must enable the Analytics Link Administration Services Console plug-in in Administration Services Console.

Note: Analytics Link does not support activating the Analytics Link Administration Services Console plug-in when accessing Administration Services Console using the Web launcher URL: `http://server_name:10080/easconsole/console.html`.

To activate Analytics Link Administration Services Console plug-in, access Administration Services Console from the Windows Start menu: Select **Programs**, then **Oracle EPM System**, then **Essbase**, then **Administration Services**, and then **Start Administration Services Console**.

► To enable Analytics Link Administration Services Console Plug-in in Enterprise View:

1 Ensure that these EPM System products are running:

- a. Shared Services Server
- b. Essbase Server
- c. Provider Services Server

Note: Starting with Analytics Link release 11.1.1.3, using Provider Services to integrate Oracle Essbase and Financial Management through Analytics Link is optional.

- d. Essbase Administration Server
- e. Analytics Link Data Synchronization Server
- f. Analytics Link Server

2 Log into Administration Services Console.

3 Select **Tools**, and then **Configure Components**.

4 In the Configure Plugin Components dialog box, click **Add**.

5 Navigate to the following directory:

`HFS_HOME\java`

See [“HFS_HOME Environment Variable” on page 17](#).

6 Select the plug-in for the Web application server you are using:

- WebLogic Server: eas-plugin_wl.jar
- Apache Tomcat: eas-plugin_tc.jar

7 Click Open.

EAL Plug-in for EAS Console appears in the list of installed plug-ins.

8 Click Close.

9 Restart Administration Services Console for the change to take effect.

When the Analytics Link Administration Services Console plug-in component is enabled in Administration Services Console, the Analytics Link Servers node appears in the Enterprise View. An administrator can then start the process of building Analytics Link bridges. See the *Oracle Essbase Analytics Link for Hyperion Financial Management Administrator's Guide*.

7

Uninstalling Analytics Link

To remove an instance of Analytics Link from a computer, you must use the same version of Oracle Universal Installer that was used to install Analytics Link.

➤ To uninstall Analytics Link:

1 Shut down all service instances related to your Analytics Link installation.

- Administration Services Console
- Data Synchronization Server
- Analytics Link Server

2 Run the version of the Oracle Universal Installer that was used to install the Analytics Link release you are uninstalling.

- **Windows:** From the **Start** menu, select **Programs**, then **Oracle - OUI_Home_Name**, then **Oracle Installation Products**, and then **Universal Installer**.
- **Linux (64-bit):** Change the root directory to *OUI_11.2_installation_location/oui/bin*; then enter:

```
./runInstaller.sh
```

3 Choose Deinstall Products.

4 On the **Contents tab, in the list of installed Oracle products, select the instance of Analytics Link that you want to uninstall.**

5 Click **Remove, and then **Yes**.**



Secure Sockets Layer (SSL) for Analytics Link

In This Appendix

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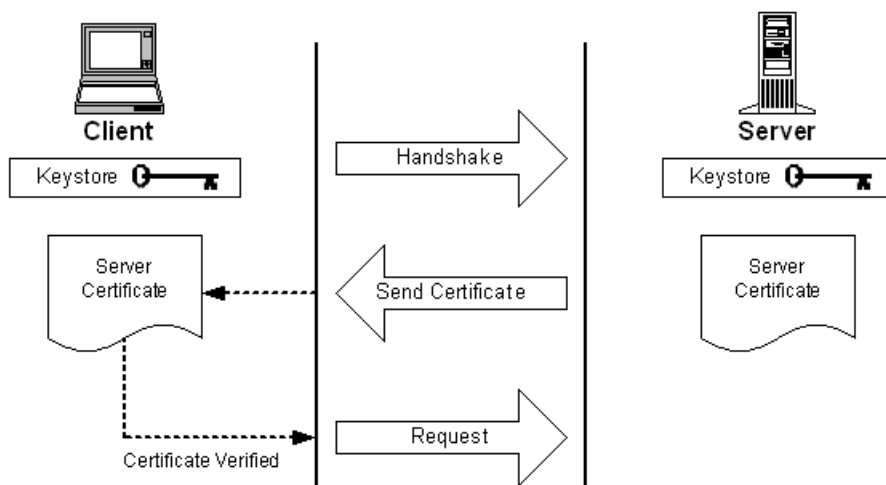
About SSL for Analytics Link

Secure Sockets Layer (SSL) is a cryptographic protocol used to secure data exchange over the network. For more information about enabling Secure Sockets Layer (SSL) for EPM System products, see the *Oracle Hyperion Enterprise Performance Management System Security Administration Guide*.

Overview of a One-Way SSL Session

To provide secure and private Web networking over TCP/IP using the `https` protocol, you can enable Secure Socket Layer (SSL) for Analytics Link.

In the beginning of an SSL interaction, the client sends a secure session request, known as a “handshake,” to the server. The handshake contains encryption information and a request for an certificate of authenticity from the server. The server returns a certificate, and the client validates it against a known list of certificate authorities (CA). The verification is one-way: The server does not verify the client.



After the client verifies the certificate from the server, the client and server can now communicate securely using encrypted keys known only to the client and server.

Types of Certificate Storage

Analytics Link Configuration Tool creates two kinds of storage for certificates during the SSL activation process: Oracle Wallet and Java Keystore. Both types of certificates are created to enable an SSL connection between the C++-based and Java-based components of Analytics Link Server and the C++-based components of Data Synchronization Server.

Oracle Wallet for C++-Based Components

Oracle Wallet is used to store security certificates for C++-based components. During activation of SSL for Analytics Link, the configuration tool creates two wallets into which it imports certificates:

- **Analytics Link Server Wallet**—The Data Synchronization Server credentials are imported into this wallet as a trusted certificate. These credentials enable the Analytics Link Server library `hrAPI.dll` to connect to Data Synchronization Server.
- **Data Synchronization Server Wallet**—The Data Synchronization Server credentials are imported into this wallet as trusted certificates. Additionally, to enable Data Synchronization Server to connect to Analytics Link Server, Analytics Link Server credentials are imported into this wallet as trusted certificates.

Note: To set up Oracle Wallet, you need the Oracle public key infrastructure (PKI) command line tool, `orapki`. You use the `orapki` utility to manage public key infrastructure elements such as wallets and certificate revocation lists.

For information about setting up Oracle Wallet, see the *Oracle Hyperion Enterprise Performance Management System Security Administration Guide*.

Java Keystore for Java-Based Components

Java Keystore is used to store security certificates for Java-based components. During activation of SSL for Analytics Link, the configuration tool creates a custom keystore for Analytics Link Server, and imports Analytics Link Server certificates and Data Synchronization Server certificates into the custom keystore as trusted entries.

Note: No separate keystore is necessary for Data Synchronization Server.

Configuring SSL When Configuring Analytics Link Server

On the Components to Configure page in Analytics Link Configuration Tool, when you select to configure Analytics Link Server, you can also select these options to enable SSL:

- **Analytics Link Server and Data Synchronization Server**—See [“Enabling SSL for Analytics Link Server and Data Synchronization Server”](#) on page 53.
- **RDBMS**—See [“Enabling SSL for RDBMS”](#) on page 54.
- **Shared Services**—See [“Enabling SSL for Shared Services”](#) on page 54.

Enabling SSL for Analytics Link Server and Data Synchronization Server

In selecting this option, all Analytics Link components connect to each other using an SSL connection:

- Analytics Link Server
- Data Synchronization Server
- Analytics Link Financial Management Connector

During the Analytics Link Server configuration process, Analytics Link Server connects to Data Synchronization Server and Analytics Link Financial Management Connector; therefore, the latter two components must be SSL-enabled.

The configuration process automatically deploys Analytics Link Server and Data Synchronization Server in SSL mode . Non-SSL mode is not supported.

- Configuring the Data Synchronization Server SSL connection:
 - If Analytics Link Server and Data Synchronization Server are installed locally (on the same computer with a shared file system and same `HFS_HOME` environment variable), the configuration tool automatically creates and imports the local Data Synchronization Server certificates. No additional configuration is needed to activate SSL between these components after running the configuration tool.

- If Data Synchronization Server is installed on a different computer than the one on which Analytics Link Server is installed, from the Data Synchronization Server computer, you must import the following certificates in the order listed:
 1. Import the `CERT_DIR\dss_cert.hostName.cer` file into the `HFS_HOME\conf\security\jks` directory.
 2. Import the `CERT_DIR\dss_ca_root_cert.hostName.cer` file into the `HFS_HOME\conf\security\wallet` directory.
 3. Import the `CERT_DIR\dss_cert.hostName.cer` file into the `HFS_HOME\conf\security\wallet` directory.

For the location of the certificate files, see [“Directory Objects Created When Configuring SSL” on page 56](#).

- Configuring the Analytics Link Financial Management Connector SSL connection:

Analytics Link Financial Management Connector runs in Microsoft IIS (Internet Information Services) Web Server, which is the web server on which the Financial Management Application Server runs. IIS must be SSL enabled.

You must import the IIS certificate into the `HFS_HOME\conf\security\jks` directory.

Enabling SSL for RDBMS

Analytics Link connects to the following RDBMS components:

- Analytics Link repository
- Financial Management repository
- Shared Services repository (Shared Services Release 11.1.2.0 or later)
- Analytics Link bridge Data Store

These repositories may reside in different databases; however, Analytics Link supports only one connection mode for all repositories: SSL connection mode or non-SSL connection mode. Therefore, if one repository is SSL enabled, all of the repositories must be SSL enabled.

In selecting this option, you must import the RDBMS certificate for each of the repositories listed above into the `HFS_HOME\conf\security\jks` directory.

Enabling SSL for Shared Services

Analytics Link security is managed by Foundation Services (Oracle Hyperion Shared Services). If Foundation Services is SSL enabled, all EPM System products that use Foundation Services for security management must be SSL enabled.

In selecting this option, you must import the certificates for all Oracle Enterprise Performance Management System SSL-enabled products to which Analytics Link connects into the `HFS_HOME\conf\security\jks` directory:

- Oracle Hyperion Foundation Services

- Provider Services (the use of Oracle Hyperion Provider Services in your Analytics Link environment is optional)

Configuring SSL When Configuring Data Synchronization Server

On the Components to Configure page in Analytics Link Configuration Tool, when you select to configure Data Synchronization Server, you can also select these options to enable SSL:

- **Analytics Link Server and Data Synchronization Server**—See [“Enabling SSL for Analytics Link Server and Data Synchronization Server” on page 55.](#)
- **RDBMS**—See [“Enabling SSL for RDBMS” on page 56.](#)

Enabling SSL for Analytics Link Server and Data Synchronization Server

In selecting this option, all Analytics Link components connect to each other using an SSL connection:

- Analytics Link Server
- Data Synchronization Server
- Analytics Link Financial Management Connector

During the Data Synchronization Server configuration process, Analytics Link Server connects to Data Synchronization Server; therefore, Analytics Link Server must be SSL-enabled. See [“Configuring SSL When Configuring Analytics Link Server” on page 53.](#)

The configuration process automatically deploys Analytics Link Server and Data Synchronization Server in SSL mode . Non-SSL mode is not supported.

In configuring the Data Synchronization Server SSL connection:

- If Data Synchronization Server and Analytics Link Server are installed locally (on the same computer with a shared file system and same `HFS_HOME` environment variable), the configuration tool automatically creates and imports the local Analytics Link Server certificates. No additional configuration is needed to activate SSL between these components after running the configuration tool.
- If Data Synchronization Server is installed on a different computer than the one on which Analytics Link Server is installed, from the Analytics Link Server computer, you must import the `CERT_DIR\ea1_ca_root_cert.hostName.cer` certificate file into the `HFS_HOME\conf\security\wallet` directory.

Enabling SSL for RDBMS

Data Synchronization Server connects to the Financial Management Server repository in order to read Financial Management application data. If the Financial Management Server repository resides on an SSL-enabled RDBMS, you must import the RDBMS certificate into the `HFS_HOME\conf\security\wallet` directory.

If you are not using a root certificate from a trusted third-party CA for the Oracle Hyperion Financial Management Server repository RDBMS, first, verify that your root CA certificate is loaded and then import the certificate into the `HFS_HOME\conf\security\wallet` directory.

Directory Objects Created When Configuring SSL

Analytics Link Configuration Tool creates directories and objects related to certificate storage, as listed in [Table 21](#). (`CERT_DIR` is a variable that refers to the `HFS_HOME\conf\security\certs` directory.)

Table 21 Directory Objects Created by Configuring SSL

Object	Description
<code>HFS_HOME\conf\security\wallet_root_tmp</code>	<p>Oracle wallet temp directory.</p> <p>Wallet password: <code>ealpassword1</code>.</p> <p>Contents of the wallet:</p> <p>Data Synchronization Server Self-Signed CA Certificate for the local Data Synchronization Server instance:</p> <p><code>CERT_DIR\dss_ca_root_cert.hostName.cer</code></p> <p>This certificate appears in the wallet as User Certificate and as Trusted Certificate (CN=testDSS-CA).</p>
<code>HFS_HOME\conf\security\wallet</code>	<p>Oracle Wallet directory.</p> <p>Wallet password: <code>ealpassword1</code>.</p> <p>Contents of the wallet:</p> <ul style="list-style-type: none">Local Data Synchronization Server certificate: <code>CERT_DIR\dss_cert.hostName.cer</code> This certificate appears in the wallet as User Certificate (CN= testDSS).Trust Chain to Data Synchronization Server Self-Signed CA Certificate: <code>CERT_DIR\dss_ca_root_cert.hostName.cer</code> This certificate appears in the wallet as Trusted Certificate (CN=testDSS-CA).Self-Signed Analytics Link Server certificate: <code>CERT_DIR\eal_ca_root_cert.hostName.cer</code> This certificate appears in the wallet as Trusted Certificate (CN= testEAL).

Object	Description
<code>HFS_HOME\conf \security\jks\eal_ identity.jks</code>	<p>Identity Java Keystore.</p> <p>Keystore password (for both storepass and keypass): <code>ealpassword</code>.</p> <p>Contents of the keystore:</p> <p>Self-Signed Analytics Link Server certificate:</p> <p><code>CERT_DIR\eal_ca_root_cert.hostName.cer</code></p> <p>This certificate appears in the keystore as <code>PrivateKeyEntry (CN= testEAL)</code>.</p>
<code>HFS_HOME\conf \security\jks\eal_ trusted.jks</code>	<p>Trusted Java Keystore.</p> <p>Keystore password (for both storepass and keypass): <code>ealpassword</code>.</p> <p>Contents of the keystore:</p> <ul style="list-style-type: none"> Self-Signed Analytics Link Server certificate: <p><code>CERT_DIR\eal_ca_root_cert.hostName.cer</code></p> <p>This certificate appears in the keystore as <code>trustedCertEntry (CN= testEAL)</code>.</p> Local Data Synchronization Server certificate: <p><code>CERT_DIR\dss_cert.hostName.cer</code></p> <p>This certificate appears in the keystore as <code>trustedCertEntry (CN= testDSS)</code>.</p>

Importing Certificates to Existing Wallets or Keystores

To add a Data Synchronization Server certificate to any Oracle Wallet, import the following files:

```
dss_ca_root_cert.hostName.cer
dss_cert.hostName.cer
```

To add a Data Synchronization Server certificate to any Java Keystore, import the following file:

```
dss_cert.hostName.cer
```

To add an Analytics Link Server certificate to any Oracle Wallet or Java Keystore, import the following file:

```
eal_ca_root_cert.hostName.cer
```

Enabling an SSL Connection Between Analytics Link and Administration Services Console

If Analytics Link Server and Data Synchronization Server are SSL-enabled, the Analytics Link Administration Services Console plug-in in Administration Services Console can connect to Analytics Link Server with an SSL connection, even if Oracle Essbase Administration Services itself is not SSL enabled. To configure the SSL connection, you must import the `CERT_DIR\eal_ca_root_cert.hostName.cer` file into the Administration Services Console Java Keystore.

The full path to the Administration Services Console Java Keystore is defined in the *EAS_HOME* \console\bin\admincon.lax file as the value of the *-Djavax.net.ssl.trustStore* variable in the *lax.nl.java.option.additional* tag. For example:

```
lax.nl.java.option.additional=-Djavax.net.ssl.trustStore=C:\Oracle\Middleware  
\EPMSys11R1\common\JRE\Sun\1.6.0\lib\security\cacerts
```

If *-Djavax.net.ssl.trustStore* is not defined, you must define the path and then import the *CERT_DIR\ea1_ca_root_cert.hostName.cer* file into the Java Keystore.



Troubleshooting

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Analytics Link Repository: Cannot Clear Database Error Message

When you configure Analytics Link repository, if **Oracle** is selected as the RDBMS for Analytics Link repository and the repository database does not contain the BRIDGES table, you will encounter the following error message when clicking **Clear DB**.

Cannot clear database: BRIDGES table was not found in the db. Automatic clearance of the db is not allowed.

The Analytics Link repository must contain the BRIDGES table. If the table does not exist, Oracle Essbase Analytics Link for Hyperion Financial Management assumes that the database definition provided on the Configure Analytics Link Repository page is incorrect. Carefully review the information provided.

WebLogic Server Deployment

When running Analytics Link Server on Oracle WebLogic Server, the following messages in the `ea1.log` file can be safely ignored:

```
NotCompliantMBeanException: Resource class oracle.dfw.impl.jmx.  
javax.management.NotCompliantMBeanException: Resource class oracle.dfw.spi.porta  
ble.JMXDiagnosticsConfig is not an instance of oracle.dfw.jmx.DiagnosticsConfigM  
Bean  
javax.management.NotCompliantMBeanException: Resource class oracle.dfw.impl.jmx.  
Streaming is not an instance of oracle.dfw.impl.jmx.StreamIntf.
```


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