



# Upgrade Guide

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Release 2.7



**Home Office**

1240 East Diehl Road, Suite 400

Naperville, IL 60563

Tel: + 1.630.505.1800

[www.infogix.com](http://www.infogix.com)

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## Introduction

This guide gives information about upgrading the Infogix ER database and application to a new application version.

## Who Should Use this Guide

This guide is intended for the individuals responsible for maintaining and upgrading the Infogix ER application. Typically, this involves the database and system administrator.

## What This Guide Includes

This guide has the following chapters:

- Chapter 2, “Preupgrade Tasks”
- Chapter 3, “Upgrade the Database”
- Chapter 4, “Deploy and Test the Application”
- Chapter 5, “Troubleshooting Upgrade Issues”

## Other Sources of Information

Your Infogix ER software includes documentation for each phase of implementation. The following table provides a list of available documentation.

Consult this document:	For this type of information:
<i>Infogix ER Security Administrator's Guide</i>	What you need to know to plan and implement the Infogix ER security set up.
<i>Infogix ER Installation Guide</i>	What you need to know to install Infogix ER.
<i>Infogix ER Operator's Guide</i>	What you need to know about running command line utilities, managing users and user groups, and troubleshooting the Infogix ER application.
<i>Infogix ER Upgrade Guide (this book)</i>	What you need to know to upgrade the Infogix ER database and application to a newer version.

## Customer Support

If you need assistance, contact Infogix Customer Support:

U.S. and Canada: Call us at +1.630.505.1890 or send a fax to +1.630.505.1883. You can also send email to [support@infogix.com](mailto:support@infogix.com).

Outside the U.S. and Canada: Infogix maintains offices around the world. Check our Web site at [www.infogix.com](http://www.infogix.com) for the closest office or email.

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## Preupgrade Tasks

This chapter lists the preupgrade tasks that must be completed before upgrading the Infogix ER application.

Both the Infogix ER server and database are upgraded when upgrading from an older to a newer version of the application. Typically, the upgrade involves assistance from the system and database administrators.

There are four major steps involved in upgrading Infogix ER:

1. Perform the Preupgrade Tasks in this chapter to prepare the deployment files for use.
2. Upgrade the database.
3. Deploy the application.
4. Test the application.

To perform the pre-upgrade tasks, you must have administrator permissions on the machine where Infogix ER is installed.

Throughout this document, the directory where Infogix ER is installed is called *install\_folder*. This folder was created and named during installation.

Complete information on all properties are found in the *Infogix ER Installation Guide* for your platform; refer to that document for additional information on the parameters and their use.

## Platform-Specific Separators

Some of the parameters in the application properties file requires the use of platform-specific separators in the file paths.

UNIX/Linux style paths use a single forward slash to separate directories and to end the path. For example:

```
/opt/IBM/WebSphere/AppServer/java/
```

Windows-style paths use two back slashes to separate directories and indicate the end of the path. For example:

```
D:\\java\\jdk1.5.0_12\\
```

## Platform-Specific File Extensions

Infogix ER scripts are included in both Windows and UNIX/Linux versions. Windows system scripts have `.bat` file extensions. Scripts designed to run on UNIX/Linux environments have a `.sh` file extension.

## Password Encryption

Some properties file parameters request user names and passwords. Because having user names and passwords in a plain text configuration file can be a security concern, Infogix ER includes an encryption script that encrypts all passwords.

The script, `crypt-properties`, encrypts sensitive information in the properties files. The script is located in the `install_folder`. In a production environment, it is recommended that you run this script before deploying the application.

## Preupgrade Tasks

Before beginning the preupgrade tasks that follow, it is recommended that you disable the Infogix ER scheduler.

1. Log into the web-based user interface.
2. Choose **System > Scheduler** from the navigation menu.
3. Click **Disable Scheduler**.

The scheduler, which starts the automatic jobs configured in the component definitions, can be enabled after the application and database upgrades are complete.

1. Stop Infogix ER.

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**Note:** Infogix ER must be running to complete an upgrade of Infogix Assure. Do not stop the application while an Infogix Assure upgrade is running or it will fail.

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2. Print the following files:
  - `build.install.appserver.properties`, located in `install_folder\InfogixER`. You will reference some of the properties in this file during the upgrade process.
  - `setup script`, located in `install_folder`. You will refer to this file to set the parameters in the new setup script.

- `build.install.database.properties`, located in `install_folder\InfogixER`. You will reference some of the properties in this file during the upgrade process.
3. If your system uses LDAP, also print these files:
    - `build.install.security.directory.properties`, located in `install_folder\InfogixER`. You will reference properties in this file to configure the application security.
    - `build.install.userinfo.directory.properties`, located in `install_folder\InfogixER`. This configuration file is used only if the user information is stored in a location other than LDAP.
  4. Rename the directory where Infogix ER is currently installed to `old_install_folder`.
  5. Create a new directory, giving it the same name as original installation folder before you renamed it. This folder will be referred to as `install_folder`.
  6. In the `build.install.appserver.properties` file, locate the following parameters:
    - `CONFIG_HOME` - Sets the directory location for the configuration files.
    - `CONFIG_OVERRIDE` - If configured, this parameter sets the location of a configuration file that overrides settings in `CONFIG_HOME`.

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**Note:** Pre-version 2.6 of the application did not include the `CONFIG_OVERRIDE` parameter.

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- `DATA_HOME` - Sets the directory location for the data files.
  - `DATA_TEMP` - Sets the directory location for the temporary data files.
- If any of the directories set in `CONFIG_HOME`, `CONFIG_OVERRIDE`, `DATA_HOME`, or `DATA_TEMP` are located in `old_install_folder`, copy them to the new `install_folder`.
7. Copy the installer zip file to the machine where you are upgrading Infogix ER and unzip it to `install_folder`.
  8. Navigate to `install_folder` and open the setup script for editing.
  9. Complete the following edits to the setup script, referring to the printed copy of the setup file for details:
    - Set `JAVA_HOME` to the full path of your installation's Java directory.
    - For installations that do not use a Sun Java VM, comment out the first `ANT_OPTS` variable and uncomment the second `ANT_OPTS` variable.

## 2 ■ Preupgrade Tasks

### Properties Files

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- For Linux installations, uncomment the four lines that set and export the `LANG` and `LC` variables.
10. When you are finished with the edits, save and close the setup script.
  11. From the command line, run the `init-config` script.
  12. When prompted, specify your choice of the following installation options:
    - **Application Server:** JBoss or WebSphere
    - **Environment:** single or clustered
    - **Database:** Oracle or SQL Server
    - **Security Directory:** Embedded, Active-Directory, ADAM, Sun-One, or Tivoli
    - **User Information Directory:** Embedded, Active-Directory, ADAM, Sun-One, or EDirectory
    - **Copy configuration from a previous installation?:** y/n  
Enter `y`. This instructs the script to copy configuration properties from your older Infogix ER installation to the new properties files. You will be prompted for the installation path.
    - **Full path of the previous installation:**  
Enter the full path to the `old_install_folder` directory. Note that if you did not enter `y` for the previous item, you will not be prompted for this path.

The `init-config` script creates the new properties files required for installation based on your selections.

## Properties Files

The properties files created when you ran `init-config` must be reviewed for accuracy and edited where needed.

### Advanced Properties Files

Previous versions of Infogix ER had one properties file (`build.install.appserver.properties`) for the application, and one properties file (`build.install.database.properties`) for the database. Infogix ER 2.7 has two properties files (`build.install.appserver.properties` and `build.advanced.appserver.properties`) for the application, and two files (`build.install.database.properties` and `build.advanced.database.properties`) for the database.

Properties in the advanced files were previously located in the general properties files in “Do Not Change” sections. For easier configuration, these parameters were moved to the advanced files.

Most upgrades do not require editing of the advanced properties files. Normally, it is recommended that you not alter the advanced parameters without assistance from Infogix Support. However, some parameters in the advanced files may have been changed due to specific conditions in your environment, and one JBoss property (`JBOSS_ENCRYPTION_SALT`) must be changed in the `build.advanced.appserver.properties` file or the upgrade will fail.

Referring to the properties files you printed, review all properties in all files, editing as necessary:

■ `build.install.appserver.properties`

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**TIP:** Make certain the directories configured in `CONFIG_HOME`, `CONFIG_OVERRIDE`, `DATA_HOME`, and `DATA_TEMP` are in the correct locations, as specified by these parameters.

Make certain that `UPGRADE_FROM_VERSION` is set to 1.0 for an upgrade from version 1.0 or 1.1; set this parameter to 2.0 for an upgrade from version 2.0.

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■ `build.advanced.appserver.properties`

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**TIP:** For JBoss deployments only, make certain to change the value of the parameter `JBOSS_ENCRYPTION_SALT` to “Accurate.”

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■ `build.install.database.properties`

■ `build.advanced.database.properties`

Depending upon your choices, you may also have to review and edit the following files:

■ `build.install.security.directory.properties` must be verified only when LDAP is used to authenticate Infogix ER users.

■ `build.install.userinfo.directory.properties` must be verified only if LDAP is used to manage Infogix ER user information.

## Changes in Property Files

All parameters in this version of Infogix ER that do not occur in the version from which you are upgrading are identified by the phrase “#NEW PROPERTY-TO BE EDITED#,” which is appended to the parameter and its default value, if any. For example:

```
JAVA_VERSION=1.5#NEW PROPERTY-TO BE EDITED#
```

## 2 ■ Preupgrade Tasks

### Changes in Property Files

These parameters must be reviewed, #NEW PROPERTY-TO BE EDITED# removed from the parameter value, and the parameter value revised as needed for your deployment.

Following sections detail new application and database parameters.

## Application Server Properties

### Property Changes from Infogix ER 1.0 and 1.1

The following changes were made to the application server properties files.

Parameter	Description
WEBSHERE_VERSION	<b>In WebSphere deployments only</b> , this parameter was removed.
JAVA_VERSION	Version of Java on the server; default is 1.5. This parameter is required.
CONFIG_OVERRIDE	Location for configuration files that override the files in CONFIG_HOME. This optional parameter should be left empty unless you are using an alternate configuration file.
INTERNAL_AUTHENTICATION	Specifies whether the application or server performs authentication. Default is <i>false</i> (server performs authentication).
LICENSE_EXPIRING_EMAIL_LIST	Optional comma-separated list of email addresses to which emails will be sent when the license expiration for the application is about to expire.
ALLOW_REMEMBER_USER_ID	Allows the User ID to be remembered on the login page; default is <i>true</i> .
SWING_CLIENT_TIMEOUT_ALERT	Specifies the amount of time, in minutes, of inactivity before displaying the time out alert; default is 20.
SWING_CLIENT_TIMEOUT	Specifies the amount of time, in minutes, of inactivity after showing the time out alert before the system actually logs the client off the system; default is 10.
SWING_VALIDATE_PRINCIPALID	Specifies whether or not the ID should be validated on screens where manual entry is allowed. Valid values are <i>true</i> (validate) or <i>false</i> (do not validate); default is <i>true</i> .
PLUGINS_DIR	Gives the location of an optional server plug in directory.

Parameter	Description
ASSURE_GATEWAY_ENABLED	<p>This required parameter must be set. The possible values are:</p> <ul style="list-style-type: none"> <li>■ <code>true</code> – Enables the communication gateway from Infogix ER to Infogix Assure. During SOD and EOD processing, Infogix ER attempts to contact Infogix Assure using the given connection parameters to execute the Infogix Assure controls specified in the Process Definition Rules.</li> <li>■ <code>false</code> – The communication gateway from Infogix ER to Infogix Assure is disabled and Infogix ER will not attempt to start Infogix Assure controls during SOD and EOD processing.</li> </ul> <p>Default is <code>false</code>.</p>
ASSURE_GATEWAY_SERVICE_SELECTOR	<p>This parameter is required only if <code>ASSURE_GATEWAY_ENABLED</code> is set to <code>true</code>. Currently the only option is <code>httpinvoker</code>.</p>
ASSURE_GATEWAY_HTTP_HOST_NAME	<p>This parameter is required only if <code>ASSURE_GATEWAY_ENABLED</code> is set to <code>true</code>. The value is the IP address or host name of the server on which Infogix Assure is running. Default is <code>localhost</code>.</p>
ASSURE_GATEWAY_HTTP_PORT	<p>This parameter is required only if <code>ASSURE_GATEWAY_ENABLED</code> is set to <code>true</code>. The value is the port on which Infogix Assure is running; default is <code>8080</code>.</p>
ASSURE_GATEWAY_INVOKER_URI	<p>This parameter is required only if <code>ASSURE_GATEWAY_ENABLED</code> is set to <code>true</code>. Currently the only option is <code>/infogixassurekernel/invoke</code>.</p>
ASSURE_GATEWAY_HTTP_USER_NAME	<p>This parameter is required only if <code>ASSURE_GATEWAY_ENABLED</code> is set to <code>true</code>. The value is the user name used to log on to the Infogix Assure server. The login must have permissions to read and execute Control Entity Names and Control Point Names.</p>

## 2 ■ Preupgrade Tasks

### Changes in Property Files

Parameter	Description
ASSURE_GATEWAY_HTTP_USER_PASSWORD	This parameter is required only if ASSURE_GATEWAY_ENABLED is set to true. The value is the password for the user defined in ASSURE_GATEWAY_HTTP_USER_NAME.
ASSURE_GATEWAY_SCHEME	This parameter is required only if ASSURE_GATEWAY_ENABLED is set to true. Possible values are: <ul style="list-style-type: none"><li>■ http – for standard HTTP connections</li><li>■ shttp – for secure HTTP connections</li></ul> Default is http.
ASSURE_GATEWAY_PROXY_HOST_NAME	This parameter is optional, and should be left blank unless Infogix ER will be accessing Infogix Assure through a proxy. If using a proxy, the proxy host is required and must be supplied.
ASSURE_GATEWAY_PROXY_PORT	This parameter is optional, and should be left blank unless Infogix ER will be accessing Infogix Assure through a proxy. If using a proxy, the proxy port is required and must be supplied.
ASSURE_GATEWAY_PROXY_USER_NAME	This parameter is optional, and should be left blank unless Infogix ER will be accessing Infogix Assure through a proxy. If using a proxy, the proxy user name is required and must be supplied.
ASSURE_GATEWAY_PROXY_USER_PASSWORD	This parameter is optional, and should be left blank unless Infogix ER will be accessing Infogix Assure through a proxy. If using a proxy, the proxy password is required and must be supplied.

All advanced properties in the Infogix ER 1.0 or 1.1 `build.install.appserver.properties` file were moved to the `build.advanced.appserver.properties` file. These properties were in sections labeled as:

```
#####  
# BEGIN DO NOT CHANGE  
#####
```

In addition, these parameters were moved or added to the advanced properties files:

Parameter	Description
JBOSS_INSTANCE_NAME	Moved from build.install.appserver.properties.
IS_CLUSTERED	Moved from build.install.appserver.properties.
CLUSTER_ID	Moved from build.install.appserver.properties.
CLUSTER_MULTICAST_ADDRESS	Moved from build.install.appserver.properties.
CLUSTER_MULTICAST_START_PORT_PREFIX	Moved from build.install.appserver.properties.
CLUSTER_MULTICAST_TTL	Moved from build.install.appserver.properties.
PACKAGE_SHARED_LIBS_IN_EAR	New property that specifies that the shared libraries should be packaged in the application EAR file; default is <code>true</code> .
VALIDATE_TRANSACTION_CREATION	New property that defines the validation transaction; default is <code>false</code> .
DEFAULT_ENCRYPTION_LEVEL	Specifies the default encryption level; default is <code>PBE-DES</code> . This parameter has been added to all advanced application server properties files.

### Property Changes from Infogix ER 2.0

The following changes were made to the application server properties files.

Parameter	Description
JAVA_VERSION	Version of Java on the server; default is 1.5. This parameter is required.
CONFIG_OVERRIDE	Location for configuration files that override the files in <code>CONFIG_HOME</code> . This optional parameter should be left blank unless you are using an alternate configuration file.

## 2 ■ Preupgrade Tasks

### Changes in Property Files

Parameter	Description
INTERNAL_AUTHENTICATION	Specifies whether the application or server performs authentication. Set to <code>true</code> for Infogix ER to perform authentication; default is <code>false</code> (server performs authentication).
LICENSE_EXPIRING_EMAIL_LIST	Optional comma-separated list of email addresses to which emails will be sent when the license expiration for the application is about to expire.
ALLOW_REMEMBER_USER_ID	Allows the User ID to be remembered on the login page; default is <code>true</code> .

All advanced properties in the Infogix ER 2.0 `build.install.appserver.properties` file were moved to the `build.advanced.appserver.properties` file. These properties were in sections labeled as:

```
#####  
# BEGIN DO NOT CHANGE  
#####
```

In addition, the parameters listed in "[Property Changes from Infogix ER 1.0 and 1.1](#)" were moved or added to the advanced properties files for all types of deployments.

## User Information Directory Properties

### Property Changes from Infogix ER 1.0 and 1.1

With this version of Infogix ER, supported user information directories are:

- Embedded (Infogix ER internal security)
- Novell EDirectory
- IBM Tivoli Directory Server
- Microsoft ADAM (Active Directory Application Mode)
- Sun ONE Directory Server
- Windows Server 2003 Active Directory

Changes to the user information directory properties files are:

Parameter	Description
USER_LDAP_BASE_DN_ESCAPED	This parameter was removed.
USER_LDAP_USER_BASE_DN_ESCAPED	This parameter was removed.
USER_LDAP_OBJECTCLASS	Object class for LDAP.
USER_LDAP_GROUP_BASE_DN_ESCAPED	This parameter was removed.
USER_LDAP_REFERRALS	Specifies LDAP referral; valid values are follow, ignore, and throw.
USER_LDAP_NESTED_GROUPS	Specifies nested group support; default is false.
USER_LDAP_NESTED_GROUP_OID	This parameter is valid only for Active Directory and ADAM deployments and is the OID used for performing nested group queries.

### Property Changes from Infogix ER 2.0

With this version of Infogix ER, supported user information directories are:

- Emdedded (Infogix ER internal security)
- Novell EDirectory
- IBM Tivoli Directory Server
- Microsoft ADAM (Active Directory Application Mode)
- Sun ONE Directory Server
- Windows Server 2003 Active Directory

Changes to the user information directory properties files are:

Parameter	Description
USER_LDAP_BASE_DN_ESCAPED	This parameter was removed.
USER_LDAP_USER_BASE_DN_ESCAPED	This parameter was removed.
USER_LDAP_GROUP_BASE_DN_ESCAPED	This parameter was removed.

## 2 ■ Preupgrade Tasks

### Changes in Property Files

Parameter	Description
USER_LDAP_PRINCIPAL_USER_ATTR	This parameter was removed.
USER_LDAP_NESTED_GROUPS	Specifies nested group support; default is false.
USER_LDAP_NESTED_GROUP_OID	This parameter is valid only for Active Directory and ADAM deployments and is the OID used for performing nested group queries.

## Security Directory Properties

### Property Changes from Infogix ER 1.0 and 1.1

With this version of Infogix ER, supported security directories are:

- Embedded (Infogix ER internal security)
- EDirectory
- Active Directory
- ADAM
- Sun One
- Tivoli

Changes to the security directory properties are:

Parameter	Description
SECURITY_LDAP_BASE_DN_ESCAPED	This parameter was removed.
SECURITY_LDAP_USER_BASE_DN_ESCAPED	This parameter was removed.
SECURITY_LDAP_OBJECTCLASS	Object class for LDAP.
SECURITY_LDAP_GROUP_BASE_DN_ESCAPED	This parameter was removed.
SECURITY_LDAP_PRINCIPAL_DN_PREFIX	This parameter was removed.
SECURITY_LDAP_PRINCIPAL_DN_SUFFIX	This parameter was removed.
SECURITY_LDAP_PRINCIPAL_USER_ATTR	This parameter was removed.

Parameter	Description
SECURITY_LDAP_REFERRALS	Specifies LDAP referral handling; values may be <code>follow</code> , <code>ignore</code> , or <code>throw</code> .
SECURITY_LDAP_NESTED_GROUPS	Specifies whether or not LDAP nested groups are used; default is <code>false</code> .
SECURITY_LDAP_NESTED_GROUP_OID	<b>For Active Directory deployments only</b> , specifies the OID for performing nested group queries.

### Property Changes from Infogix ER 2.0

With this version of Infogix ER, supported security directories are:

- Emdedded (Infogix ER internal security)
- EDirectory
- Active Directory
- ADAM
- Sun One
- Tivoli

Changes to the security directory properties files are:

Parameter	Description
SECURITY_LDAP_BASE_DN_ESCAPED	This parameter was removed.
SECURITY_LDAP_USER_BASE_DN_ESCAPED	This parameter was removed.
SECURITY_LDAP_GROUP_BASE_DN_ESCAPED	This parameter was removed.
SECURITY_LDAP_PRINCIPAL_DN_PREFIX	This parameter was removed.
SECURITY_LDAP_PRINCIPAL_DN_SUFFIX	This parameter was removed.
SECURITY_LDAP_PRINCIPAL_USER_ATTR	This parameter was removed.
SECURITY_LDAP_NESTED_GROUPS	Specifies nested group support; default is <code>false</code> .
SECURITY_LDAP_NESTED_GROUP_OID	<b>For Active Directory deployments only</b> , specifies the OID used for performing nested group queries.

## 2 ■ Preupgrade Tasks

### Changes in Property Files

## Database Properties

### Property Changes from Infogix ER 1.0 and 1.1

There were no database property changes between versions; however, the following parameters were moved from `build.install.database.properties` to the advanced database properties file.

Parameter	Description
<code>DATABASE_TYPE</code>	Database type; supported database types are <code>oracle</code> and <code>sqlserver</code> .
<code>DATABASE_DRIVER_TYPE</code>	JDBC driver type; default is <code>4</code> .
<code>DATABASE_DRIVER</code>	Name of the database driver; valid names are <code>oracle.jdbc.driver.OracleDriver</code> or <code>com.microsoft.sqlserver.jdbc.SQLServerDriver</code> .
<code>DATABASE_DRIVER_LOCATION</code>	Driver location; by default this points to the embedded Infogix ER database drivers.
<code>DATABASE_SHOW_SQL</code>	Determines whether or not the SQL is sent to <code>stdout</code> ; default is <code>false</code> .
<code>DATABASE_BATCH_SIZE</code>	Database batch request size; default is <code>100</code> .
<code>DATABASE_BATCH_QUERY_SIZE</code>	Database batch query request size; default is <code>250</code> .
<code>DATABASE_BATCH_COMMIT_SIZE</code>	Database batch commit size; default is <code>250</code> .
<code>DATABASE_ENABLE_UNCOMMITTED_READS</code>	Enables uncommitted reads; default is <code>false</code> .
<code>DATABASE_DIALECT</code>	Database dialect; valid values are <code>org.hibernate.dialect.Oracle9Dialect</code> or <code>cosm.cee.facility.persistenceimpl.hibernate.SQLServerDialect</code> .
<code>DATABASE_VERSION</code>	Database version. Valid values are <code>9i</code> (for Oracle) and <code>2005</code> (for SQL Server). Use these values even if your database is a later version; earlier versions are not supported.
<code>DYNAMIC_TABLES_TABLESPACE</code>	Specifies the tablespace in which to put the dynamically created tables. Default is <code>@solution.short.name@_DYNOBJECTS</code> .

Parameter	Description
USE_TABLE_PARTITIONING	Flag that indicates if table partitioning is used. Table partitioning must be done at database creation and cannot be enabled after the table is created.
DATABASE_BULKLOAD_BACKUP_DIR	Specifies the directory in which to store a backup of the bulk load file. This path must be platform-specific.
DATABASE_BULKLOAD_BACKUP_FILE	Indicates whether or not a back up should be made of the bulk load file; default is <code>false</code> .
DATABASE_BULKLOAD_DIRECT_INSERT	Indicates whether or not the bulk load should be direct insert; default is <code>false</code> for Oracle and <code>true</code> for SQL Server.
DATABASE_BULKLOAD_DIRECT_INSERT_SAFE_MODE	Indicates whether or not the bulk load should be direct insert in safe mode; default is <code>true</code> for Oracle and <code>false</code> for SQL Server.
DATABASE_CLIENT_HOME	Location of the local database client; this must be a full path that is platform-specific.

### Property Changes from Infogix ER 2.0

There were no changes between versions; however, the properties listed in "Database Properties" were moved from the `build.install.properties.file` to the advanced database properties file. Refer to that section for details on the parameters.

## 2 ■ Preupgrade Tasks

---

### *Changes in Property Files*

---

## Upgrade the Database

Upgrading the Infogix ER database requires the assistance of a database administrator (DBA). The database upgrade must be done before running the application upgrade.

The process described in this chapter upgrades your existing database to a new Infogix ER version. You should always back up the existing database before attempting an upgrade.

Infogix ER supports two types of database upgrade procedures. The procedure you use depends upon how the application was originally deployed.

### ■ Custom

Custom upgrade procedures are available for Oracle and SQL Server databases. The custom procedure allows the DBA to control tablespace allocation and create database tables across multiple physical disks and directories. A custom upgrade requires that you have knowledge about the database deployment and administrative permissions to access the database to run the upgrade scripts. Use the custom upgrade procedure if the database was deployed using the custom method.

### ■ Express

The express upgrade can be used on either Oracle or SQL Server databases and consists of a single script that creates the tablespaces and tables and populates the database with base data. All tablespaces are installed in the same directory. The express upgrade requires that the administrative user ID and password be included in the database properties file. Use the express upgrade procedure if the database was deployed using the express method.

This chapter contains the following sections:

- “Custom Upgrade for an Oracle Database” on page 24
- “Custom Upgrade for a SQL Server Database” on page 26
- “Express Database Upgrade” on page 29

## Custom Upgrade for an Oracle Database

To perform a custom upgrade on an Oracle database:

1. Update the application server and database properties files. The upgrade scripts reference these files. This procedure is detailed in [Chapter 2, “Preupgrade Tasks.”](#)
2. If your deployment uses LDAP for the security or user information, upgrade the security properties file and user information properties file files.

---

**Note:** Do not skip updating the properties files or you will receive errors when you attempt to run the upgrade scripts!

---

3. Using a command line utility, navigate to `install_folder` and run the `gen-update-db` script to generate the SQL scripts required for the upgrade. Ignore any warning messages.
4. When the `gen-update-db` script has completed, locate the schema files for your deployment. If the `DATABASE_POPULATE_MODE` parameter in your `build.install.database.properties` file is advanced, the files are located in `install_folder\InfogixER\dist-stage\dist-db\schema\oracle\9i\advanced`. If this parameter value is `basic`, the files are located at `install_folder\InfogixER\dist-stage\dist-db\schema\oracle\9i\basic`.
5. Verify the following scripts were generated:
  - `update-tablespaces.sql` - This script updates the storage area for the Infogix ER database tables.
  - `update-before-update-data.sql` - This script updates the schema for the Infogix ER database tables.
  - `update-after-update-data.sql` - This script loads SQL base data required by Infogix ER.
6. Edit the `update-tablespaces.sql` script. This script adds tablespaces for any new Infogix ER database tables. Edit these two variables:
  - `@TABLESPACE_DATAFILE_DIR@` - Substitute the full, platform-specific path of the directory where you want to create space for the table, replacing the entire parameter (including the @ symbols).

- @DATABASE\_USER@ - Substitute the user name of the Infogix ER database user.

---

**Note:** If the `update-tablespaces.sql` script is empty, no changes to the database tablespaces are needed; skip to the [step 11](#).

---

The edited code segment looks similar to the following:

```
CREATE TABLESPACE "TS_DIRECTORY"
LOGGING
DATAFILE 'C:\\Oracle\\oradata\\ER\\TS_DIRECTORY.ORA' SIZE
100M
REUSE AUTOEXTEND ON NEXT 100M
EXTENT MANAGEMENT LOCAL AUTOALLOCATE
SEGMENT SPACE MANAGEMENT AUTO;
ALTER USER ERuser
QUOTA UNLIMITED ON "TS_DIRECTORY";
```

7. When you are finished with your edits, save and close the file.
8. Log in to SQL\*Plus, using the Oracle database administrative user name and password.
9. Run `update-tablespaces.sql` by entering the following at the SQL prompt:

```
@C:\install_folder\InfogixER\dist-stage\dist-
db\schema\oracle\9i\advanced\update-tablespaces.sql;
```

---

**Note:** Depending upon your platform and environment, the path to your Infogix ER installation will differ; substitute the correct full path to your installation when running these scripts.

---

10. When the script has completed, log out of SQL\*Plus.
11. Log in to SQL\*Plus as the Infogix ER database user.
12. Run the `update-before-update-data.sql` script by entering the following at the SQL prompt:

```
@C:\install_folder\InfogixER\dist-stage\dist-
db\schema\oracle\9i\advanced\update-before-update-
data.sql;
```
13. When the script has completed, log out of SQL\*Plus.
14. Using the command line, navigate to `install_folder` and run `populate-update-data` with the appropriate system-specific file extension.

## 3 ■ Upgrade the Database

### Custom Upgrade for a SQL Server Database

---

15. After this script finishes, check the `populate-update-data.log` file for errors. If there are errors in the log, refer to [Chapter 5](#), “[Troubleshooting Upgrade Issues](#)” to correct issues.
16. Log in to SQL\*Plus as the Infogix ER database user.
17. Run the `update-after-update-data.sql` script by entering the following at the SQL prompt:

```
@C:\install_folder\InfogixER\dist-stage\dist-  
db\schema\oracle\9i\advanced\update-after-update-  
data.sql;
```
18. When this script completes, enter the following command:

```
commit;
```
19. Exit SQL\*Plus.
20. Using the command line, from inside `install_folder`, run the `update-base-data` script with the appropriate system-specific file extension.
21. After this script finishes, check the `update-base-data.log` file for errors. When you review the log file, you may notice errors about dropping or adding indexes or constraints. In Oracle, the errors are similar to the following:

```
[updatedbschema] Executing sql - DROP INDEX "<index_name>";  
[updatedbschema] java.sql.SQLException: ORA-01418: specified index does not exist  
  
[updatedbschema] Executing sql - CREATE INDEX "<index_name>" ON "<table_name>" (  
"OBJREFTYPE", "DELETIONID");java.sql.SQLException: ORA-00955: name is already used by an  
existing object  
  
[updatedbschema] Executing sql - ALTER TABLE "<table_name>" ADD CONSTRAINT  
"<constraint_name>" FOREIGN KEY ( "<column_name>" ) REFERENCES  
"<table_name>"("<column_name>");java.sql.SQLException: ORA-02275: such a referential  
constraint already exists in the table
```

These errors are expected and can be safely ignored. If other errors exist, refer to [Chapter 5](#), “[Troubleshooting Upgrade Issues](#).”

## Custom Upgrade for a SQL Server Database

To perform a custom upgrade on an SQL Server database:

1. Update the application server and database properties files. The database upgrade scripts reference these files. This procedure is detailed in [Chapter 2](#), “[Preupgrade Tasks](#).”

2. If your deployment uses LDAP for the security or user information, you must also upgrade the security properties file and user information properties file files.

---

**Note:** Do not skip updating the properties files or you will receive errors when you attempt to run the upgrade scripts!

---

3. Using a command line utility, navigate to `install_folder` and run the `gen-update-db` script to generate the SQL scripts required for the upgrade. Ignore any warning messages.
4. When the `gen-update-db` script has completed, locate the schema files for your deployment. If the `DATABASE_POPULATE_MODE` parameter in your `build.install.database.properties` file is advanced, the files are located in `install_folder\InfogixER\dist-stage\dist-db\schema\sqlserver\2005\advanced`. If this parameter value is basic, the files are located at `install_folder\InfogixER\dist-stage\dist-db\schema\sqlserver\2005\basic`.
5. Verify the following scripts were generated:
  - `update-tablespaces.sql` - This script updates the storage area for the Infogix ER database tables.
  - `update-before-update-data.sql` - This script updates the schema for the Infogix ER database tables.
  - `update-after-update-data.sql` - This script loads SQL base data required by Infogix ER.
6. Edit the `update-tablespaces.sql` script. This script adds tablespaces for any new Infogix ER database tables. Edit these two variables:
  - `@TABLESPACE_DATAFILE_DIR@` - Substitute the full, platform-specific path of the directory where you want to create space for the table, replacing the entire parameter (including the `@` symbols).
  - `@DATABASE_USER@` - Substitute the user name of the Infogix ER database user.

---

**Note:** If the `update-tablespaces.sql` script is empty, no changes to the database tablespaces are needed; skip to the [step 11](#).

---

### 3 ■ Upgrade the Database

#### *Custom Upgrade for a SQL Server Database*

---

The edited code segment looks similar to the following:

```
CREATE TABLESPACE "TS_DIRECTORY"  
LOGGING  
DATAFILE 'C:\\MS SQL Server\\Data\\ER\\TS_DIRECTORY.ndf'  
SIZE 100M  
REUSE AUTOEXTEND ON NEXT 100M  
EXTENT MANAGEMENT LOCAL AUTOALLOCATE  
SEGMENT SPACE MANAGEMENT AUTO;  
ALTER USER ERuser  
QUOTA UNLIMITED ON "TS_DIRECTORY";
```

7. When you are finished with your edits, save and close the file.
8. Log in to your SQL Server management tool using the SQL Server database administrative user name and password.
9. Run `update-tablespaces.sql`.
10. When the script has completed, log out of the SQL Server management tool.
11. Log in to your SQL Server management tool as the Infogix ER database user.
12. Run the `update-before-update-data.sql` script.
13. When the script has completed, log out of the SQL Server management tool.
14. Using the command line, navigate to `install_folder` and run `populate-update-data` with the appropriate system-specific file extension.
15. After the script finishes, check the `populate-update-data.log` file for errors. If there are errors in the log, refer to [Chapter 5, “Troubleshooting Upgrade Issues”](#) to correct issues.
16. Log in to the SQL Server management tool as the Infogix ER database user.
17. Run `update-after-update-data.sql`.
18. When the script completes, exit the SQL Server management tool.
19. Using the command line, from inside `install_folder`, run the `update-base-data` script with the appropriate system-specific file extension.

20. After the script finishes, check the `update-base-data.log` file for errors. When you review the log file, you may notice errors about dropping or adding indexes or constraints. In SQL Server, the errors are similar to the following:

```
[updatedbschema] Executing sql - DROP INDEX "<index_name>";
[updatedbschema] java.sql.SQLException: ORA-01418: specified index does not exist

[updatedbschema] Executing sql - CREATE INDEX "<index_name>" ON "<table_name>" (
"OBJREFTYPE", "DELETIONID" );java.sql.SQLException: ORA-00955: name is already used by an
existing object

[updatedbschema] Executing sql - ALTER TABLE "<table_name>" ADD CONSTRAINT
"<constraint_name>" FOREIGN KEY ( "<column_name>" ) REFERENCES
"<table_name>"("<column_name>");java.sql.SQLException: ORA-02275: such a referential
constraint already exists in the table
```

These errors are expected and can be safely ignored. If other errors exist, refer to [Chapter 5, “Troubleshooting Upgrade Issues.”](#)

## Express Database Upgrade

To perform an express upgrade on an Oracle or SQL Server database:

1. Update the application server and database properties files. The database upgrade scripts reference these files. This procedure is detailed in [Chapter 2, “Preupgrade Tasks.”](#)
2. If your deployment uses LDAP for the security or user information, you must also upgrade the security properties file and user information properties file files.

---

**Note:** Do not skip updating the properties files or you will receive errors when you attempt to run the upgrade scripts!

---

3. Using a command line utility, navigate to `install_folder` and the run `update-db` script.
4. Open `install_folder\InfogixER` and review the `update-db.log` file to verify the script ran successfully.

### 3 ■ Upgrade the Database

#### *Express Database Upgrade*

---

When you review the log file, you may notice errors about dropping or adding indexes or constraints. In Oracle, the errors are similar to the following:

```
[updatedbschema] Executing sql - DROP INDEX "<index_name>";
[updatedbschema] java.sql.SQLException: ORA-01418: specified index does not exist

[updatedbschema] Executing sql - CREATE INDEX "<index_name>" ON "<table_name>" (
"OBJREFTYPE", "DELETIONID" );java.sql.SQLException: ORA-00955: name is already used by an
existing object

[updatedbschema] Executing sql - ALTER TABLE "<table_name>" ADD CONSTRAINT
"<constraint_name>" FOREIGN KEY ( "<column_name>" ) REFERENCES
"<table_name>"("<column_name>");java.sql.SQLException: ORA-02275: such a referential
constraint already exists in the table
```

In SQL Server, these errors are similar, but worded differently as shown below:

```
[updatedbschema] com.microsoft.sqlserver.jdbc.SQLServerException: Cannot drop the index
'<table_name>.<index_name>', because it does not exist or you do not have permission.

[updatedbschema] Executing sql - ALTER TABLE "<table_name>" DROP CONSTRAINT
"<constraint_name>";
[updatedbschema] com.microsoft.sqlserver.jdbc.SQLServerException: '<constraint_name>' is
not a constraint.

[updatedbschema] Executing sql - CREATE INDEX "<index_name>" ON "<table_name>" (
"OBJREFTYPE", "RETENTIONID" ) ON "ER_WORKMGMT"
com.microsoft.sqlserver.jdbc.SQLServerException: The operation failed because an index or
statistics with name "<filegroup_name>" com.microsoft.sqlserver.jdbc.SQLServerException:
The operation failed because an index or statistics with name '<index_name>' already exists
on table '<table_name>'.
```

These errors are expected and can be safely ignored. If other errors exist, refer to [Chapter 5, “Troubleshooting Upgrade Issues.”](#)

---

## Deploy and Test the Application

This chapter contains information about deploying and testing the upgraded Infogix ER application. The chapter includes the following sections:

- “Validate the Configuration Files” on page 31
- “Encrypt the Passwords” on page 31
- “Deploy Infogix ER” on page 33
- “Test the Application” on page 33

### Validate the Configuration Files

Before deploying the application, you must validate the configuration files by running `validate-config-values`. The validation script performs several tasks:

- Validates the OS.
- Creates a temporary table in the database specified in your configuration files.
- Alters the temporary table.
- Queries the temporary table.
- Creates a new user in the database specified in your configuration files.
- Creates a new view as the user.
- Drops the view.
- Drops the temporary table.

Validation helps ensure the deployment process goes smoothly and is a requirement before you can deploy.

### Encrypt the Passwords

It is recommended that you encrypt all passwords in the properties files by running the provided encryption script.

From a command line utility, run `crypt-properties` (located in `install_folder`). When the script finishes, all passwords in the application server, database, security, and user information properties files are encrypted in the following format:

## 4 ■ Deploy and Test the Application

### WebSphere Environment

```
SECURITY_USER_PASSWORD={enc}ck6hJCr4syE=
```

The {enc} indicates that the passwords have undergone the encryption process.

## WebSphere Environment

If you are deploying to a WebSphere application server, it is best to uninstall the Infogix ER application in the console before deploying the new version.

### Update the Database Driver Path

This version of Infogix ER includes database driver path changes. If your deployment uses the embedded database drivers shipped with Infogix ER, you must update the database driver path.

1. In the WebSphere Administrative Console, go to Environment > WebSphere Variables.
2. Locate the driver path variable for your database type. For Oracle, the variable is `ORACLE_JDBC_DRIVER_PATH`. For SQL Server, it is `MSSQLSERVER_JDBC_DRIVER_PATH`.
3. Edit the driver path variable to point to the database driver of your choice.

Database Version	Java Version	Driver Location
Oracle 10 g or Oracle 11g	Java 1.5	<code>install_folder/System/jdbcdrivers/java1.5/oracle/9i</code>
SQL Server 2005 or SQL Server 2008	Java 1.5	<code>install_folder/System/jdbcdrivers/java1.5/sqlserver/2005</code>
Oracle 10 g or Oracle 11g	Java 1.6	<code>install_folder/System/jdbcdrivers/java1.6/oracle/9i</code>
SQL Server 2005 or SQL Server 2008	Java 1.6	<code>install_folder/System/jdbcdrivers/java1.6/sqlserver/2005</code>

4. Click **OK**.
5. Save the local configuration to the master configuration.

## Check the Data Sources and JDBC Providers

The data sources and JDBC providers for the Infogix ER application must be regenerated in WebSphere because of changes in the database driver paths and driver files. Remove these properties before deploying the application.

1. In the WebSphere Administrative Console, go to Environment > Resources > JDBC > Data sources.
2. Select the check boxes to the left of InfogixER Data Source and InfogixER-Embedded Data Source.
3. Click **Delete**.
4. In the left navigation menu, click JDBC Providers.
5. Select the check boxes to the left of Infogix ER JDBC Provider and Infogix ER Embedded JDBC Provider.
6. Click **Delete**.
7. Save the local configuration to the master configuration.

## Deploy Infogix ER

Once you have validated the configuration files and encrypted the passwords, install Infogix ER by running the `deploy` script on the command line. The deployment process builds all files required for running Infogix ER and installs the program to the JBoss or WebSphere application server.

## Test the Application

To test the Infogix ER application, you may need to manually start the program. Most WebSphere deployments and JBoss instances deployed as a service automatically start the application.

If you are using the embedded JBoss instance for testing, start JBoss and Infogix ER by running the `startJBoss` script, located in the `install_folder`.

There is also a corresponding `stopJBoss` script, located in the `install_folder`, to stop the embedded JBoss instance.

Once the application is running, test the user interface by opening Internet Explorer and entering the URL to the instance in the format:

```
http://hostname:port/infogixer
```

## 4 ■ Deploy and Test the Application

---

### *Test the Application*

When the log in screen is displayed, use the administrative user name and password configured in the `build.install.appserver.properties` file to log into the application.

---

# Troubleshooting Upgrade Issues

## Database Errors

If there were errors in either the `populate-update-data.log` or `update-base-data.log` files, you'll need to troubleshoot the issue, resolve it, then rerun the process.

If recoverable errors occur, the database update scripts generate an error detail file named `db_update_errors_identifier.xml`. The error file is in `install_folder\InfogixER`. You will need this error file to rerun the migration.

Most often database issues are caused by incorrect configuration of the database properties. Check this properties file to make certain all parameters are correctly set.

After resolving the issue, use the following command to rerun the upgrade:

```
runant.bat rerun-failed-dbupdates -Dinputfile=<filename>
```

where `<filename>` is the name of the error file generated by the script.

If the rerun fails, the script generates a new error file. Use this new error file to correct the issue, then rerun the script. Make certain to check the file timestamp to ensure you use the correct, most recent, error file. These steps can be repeated until all recoverable errors are resolved.

If you need additional assistance, Infogix ER support can assist you in resolving database upgrade errors. Refer to [“Customer Support”](#) on page 6 for details on contacting Infogix ER support staff.

## Application Errors

### Unable to locate tools.jar.

This error may occur when you run the `validate-config-values` script, and indicates that the `JAVA_HOME` parameter in the `setup` script is not set correctly. Revise the parameter and rerun the validation script.

## 5 ■ Troubleshooting Upgrade Issues

---

### *Application Errors*

**Please define this property - currently it contains the value: #NEW PROPERTY-TO BE EDITED#.**

This error may occur when you run the `validate-config-values` script, and indicates that you have not configured all of the new properties. Edit the properties and rerun the script.

**BUILD FAILED: An error was encountered when attempting to connect to the database.**

This error may occur when you run the `validate-config-values` script, and. The error also says “Please review the `DATABASE_SERVER`, `DATABASE_PORT`, `DATABASE_NAME`, `DATABASE_USER`, `DATABASE_PASSWORD`, `DATABASE_DRIVER` and `DATABASE_DRIVER_LOCATION` values entered.” This error message indicates one of the following problems:

- The database configuration file was not configured properly.
- The database user was not created properly.
- There is no database for Infogix ER.
- The database is inaccessible for some reason.

To resolve this issue:

1. Review the database properties files to make certain all settings are correct.
2. Try logging into the database as the Infogix ER user. This user must have permissions to update, insert, view, and drop all data in the Infogix ER tables.
3. Log into the database as the administrative user and check that the Infogix ER database exists and that the Infogix ER user exists and has the correct permissions for the database.
4. If the previous steps do not resolve the issue, check to make sure the database is functional and accepting requests. You may also check network settings to make certain the issue is not network related.

**You have edited your configuration files since the last validation. Please run validation again.**

This error may occur when you run the `deploy` script, and indicates one or more configuration files have changed since you last ran the validation script. To resolve this issue, run the validation script, then run the `deploy` script.

### Failed to Connect to the Application

This error occurs when you are attempting to test the application and indicates the application is unavailable. This may be due to one of the several reasons:

- The URL or port number you entered is incorrect. To resolve this issue, recheck the HTTP and port settings in the application properties file.
- The application server is not running. To resolve this issue, check to make sure the application server is running. If you are using the embedded JBoss instance, you must start the instance manually.
- The application is not running. To resolve this issue, check to make sure Infogix ER has been started. In JBoss instances that are installed as a service, you may need to restart the service. In WebSphere deployments, you may need to start the application through the console.
- Infogix ER seems to be running but it will not accept any incoming requests. If there is a conflicting port in the Infogix ER configuration, the application may appear to be running, but it will not accept any incoming requests because of the port conflict. To resolve this issue, check all the port settings.

### Invalid Login

This error occurs when you attempt to log in to the application.

If Infogix ER seems to be running but it does not accept the user name and password, check the application server properties files to make sure you are using the correct user name and password.

---

**Note:** If you encrypted the passwords in the configuration files using the `crypt-properties` script, you will not be able to read the passwords in the configuration file.

---

If you are using an LDAP deployment for user authentication, check to make sure the user name and password configured in this file are correct for your LDAP.

If you are using embedded security, make certain the Infogix ER database is running. Infogix ER relies on the database for user authentication when using embedded security.

## 5 ■ Troubleshooting Upgrade Issues

---

### *Application Errors*

---

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