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# Workforce Management Administrator's Guide

Preparing to Install WFM

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# Preparing to Install WFM

To prepare Workforce Management (WFM) for installation, read through the topics on this page and complete the procedures as required.

WFM works in conjunction with a number of software components. Before installing WFM, set up Genesys Framework. The installation should include at least the following components:

- Configuration Manager
- Configuration Server
- DB Server
- T-Server
- Stat Server

## Important

For full interoperability with WFM 8.5, the Genesys components must be release 7.6 or later. Using WFM 8.5 with earlier releases of these components limits use of Management Layer support and Reason Code support. For example, the WFM Daemon wizard will work only with Genesys Framework 7.6 or later, because it uses the new WFM Daemon Application type which was introduced in Configuration Manager 7.6.

## Software Requirements

For complete and up-to-date information on software requirements, review the *Genesys Supported Operating Environment Reference Manual*. You will need a Genesys-supplied login and password to access certain documents there.

## Important

When installing WFM components, ensure they are all within the same major release stream. Mixing components from different major release streams is untested and therefore, not supported in production environments. The major release stream is determined by the first three digits in the release number. For example, 8.1.0, 8.1.1, 8.1.2, 8.1.3.

## Management Layer System Requirements

The Management Layer of Genesys Framework enables administrators to start, stop, and monitor the status of entire solutions from a centralized location. To use Management Layer, you must also have the following Genesys Framework components installed:

- DB Server
- Configuration Server
- Message Server
- Log Database
- Solution Control Server (SCS)
- Solution Control Interface (SCI)
- Local Control Agents (LCA)

For more information on installing any of these components, see the [Management Framework](#) documentation.

To use Management Layer, you must install LCA on the servers running WFM Builder, WFM Server, WFM Data Aggregator, and WFM Daemon.

## Register the Server Host Computers

You must register each host computer that runs one or more of the servers. See [Registering a Host Computer](#).

## Connect to Backup Configuration Server

After installation, WFM components connect to Configuration Server to obtain information about the environment. If the primary Configuration Server is not available during startup, WFM Web, Server, Builder, Daemon, and Data Aggregator can connect to the backup Configuration Server.

### **To implement this feature in 8.1.3 and later releases**

- For WFM Web and Daemon, this feature is implemented automatically during installation.
- For WFM Server, Builder, and Data Aggregator this feature is implemented by setting the backuphost and backupport options in the Start command line or in the NT Service command line.

### **To implement this feature in 8.1.2**

- For WFM Web, manually configure two optional keys backuphost and backupport in the ConfigServer.properties file located in the Tomcat directory webapps\wfm\WEB-INF (assuming WFM

Web was deployed as `wfm.war`, otherwise replace `wfm` with the specified name). After you have made the changes, save the file and restart the host.

- In the WFM Server Application, WFM Builder Application, and Data Aggregator Application objects, set the `backuphost` and `backupport` options to take effect during startup. (These options are not set automatically during installation for these components.)
- For WFM Daemon, no configuration is required.

## Connect to Backup WFM Server

If you plan to install a redundant WFM Server, you can configure it as the backup server for the primary WFM Server Application in Configuration Manager (or Genesys Administrator). All WFM components will then connect to the backup server if the primary WFM Server fails.

## Create Your WFM Database

If you are updating from WFM 7.x to WFM 8.5, you do not need to create a new database. Simply update your current database as described in [Managing WFM Database Utility](#).

If you are installing WFM for the first time or migrating from version 6.x, you must create a new database.

### Important

If you are migrating from WFM 6.x, see the “Workforce Management Migration Procedures” chapter in the [Genesys Migration Guide](#) to find information about how to transfer your data from your current database to the new one.

Ensure your database meets the following criteria:

- Is of an appropriate size.
- Allows room for expansion.
- Is configured to be case insensitive.

## Database Access Privileges

You must have specific privileges or security roles to access the database which differ slightly, depending on the platform being used.

### Microsoft SQL Server (MSSQL) Security Roles:

Creates and maintains WFM database (can use all WFM applications and their functionality):

- db\_datareader
- db\_datawriter
- db\_ddladmin (must to be able to CREATE/ALTER/DROP OBJECTS, DISABLE/ENABLE TRIGGERS, TRUNCATE TABLES, UPDATE STATISTICS)

Uses WFM applications only (does not access database server directly nor modify WFM database objects):

- db\_datareader
- db\_datawriter

### Oracle Database Server Security Roles:

- GRANT CREATE SESSION TO <user name>
- GRANT CREATE TABLE TO <user name>
- GRANT CREATE VIEW TO <user name>
- GRANT CREATE PROCEDURE TO <user name>
- GRANT CREATE SEQUENCE TO <user name>
- GRANT CREATE TRIGGER TO <user name>
- GRANT CREATE TYPE TO <user name>
- GRANT UNLIMITED TABLESPACE TO <user name>

#### Important

The privileges listed above must be assigned to Oracle database owners to ensure WFM Applications are fully functional when the WFM database runs on an Oracle platform.

### IBM DB2 Server Security Roles:

- Connect to database
- Create tables
- Create packages
- Register routines to execute in database manager's process
- Database administrator authority
- Create schemas implicitly

- Access to the load utility
- Create external routines
- Connect to quiesced database

### Important

A DB2 database requires specific configuration, which is described in the section [New Database Configuration](#).

For an Oracle database, the database server name that the client application uses to access the database is actually an alias. If you use different database aliases on the various client computers, you cannot use the same Database Access Point (DAP) for data from each client.

The procedure required to create your WFM Database varies, depending upon which database type you are using. A qualified database administrator should perform this procedure.

To ensure the WFM applications work properly, you must set Microsoft SQL and Oracle database management systems to be case-insensitive.

## Create a Database Access Point

Many of the WFM Application objects require a connection to a Database Access Point (DAP), which specifies the name and location of the WFM Database. To create a DAP, see [Creating a Database Access Point](#).

## Requirements for Using an Oracle Database

Before you install an Oracle Database, ensure you are using:

- The latest Oracle Client 11 with Oracle NET and Oracle Provider for OLE DB.
- The 64-bit Oracle Client with 64-bit WFM servers.
- The 32-bit Oracle Client on the WFM Database Utility host computers (which are 32-bit

applications).

### Important

- Do not install 64-bit WFM Data Aggregator and WFM Server on the same machine as 32-bit WFM Database Utility, because they require different Oracle Clients.
- Regardless of the version of Oracle Database Server used, Genesys recommends that you use Oracle Client version 11.2 or later on all WFM hosts.

- To install all required components, use the Oracle Client or Oracle ODAC installation packages.

## Import the WFM Templates

Import the Application templates. WFM component applications use the Application template. See [Importing the Application Templates](#).

## Procedures

The procedures in this section relate to the topics on this page.

### Registering a Host Computer

**Purpose:** To enable the computer to run one or more servers required by WFM. **Prerequisites:** The computer being registered is on the same network as the computer you are using to register it.

#### Start of Procedure

1. Identify the host computer's assigned name on the network.
2. Open Genesys Administrator and select Environment > Hosts.
3. Right-click Hosts and from the shortcut menu, select New > Host.
4. In the dialog box that opens, enter the host name of a computer on which you are installing a WFM server.

#### Important

Host names must be lowercase. They are case sensitive.

5. Enter the host computer's operating system, version, and its IP address.
6. Accept the default port number, and ensure the State Enabled check box is selected.
7. Click Apply.  
Repeat the process for all computers that will run a WFM server.

#### End of Procedure

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### Creating a Database Access Point

**Purpose:** To enable the Database Utility and WFM Server to specify the DAP on their Application object Connections tab. **Prerequisites:** You know the name of your new WFM Database, its location, its type, and the login name and password for a user with DBO privileges.

#### Start of Procedure

1. In Genesys Administrator, open Environment and then right-click Applications.
2. From the shortcut menu that appears, select New Application.
3. From the Templates list, choose your DAP Application template and then click OK.
4. On the General tab, enter a unique DAP name.

#### Important

You do not need to select a DB Server. WFM does not use DB Server to access its database.

5. On the Server Info tab, enter any valid host name and port number.  
WFM does not use them, but you cannot save the DAP Application object unless these fields are filled in.
6. Enter the appropriate information on the remaining Application object tabs.  
If you need help with this step, see "Configuring Database Access Points" in the *Framework DB Server User's Guide*.
7. To save the new Application object, click OK.

#### End of Procedure

### Installing the Oracle Client with Oracle NET and Oracle Provider for OLE Database

**Purpose:** To install the Oracle Client with Oracle NET.

#### Start of Procedure

1. Uninstall all Oracle Client software that is currently installed. Use the Oracle Deinstall Tool and steps described in the *Oracle® Database Client Quick Installation Guide*. See the topic, "Removing Oracle Database Client Software".
2. Download the latest Oracle Client 11g complete installation package with the appropriate bit version: Oracle ODAC 11g 32-bit or Oracle ODAC 11g 64-bit.
3. During Oracle Client installation, use any type of installation.

### Important

Recommended types are Administrator or Runtime installation types which will install all required components. The installation type Instant Client will need an additional Oracle Provider for OLE DB installation, found in Oracle ODAC. The installation type Custom will require you to manually select the Oracle NET and Oracle Provider for OLE DB.

4. Connect Oracle Database Client to an Oracle Database. In the *Oracle® Database Client Quick Installation Guide*, see the topic, "Oracle Database Client Post installation Tasks".

### End of Procedure

## Installing Oracle ODAC with Oracle Provider for OLE DB and Oracle Instant Client

**Purpose:** To install Oracle ODAC with Oracle Provider.

### Start of Procedure

1. Uninstall all Oracle Client software that is currently installed. Use the Oracle Deinstall Tool and steps described in the *Oracle® Database Client Quick Installation Guide*. See the topic, "Removing Oracle Database Client Software".
2. Download the latest Oracle Client 11g complete installation package with the appropriate bit version: Oracle ODAC 11g 32-bit or Oracle ODAC 11g 64-bit.
3. During the Oracle ODAC installation, select Oracle Provider for OLE DB and Oracle Instant Client components.
4. Connect Oracle Database Client to an Oracle Database. In the *Oracle® Database Client Quick Installation Guide*, see the topic, "Oracle Database Client Post installation Tasks".

### End of Procedure

## Importing Application Templates

**Purpose:** To enable WFM installation, which requires the current Application templates.

### Start of Procedure

1. In Genesys Administrator, select Environment > Application Templates.
2. Right-click Application Templates and from the shortcut menu, select Import Application Template.  
A dialog box opens that enables you to browse to the Application templates on your Workforce Management installation disk.
3. Select one of the following templates and then, click Open:
  - WFM\_Builder.apd
  - WFM\_Client.apd (used by the WFM Database Utility)
  - WFM\_Data\_Aggregator.apd

- WFM\_Daemon.apd
- WFM\_Server.apd
- WFM\_Web.apd

4. If you want to, enter a name for the template in the Name text box on the General tab.

### Important

Do not make any other changes to the template. When you create Application objects using the imported templates, you configure them as explained in the following sections.

5. To save the template, click OK.
6. Repeat Steps 1–5 to import all of the Application templates.

### End of Procedure

**Next Step:** Configure the new Application objects, based on the imported Application templates, as described in the various sections in [Installing Workforce Management](#).