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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:

- Genesys Administrator
- 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.

Major software releases and iterations

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, 8.5.0, 8.5.1, 8.5.2.

Starting in 8.5.2, WFM is released in multiple iterations. You can determine the iteration number by checking the middle three digits. For example, iterations for major release 8.5.2 might look like this: 8.5.**200**.00, 8.5.**201**.00, 8.5.**202**.00, or 8.5.**203**.00. Note that the first iteration is **200** and not **201**. Currently, this is applicable to 8.5.2 release only.

You can mix and match 8.5.2 components of different iterations—for example, you can run WFM Server 8.5.203.xx with WFM Web 8.5.202.xx—but if you do, you might notice that there are rules or exceptions about how new features appear, or if they appear at all. For example, enhancements added to a feature in iteration 2 (perhaps 8.5.**201**.00), they might not appear in iteration 1; Or a new feature might require the latest version of multiple WFM components. If you have only one of the required components in the latest version, the software will not malfunction, but the new feature will not be available.

Be sure to check the release number carefully when deploying or updating WFM software.

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.

Management Framework system requirements

Genesys Management 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
- Genesys Administrator
- 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 Deployment Guide* and related documentation.

To use Management Framework, 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 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 7.6 to WFM 8.5, you do not need to create a new database. Simply update your current database as described in [Managing WFM Backup-Restore Utility](#).

Database access privileges

You must have specific security roles or access privileges 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.

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

Regardless of the version of Oracle Database Server used, Genesys recommends that you use the latest Oracle 64-bit client on all WFM hosts. Use the latest Oracle 64-bit client with Oracle NET and Oracle Provider for OLE DB.

Import the WFM templates

WFM component applications use Application templates. For information about how to import the templates, see *Genesys Administrator Extention Help*.

Procedures

The following procedures 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.
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**.
8. Repeat the process for all computers that will run a WFM server.

End of Procedure

Creating a database access point

Purpose: To enable WFM Server to specify the database access point (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. In the shortcut menu that appears, select **New Application**.

3. In the **Templates** list, choose your DAP Application template and then click **OK**.
4. On the **General** tab, enter a unique DAP name.
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, specifically the DAP fields required for Oracle and MSSQL database servers.
 - For Oracle enter: DBMS name, DBMS type, username and passwords.
 - For MSSQL: DBMS name, DBMS type, database name, username and passwords.

If you need help with this step, see *Framework Database Connectivity Reference 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 *Database Client Quick Installation Guide*. See the topic, "Removing Oracle Database Client Software".
2. Download one of WFM *certified* Oracle Client complete installation package with Oracle ODAC 64-bit.
3. During Oracle client installation, use any type of installation.
Recommended types are Administrator or Runtime installation types which will install all required components. The installation type Instant Client requires an additional Oracle Provider for OLE DB installation, found in Oracle ODAC. The installation type Custom requires you to manually select the Oracle NET and Oracle provider for OLE DB.
4. Connect Oracle Database client to an Oracle Database. In the *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 *Database Client Quick Installation Guide*. See the topic, "Removing Oracle Database Client Software".
2. Download one of WFM *certified* Oracle Client complete installation package with Oracle ODAC 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 [Database Client Quick Installation Guide](#), see the topic, "Oracle Database Client Post installation Tasks".

End of Procedure

Installing and configuring the latest Microsoft OLE DB Driver

Purpose: To install Microsoft OLE DB Driver (MSOLEDBSQL) and configure the required options in WFM Server and WFM Data Aggregator.

By default, WFM Server and WFM Data Aggregator use the outdated Microsoft OLE DB Driver (SQLOLEDB) to connect to MS SQL Server. However, this driver does not support all the latest features and functions of your MS SQL Server. Therefore, Genesys recommends to install the latest Microsoft OLE DB Driver (MSOLEDBSQL) on WFM Server and WFM Data Aggregator hosts.

Start of Procedure

1. Install the latest [Microsoft OLE DB Driver](#) (MSOLEDBSQL) v.19 on both the WFM Server and WFM Data Aggregator hosts.
2. In Genesys Administrator, configure the settings for WFM Server and WFM Data Aggregator applications:
 - Set **[Server] OLEDB_Provider** configuration option to MSOLEDBSQL19.
 - Set **[Server] OLEDB_options** configuration option to:
 - if TLS is not used in your environment: Use Encryption for Data=False;
 - if TLS is used in your environment: OLE DB Services=-2;DataTypeCompatibility=80;Authentication=SqlPassword;Use Encryption for Data=Mandatory;Trust Server Certificate=true;

Example:

```
[Server]
OLEDB_Provider = MSOLEDBSQL19
OLEDB_options = OLE DB
Services=-2;DataTypeCompatibility=80;Authentication=SqlPassword;Use Encryption for
Data=Mandatory;Trust Server Certificate=true;
```

If the **[Server]** section does not exist, create it. For more information, see [Creating New Sections and Options in the Workforce Management Options Reference](#).

3. In a setup that uses TLS, it is essential to adjust the Windows registry settings on both the WFM Server and the WFM Data Aggregator hosts:
Set **HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\MSSQLServer\Client\SN19.0\GeneralFlags\Flag2** value to 1
4. Configure the **Database Access Point** application parameter on the **DB Info** tab by setting **DBMS Name** to tcp:<your-sql-server-name>,1433
5. Restart both the WFM Server and the WFM Data Aggregator.

End of Procedure
