Workforce Management Administrator's Guide

Installing WFM Web

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Installing WFM Web

Before you install Workforce Management Web, you must consider ensure the prerequisites, and some web tools and applications are installed and configured on the WFM Web host computer. Use the Task Summary in this section to ensure you have adequately prepared the WFM host and your installation goes smoothly.

This page includes the following topics:

- Browser Security Considerations
- TCP/IP Connection Settings
- Configuring Tomcat for WFM Web)
- Configuring WebSphere for WFM Web
- Choosing the Platform for WFM Web
- Recommendations for WFM Web as a Report Server
- Procedures

Important

For information and procedures describing how to uninstall WFM Web, see Uninstalling Workforce Management.

Task Summary: Preparing and Installing the WFM Web Host

Task	Description and procedures
Ensure the prerequisites are installed.	Framework 7.2 or higher and Java SDK are required. To learn which version of Java is required, consult the WFM section at the end of the table "Product Prerequisites" in the Genesys Supported Operating Environment Reference Manual.
Install and configure Jakarta Tomcat or IBM WebSphere.	For installation and configuration instructions specific to Genesys Workforce Management: • For Tomcat see, Configuring Tomcat for WFM Web • For WebSphere see, Configuring WebSphere for WFM Web
Install the WFM Web application.	See Choosing the Platform for WFM Web.
Install a supported browser on each workstation that will access WFM Web.	For WFM Web for Supervisors, the browser installation must include the appropriate Java plug-

Task	Description and procedures
	in. If this plug-in was not installed with the browser, download the plug-in from java.sun.com.
	To learn which version of Java is required, consult the WFM section at the end of the table "Product Prerequisites" in the Genesys Supported Operating Environment Reference Manual.
	Important to Note—If the computers that will be accessing WFM Web for Supervisors have pop-up blockers installed, they must be configured to allow popups from the WFM Web URL. Otherwise, pop-up blockers prevent WFM Web for Supervisors from opening.
	The version of Java that you install must include the latest time zones update (TZ/Olson database). See java.sun.com for details and use the Java version that is specified there.
Ensure your browser and TCP/IP settings are configured to run WFM Web for Supervisors correctly.	See Browser Security Considerations and TCP/IP Connection Settings.
Verify that your window resolution has been set to display WFM Web correctly.	WFM Web is optimized for a window resolution of at least 1024 x 768. At lower resolutions, some elements (such as table headers) might not display correctly.
(Optional) Set up WFM Web as Report server.	See Recommendations for WFM Web as a Report Server.

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Browser Security Considerations

WFM Web uses technical approaches that might be affected by web browser security settings, such as:

- WFM Web uses signed Java applets on Supervisors' workstations.
- WFM Web uses Java applets on Supervisors' workstations that are run by Sun's Java Plug-in. On Windows operating systems, the Java Plug-in is running as ActiveX, which means that supervisors must have rights to run ActiveX controls.
- WFM Web uses non-encrypted form data in the login page for all users.
- WFM Web relies on active scripting for all users.
- When running WFM Web in an AIX or Solaris operating system environment, if the X Server software is not installed, reports might not be generated or might be generated incorrectly. In the case of WFM Web, X Server provides fonts and related functionality.

TCP/IP Connection Settings

In environments with higher loads (more than 100 total supervisors or 50+ supervisors running agent

real-time adherence views) you might need to change the default TCP settings on computers running the WFM servers: WFM Web, WFM Data Aggregator, and WFM Server. You can determine whether you need to adjust your settings by monitoring the number of TCP sockets in the TIMED_WAIT mode. If the number exceeds 2000 on one computer or if WFM Web with servers start to report TCP socket errors, modify the settings to make TCP release port resources faster.

Important

Genesys has identified this issue on Windows-based machines. Similar changes are probably required for other operating systems. However, Genesys has not determined recommended adjustments to other operating systems.

To resolve this issue, you must make changes to the HKEY_LOCAL_MACHINE\SYSTEM\ CurrentControlSet\Services\Tcpip\Parameters\ section in the registry of the host computers.

You can find a reference for this registry modification in the Microsoft TCP/IP Implementation Details document for the appropriate operating system at www.microsoft.com.

Genesys recommends these values:

- Increase the MaxFreeTcbs configuration option value from 2000 to 9000.
- Increase the MaxFreeTWTcbs option value from 1000 to 8000.
- Increase the MaxHashTableSize option value from 512 to 2048.
- Increase the MaxUserPort option from value 5000 to 65534.
- Reduce the TcpTimedWaitDelay option value from 240 to 60.

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Configuring Tomcat for WFM Web

After installing WFM Web, you must manually copy the .war file (by default, located in the WFM8\Web directory) to the Tomcat webapps directory.

Important

Tomcat is available for download at jakarta.apache.org. There is no charge for this program. For basic installation and configuration instructions, see the Tomcat documentation, available at the same website as the program.

Warning

Genesys developed and tested supported servlet containers using the default settings as configured for each particular servlet runner during installation time. Any changes to default settings are described in this document. If you use custom settings for servlet containers and experience issues while configuring and/or running WFM Web, Genesys recommends that you evaluate the impact of those custom settings. You might need to re-adjust them to ensure they do not interfere with the operation of WFM Web.

The following sections describe specific configurations that enable Tomcat to support WFM Web:

Set Environment Variables

When configuring Tomcat, add the variables JAVA_HOME and CATALINA_HOME to the Windows Start > Settings > Control Panel > System > Environment > System Variables list. Enter the full path to each home directory for the values for theses variables. CATALINA_HOME is the folder in which Tomcat is installed.

JVM Command-Line Settings

Tomcat's default settings are not suitable for production sites that experience moderate or heavy load. To support Web Services, you must enter the settings in the Table: Tomcat JVM Settings for the Java Virtual Machine (JVM) that runs Tomcat.

Important

You can enter Tomcat settings in different ways, depending on your Tomcat version and configuration. Refer to your Tomcat documentation for details.

Table: Tomcat JVM Settings

JVM Setting	Purpose
-Xms256m	Instructs JVM to initially allocate 256 MB of memory for its own needs.
-Xmxnm	Determines the maximum amount of memory the JVM can allocate for its own needs. For example, -Xmx256m would allocate a maximum of 256 MB. If you are experiencing OutOfMemory exceptions with Tomcat, increase this setting's n parameter to provide Tomcat more memory. Make sure that enough physical memory is available to support the parameter that you choose.
-XX:MaxPermSize =256m	Sets the size of the Permanent Generation, so Tomcat can run properly. 256 is the mandatory minimum value.

WFM 8.1 requires settings changes to the Apache Tomcat Properties dialog, accessible by opening

the file C:\Apache\Tomcat6.0\bintomcat6w.exe (the location on your computer might be different). Select the Java tab. See Table: Minimum Tomcat Java Settings.

Table: Minimum Tomcat Java Settings

Item	Recommended setting
Initial memory pool	256
Maximum memory pool	1024

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Configuring WebSphere for WFM Web

> **Important**
>
> See the Warning, which applies to configuring both Tomcat and WebSphere.

The libraries that WebSphere provides by default for web services are older than, and incompatible with, the libraries that WFM Web requires. If you do not set the `Classloader Mode` option to PARENT_LAST, the WebSphere libraries are loaded first, causing WFM Web not to run. After you set PARENT_LAST, the WFM Web libraries are loaded first, which enables WFM Web to run correctly.

> **Important**
>
> Configuring the `Classloader Mode` option to PARENT_LAST in no way affects other applications running simultaneously in WebSphere.

See also, Configuring WebSphere.

Choosing the Platform for WFM Web

Install WFM Web on either a Windows or a Unix-based platform:

- To install on Windows platforms, see Installing WFM Web (Windows).
- To install on Unix-based platforms, see Installing WFM Web (Unix).

Recommendations for WFM Web as a Report Server

Workforce Management no longer uses the WFM Reports server component found in previous WFM versions to generate reports. Instead, Workforce Management uses the WFM Web component to generate reports.

> **Important**
>
> In addition to functioning as a report server, by default, WFM Web 8.1 continues to perform all its usual WFM Web functions.

Report generation requires the same, and sometimes more hardware requirements than other WFM Web functions, Genesys recommends that medium or large sites (as described in the Genesys Hardware Sizing Guide) install a separate WFM Web Server to function as a report server. If you are upgrading, use the same hardware previously used for the 7.2 WFM Reports component to set up 8.1 WFM Web as the report server.

To install WFM Web as the reports, see Installing WFM Web as Report Server server.

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Procedures

Click the red arrow to display a list of procedure that are related to the topics on this page.

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|-| Configuring WebSphere=

Purpose: To configure WebSphere for WFM Web.

Start of Procedure

1. Log in to the WebSphere Administration Console.

2. Navigate to `Applications > Enterprise Applications`.

3. Install the WFM `Application` from the `wfm_war` directory and save it to the master configuration.

4. Locate the newly-installed WFM `WebApp` and click its link to drill down into the configuration.

5. On the `Configuration` tab, locate the `Related Items` group. The `Classloader Mode` setting, located on `Configuration` tab, is not the correct place to set the `classloader` option. It will not provide the desired effect if set only in that tab.

6. Click the `Web Modules` link to open the `WebModuleDeployment` page.

7. Click the `*.war` link to open `Web Module` configuration properties.

8. Locate the `Classloader Mode` row and change the control value to PARENT_LAST.

9. Save the changes.

End of Procedure

Next Steps:

- Start the WFM application.

> ## Important
> Genesys recommends that you adjust memory and processing thread settings for WebSphere to similar values as specified for Tomcat (see Table: Tomcat JVM Settings). For the exact location of those settings, consult the Websphere documentation.

|-| Installing WFM Web (Windows)=

Purpose: To install WFM Web on the Windows platform.

Start of Procedure

1. On your Workforce Management release disk, navigate to the windows subdirectory in the `solution_specific\WFMWeb` directory.

2. Double-click `Setup.exe`.
   The WFM Web Installation Wizard opens.

3. Click Next to begin using the Wizard.

4. Enter your Configuration Server host name, port number, user name, and password, and then, click `Next`.
   A list of `WFM Web Application` objects displays.

5. Select the correct `Application` object and then click `Next`.
   The properties for each `WFM Web Application` object display in the `Application Properties` list when that `Application` is selected.

> ## Important
> If you are running a Framework 6.x environment, your WFM Web's Application type must be `Third Party Server`.

6. Specify the destination directory into which you want to install WFM Web. Then, click `Next`.

7. In the `Ready to Install` window, click `Install`.
   A progress bar shows the setup status.

8. Click `Finish` to close the Installation Wizard.

9. Using the Tomcat or WebSphere Administrative Console, locate the WFM `.war` file and move it to the appropriate directory for the web server you are using.
   For example, if you are using Tomcat, deploy the `.war` file in the webapps directory. For the location if you are using WebSphere, see your WebSphere documentation.

End of Procedure

|-| Installing WFM Web (Unix)=

Purpose: To install WFM on the Unix platform.

Start of Procedure

1. On your Workforce Management release disk, navigate to the appropriate subdirectory in the `solution_specific\WFMWeb` directory.
   Your choice of subdirectory depends on the platform on which you are installing WFM Web. The choices are AIX and Solaris.

2. Launch `install.sh`.

3. Enter this information for your Configuration Server: host name, port number, user name, and password.

4. Enter the name of your `WFM Web Application` object.

5. Specify the destination directory into which you want WFM Web installed.

6. Click `Finish` to close the Installation Wizard.

7. Using the Tomcat or WebSphere Administrative Console, locate the WFM `.war` file and move it to the appropriate directory for the web server you are using.
   For example, if you are using Tomcat, deploy the `.war` file in the webapps directory. For the location if you are using WebSphere, see your WebSphere documentation.

End of Procedure

|-| Installing WFM Web as a Report Server=

Purpose: To install and configure a separate instance of WFM Web as the reports server.

Start of Procedure

1. Install WFM Web using the steps, as described in Installing WFM Web (Windows) or Installing WFM Web (Unix). .

2. In the Configuration Manager, in the `WFM Web Application` properties, set the value for option `ServerURL` in the `Reports` section, by entering the complete URL that was used to installed WFM Web.
   For a complete description of the `ServerURL` option, see WFM Web Options.
   For example: `http://<host>:<port>/<appname>`
   In this example:

   • `<host>` and `<port>` refer to where the servlet container (the one that will function as the report server) for WFM Web is running.

   • `<appname>` is the name that is used while WFM Web is being deployed.

3. In the Connections tab of the WFM Web Application that will perform all the usual WFM Web functions except report generating, include the Application name of the WFM Web Application that will function as the report server.

End of Procedure

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