

WebSphere. Lombardi Edition Version 7.1

Upgrade Guide





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Upgrading to Lombardi 7.1

If you are running Lombardi Teamworks 7.0.0 or 7.0.1, you can upgrade to IBM WebSphere Lombardi Edition 7.1, as described in the following sections. For this upgrade operation, you have the following options:

Option	When to use...	See...
Upgrade data in all environments	<p>If you are currently running processes and want to retain all runtime data and instances, you need to upgrade the Lombardi databases in your Process Center and each runtime environment.</p>  <p>The Process Center and each runtime environment must be running the same version of the Lombardi software. Therefore, you should upgrade the Process Center and each runtime environment within a very short timeframe. Otherwise, you should contact Lombardi Customer Support to develop an approach for your upgrade that will prevent version conflicts and other potential issues.</p>	Upgrading databases in all Lombardi environments
Export all Lombardi assets from the earlier version and import them into Lombardi 7.1.	<p>If there is no need to retain runtime data and instances.</p>  <p>This option is not recommended for Lombardi upgrades in most situations. You should review the information in the referenced section to understand how toolkits and snapshot histories are affected and then contact Lombardi Customer Support for assistance if you still believe you need to upgrade in this manner.</p>	Exporting and importing Lombardi assets

Upgrading databases in all Lombardi environments

The following table lists the tasks that you must complete to upgrade to IBM WebSphere Lombardi Edition 7.1 by upgrading existing Lombardi Teamworks databases:

Task	See...
1. Back up existing installations (Process Center and runtime environments).	Backing up existing installations
2. Itemize customizations for each installation.	Itemizing customizations
3. Back up databases (Process Center and runtime environments).	Backing up databases
4. Install Lombardi 7.1 Process Center and runtime environments.	Installing Lombardi 7.1

Task	See...
5. Run Upgrade.bat/sh on all databases (Process Center and runtime environments).	Upgrading existing databases
6. Apply customizations to each new installation.	Applying customizations
7. Start Lombardi 7.1 servers and verify all data.	Verifying upgrade

Backing up existing installations

Backups enable you to keep files and settings to transfer to the new Lombardi 7.1 installations.



Create a backup of the Process Center and each runtime environment installation.

By default, for earlier versions of Lombardi Teamworks, the name of the installation directory is `Teamworks`, and it is usually installed on the root drive. Locate each installation directory and then copy it to a backup directory.



The installation of Lombardi 7.1 does not modify existing installations. Nevertheless, creating a backup before upgrading is prudent.

Itemizing customizations

Before upgrading, make a list of any customizations you have made to your existing installations and ensure you have a backup copy of your customized files. For example, if you have changed configuration settings for the Process Center using the `100Custom.xml` file, you need to have a copy of that file available. This enables you to easily apply your customized settings to the new installation.



If you have changed configuration settings by directly editing configuration files like `99Local.xml` and `00Static.xml`, be sure you have backup copies of each altered file for each installation.



The installation of Lombardi 7.1 automatically installs WebSphere® Application Server 7.0, while Lombardi Teamworks 7.0.0 and 7.0.1 automatically installed JBoss® Application Server 4.3.0. If you customized the JBoss configuration of your earlier installation, you must determine the corresponding customizations (if applicable) for the WebSphere Application Server configuration. For more information about embedded application server settings, see *WebSphere Application Server Version 7.0 Information Center*. For information on other changes that might affect customizations, see the *Lombardi 7.1 Release Notes*.

Backing up databases

Before you upgrade to Lombardi 7.1, create backup copies of your existing databases. This enables you to revert to the pre-upgrade state of the databases at any time, if necessary.



You need to create a backup of the Process Center databases and also the databases in each runtime environment.

Most databases provide a backup wizard or other user assistance for creating database backups. Contact your database administrator for more information.

Installing Lombardi 7.1

Install Lombardi Process Center and any runtime environments that you require. Just as with installing Lombardi for the first time, for an upgrade, you can install Lombardi immediately from the installer program, or you can create an Automated Installer package that you can modify and later install non-interactively. For installation instructions, refer to the appropriate guide for the server type, installation type, and operating system:

Server type	Interactive installation	Automated installation
Process Center	<i>Process Center Installation and Configuration Guide for Windows</i>	<i>Automated Process Center Installation and Configuration Guide for Windows</i>
	<i>Process Center Installation and Configuration Guide for UNIX</i>	<i>Automated Process Center Installation and Configuration Guide for UNIX</i>
Runtime environment	<i>Runtime Environment Installation and Configuration Guide for Windows</i>	<i>Automated Runtime Environment Installation and Configuration Guide for Windows</i>
	<i>Runtime Environment Installation and Configuration Guide for UNIX</i>	<i>Automated Runtime Environment Installation and Configuration Guide for UNIX</i>

The following choices in the Lombardi 7.1 installation program are specific to upgrading:

- Install to a directory that is different from the earlier Teamworks installation directory.
- Specify the parameters for the existing databases that you will be upgrading and using with Lombardi 7.1.
- Do *not* select the **Initialize new database?** option in the Lombardi Installer, and do not perform the steps to load initial data, as described in the Installation and Configuration guides. The upgrade utility described in [Upgrading existing databases](#) performs all the necessary database and system data initialization for Lombardi 7.1.
- Do *not* select **Startup Lombardi**. The Lombardi Process Center and runtime environments must not be running when you upgrade the databases.

Upgrading existing databases

The upgrade utility modifies your existing database schemas and data for use with Lombardi 7.1. This includes converting encrypted passwords to work with the encryption algorithm used by Lombardi 7.1. Encrypted passwords may be stored in the database for users defined through the internal security provider, for secure web service integrations, or for Microsoft SharePoint integrations.

The upgrade utility also updates the following items to version 7.1:

- Lombardi System Data toolkit
- Process Portal process app
- Quick Start process app

The following instructions assume that you have created backups of your existing databases.

1. In the [Lombardi_home] /upgrade directory, modify the `upgrade.properties` file to set the value of the `previous.lombardi.install.dir` property to be the earlier installation directory. If

this property is missing or invalid, the upgrade script is unable to upgrade encrypted passwords, but can still perform other upgrade processing.



If the new installation is on a different filesystem from the older installation, copy `utility.jar` from `[Teamworks_home]/process-center/lib` or `[Teamworks_home]/process-server/lib` in the older installation to `[some_dir]/process-center/lib` on the filesystem of the new installation, and set `previous.lombardi.install.dir` to `[some_dir]`.

- From the `[Lombardi_home]/upgrade` directory, run `Upgrade.bat` (for Windows) or `Upgrade.sh` (for UNIX).

The script updates existing schemas, migrates data, and converts encrypted passwords to work with Lombardi 7.1. Because the script detects the state of both databases and applies only the necessary steps, it is always safe to run again. If a step fails, you can simply re-execute the upgrade script after you have addressed the problem that caused the failure.



The upgrade utility updates the Lombardi System Data toolkit to version 7.1, but it does not automatically update existing dependencies. To update dependencies, in Lombardi Authoring Environment, open each existing process app and toolkit, click the update icon next to the System Data toolkit, and select **Upgrade dependency to 7.1**. Refer to *Managing and using toolkits* in *Lombardi Authoring Environment User Guide* or online Help.

Applying customizations

Compare your customized files from the backups of your existing installations with the corresponding files in the new Lombardi 7.1 installations to ensure that all of your settings are correctly applied to the new installations. Ensure that you have applied customized settings for the following:

- Lombardi configuration files
- Application server database connection pool settings and tuning parameters
- E-mail templates
- Logging configurations



Custom CSS, HTML, JAR, and other files (such as custom images) should be included in your Lombardi process applications and toolkits as managed external files. However, in cases where such files were not yet added to the process applications and toolkits in Lombardi Teamworks, be sure that those customizations are also brought over so that they can be added as managed files in IBM WebSphere Lombardi Edition 7.1.



If you have customized the length of tracked fields in the Performance Data Warehouse database, be sure to update the value of the Performance Data Warehouse's `max-length-of-string-columns` property. For more information, see *Extending the maximum number of characters in tracked performance data* in *Lombardi Administration Guide*.



Lombardi 7.1 uses a different encryption algorithm from previous versions. When updating configuration files, be sure to replace encrypted passwords created by the old version with passwords encrypted by the new version. For more information on encrypting passwords, see *Encrypting passwords* in the *Installation and Configuration Guides*.

Verifying upgrade

Start the Lombardi servers in each environment as described in the *Installation and Configuration Guides*. You can use the Process Center Console and the Designer in Lombardi Authoring Environment to verify that all process applications, toolkits, and assets are available in the repository. You can check for errors and rectify any issues as described in *Validating processes in Lombardi Authoring Environment User Guide* and online Help.

From the Process Center Console, verify that connected servers are showing up and that previously installed snapshots are accurately listed. You can use the Inspector in Lombardi Authoring Environment to check active instances.

Exporting and importing Lombardi assets

This upgrade option is not recommended in most situations for upgrading from Lombardi Teamworks to IBM WebSphere Lombardi Edition 7.1. Read [Before you begin](#) to understand how your existing assets are affected by export and import.

Before you begin

In the majority of cases, upgrading your databases in all environments ensures that you retain all the features and flexibility that Lombardi offers. After you export and then import Lombardi assets, your assets are affected as follows:

- Imported toolkits are immutable.
- Snapshot histories for process applications and toolkits are lost.

Because imported toolkits are immutable, no one can change the items within them. And, no user can change the immutable quality of imported toolkits. However, the user who imports a toolkit does have administrative access to that toolkit and can grant the following access to other users and groups:

Read	Users with Read access can clone the imported toolkit or copy items from the toolkit to a different toolkit or process application.
Write	Users with Write access have all the capabilities included with Read access, plus they can import a new version of the toolkit and archive older versions of the toolkit. Write access also enables users to restore previously archived versions.
Admin	Users with Admin access have all the capabilities included with Write access, plus they can grant or remove administrative access to the toolkit.

When you export process applications and toolkits, you select a snapshot for the export procedure. In most cases, you select the most recent snapshot and perhaps one or more additional snapshots that represent important milestones. Because you export particular snapshots, you lose the history provided by any additional snapshots that you may have stored in the Process Center repository.

With a database upgrade, your toolkits remain mutable and you retain the entire snapshot history for all process applications and toolkits. For these reasons, a database upgrade as outlined in [Upgrading databases in all Lombardi environments](#) is appropriate in most situations.

Steps to follow

The following table lists the tasks that you must complete to upgrade to Lombardi 7.1 by exporting and importing existing assets:

Task	See...
1. Export existing assets.	Exporting existing assets from Teamworks 7.0.0 or 7.0.1
2. Back up existing installations (Process Center and runtime environments).	Backing up existing installations
3. Itemize customizations for each installation.	Itemizing customizations
4. Back up existing databases.	Backing up databases
5. Install Lombardi 7.1 Process Center and runtime environments.	Installing Lombardi 7.1
6. Apply customizations to each new installation.	Applying customizations
7. Import existing assets into Lombardi 7.1 Process Center.	Importing older Teamworks assets into Lombardi 7.1
8. Verify implementations in Designer in Lombardi Authoring Environment.	Verifying implementations

Exporting existing assets from Teamworks 7.0.0 or 7.0.1

You can export assets using the Process Center Console. To access the Process Center Console either start Teamworks Authoring Environment or open your Web browser to the following location: `http://[host_name]:[port]/ProcessCenter`. Teamworks Process Center Server must be running.

1. Export existing process applications and toolkits as described in *Importing and exporting process applications from the Process Center Console* and *Importing and exporting toolkits from the Process Center Console* in *Authoring Environment User Guide* and online Help.
2. When you are finished exporting all existing assets, exit Teamworks Authoring Environment or close your browser window.
3. Stop the Teamworks servers in the Process Center and each runtime environment as described in the *Installation and Configuration Guides*.

Backing up existing installations

After you have exported existing assets and shut down Teamworks servers, you are ready to create a backup of your existing installation directories. The backups enable you to keep files and settings to transfer to the new Lombardi 7.1 installations.



You need to create a backup of the Process Center and each runtime environment installation.

By default, the name of the installation directory for earlier versions is `Teamworks`, and it is generally installed on the root drive. Locate each installation directory and then copy it to a backup directory.

Itemizing customizations

Before upgrading, make a list of any customizations you have made to your existing installations and ensure you have a backup copy of your customized files. For example, if you have changed configuration settings for the Process Center using the `100Custom.xml` file, you need to have a copy of that file available. This enables you to easily apply your customized settings to the new installation.



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Backing up databases

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You need to create a backup of the Process Center databases and also the databases in each runtime environment.

Most databases provide a backup wizard or other user assistance for creating database backups. Contact your database administrator for more information.

Installing Lombardi 7.1

Install Lombardi Process Center and any runtime environments that you require. For instructions, see the *Installation and Configuration Guide* appropriate for the server type, installation type, and operating system.



Be sure to either select the option to **Initialize new databases?** in the Lombardi Installer or run the initialization script for each Lombardi installation as described in the *Loading initial data* section in the *Installation and Configuration Guides*.

Applying customizations

Compare your customized files from the backups of your existing installations with the corresponding files in the new Lombardi 7.1 installations to ensure that all of your settings are correctly applied to the new installations. Ensure that you have applied customized settings for the following:

- Lombardi configuration files
- Application server database connection pool settings and tuning parameters
- E-mail templates
- Logging configurations



Custom CSS, HTML, JAR, and other files (such as custom images) should be included in your Lombardi process applications and toolkits as managed external files. However, in cases where such files were not yet added to the process applications and toolkits in Lombardi Teamworks, be sure that those customizations are also brought over so that they can be added as managed files in IBM WebSphere Lombardi Edition 7.1.



If you have customized the length of tracked fields in the Performance Data Warehouse database, be sure to update the value of the Performance Data Warehouse's `max-length-of-string-columns` property. For more information, see *Extending the maximum number of characters in tracked performance data* in *Lombardi Administration Guide*.



Lombardi 7.1 uses a different encryption algorithm from previous versions. When updating configuration files, be sure to replace encrypted passwords created by the old version with passwords encrypted by the new version. For more information on encrypting passwords, see *Encrypting passwords* in the *Installation and Configuration Guides*.

Importing older Teamworks assets into Lombardi 7.1

Make sure that Lombardi 7.1 Process Center Server is running and then start the Process Center Console. To access the Process Center Console either start Lombardi Authoring Environment or open your Web browser to the following location: `http://[host_name]:[port]/ProcessCenter`.

1. Import previously exported process applications and toolkits as described in *Importing and exporting process applications from the Process Center Console* and *Importing and exporting toolkits from the Process Center Console* in *Lombardi Authoring Environment User Guide* and online Help.



If an imported process application or toolkit contains a password in its implementation (for example, a protected web service implementation), the password field is blank when imported into Lombardi 7.1.

2. If your imported assets include tracking groups or other data required by the Performance Data Warehouse, be sure the warehouse is running and then select **File > Send definitions to Performance Data Warehouse** from the main menu. Sending existing definitions enables authors to capture data needed to test reports (and other assets that require performance data) while developing those assets in Lombardi Authoring Environment.

Verifying implementations

After importing, open imported assets in the Designer in Lombardi Authoring Environment to check for validation errors. You can open each imported process application and toolkit and check for errors as described in *Validating processes* in *Lombardi Authoring Environment User Guide* and online Help.

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