

WebSphere. Lombardi Edition 7.2

Release Notes



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Introduction

Welcome to IBM® WebSphere® Lombardi Edition, an award-winning Business Process Management (BPM) application. WebSphere Lombardi Edition is designed to address complex business environments, easily transforming an organization's process inefficiencies into adaptable and efficient processes.

Lombardi provides a set of data-driven engines, environments, and reusable process components for capturing process best practices and knowledge, orchestrating interaction between multiple people and systems, and monitoring for critical business events to enable you to manage your business.

What's new in IBM WebSphere Lombardi Edition 7.2.0

This release introduces the following new features and major enhancements. For information about existing features that have changed with this release, see [What's changed in IBM WebSphere Lombardi Edition 7.2.0](#).

Product translation

Starting with this release, WebSphere Lombardi Edition enables customers to choose the language they would like to use independently of each other and of the server language. Language packs are available for installation with the product as described in the following section. However, this release does *not* support: installation of external language packs that enable end users to create their own language translations; culturally sensitive formatting; non-Gregorian calendars; or bidirectional text. Only those language packs distributed with the product are supported and formatting follows U.S. rules for date, time, currency, string sorting, and string searching with few exceptions. Product logs remain in English regardless of language pack selection and language packs cannot be added to an installation after the fact, so be sure to select all languages required by Lombardi users in your environment during installation.

Unicode data

When integrating WebSphere Lombardi Edition with external systems, all incoming and outgoing data must be UTF-8 encoded.

Language packs available for installation

During installation of WebSphere Lombardi Edition, you can choose the language packs to install with the product. The following language packs are available:

- Chinese (Simplified Han)
- Chinese (Traditional Han)
- French
- German
- Italian
- Japanese
- Korean
- Portuguese (Brazil)
- Spanish
- Dutch
- Greek

- Portuguese (Portugal)
- Swedish
- Russian

The languages that you select are added to the locale preferences for Lombardi Process Center Console, Authoring Environment, Process Portal, and Process Admin Console. Lombardi users can change their locale preference as described in the following section.

Locale preference for Lombardi interfaces

Starting with this release, you can set the locale for Lombardi interfaces, including Lombardi Process Center Console, Authoring Environment, Process Portal, and Process Admin Console. The language packs installed with WebSphere Lombardi Edition (as described in the preceding section) determine the list of locales that are available. When you set the locale for an interface, that setting is applied across all Lombardi interfaces, but not environments. For example, when a user sets his locale preference, each Lombardi interface he starts will respect that preference. But because the preference is persisted, a preference specified by a user in the Process Center development environment is not going to be recognized in runtime environments. Lombardi interfaces default to the system locale.

Locale setting for installer

When you start the Lombardi installer, you can choose the language in which the installer presents information and options for WebSphere Lombardi Edition installation. Lombardi installer defaults to the system locale.

Conditional activities

Lombardi Authoring Environment now enables you to include conditional activities in your processes. Conditional activities allow you to model steps which, at run time, are either skipped or performed based on the values of particular process variables. The decision to skip or perform a conditional activity can be made by the runtime user or programmatically, based on scripted rules. You can build a graphical user interface (Coach) that enables end users to select the conditional activities to be performed. The conditional activity sample process available in `[Lombardi_home]/imports` includes a Coach that demonstrates this type of implementation. For more information, see **Modeling processes > Configuring conditional activities** in *Lombardi Authoring Environment Help*.

Critical path management

When you model a process in Lombardi Authoring Environment, you can configure the process so that designated users in Lombardi Process Portal can perform critical path analysis. Critical path analysis enables designated Lombardi Process Portal users to perform the following actions for running process instances:

- Determine whether a running process instance is on track for completion
- Change the due date for a process instance at any time during the life of the running instance
- Adjust the due dates of tasks in a process instance to get an instance back on track

For more information, see **Modeling processes > Enabling a process for critical path analysis** in *Lombardi Authoring Environment Help*, **Using Critical Path Management features** in *Lombardi Process Portal Help*,

and **Managing Lombardi configuration settings > Settings for Critical Path Management** in *Lombardi Process Admin Console Help*.

Web Service Integration component supports WSRR

You can build integration services in Lombardi Authoring Environment when you need to integrate with an external system to retrieve, update, or insert data in order to complete a task. The Web Service integration component available in Lombardi Authoring Environment has been expanded to enable you to connect to both secure and non-secure services exposed by WebSphere Process Server Version 7.0.0.x. Such an integration allows you to take advantage of reusable components that have been shared via the WebSphere Service Registry and Repository Version 7.0.0.x (WSRR). When you build an integration service and include a Web Service Integration component, you can choose the registry type that you want to search, either UDDI or WSRR. For more information, see **Modeling processes > Integrating with other systems > Creating outbound integrations** in *Lombardi Authoring Environment Help*.

ILOG JRules Decision Service Integration component

Starting with this release, IBM WebSphere Lombardi Edition integrates with IBM WebSphere ILOG JRules by providing a new ILOG JRules Decision Service Integration component. This new rule component enables you to use decision services available on a JRules Rule Execution Server for your Lombardi activity implementations. Using the JRules Decision Service Integration component, you can browse available decision services and connect to both secure and non-secure decision services from IBM WebSphere ILOG JRules Version 7.1.1.x. For more information, see **Modeling processes > Creating a service > Building a rule service** in *Lombardi Authoring Environment Help*.

New Document Viewer Coach control to view and list documents stored in an ECM repository

When building Coaches in Lombardi Authoring Environment, you can use the new Document Viewer Coach control to display a document or list of documents stored in a Enterprise Content Management (ECM) repository such as IBM FileNet Content Manager or IBM Content Manager. The Coach control connects to remote repositories using IBM Content Integrator Enterprise Edition Version 8.5.1, which enables integration with a wide variety of IBM ECM products, including:

- FileNet P8 Content Manager Version 3.5.2
- FileNet P8 Content Manager Version 4.0.1
- FileNet P8 Content Manager Version 4.5
- Content Manger Enterprise Edition Version 8.3 with fixpack 3, or later
- Content Manager for z/OS®, Version 8.3.0.x
- Content Manager Enterprise Edition Version 8.4.0
- Content Manager for z/OS, Version 8.4
- Content Manager Enterprise Edition Version 8.4.1

Enabling process participants to view documents stored in their ECM repository can help them make decisions regarding tasks and task assignments. For more information, see **Building Coaches > Adding documents and reports to Coaches** in *Lombardi Authoring Environment Help*.

Document Attachment Coach control updates

In this release, the Document Attachment Coach control has been updated to work with documents stored in an Enterprise Content Management (ECM) repository. This enables end users of the processes that you develop to attach any document from their ECM repository to a Coach so that other process participants can immediately see necessary information when performing tasks. When you use the Document Attachment Coach control, you can configure it to work with Lombardi documents or with IBM Content Integrator Enterprise Edition, which enables end users to access documents from the following IBM ECM products:

- FileNet P8 Content Manager Version 3.5.2
- FileNet P8 Content Manager Version 4.0.1
- FileNet P8 Content Manager Version 4.5
- Content Manger Enterprise Edition Version 8.3 with fixpack 3, or later
- Content Manager for z/OS®, Version 8.3.0.x
- Content Manager Enterprise Edition Version 8.4.0
- Content Manager for z/OS, Version 8.4
- Content Manager Enterprise Edition Version 8.4.1

For more information, see **Building Coaches > Adding documents and reports to Coaches** in *Lombardi Authoring Environment Help*.

New process app and toolkit settings

Starting in this release, new process app and toolkit settings enable you to edit the name and acronym for a process app or toolkit while working in the Designer in Lombardi Authoring Environment. You can also specify the CSS and XSL to use for all Coaches in the process app or toolkit. To learn more about these new settings and how they work, see **Managing process applications > Editing process application settings** and **Managing toolkits > Editing toolkit settings** in *Lombardi Authoring Environment Help*.

New platform support

This release adds support for the following platforms:

- IBM AIX® 5L Version 5.3
- Red Hat Enterprise Linux 5 on IBM System z (64-bit)
- SUSE Linux Enterprise Server 10 on IBM System z (64-bit)
- Microsoft SQL Server 2008 R1 and R2
- Oracle Enterprise 11g Release 2
- Oracle Standard 11g Release 2
- Microsoft Internet Explorer 8 (with Compatibility View enabled)

For more information about supported platforms, see the *Installation and Configuration Guide* appropriate for your environment.

What's changed in IBM WebSphere Lombardi Edition 7.2.0

This release introduces the following changes to existing features. For information about new features that have been added to this release, see [What's new in IBM WebSphere Lombardi Edition 7.2.0](#).

Simple installation option can now be used for enterprise Process Center installations

In previous releases, the Simple installation option described in the Express Installation and Configuration Guide was intended only for individual users who wanted to quickly install Lombardi Process Center on a personal Windows desktop or laptop for demonstration purposes. Starting with this release, the Simple installation option can now be used to install Lombardi Process Center in enterprise environments for use by business analyst and development teams. The Simple installation option installs Lombardi Process Center with an embedded DB2 Express database. For more information, see *WebSphere Lombardi Edition Express Installation and Configuration Guide*.

Preventing XSS vulnerability is on by default

The `<escape-user-input>` property in the `[Lombardi_home]/process-server/config/system/00Static.xml` configuration file prevents a user who is working in Lombardi Process Portal, Lombardi Process Center Console, or Lombardi Process Admin Console from executing JavaScript that is embedded in the URLs and might cause a security risk. Starting in WebSphere Lombardi Edition 7.2.0, the `<escape-user-input>` property is set to `true` by default. In WebSphere Lombardi Edition 7.1.0 and previous versions of Teamworks, the `<escape-user-input>` property is set to `false` by default.

X-Windows Virtual Frame Buffer no longer required for UNIX platforms

In previous releases of WebSphere Lombardi Edition, X-Windows Virtual Frame Buffer (Xvfb) was required to properly render reports in a UNIX system. Starting with this release, it is no longer necessary to install Xvfb on UNIX platforms. Reports are properly rendered on UNIX systems without it.

What's new in IBM WebSphere Lombardi Edition 7.1.0

This release introduces the following new features and major enhancements. For information about existing features that have changed with this release, see [What's changed in IBM WebSphere Lombardi Edition 7.1.0](#).

New product name

The Teamworks product name has changed to IBM® WebSphere® Lombardi Edition. Product components such as Teamworks Authoring Environment and Teamworks Process Portal are now named Lombardi Authoring Environment and Lombardi Process Portal.

New embedded application server

The embedded application server for release 7.1.0 is WebSphere Application Server ND Version 7.0. In previous releases (Teamworks 7.0.0 and 7.0.1), the embedded application server was JBoss 4.3.0. For more information, see the *Installation and Configuration Guide* appropriate for your environment.

New platform support

This release adds support for the following platforms:

- IBM AIX® 6.1 (Power6)
- Red Hat Enterprise Linux 5 on IBM System z (64-bit)
- SUSE Linux Enterprise Server 10 on IBM System z (64-bit)
- DB2® Version 9.7 Fix Pack 1
- DB2 Express Edition Version 9.7 (as an embedded database with Express installations)
- Microsoft® Windows 7 (for Express installations and standalone Authoring Environment installations)

For more information about supported platforms, see the *Installation and Configuration Guide* appropriate for your environment.

New Lombardi Information Center

Starting with this release, you can go to the Information Center for WebSphere Lombardi Edition to access all product documentation:

<http://publib.boulder.ibm.com/infocenter/wle/v7r1/index.jsp>

What's changed in IBM WebSphere Lombardi Edition 7.1.0

This release introduces the following changes to existing features. For information about new features that have been added to this release, see [What's new in IBM WebSphere Lombardi Edition 7.1.0](#).

Improved installer

This release includes a new installer that enables you to choose either a simple or custom installation. With a simple installation, you get the same product components provided by the Express Installer in previous releases (Process Center for demonstration purposes) with the following changes:

- The embedded database is now DB2 Express Edition Version 9.7
- The embedded application server is WebSphere Application Server Version 7.0

The custom installation option always installs WebSphere Version 7.0 as the embedded application server and enables you to choose the following:

- Whether to install a Process Center or runtime environment
- The type of runtime environment to install: testing, staging, or production
- Whether to enable clustering for servers in runtime environments and, if so, whether to add the server to an existing cluster
- Database: DB2, Microsoft SQL Server, or Oracle database
- Whether to create an automated installation package

In addition, the new installer automatically performs the following post-installation configuration tasks by default:

- Initializes Lombardi databases by automatically running the twinit script
- Starts Lombardi servers

For setting advanced options such as environment type and specific ports to use for WebSphere, you can configure the `install.properties` file to further customize your installation as described in the automated installation guides.



Adding a runtime server to an existing cluster also requires that you configure the `install.properties` file for use with the automated installer and perform additional post-installation tasks. For more information, see the *Lombardi Automated Runtime Environment Installation and Configuration Guide* appropriate for your environment. (Process Center servers cannot be clustered. Clustering is supported only for Process Servers in runtime environments.)

Must be an administrator to install

You must be an administrator to install IBM WebSphere Lombardi Edition on Windows or have root access to install on UNIX® platforms.

Windows Authentication option for Microsoft SQL Server databases

The option to enable Windows Authentication for Microsoft SQL Server databases is no longer available in Lombardi installers. In previous releases, this option enabled you to authenticate access to your Microsoft SQL Server database server using Windows logon permissions. For this type of configuration for this release of WebSphere Lombardi Edition, you need to use Lombardi Automated Install and contact IBM Customer Support for assistance.

WebSphere MQ

Previous releases of Lombardi Teamworks 6 provided support for WebSphere MQ or WebSphere embedded messaging for the product's internal queues. WebSphere MQ is not supported for the product's internal queues in this release. The Java Integration component that allows process applications to interface with WebSphere MQ is still available and supported.

Improved WS-Security support

In this release, Web Services Security has been enhanced to support additional scenarios with WebSphere 7 web service end points. The following scenarios are now supported:

- XML Signature
- Encryption
- XML Signature + Encryption
- Username Token
- Username Token + XML Signature
- Username Token + Encryption
- Username Token + XML Signature + Encryption

Password encryption

In previous releases, passwords were encrypted using the Blowfish algorithm. In this release, the encryption algorithm is Cipher Block Chaining (CBC) mode Advanced Encryption Standard (AES) encryption.

Startup wrapper

In previous releases, Lombardi used a startup wrapper to control the Process Server, Process Center Server, and Performance Data Warehouse. In this release, Lombardi no longer uses the startup wrapper service written by Tanuki Software.

Configuration file directory

In this release, Lombardi configuration files are installed in the following directory:
[Lombardi_home] / [process-center|process-server] / config

The `100Custom.xml` and `log4j.xml` files are located in the top-level directory. Other configuration files, such as `99Local.xml` and `80EventManager.xml` are stored in the `system` sub-directory.

Yahoo! UI Library

Yahoo! UI Library (YUI) assets have been removed from IBM WebSphere Lombardi Edition and replaced with Dojo components. Any existing customizations made directly to YUI assets (for example, in the WAR file for Lombardi Process Portal) will no longer work in release 7.1.0.

Date selector Coach control

The Date selector Coach control has changed. When the data format for a Date selector Coach control includes minutes and seconds, the resulting Date selector on the rendered Coach now includes two fields: one field for the date and a separate field for the time.

User interface elements

Many user interface elements have changed such as the startup icons for the Windows desktop, the login dialogs for Lombardi Authoring Environment, Process Portal, and Process Admin Console, and the title bars for these interfaces. All changes reflect the new product name and branding and do not affect functionality.

Windows services for Lombardi servers

In previous releases, you could create Windows services for Lombardi servers using available commands after installing. In this release, the commands to create Windows services are not available. Lombardi administrators can use WebSphere tools to create Windows services. (Note that Lombardi simple install option (as described in the Express Installation Guide) does create and start Windows services, but simple installation is for demonstration purposes only.)

Teamworks for Office and Teamworks for SharePoint support

Teamworks for Office and Teamworks for Sharepoint are not available with this release of WebSphere Lombardi Edition. If you upgrade from a previous release (Teamworks 7.0.1) to WebSphere Lombardi Edition 7.1.0 and your data includes assets for these products, those assets may not function as expected and are not supported with this release.

What's new in Teamworks 7.0.1

This release of Teamworks 7 introduces the following new features and major enhancements. For information about existing features that have changed with this release, see [What's changed in Teamworks 7.0.1](#).

Blueprint process subscriptions

You can now subscribe to Blueprint processes from the Designer in Teamworks Authoring Environment. Subscriptions enable you to collaborate with members of your team who are discovering and developing processes in Blueprint. And, when a process reaches the stage where your team is ready to implement the steps in that process, a subscription in Teamworks Authoring Environment enables you to develop all necessary interfaces, integrations, and services, and then begin running the process for testing and eventually production purposes. This combination of Blueprint and Teamworks enables both business and IT professionals to work together from the outset to plan, design, and then implement the processes that they need to streamline their business initiatives.

For more information, see **Managing the Process Center repository > Subscribing to Blueprint processes** in *Teamworks Authoring Environment Help*.

Process app installation to offline servers

Starting with Teamworks 7.0.1, you can install process applications on Teamworks Process Servers that are not connected to the Process Center. For example, you may have a Process Server that is isolated because it resides behind a firewall. For cases like this, you can create an offline Process Server in the Process Center Console. Then, when you are ready to install a snapshot of a process app on that offline server, you can create an installation package. You can transfer the installation package to the server, and then use a new command-line utility to install the package. Offline installation includes several capabilities that are available when performing an installation to an online server. For example, when you install the package, any toolkits that the process application depends upon (that are not already installed on the Process Server) are also installed, ensuring all library items required to run the application are available on the server. The installation package also enables you to specify how to handle running instances of the process app. If a previous snapshot (version) of the process app is running on the server, you can choose whether to leave the running instances as is or migrate those instances to the new snapshot version.

For more information, see **Managing the Process Center repository > Managing Teamworks servers > Adding offline servers to the Process Center Console** and **Releasing and installing processes > Installing process applications: offline Process Servers** in *Teamworks Authoring Environment Help*.

Process monitoring

Teamworks Process Admin Console includes a new Process Monitor that enables a Teamworks administrator to identify and stop problematic processes and services. For example, you may need to stop a process that causes an exception or a service that is stuck in a repeating loop. The Process Monitor also enables you to analyze performance by showing which processes and services are most expensive in terms of the time, instances, and the steps needed to execute them.

For more information, see **Managing Teamworks Process Servers > Monitoring processes and services** in the *Teamworks Administration Guide*.

Proxy server configuration

Starting with Teamworks 7.0.1, if you use a proxy server for internet connections, you can configure Teamworks so that it uses the appropriate server and protocol when connecting to Blueprint. The 99Local.xml configuration file contains a new connection section for Teamworks proxy settings. To learn how to configure these settings for your environment, see **Managing Teamworks configuration settings > Configuring proxy settings** in the *Teamworks Administration Guide*.

Variable auto-mapping added to Java and Web Service Integration components in Integration services

When you use a new Web Service Integration or Java™ Integration component in an Integration service, you can auto-map the variables for these components in the Data Mapping tab in the component properties. This functionality was not available in Teamworks 7.0.0. For more information, see **Advanced modeling tasks > Integrating with other systems** in *Teamworks Authoring Environment Help*.

New JavaScript API Reference

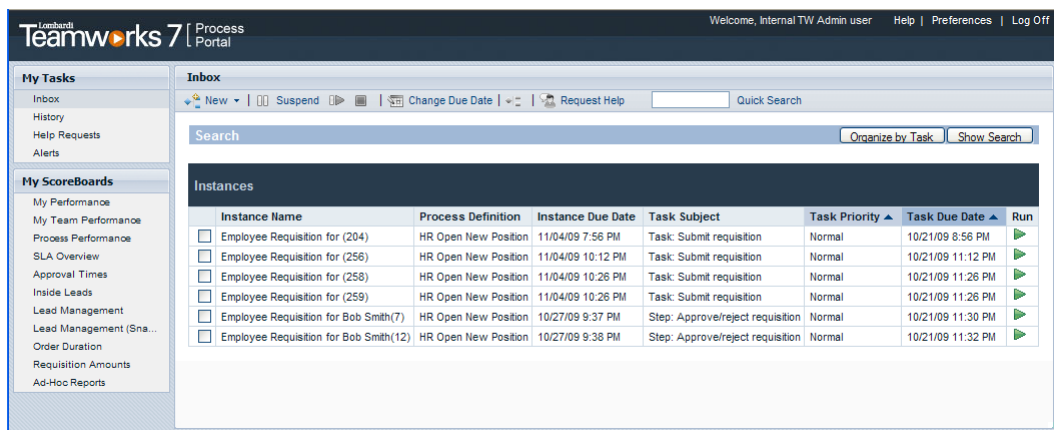
To learn more about the JavaScript API, see the reference information posted to the Lombardi Documentation Wiki: <http://wiki.lombardi.com/display/tw7/Teamworks+7+JavaScript+API> (You must have an account for the IBM Customer Support for Lombardi site to access the wiki.)

What's changed in Teamworks 7.0.1

This release of Teamworks 7 introduces the following changes to existing features. For information about new features that have been added to this release, see [What's new in Teamworks 7.0.1](#).

New skin for Teamworks Process Portal

Teamworks Process Portal has a new look and feel, providing end users with a streamlined interface in which to monitor and perform tasks. All Teamworks Process Portal functionality remains the same; only the design of the interface has changed. This new design is also visible when you run Coaches from Teamworks Authoring Environment, giving authors a true representation of what their end users will see. The following image shows the new design:



The previous skin is still available if you want to retain customizations based on that skin.

New credentials for Process Center and Inspector connections

The default account used for the connection from a runtime Process Server to the Process Center in Teamworks 7.0.0 was `tw_admin`. In Teamworks 7.0.1, the new `tw_runtime_server` user is the default account for Process Server to Process Center connections. For complete information, see *Connecting a runtime environment to a Process Center* in the *Teamworks Runtime Environment Installation and Configuration Guide* appropriate for your operating system.

Oracle databases no longer require unicode encoding for Teamworks internationalization features

In Teamworks 6 Enterprise Release 6.2 and earlier versions of Teamworks, it was necessary to enable Oracle databases for UTF-8 encoding if you wanted to use internationalization features of Teamworks. With Teamworks 7, this is no longer a requirement for Oracle databases. Starting with Teamworks 7.0.0, national columns are used for Teamworks data and so the database encoding no longer needs to be unicode.

What's new in Teamworks 7.0.0

This release of Teamworks 7 introduces the following new features and major enhancements. For information about existing features that have changed with this release, see [What's changed in Teamworks 7.0.0](#).

Introducing Teamworks 7

Teamworks 7 includes several new features and product components designed to revolutionize the way you implement and deploy your business processes. Teamworks 7 provides a new paradigm for version management, enabling large and diverse organizations to easily organize, share, and reuse process assets. With Teamworks 7, you can easily manage design-time process assets from development teams in various geographic locations and then deploy your production processes to multiple execution environments. Once in production, your processes will continue to evolve due to changing needs. Teamworks 7 is designed to help you rapidly deploy and update your processes in response to the changes in your business. Working together, the new features in Teamworks 7 provide the following capabilities:

- Storing multiple versions of all business processes and related assets across your enterprise in a single repository
- Sharing and collaborative editing of business processes and the services and other components used to implement those processes
- Saving projects at specific points in time and versioning those projects in order to compare the assets within or revert to a previous version of a particular asset
- Easily deploying and running initial versions of processes in test and production environments and then quickly updating to newer versions as changes occur

Teamworks Process Center

This release of Teamworks includes a new Process Center, which enables you to build, store, and share your processes and supporting assets from a single repository. From Teamworks Authoring Environment, multiple users can connect to the Process Center and then access the projects in which they want to create or modify their business processes and the assets used to implement those processes. You can work simultaneously with other users and see all updates as they are saved. The Process Center also enables you to capture and timestamp your progress in snapshots. With snapshots, you can open previous versions of projects to see the changes that have been made over time, and you can run processes and all other assets from previous versions to gain a more detailed understanding of previous versus current implementations.

For more information, see **Planning Teamworks projects > Understanding process development in Teamworks** in *Teamworks Authoring Environment Help*.

Teamworks Process Center Console

The Teamworks Process Center Console is a user interface that provides the tools you need to create and manage the projects and other assets stored in the Teamworks repository. You can use the Process Center Console to create projects in the Teamworks repository and manage user access to those projects. You can also create and manage snapshots of all projects from the Process Center Console. The Process Center Console enables you to easily support the entire lifecycle of your projects, including installation of project snapshots on Process Servers in test and production environments. And, once your processes are up and running, you can manage those running instances from the Process Center Console.

For more information, see **Managing the Process Center repository > Overview** in *Teamworks Authoring Environment Help*.

Teamworks process applications and toolkits

When you're developing processes in Teamworks, there's a hierarchy available in the repository which is designed to help you manage your projects. All projects in the Teamworks repository are either process applications or toolkits. Process applications are containers for the process models and supporting implementations that BPM analysts and developers create in Teamworks Authoring Environment. Toolkits are a collection of assets that can be shared across numerous projects. You can create workspaces in both process applications and toolkits. Workspaces are optional subdivisions based on team tasks or project versions. When enabled, workspaces allow parallel development to occur in a single project. For example, workspaces enable one team to fix the current version of a process while another team builds a completely new version based on new external systems and a new corporate identity.

When working in Teamworks Authoring Environment, you can pick the toolkits that you want for each process application. Adding toolkits to your process application enables you to re-use the items within each toolkit. When toolkit items are updated, those users with toolkit dependencies are notified of the updates and can choose to either accept the new version or continue using the current version. Team members with the required permissions can create new toolkits as projects grow and additional items for re-use are identified.

For more information, see **Planning Teamworks projects > Understanding process development in Teamworks** in *Teamworks Authoring Environment Help*.

Versioning capabilities

This release of Teamworks enables you to version your projects and the assets within them using snapshots. You can create snapshots in the Process Center Console and in the Designer in Teamworks Authoring Environment. Snapshots enable you to easily view all assets within your project as they existed at the time the snapshot was created. While viewing previous snapshots of your project assets, you can also run processes or services to compare previous implementations to your current status. Snapshots ensure that you can run any version of any asset at any time. Plus, you can choose to copy an older version of an asset to your current project or you can simply revert to an older version of a particular asset if the previous implementation matches your current needs. Snapshots provide the flexibility that you need to fully understand and compare your project's implementations as they evolve. Snapshots also enable you to locate and re-use valuable assets from the past when necessary.

Using snapshots, you can easily install new versions of your projects as they are updated to meet changing business needs. And, you can install different versions of the same project in various environments within your organization, which enables you to upgrade and deploy your business processes as the requirements throughout various business units dictate. For more information, see **Running and installing processes > Releasing and installing processes** in *Teamworks Authoring Environment Help*.

Enhanced library in Teamworks Authoring Environment

Interacting with the library while working in Teamworks Authoring Environment is much easier due to the following enhancements:

Collaborative editing	Teamworks enables multiple users to simultaneously access library items in the Designer view. With collaborative editing, all users who are accessing an item at the same time can see changes as they are saved. The Designer view displays notifications to ensure that all users are aware of the library items that are open and the changes being made.
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Favorites	You can mark library items as favorites for quick and easy access. Each library item that you mark as a favorite is added to a pre-existing Favorites folder.
Tags	By default you can sort library items by name or by type. If you want to sort library items using your own labels, you can attach a tag for quick and easy access.
Smart folders	Teamworks Designer includes several default smart folders such as the Changed Today folder, which includes all library items in the current project that were changed on the current day. Default smart folders include library items changed by all users who have access to the current project. In addition to the default smart folders, you can create custom smart folders that include library items based on rules that you establish. You can include library items based on the presence of a particular tag, their creation date, item type, and so on. Custom smart folders can be private or shared.
Viewing and running previous snapshots	Using a snapshot entry in the Revision History, you can view the state of all library items within a project as they existed when a particular snapshot was created. Plus, you can run processes and services from previous snapshots to fully understand and analyze previous implementations.
Reverting to previous versions of library items	In the library in the Designer view, you can revert to a previous version of a library item. For example, if you realize that a service you created in a previous snapshot is closer to the implementation that you need than the current version, you can revert to the previous version of the service.
Copying and moving library items	You can copy or move specific library items from one project to another. When you move library items from a process application to a toolkit, references are created from the source process application to the target toolkit when the move is complete. For example, if you move a service (that is the implementation for a particular step in a process) from a process application to a toolkit, the implementation is automatically updated to call the service from its toolkit location.
Managing files	Images, style sheets, JAR files, and other assets are often part of a Teamworks implementation, but developed outside of Teamworks. In Teamworks 7, you can add these external files to your process application or toolkit in the Designer view so that all project assets are included in the Teamworks repository. Doing so ensures that all required files are available and installed when a project is ready for testing or production.

For more information, see **Managing the Process Center repository > Managing library items in the Designer view** in *Teamworks Authoring Environment Help*.

Enhanced process installation and migration

Starting with Teamworks 7, you can install process applications on Teamworks Process Servers in your test, production, and other environments using the Process Center Console. When installing a process application, you can select the snapshot version that you want to install. When Teamworks performs an installation, it moves all components of a snapshot version, including all library items and toolkit dependencies, from the Process Center repository to the Process Server that you choose. After the application is installed, you can configure the run-time settings for the exposed processes and services using the Process Admin Console. For example, you can add members to the participant groups who were given access to a process during development. This may be necessary because users that exist in the test or production environment may not have been available in the development environment.

During process application installation, if Teamworks detects running instances of the processes that you are installing, it enables you to choose whether to leave the running instances as is or migrate those instances to the new snapshot version. For non-production servers, you have the additional option of deleting running instances. Teamworks also automatically includes an installation service in each process application that you create. You can add components to this installation service to handle any advanced requirements in your target environment such as creating or updating database tables, determining which snapshots are already installed, and migrating individual process instances. For more information, see **Running and installing processes > Releasing and installing processes** in *Teamworks Authoring Environment Help*.

Enhanced testing using the Inspector in Teamworks Authoring Environment

The Inspector in Teamworks Authoring Environment has been enhanced to enable you to choose the runtime environment in which to run and test your processes. For example, when working in Teamworks Authoring Environment while developing a process, you can choose to run that process on the Process Server in your test environment. Testing the process in a different runtime environment can reveal issues that will help you anticipate how to effectively build the process and then also configure the process when it is ready for installation in a production environment. The improved Inspector also enables you to choose the version of the process that you want to run so that you can compare the results and make decisions about implementation options for activities and other similar considerations.

For more information, see **Running and installing processes > Running and debugging processes with the Inspector** in *Teamworks Authoring Environment Help*.

Enhanced simulation and historical analysis using the Optimizer in Teamworks Authoring Environment

The Optimizer in Teamworks Authoring Environment has been enhanced to enable you to analyze different versions of processes as well as processes from different process applications. For example, you can compare the current version of a process to an older version from a different snapshot. Plus, when you're viewing a heat map of an older version of a process, the heat map includes any activities or other elements that may have been changed or removed in the current version.

Environment variables

Each project that you create in Teamworks includes environment variables, which you can set and implement throughout your project. Environment variables enable you to specify a key identifier, a default value, and then a specific value for each of your configured environments. You can use these environment variables in your implementations (such as services) throughout an entire project. Taking advantage of environment variables ensures that your process implementations are utilizing correct values no matter which environment you deploy to or how much your environment changes at run-time. For example, suppose your process includes an implementation that requires the port number for an external application. By using an environment variable, you can set the port number for each environment in which the process will run. Plus, administrators can verify and adjust environment variable values from the Process Admin Console after a process is installed. For more information, see **Modeling processes > Basic modeling tasks > Setting environment variables** in *Teamworks Authoring Environment Help*.

New platform support

Teamworks 7 includes an embedded application server and adds support for the following platforms:

- Microsoft Windows Server 2008
- Microsoft Windows Vista
- Mozilla Firefox 3.0

For more information about supported platforms, see *Teamworks Installation and Configuration Guide*.

What's changed in Teamworks 7.0.0

This release of Teamworks 7 introduces the following changes to existing features. For information about new features that have been added to this release, see [What's new in Teamworks 7.0.0](#).

Changes in platform support

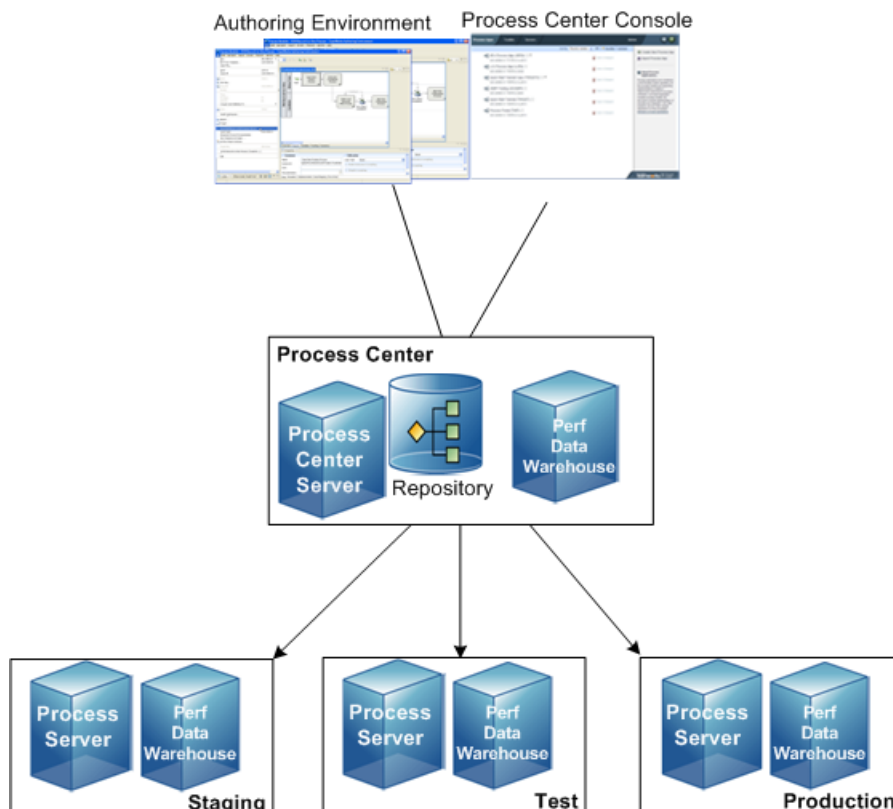
Teamworks 7.0 includes an embedded application server and does not require a third-party application server. For more information, see your *Teamworks Installation and Configuration Guide*.

Performance Server name change

In Teamworks 7, the Performance Server name has changed to Performance Data Warehouse.

Installation and configuration changes

Each Teamworks 7 configuration includes one Process Center to which you connect the Process Servers in your test, production, and any additional environments. The following diagram illustrates a typical Teamworks 7 configuration:



Teamworks Process Center provides a central development environment and repository for multiple process authors working in the Process Center Console and other interfaces in Teamworks Authoring Environment. The Process Center includes a Process Center Server and a Performance Data Warehouse, allowing authors

to build and run process applications and also store performance data for testing and playback purposes during development efforts.

The runtime environments, like the staging, test, and production environments shown in the preceding diagram, enable Teamworks users to first test and refine processes before finally rolling them out to production audiences. Using the new Process Center Console, administrators can install processes that are ready to run on test or other servers.

During Teamworks 7 installation, you need to install the following:

One Process Center	Includes the Process Center Server and Performance Data Warehouse for which you need to create and initially load databases. The Process Center installation also includes all Teamworks interfaces, such as Teamworks Authoring Environment, Process Portal, and Process Admin Console. See the <i>Process Center Installation and Configuration Guide</i> appropriate for your environment for more information and instructions.
One or more runtime environments	Each runtime environment includes a Process Server and a Performance Data Warehouse for which you need to create and initially load databases. Each runtime environment installation also includes Teamworks Process Portal, Process Admin Console, and Performance Admin Console. See the <i>Runtime Environment Installation and Configuration Guide</i> appropriate for your environment for more information and instructions.
Teamworks Authoring Environment	Those users who want to create process models and share work by connecting to an existing Process Center can install Teamworks Authoring Environment. See the <i>Authoring Environment Installation and Configuration Guide</i> for more information and instructions.

To initially load the databases for your Teamworks servers and import the System Data and other toolkits required by the Process Center, you should run the new initialization script (`twinint.cmd`). For step-by-step instructions for post-installation configuration, see your *Teamworks Installation and Configuration Guide*.

After Teamworks installation, all Teamworks consoles (including the new Process Center Console) and Teamworks Process Portal can be accessed from your Web browser as follows:

Interface	URL	Provide...
Process Center Console	<code>http://[host_name]:[port]/ProcessCenter</code>	The name of the host on which the Process Center Server is installed and the port designated for the Process Center Server during installation.
Process Admin Console	<code>http://[host_name]:[port]/ProcessAdmin</code>	The name of the host on which the server is installed and the port designated for the server during installation. You can access and administer the Process Center Server or any Process Server installed in a runtime environment.
Performance Admin Console	<code>http://[host_name]:[port]/PerformanceAdmin</code>	The name of the host on which the Performance Data Warehouse is installed and the port designated for the server during installation. You can access and administer a Performance Data Warehouse included in the Process Center or installed in a runtime environment.
Process Portal	<code>http://[host_name]:[port]/portal</code>	The name of the host on which the server is installed and the port designated for the server during installation. From the portal, you can run processes on the Process Center Server or on any Process Server installed in a runtime environment.

Changes to Teamworks Authoring Environment

The Process Modeler perspective in Teamworks Authoring Environment has been enhanced and, in Teamworks 7, is now known as the Designer. The new Designer includes changes to several views and tabs as follows:

- The Library view no longer includes folders, as described in the following section
- The Library view has been enhanced to exploit the new features made possible by the new Process Center as described in [What's new in Teamworks 7.0.0](#)
- All persona capabilities are enabled by default
- The Welcome view has been replaced by the Startup Assistant

Folders and library item security in Teamworks Authoring Environment

Folders have been removed from the Library view in Teamworks Authoring Environment. Instead of folders, the library includes categories of item types, which you can click to expand and view the specific items within. You can use tags and custom folders to manage library items in Teamworks 7. For more information, see **Managing the Process Center repository > Managing library items in the Designer view** in *Teamworks Authoring Environment Help*.

Security is no longer controlled using folders. Starting with Teamworks 7, Teamworks administrators can grant access to the Process Center repository as well as individual process applications and toolkits within the repository using the Process Center Console. Administrators can grant read, write, or administrative access to other users and groups. Users who are granted access to a process application or toolkit have access to all library items within that application or toolkit in Teamworks Authoring Environment. For more information, see **Managing the Process Center repository > Managing access to the Process Center repository** in *Teamworks Authoring Environment Help*.

Maintaining Process Portal favorites

In previous versions of Teamworks, favorites were established for particular logical roles to configure the users who could start a process from the drop-down menu in the Process Portal. In Teamworks 7, the ability to start a process is controlled using the Exposure settings in the Overview tab in the Designer. For example, you can select a Participant Group to whom you want to expose a BPD and users who are members of that Participant Group can start the process using the drop-down menu in the Process Portal. For more information, see **Modeling processes > Configuring BPDs > Exposing BPDs** in *Teamworks Authoring Environment Help*.

Logical roles

Logical roles are no longer used in Teamworks 7. Design-time access to library items in the Teamworks repository is granted in the Process Center Console per each process application and toolkit. Administrators can grant repository access to users from both the internal Teamworks security provider and any configured external security provider. For more information, see **Managing the Process Center repository > Managing access to the Process Center repository** in *Teamworks Authoring Environment Help*.

Favorites and run-time access are controlled by exposing items to Participant Groups. You can add users from both the internal Teamworks security provider and any configured external security provider to

Participant Groups. For more information, see **Managing Teamworks Process Servers > Managing Teamworks users** in the *Teamworks Administration Guide*.

Changes to services

In Teamworks Authoring Environment, you can no longer create generic services. The service types available in Teamworks 7 include: Integration, Human, Ajax, Rule, and General System. The following table describes the available service types:

Integration service	Use an Integration service when you want to integrate with an external system. Integration services are the same as generic services from previous releases, but without coaches, postpones, or rules. An Integration service is the only type of service that can contain a Java or Web Service integration. You can call an Integration service from any other type of service and an Integration service can call other nested services.
Human service	Use a Human service when you want to create an interactive service. A Human service is the only type of service that can contain Coaches and postpones. A Human service is the only type of service that can call other nested Human services.
Ajax service	Use an Ajax service when you want to include a control in a Coach to implement dynamic data selection such as automatically populating drop-down lists and automatically completing edit boxes. An Ajax service can pull data dynamically from a connected data source, such as a database. You cannot call an Ajax service from other types of services, but an Ajax service can call other nested services.
Rule service	Use a Rule service when you want a condition to determine the implementation invoked. For example, when a certain condition evaluates to true, Teamworks implements the JavaScript expression that you provide. Rule services cannot include Java or Web Service integrations directly. You can call a Rule service from any other type of service and a Rule service can call other nested services.
General System	Use a General System service when you need to coordinate other nested services or you need to manipulate variable data. For example, if you need to implement data transformations or generate HTML for a coach, you can use a General System service. General System services cannot include Java or Web Service integrations directly. You can call a General System service from any other type of service and a General System service can call other nested services.

For more information, see **Modeling processes > Advanced modeling tasks > Building services** in *Teamworks Authoring Environment Help*.

Integration Definitions and Connectors

Integration Definitions, Java Connectors, and WebService Connectors are deprecated. Deprecated library items will not be supported in future releases of Teamworks. The Integration Definition and Connector library items are no longer necessary because Teamworks 7 enables you to create integrations directly in Integration services. For more information, see **Modeling processes > Advanced modeling tasks > Integrating with other systems** in *Teamworks Authoring Environment Help*.

Changes to reports and scoreboards

Because Integration Definitions, Java Connectors, and WebService Connectors are deprecated, use new Integration services as data sources for reports. In previous versions of Teamworks, you could control access to your reports and corresponding scoreboards by setting the Access Control on the folders where your scoreboards resided. In Teamworks 7, you can use the `Expose to` setting for each scoreboard that you create to establish the participant group whose members can access reports and scoreboards.

You can control access and otherwise configure the standard out of the box scoreboards as follows:

Scoreboard	Access	Configuration
My Performance	By default, this scoreboard can be accessed in Teamworks Process Portal by members of the All Users participant group. (The following note describes how to change members of this group.)	No further configuration required.
My Team Performance	By default, this scoreboard can be accessed in Teamworks Process Portal by members of the Managers participant group. (The following note describes how to change members of this group.)	To establish a team hierarchy for this report, an administrator can use the Team Manager Group setting in the Process Admin Console. See Managing Teamworks users > Managing group membership in <i>Teamworks Process Admin Console Help</i> .
Process Performance	By default, this scoreboard can be accessed in Teamworks Process Portal by members of the Process Owner participant group. (The following note describes how to change members of this group.)	To establish the processes for which this scoreboard should display data, use the <code>Expose performance metrics</code> setting in the Overview tab for each BPD. For more information, see Modeling processes > Configuring BPDs > Exposing BPDs in <i>Teamworks Authoring Environment Help</i> .
SLA Overview	By default, this scoreboard can be accessed in Teamworks Process Portal by members of the Process Owner participant group. (The following note describes how to change members of this group.)	To establish the SLAs for which this scoreboard should display data, use the <code>Expose</code> setting for each SLA.



From the Installed Apps area of the Process Admin Console, a Teamworks administrator can change the members of the All Users, Managers, and Process Owner participant groups on any runtime Process Server. To do so, administrators can select the current snapshot of the Process Portal process application, select the Role Bindings option, and then adjust members as described in **Managing Teamworks Process Servers > Managing installed applications** in *Teamworks Process Admin Console Help*.

Sending definitions to the Performance Data Warehouse

In previous releases of Teamworks, you could send definitions to the Performance Server from the Process Admin Console. In Teamworks 7, the Send Definitions page is not included in the Process Admin Console. With Teamworks 7, when you install snapshots of process applications, the Process Server in the runtime environment automatically sends new or changed definitions to the Performance Data Warehouse. If a problem occurs, and definitions are not sent during snapshot installation, you can send definitions after the snapshot installation completes as described in **Managing Teamworks Process Servers > Managing installed applications > Configuring installed snapshots** in *Teamworks Process Admin Console Help*.

Enhanced JavaScript API

In order to consolidate all primary functions into a consistent interface, the JavaScript API now includes functionality previously found only in the Web API and EJB API. The enhancements ensure that process authors and developers have a consistent JavaScript API to use within their processes. New objects have been added to support the new features of Teamworks 7. Plus, existing namespaces have been expanded with objects that provide greater flexibility and control. For example, several new objects enable developers to gather information about and control run-time instances of processes.

Changes to calendars

In Teamworks 7, Work Schedules replace Calendars. However, Work Schedules are not library items in Teamworks Authoring Environment and they are not associated with users and groups. Instead, Work Schedules are set on BPDs (in the Overview tab) and for activities (in the Implementation tab). Work Schedules include options for time schedule, time zone, and holiday. For more information, see **Modeling processes > Basic modeling tasks > Implementing activities** and **Modeling processes > Configuring BPDs > Setting the work schedule for a BPD** in *Teamworks Authoring Environment Help*.

Custom priorities

In previous releases of Teamworks, you could define custom priorities for activities within your BPDs. For Teamworks 7, there are no custom priorities. All priorities are now one of five established levels: Low, Normal (default), Urgent, Very Low, Very Urgent. In Teamworks 7, you can use process variables to handle implementations that require custom priorities.

Global variables

Global variables are no longer available and are not supported in Teamworks 7. Most uses of this feature can be achieved by using process data with business data search.

Time-based Undercover Agent (UCA)

Time-based UCAs are no longer available and are not supported in Teamworks 7. Scheduled UCAs are different and are still available in Teamworks 7. Time-based UCAs provided a way to create one-time events, which can now be done using a process with a timer.

Discontinued and deprecated service components

The following components are either modified, deprecated, or no longer available in the palette when building services in Teamworks 7. Deprecated components will not be supported in future releases of Teamworks.

Component	Status	Description
Integration Component	Deprecated	In Teamworks 7, use new Java and Web Service Integrations instead of Integration Components
Modify Task	Modified	Modify Task no longer includes the following Task Modifications: Category and Custom Status; plus Postpone Task is now a separate service component
Browser Script/Browser Script Layout	Removed	Browser Script is no longer available in the service palette and is not supported in Teamworks 7
Coach Form/Coach Form Layout	Removed	Coach Form is no longer available in the service palette and is not supported in Teamworks 7
Send Task	Removed	Send Task is no longer available in the service palette and is not supported in Teamworks 7
Coach v1/Coach Layout	Removed	Coach v1 is no longer available in the service palette and is not supported in Teamworks 7
Send Alert v1/Alert Layout	Removed	Send Alert v1 is no longer available in the service palette and is not supported in Teamworks 7

Dates stored in server local time

Dates and times that were previously stored using a combination of Coordinated Universal Time (UTC)/GMT and server local time are now stored exclusively in server local time. For example, Teamworks stores data about running process instances in the Process Server database. In previous releases of Teamworks, the dates and times were stored using a combination Universal Time (UTC)/GMT and server local time. Now all dates are stored exclusively in server local time. This is also true for dates and times stored in the Performance Data Warehouse.

Teamworks for Organization Management

Teamworks for Organization Management is not available in Teamworks 7.0.

Teamworks for Office and Teamworks for Sharepoint

Teamworks for Office and Teamworks for Sharepoint are not available with the initial release of Teamworks 7.0.

Resolved issues

The latest information about resolved issues is documented on the IBM Support Portal. If you need further information about a particular issue, contact IBM Customer Support with the relevant issue number(s).

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<http://www.ibm.com/support/docview.wss?uid=swg27019846>

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<http://www.ibm.com/support/docview.wss?uid=swg27019837>

Known problems and workarounds

The latest information about known problems is documented on the IBM Support Portal. If you need further information about a particular issue, contact IBM Customer Support with the relevant issue number(s).

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<http://www-01.ibm.com/support/docview.wss?uid=swg27018847>

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<http://www.ibm.com/support/docview.wss?uid=swg27019834>

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KTable	2.1.3	http://sourceforge.net/projects/ktable/
Mozilla Rhino	1.7R2	http://www.mozilla.org/MPL/MPL-1.1.html
Mozilla XPCOM Eclipse Plug-in	1.8.1.3	http://www.mozilla.org/MPL/MPL-1.1.html
OpenSAML	1.1	http://www.opensaml.org
Spring	2.5.5	http://apache.org/licenses/LICENSE-2.0.html
Struts	1.2.7	http://struts.apache.org/