



IBM Software Group

WebSphere® Business Process Management WebSphere Dynamic Process Edition V6.2

What is new in business process choreographer



@business on demand.

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This presentation provides an overview of what's new in the business process choreographer component of WebSphere Process Server and WebSphere Integration Developer version 6.2.

Agenda

- Business processes
 - ▶ Improved WS-BPEL 2.0 support
 - ▶ Support for activity exit conditions
 - ▶ Richer flow model to support BPMN
 - ▶ Various repair and dynamicity features
- Human tasks
 - ▶ Parameter passing to post-processing
 - ▶ Enhanced ad-hoc support for business users
 - ▶ History log for human tasks



This slide lists the changes, enhancements, and new features in the areas of business processes and human tasks. Each of these is described later in this presentation.

Agenda (*continued*)

- BPC clients
 - ▶ Improved process / task administration
 - ▶ HTML-Dojo client for business space
 - ▶ Business user workspace
 - (also known as business space for human workflow)



In addition to the server-side changes, enhancements and new features on the previous slide, this slide lists the changes associated with BPC clients. Again, each of these is described later in this presentation.

Section

Business processes



This section will introduce the changes, enhancements, and new business process choreographer features introduced in version 6.2 in the area of business processes.

Improved WS-BPEL 2.0 Support

- Support processes containing **repeatUntil** activity

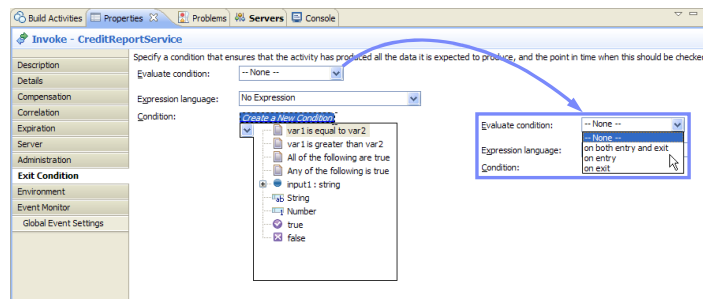
The screenshot displays the IBM Business Process Choreographer (BPC) interface. On the left, a process diagram shows a flow starting with a 'Receive' activity, followed by a 'RepeatUntilLoop' activity containing a 'HumanTask', and ending with a 'Reply' activity. The main window shows the configuration for the 'Repeat Until Loop - RepeatUntilLoop' activity. The 'Condition' field is set to 'No Expression', and the 'Expression language' is set to 'XPath 1.0'. A 'Create a New Condition' dialog box is open, showing various condition types such as 'var1 is equal to var2', 'var1 is greater than var2', 'All of the following are true', 'Any of the following is true', 'input 1 : string', 'String', 'Number', 'true', and 'false'.

- Process variables can be referenced using the XPath (`$variable`) notation

Version 6.2 of WebSphere Integration Developer and WebSphere Process Server have improved support for version 2.0 of the WS-BPEL standard for defining the execution of business processes. Processes containing the “repeatUntil” activity are now supported. The “repeatUntil” activity provides for repeated processing of contained activities. The contained activities are performed until the given Boolean condition becomes true. The condition is tested after each execution of the body of the loop. In contrast to the “while” activity, the “repeatUntil” loop executes the contained activity at least once. In addition to the “repeatUntil” activity, WebSphere Integration Developer and WebSphere Process Server now also support the “\$variable” notation for referencing process variables.

Support for activity exit conditions

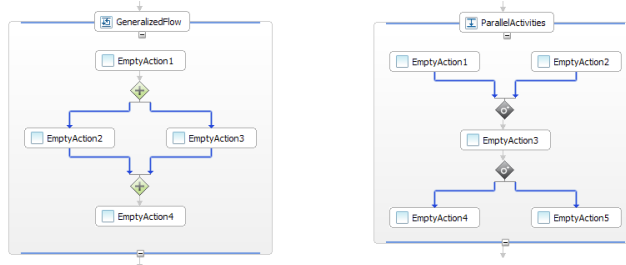
- Determine if an activity should be performed
 - ▶ executeAt = entry
- Determine if navigation should continue as expected upon completion of the activity
 - ▶ executeAt = exit



Version 6.2 of WebSphere Integration Developer and WebSphere Process Server introduce the concept of attaching exit conditions to activities of a business process. These conditions can be specified to be evaluated either before or after the implementation of the activity is performed, or both at entry and exit of the activity. Evaluation of the condition at entry determines if the activity should be performed. If the condition is evaluated to true, the activity is skipped and navigation continues directly after the activity. If the activity has outgoing links with transition conditions, the transition conditions are evaluated. The activity itself enters the "skipped" state. If the exit condition is evaluated to false, the activity is performed normally. Evaluation of the condition at exit determines if navigation should continue as expected upon completion of the activity. If the condition is evaluated to true, the navigation is continued normally. If the exit condition is evaluated to false, the activity is stopped. In this case, no fault is thrown and thus any enclosing fault handler is not entered. The activity enters the "stopped" state, where it can then be forcibly retried or completed by an administrator.

Richer flow model to support BPMN

- Direct support for BPMN models
- See the navigation logic in Parallel Activities
- Set the navigation logic in Generalized Flows*
 - ▶ mix of fork/split and merge/join in single flow



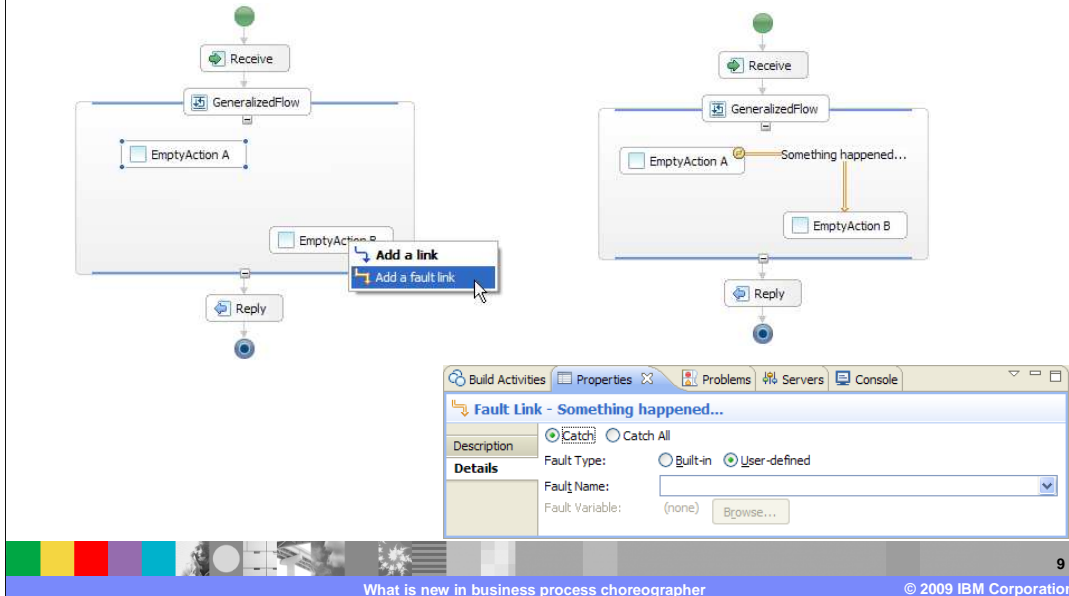
* Note: the Cyclic Flow activity introduced in 6.1 has been renamed to Generalized Flow in 6.2



WebSphere Business Modeler version 6.2 introduces support for BPMN (Business Process Modeling Notation) as defined by the OMG (Object Management Group). Some aspects of this support have been added to WebSphere Integration Developer and WebSphere Process Server, resulting in a new way to model the flow of business processes. This new way to model process flows is much more graph-like in fashion, meaning an integration developer is now able to specify the behavior when the flow of control is branched or merged. Setting the navigation logic is allowed in “Cyclic Flows” (or Generalized Flows, as they are called now). For “Parallel Activities” the navigation logic is not determined by the user, but rather by the business process choreographer. In both cases, for each activity that has more than one incoming or outgoing link, a BPMN-like diamond is displayed that represents the navigation behavior.

Richer flow model to support BPMN

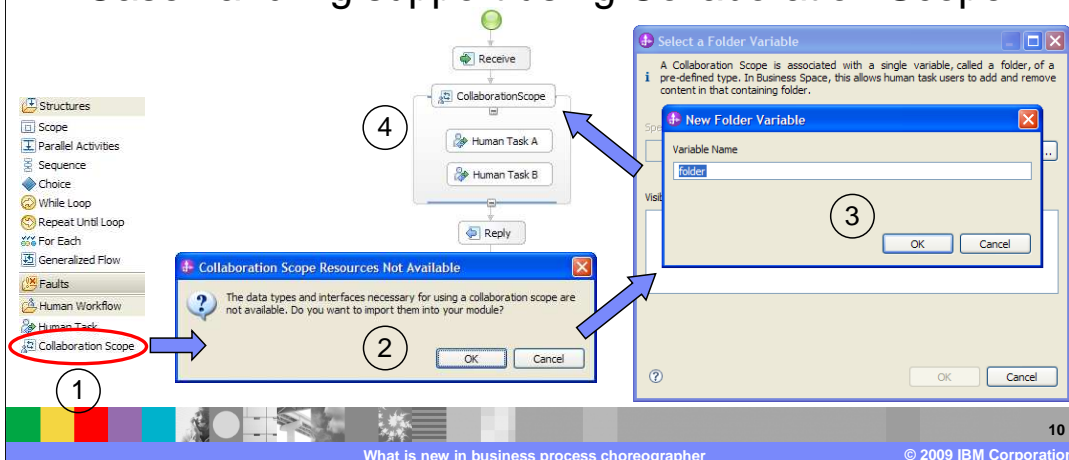
- Model faults graphically in BPEL editor



The support for BPMN also allows an integration developer to model business process faults in a more graph-like in fashion. Instead of attaching a fault handler to a scope as before, now fault processing can be specified much more directly by drawing a “fault link”. This is meant to express that an activity can throw a fault, and that this fault is to be caught by a “link”. In order to create a “fault link”, you pick an activity, grab the connection terminal, and drag it to the target activity. Upon dropping the connection terminal on the target activity, you are presented with a choice of creating a regular link, or a “fault link”. A “fault link” is visually distinguished from a regular link by the color and thickness of the line connecting the two activities. The properties page of a “fault link” is used to specify whether a particular fault type is to be caught, or whether all faults are to be caught. The example on this slide illustrates a “fault link” labeled “Something happened...”. Although admittedly not a very realistic scenario, the example shows that “EmptyActionB” is to be invoked in case a fault occurs while performing “EmptyActionA”.

Various repair and dynamicity features

- Restrictions on jump feature in 6.1.2 now removed
- Ability to transfer ownership of process instances
- Case handling support using Collaboration Scope



Version 6.1.2 of WebSphere Process Server introduced many business process repair and dynamicity features. Most notable is the ability to skip activities and jump forward or backward in a business process as necessary. There were some restrictions regarding where you were allowed to jump, some of which are now removed in version 6.2. For instance, in version 6.1.2, jumping within a (parallel) flow was not allowed. Now, however, this restriction is being partially removed and jumps are allowed within single threads or branches of a (parallel) flow. Jumps between threads of execution are still restricted. Version 6.2 also adds an additional business process repair capability, that being the ability to transfer ownership of process instances. This is useful when the owner of a process instance has left the organization. Finally, WebSphere Integration Developer has added new support for so-called case handling scenarios. This support involves the use of a new activity type called “Collaboration Scope” in conjunction with a folder variable, which is shared by all of the tasks within the scope.

Section

Human tasks



This section will introduce the changes, enhancements, and new business process choreographer human task features introduced in version 6.2.

Parameter passing to post-processor

- Enhanced support for post-processing the results of people queries
 - ▶ Access to additional meta data from the human task template is now provided to the post-processing plug-in
 - The people assignment criteria data (including resolved context variables) is passed to the post-processing plug-in through the context map
 - ▶ Enables scenarios where the post-processing plug-in assumes responsibility not only for post-processing, but also for resolving / re-evaluating parts of the people query



The human task manager component of WebSphere Process Server has enhanced its people assignment post-processing with the addition of parameter passing. People assignment post-processing allows you to augment or modify the results of the query performed for assigning people to specific roles for human tasks. Previously the implementation of a people assignment post-processing plug-in was provided with nothing more than the query result set. Now, in addition to the query result set, a people assignment post-processing plug-in also receives additional meta data from the human task template. This includes the people assignment criteria data with all context variables resolved to their proper values. This enables scenarios where the post-processing plug-in assumes responsibility not only for post-processing, but also for resolving or re-evaluating parts of the people query that was performed.

Enhanced ad-hoc support for business users

- Business user can exploit subtask feature using business space and the human workflow widgets
- Subtasks can only be created for tasks that are modeled with the *supportsSubTasks* flag enabled
- The following scenarios are supported
 - ▶ Create new subtask
 - ▶ View task status pending on subtasks
 - ▶ View status of subtasks for a given task
 - ▶ View result of finished subtask fro a given task
 - ▶ Cancel subtask of a given task
 - ▶ View created tasks and subtasks

13

What is new in business process choreographer

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The “Subtasks” feature is an existing feature of the human task manager component that supports ad-hoc human collaboration. This feature was previously only available to users of custom BPC clients that were written to invoke human task manager APIs for creating and working with subtasks. Version 6.2 of WebSphere Process Server allows business users to exploit the subtask feature using the human workflow widgets that are provided ready to use with the business space client. As before, subtasks can only be created for tasks that are modeled with the “supportsSubTasks” flag enabled. Note that a receiver (potential owner or owner) of a collaboration task will not notice whether it was created as a subtask. The human workflow widgets of the business space client support all of the subtask scenarios listed on this slide.

History log for human tasks

- Business users are able to see a simple "who has done what and when" history for a task
- Exposed in task details and graphical process view of both business space and BPC Explorer clients

Subtasks			
History			
Principal	Event	Timestamp	Owner
wswf	Task claimed	6/26/08 10:17 AM	bman1
bman1	Subtask created	6/26/08 11:17 AM	-
wswf	Subtask completed	6/26/08 12:17 PM	-
buser1	Task transferred	6/26/08 1:17 PM	wswf ↔ bman1
wswf	Task suspended	6/26/08 2:12 PM	-
wswf	Task resumed	6/26/08 3:12 PM	-



In version 6.2 of WebSphere Process Server, business users are able to see a simple "who has done what and when" history for a task. This is exposed in the task details and the graphical process view of both the business space and BPC Explorer clients. The history log shows when a task was ready, claimed, updated, suspended, resumed, transferred, returned, and completed. For each of these events, the "reason" for the event (for example, task claimed), the date/time of the event, and the person who caused the event is shown. The human task manager automatically creates these log entries and they are not customizable. Log entries for a task instance are deleted when the human task instance is deleted.

Section

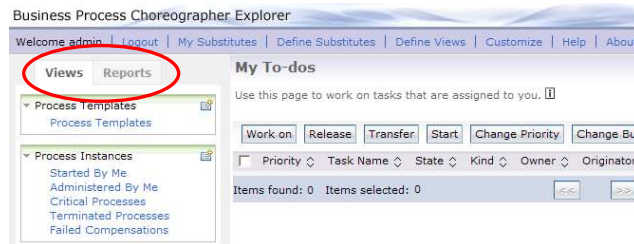
BPC clients



This section will introduce the changes, enhancements, and new business process choreographer client features introduced in version 6.2.

Improved process and task administration

- BPC administrative client =
BPC Explorer + BPC Observer
- Merger allows leveraging reports while administering processes and tasks



- Many usability and customization enhancements

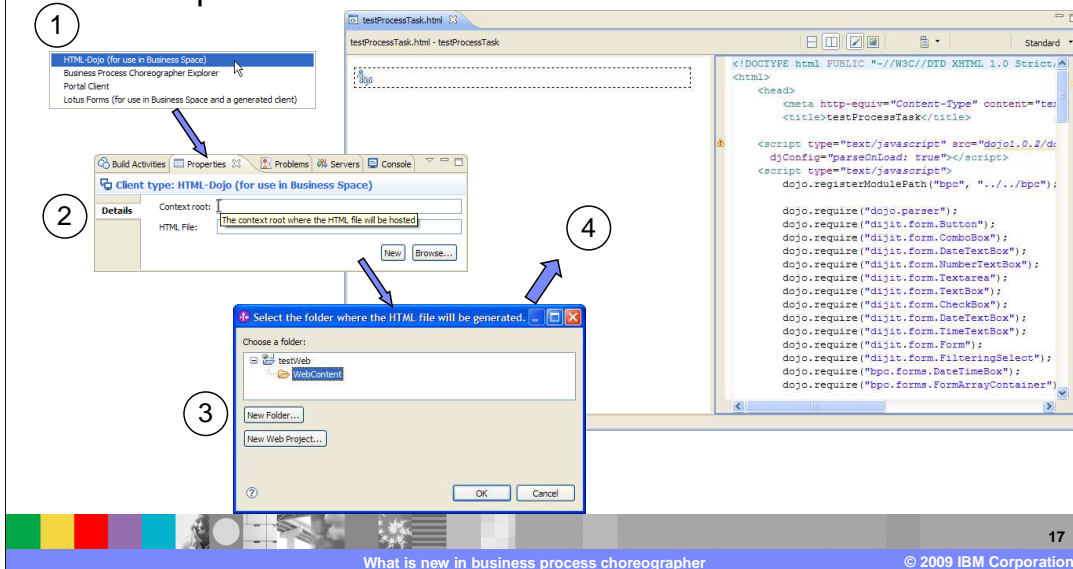


WebSphere Process Server provides two different client applications for administering business processes and human tasks: the BPC Explorer and the BPC Observer. In version 6.2, the reporting capabilities of the BPC Observer are folded into the BPC Explorer. The old BPC Explorer is available on the “Views” tab. The old BPC Observer is available on the “Reports” tab. Additionally, some of the reporting capabilities are available on certain of the BPC Explorer panels. This merger allows solution administrators to more easily use these reporting capabilities when administering business processes and human tasks. A typical scenario might be that an administrator gets notification by way of e-mail that a business process has failed. Using the BPC Explorer, the administrator views the process instance by selecting a custom view for failed process instances. Opening the process instance details page shows that one of its activities is in the “failed” state. Opening the “Unhandled Exception” tab shows that the activity failed because of a database error. The administrator wants to know whether this error has ever happened before for this process, and so selects the “Statistics” tab on the process details page (which is only available when reporting capabilities are configured). There the administrator sees a statistical summary for the process template.

Besides the merger of the BPC Explorer and the BPC Observer, there many usability and customization enhancements have been made to the BPC Explorer.

HTML-Dojo client for business space

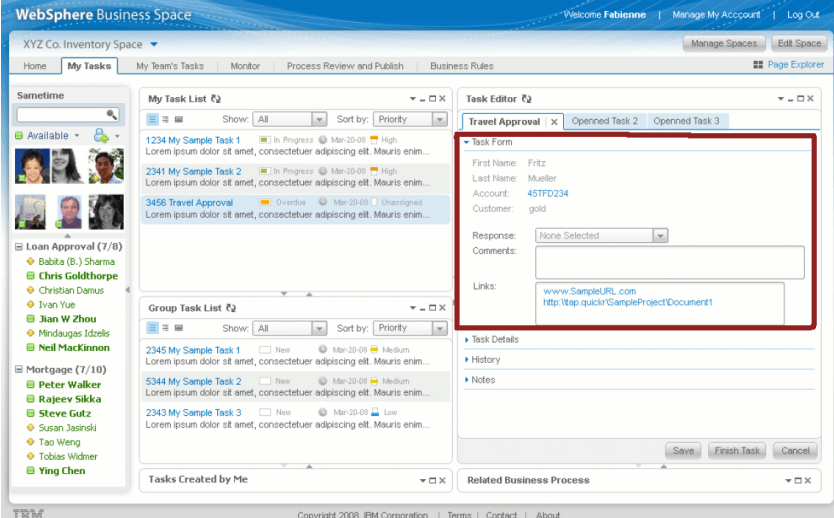
- HTML-Dojo forms are developed in WebSphere Integration Developer ...



Version 6.2 of WebSphere Integration Developer and WebSphere Process Server introduce support for a new type of generated BPC client: the HTML-Dojo client. The HTML-Dojo client is conceptually very similar to the Lotus® Forms client. In both cases the client is generated based on the definition of a human task. However, whereas the Lotus Forms client requires the Lotus Forms viewer to be downloaded and installed as a Web browser plug-in, the HTML-Dojo is more light-weight and does not require the installation of a Web browser plug-in. Having generated an HTML-Dojo client, you can optionally customize the client using the Web editing tools built into WebSphere Integration Developer.

HTML-Dojo client for business space

- ... and rendered in the business user workspace



The screenshot displays the WebSphere Business Space user interface. At the top, it says 'Welcome Fabienne' and includes links for 'Manage My Account' and 'Log Out'. The main navigation bar includes 'Home', 'My Tasks', 'My Team's Tasks', 'Monitor', 'Process Review and Publish', and 'Business Rules'. The interface is divided into several panels:

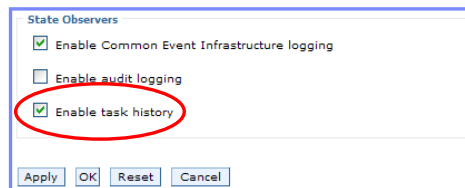
- Left Panel:** A 'Sarnetime' section with a search bar and a list of users including Babita (B.) Sharma, Chris Goldharpe, Christian Dams, Ivan Yue, Jian W Zhou, Mindaugas Idzels, Neil MacKinnon, Peter Walker, Rajeev Sikka, Stevee Gutz, Susan Jasinski, Tao Weng, Tobias Widner, and Ying Chen.
- My Task List:** A table of tasks with columns for ID, status, date, and priority. Tasks include '1234 My Sample Task 1', '2341 My Sample Task 2', and '3456 Travel Approval'.
- Task Editor:** A detailed view of the 'Travel Approval' task. It contains a 'Task Form' with fields for 'First Name: Fritz', 'Last Name: Mueller', 'Account: 45TFD234', and 'Customer: gold'. There is a 'Response' dropdown menu set to 'None Selected', a 'Comments' text area, and a 'Links' section with two URLs: 'www.SampleURL.com' and 'http://wap.quickr/SampleProjectDocument1'. Below the form are 'Save', 'Finish Task', and 'Cancel' buttons.
- Group Task List:** A table of tasks with columns for ID, status, date, and priority. Tasks include '2345 My Sample Task 1', '5344 My Sample Task 2', and '2343 My Sample Task 3'.
- Tasks Created by Me:** A section for tasks created by the user.
- Related Business Process:** A section for related business processes.

The footer of the interface includes the IBM logo, copyright information 'Copyright 2008, IBM Corporation', and links for 'Terms', 'Contact', and 'About'. The page number '18' is visible in the bottom right corner of the screenshot area.

Once your generated (and optionally customized) HTML-Dojo client is ready, it is deployed to the WebSphere Process Server. It is then rendered in the business user workspace (also referred to as the business space for human workflow) by the task editor widget. As is true for all of the human workflow widgets, the HTML-Dojo client communicates to the WebSphere Process Server using the REST APIs provided by BPC.

Business user workspace

- Task editor widget completely re-designed to allow much more room for forms
- Task information widget allows for the creation of subtasks
- Human workflow diagram widget shows the history of a task
 - ▶ Must be enabled for the Human Task Manager in the administrative console



The business user workspace was actually introduced in version 6.1.2 of WebSphere Process Server, when it was referred to as the business space for human workflow. This is a Web 2.0 based client that business users can use to work with all sorts of human tasks. It consists of six different widgets designed specifically for working with human tasks. There are no new widgets being provided in version 6.2 of WebSphere Process Server, but several of the existing widgets have undergone changes in this release. The task editor widget has been completely re-designed to allow much more room for forms, which is where most of the work on tasks is done. The task information widget now allows business users to create subtasks, thus enabling many new collaboration scenarios. And also the human workflow diagram widget has been updated to show the history of a task. Note that this feature must first be enabled for the human task manager in the WebSphere Process Server administrative console.

Section

...and in conclusion...



The next slide provides a summary of what you have learned during this presentation.

Summary

- V6.2 major themes for BPC
 - ▶ Completing or enhancing V6.1.2 features
 - ▶ New features and additional WS-BPEL 2.0 support
 - ▶ Many, many minor usability improvements



In this presentation you have been introduced to the new business process choreographer features in WebSphere Process Server and WebSphere Integration Developer V6.2. The features all fall into one of these categories or themes: completing or enhancing features introduced in version 6.1.2, new features and additional WS-BPEL 2.0 support, and many minor usability improvements.

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