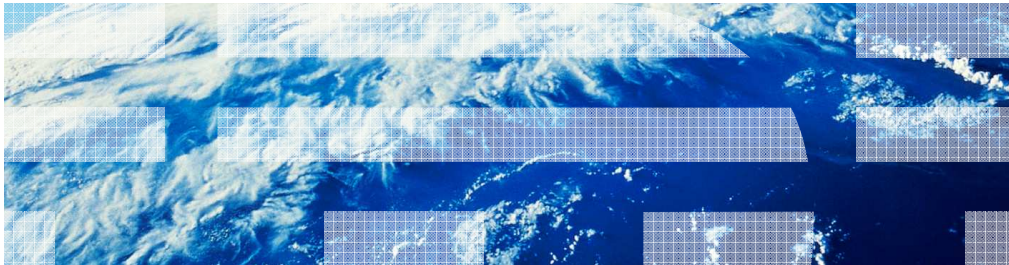


---

# Business Process Management IBM Business Process Manager V8.0

## Governance and orphan token management overview



© 2012 IBM Corporation

This presentation provides a overview about the governance and orphan token management features in version 8.

## Table of contents

- Overview of governance feature
- How to enable governance in process applications for snapshot installation
- Services available for governance and other things to know
- Overview of orphan tokens management feature
- REST API support for moving and deleting orphan tokens
- Usage of orphan token policy file

The initial set of slides explains the key concepts in governance and shows you how to enable governance in a process application. You will then learn about the integration services available in system governance toolkit and some troubleshooting tips on governance. Following that, you are given an overview on the Orphan token management feature. The last set of slides provides information about the new enhancements introduced in version 8.

**Governance of snapshot installation**

- This feature provides users control over the installation of snapshots
- Users can define custom governance processes using the System Governance toolkit
- Snapshot is installed, only if the approvals defined in governance process have been completed
- Users have a way to ensure that proper testing is done and approvals are secured before installation

**Governance of snapshot status**

- User get notified whenever
  - A new snapshot gets created
  - The status of a snapshot gets changed
- Snapshot status governance can be done on both process applications and toolkits
- Governance process runs as TIP on Process Center Server

The governance of snapshot installation feature provides you control over the installation of process application snapshots. Users can create a governance process, that defines the approvals that are required before a snapshot can be installed. When this governance process is in place and enabled on a process application, requests made from Process Center to install a snapshot of that process application passes through the governance process. The snapshot is installed on a process server only after the approvals defined have been completed.

In addition to snapshot installation, governance feature has also been extended to tracking snapshot status. This feature sends notification events, every time a new snapshot gets created or a status of the snapshot gets changed. The administrators are allowed to do the snapshot status governance on both the process applications and toolkits.

The governance process you defined to control the snapshot installation always runs as TIP on the Process Center Server.

## How to enable governance in process applications

- How to enable governance ?

The screenshot shows the IBM Process Center interface. At the top, there are tabs for 'Process Apps', 'Toolkits', 'Servers', and 'Admin'. Below these, the current application is identified as 'Hiring Sample (HSS)'. The 'Manage' tab is active, showing configuration options. On the left, there are input fields for 'Process App Name' (containing 'Hiring Sample') and 'Acronym' (containing 'HSS'). On the right, there are two checkboxes: 'Allow users to create tracks in this process app' (unchecked) and 'Delegate deployment to a governance Under Cover Agent (UCA)' (unchecked). The 'UCA' checkbox and its associated link 'Why use a governance UCA ?' are highlighted with a red box.

- Process application administrative authority needed to enable or disable governance

This slide shows you how to enable governance in a process application. If you have administrative authority for a process application, you can enable or disable governance in the Process Center console. As shown in the screen capture in this slide, on the Manage page for the process application, select the check box beside Delegate installation to a governance process.

## Services available for governance

- System Governance toolkit provides the integration services required to build a governance process
- List of installation related governance services
  - Install snapshot
  - Cancel snapshot installation
  - Get all process servers
  - Set installation status
  - Get installation status
- List of snapshot status related governance services
  - Get snapshot status
  - Get snapshot statuses
  - Set snapshot status
- System Governance toolkit is imported automatically into the Process Center repository and each governance process should include this dependency
- The governance integration services can be used only in the system lane of the process

The services available for building a governance process are discussed in this slide.

During IBM Business Process Manager installation, the System Governance toolkit is automatically imported into the Process Center repository. Each governance process that you create must include a dependency on the System Governance toolkit. The toolkit has integration services for installing process application snapshots and setting snapshot status and these services can be used to build a governance process.

The following integration services are available in the toolkit for installation governance. **Install snapshot** installs the snapshot to the specified process server. **Cancel snapshot installation** cancels the installation of a snapshot that is already in progress. **Get all process servers** returns an array of Process Servers registered with Process Center. **Set installation status** sets the installation status during long-running installations. **Get installation status** gets the installation status during long-running installations.

The following integration services are available in the toolkit for tracking snapshot status. **Get snapshot status** gets the status of a snapshot. **Get snapshot statuses** returns a list of strings containing the statuses that are used for snapshots. The list contains default values defined in the product plus any custom values added by the users. **Set snapshot status** sets the snapshot to the specified status. If the status string that is specified does not already exist, the API creates a new status value using that string.

Note that the integration services can be used only in the system lane of the governance process.

## Other things to note

- Make sure a governance process is defined in the Process Center server, before enabling installation governance flag in process applications
- If there are more than one governance process defined, each one of them are notified during snapshot installation. Define conditions to handle these scenarios.
- Governance flag should not be enabled on the governance process itself
- Governance process cannot be applied, if **wsadmin** command is used for installing snapshots
- Governance process is triggered even for an offline Process Server.
- If the installation fails, disable the governance requirement for a process application, to clear the queue.

This slide is added to provide you some general information about the governance feature.

Before you enable governance for a process application, make sure that a governance process is in place on the Process Center server. Otherwise, the governance flag will block all installations of the process application, until the flag is removed.

If you have defined more than one governance process in the Process Center Server, each of these processes are notified by the installation under cover agent, that is part of the System Governance Toolkit. Make sure to define conditions in your governance process to handle these scenarios.

You should not enable the governance flag on the governance process application itself.

When governance is enabled on a process application, only requests to install a snapshot from Process Center console are referred to a governance process. You cannot apply governance, if you are using the **wsadmin** command to install a snapshot.

The governance process will be notified even when you try to create a deployment package for an offline process server in the Process Center console.

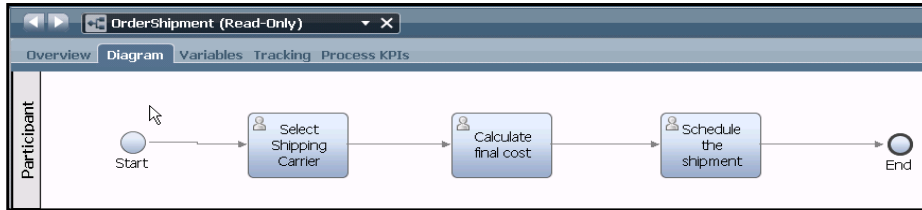
If the installation of a process application fails while under governance, several remedies are available for administrators. One of the main things you should do in such a scenario is to remove the governance flag in the process application. Refer to the Info center for detailed instructions about trouble shooting.

## Orphaned tokens - Overview

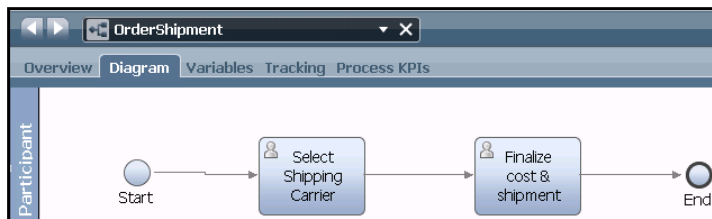
### Orphaned Tokens

An orphaned token is a pointer associated to an activity, that was removed from a BPD.

#### Source snapshot of Order Shipment BPD – Version A



#### Target snapshot of Order Shipment BPD – Version B



7

Governance and orphan token management overview

© 2012 IBM Corporation

An orphaned token is a pointer, that is associated with an activity that was removed from a Business Process Definition. You should understand how orphaned tokens get created in the first place, before going into detail on how to manage them.

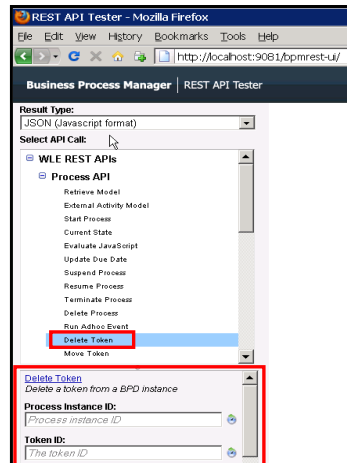
The first screen capture shows a snapshot version of Order Processing Business Process Definition, with three activities namely *Receive Order*, *Process Order* and *Confirm Order*. Lets assume you have deployed this version of snapshot to your process server and there are active BPD instances running in the system. After a period of time, you have a business need to modify and streamline the Business Process Definition to just two activities. As a result, the confirm order activity has been removed and the second version of the Order Processing Business Process Definition has been created.

At the time of deployment of the second version of the snapshot, the system automatically recognizes the active process instances and provides three options to you.

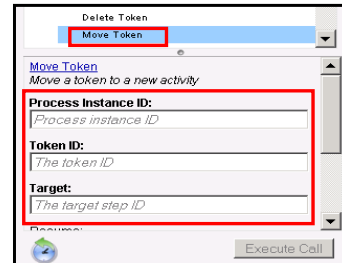
The first option is to *Leave*. When you select this, your active instances will continue to run using the old snapshot. The second option is the *Delete*. This will delete the Business Process Definition instances associated with the older, first version of the snapshot. The third option is to *Migrate*. This migrates the existing active Business Process Definition instances to the newer, second version snapshot you are deploying. When an active Business Process Definition instance is migrated, there might be tokens in there, that are based on the deleted *Confirm Order* activity from the old snapshot. And these tokens are called orphaned tokens.

## Managing orphaned tokens using REST API

### Deleting orphaned tokens



### Moving orphaned tokens



Once orphaned tokens are created, you can either delete them or move them to another activity. The screen capture here shows how to do these operations using the REST API. These REST API's are available under the Process API tree..

Based on the move or delete operation you are performing, you should provide the required input values and click start call. Values for the input parameters like token ID, process instance ID and step ID can be found using the Process designer tool or by using the 'Current State' API shown here.

The execution call returns one of these response codes. 200 means the call is a success. 405 means you are not authorized to perform this operation. And 400 means some kind of server error.



## Generating orphaned tokens policy file

- Helps users in detecting the possibility of orphaned tokens before deploying a new snapshot
- Users can specify whether to move or delete the orphaned tokens. Default action is delete.
- WSADMIN command to generate the policy file -

**\$AdminTask BPMCheckOrphanTokens {-processAppAcronym <processApp acronym> -sourceSnapshotName "<snapshot name>" -targetSnapshotName "<snapshot name>" -outputFile <file>}**

- Command compares the two versions of the snapshots in the Process Center and generates an XML file
- Sample orphaned token policy file output -

```
- <orphanTokenPolicy>
- <processApplication acronym="PO" id="2066.641ce232-f29a-4856-b1dd-715f649c8b62" name="PurchaseOrder">
  <sourceSnapshot acronym="OSVA" id="2064.6160d36d-92e5-40b5-93f6-0ab01116e144" name="OrderShipment_VerA"/>
  <targetSnapshot acronym="OSVB" id="2064.4de54dee-b30f-42b3-9006-d1c809abc9d0" name="OrderShipment_VerB"/>
- <process bpId="25.2ded1c9d-5472-442b-a73d-4665d480f632" name="OrderShipment">
  - <step id="bpdId:4b069aa7957c0e8f.7e590da1:1353a3aa3c9-7ffb" name="Schedule the Shipment">
    <delete/>
  </step>
</process>
</processApplication>
</orphanTokenPolicy>
```

9

P

g

i

poration

This slide provide you information about a new feature introduced in version 8.

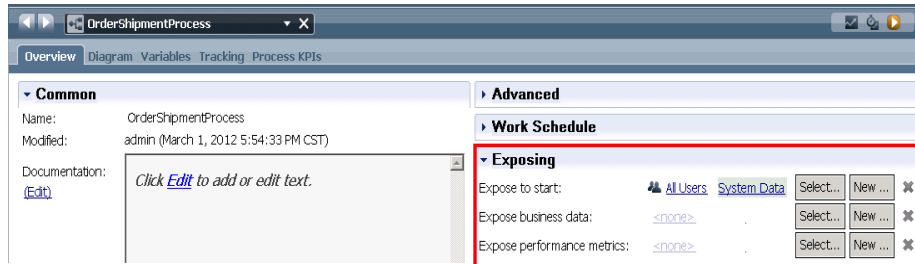
An Orphan token policy file helps you in proactively comparing two versions of a snapshot and identifying the potential locations of orphaned tokens. You can also specify whether each orphaned token should be deleted or moved in the policy file.

The BPMCheckOrphanTokens wsadmin command compares the two versions of the snapshots in the Process Center. It produces an XML file as output, listing all the steps in the BPD where orphaned tokens can potentially occur, as shown in the screen capture. Optionally, you can add an attribute to suspend the process for any activity in the policy file. That attribute suspends the process instance, after a token has been deleted or moved, so you can edit the data before resuming the instance.

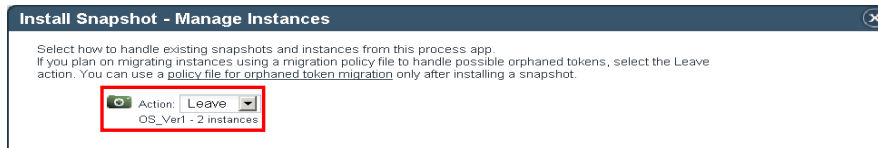
The orphan token policy file is used during instance migration. If a policy file is specified, the migration uses that file to determine whether to delete or move orphaned tokens. And if migration does not produce any orphaned tokens, the file is not used.

## Prerequisites for using orphaned tokens policy file

- Ensure the Business Process Definition (BPD) is exposed



- Select the **leave** option at the time of installing snapshot



There are two prerequisites that need to be completed in order to use the Orphan token policy file.

Ensure the business process definition is exposed, as shown in the first screen capture,

At the time of deployment of the second version of the snapshot, you should select the leave option, so that the active instances continues to run using the old snapshot. Then later, you can go to the Process Admin console to do the instances migration and specify the orphan token policy file.

## How to use orphaned tokens policy file

The screenshot shows the IBM Process Admin Console interface. At the top, there are navigation tabs: Process Admin Console, Server Admin, Process Inspector, Installed Apps, Preferences, and Log out. The main content area displays 'OrderShipment (OS) - OS\_VerB (Active)'. A modal dialog titled 'Migrate Inflight Data From Snapshot' is open. Inside the dialog, there is a section 'Select snapshot to migrate data from:' with a list of snapshots. One snapshot, 'OS\_VerA', is selected and marked with a green checkmark. Below the list, there is a text input field for 'Policy file:' containing the path 'C:\OS\_OrphanedTokens.xml' and a 'Browse...' button. Below the input field, a message states 'The orphan token policy has been validated successfully.' At the bottom right of the dialog is a 'Migrate' button. The background shows the console interface with 'OrderShipment (OS) - OS\_VerB (Active)' selected and a sidebar with options like 'Deactivate Application', 'Migrate Inflight Data', 'Sync Settings', 'Make Default Version', 'Update Tracking Definitions', and 'Environment Variables'.

This slide shows how to use the generated orphan token policy file in the Process Admin console.

From the Process Admin Console, select Installed Apps. From the list of snapshots, select the target version to which you are migrating the active instances. In the Migrate Inflight Data from Snapshot window, select the source version of the snapshot to migrate from, then browse to the location of the policy file and click Migrate.

Look at the result in the Process Inspector to ensure that all orphaned tokens have been deleted or moved or to adjust any data values after migration.

## Summary

- Introduced governance of process applications
- Looked at these governance features in the demo
  - Contents of the sample governance application
  - How to enable governance in process applications
  - How to install a snapshot with governance enabled
  - Governance of snapshot status
- Looked at these feature enhancements in orphaned token management
  - REST API's to manage orphaned tokens
  - How to generate orphaned token policy file
  - Usage of orphan token policy file in process admin console

In this presentation you were provided information about two features in Business Process Manager version 8. Governance and Orphan token management. You learned about some of the key concepts in governance. And information about the new enhancements made to manage orphan tokens are provided.

## Feedback

Your feedback is valuable

You can help improve the quality of IBM Education Assistant content to better meet your needs by providing feedback.

- Did you find this module useful?
- Did it help you solve a problem or answer a question?
- Do you have suggestions for improvements?

Click to send email feedback:

[mailto:iea@us.ibm.com?subject=Feedback\\_about\\_BPMv80\\_Governance\\_OTM\\_Overview.ppt](mailto:iea@us.ibm.com?subject=Feedback_about_BPMv80_Governance_OTM_Overview.ppt)

This module is also available in PDF format at: [../BPMv80\\_Governance\\_OTM\\_Overview.pdf](..../BPMv80_Governance_OTM_Overview.pdf)

You can help improve the quality of IBM Education Assistant content by providing feedback.



## Trademarks, disclaimer, and copyright information

IBM, the IBM logo, ibm.com, 400, B, and Current are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of other IBM trademarks is available on the web at "[Copyright and trademark information](http://www.ibm.com/legal/copytrade.shtml)" at <http://www.ibm.com/legal/copytrade.shtml>

THE INFORMATION CONTAINED IN THIS PRESENTATION IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. WHILE EFFORTS WERE MADE TO VERIFY THE COMPLETENESS AND ACCURACY OF THE INFORMATION CONTAINED IN THIS PRESENTATION, IT IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. IN ADDITION, THIS INFORMATION IS BASED ON IBM'S CURRENT PRODUCT PLANS AND STRATEGY, WHICH ARE SUBJECT TO CHANGE BY IBM WITHOUT NOTICE. IBM SHALL NOT BE RESPONSIBLE FOR ANY DAMAGES ARISING OUT OF THE USE OF, OR OTHERWISE RELATED TO, THIS PRESENTATION OR ANY OTHER DOCUMENTATION. NOTHING CONTAINED IN THIS PRESENTATION IS INTENDED TO, NOR SHALL HAVE THE EFFECT OF, CREATING ANY WARRANTIES OR REPRESENTATIONS FROM IBM (OR ITS SUPPLIERS OR LICENSORS), OR ALTERING THE TERMS AND CONDITIONS OF ANY AGREEMENT OR LICENSE GOVERNING THE USE OF IBM PRODUCTS OR SOFTWARE.

© Copyright International Business Machines Corporation 2012. All rights reserved.