

What's New in IBM Business Process Manager v8.6

Technical Overview of New Features and Functions

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V1.5

This deck: <https://ibm.box.com/s/g3obo5rhgtlmsp3py33oe62azwyhpg2e>

Recording: http://w3.tap.ibm.com/medialibrary/media_view?id=413041

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BPM 8.6 - release summary on one page

IBM BPM on Cloud

- Benefit from securer passwords for user accounts. .

IBM BPM

- Benefit from a single edition of IBM BPM
- Use Java 8 on WebSphere® Application Server
- Use the latest technology to create content management user interfaces
- Determine artifact usage across toolkits
- Build a custom deployment service flow
- Convert your coach-based UIs to use the state-of-the-art coach views from the BPM UI toolkit
- Author and edit user attribute definitions in the web Process Designer
- Author and edit exposed process values (EPVs) in the web Process Designer
- Author and edit governance processes in the web Process Designer
- Call Advanced Integration Services from a process or service flow in the web Process Designer
- Easily identify possible problems by using new metrics with IBM Cloud Product Insights
- Integrate with external services by using IBM App Connect
- Capture IBM BPM events for external use
- Claim tasks that were implemented by using an external user interface
- Experience improved performance in Process Portal when you have access to a large number of saved searches
- Configure custom JDBC driver paths
- Migrate process instances individually by using the new JavaScript API
- Pause and resume Event Manager by using a new REST API



Agenda

Single BPM Edition

Web Process Designer

IBM BPM Analytics

IBM Cloud Integration

Process Federation Server

Responsive Portal

New API

BPM on Cloud, SOE, Quality, Serviceability, Migration

Simplified Packaging - Single BPM Edition

- V8.6 combines *BPM Standard* and *BPM Advanced* into a single edition called **IBM Business Process Manager Server**
- IBM Business Process Manager Server includes all the same server profiles (IBM Process Center, IBM Process Server, IBM BPM Advanced, IBM BPM Advanced only, IBM BPM Standard, and IBM Process Federation Server) as separately deployable components of IBM BPM Server.

IBM BPM Express - PID 5725-C96

Configured for first BPM project

- For small number of users – single server, no clustering
- Low entry price ; Install in a few clicks

IBM BPM Server - PID 5737-A57

Configured for typical BPM projects with advanced BPM capabilities

- For multi-project improvement programs, with high business involvement; Basic system integration support
- Rapid time-to-value: improved user productivity
- Extended support for high-volume process automation, with high quality-of-service
- Built-in SOA components for extensive enterprise-wide service integration, orchestration



Simplified Pricing

- Merged **Process Center** into Process Server
 - Additional PC license is priced the same as PS license
- **Web Process Designer** no longer requires a separate charge.
- **Desktop Process Designer (deprecated)** V8.5.7 CF 2017.09 still available, supports IBM BPM V8.6 and is licensed separately with an additional charge

Getting Started with IBM Process Designer 8.5.7 CF2017.09 (Deprecated) [Learn more](#)



BPM Pricing Simplification from 8 chargeable components to 3

Advanced Edition 5725-C94

Process Server Advanced

Process Center Advanced

Process Server Adv Non-Prod

Standard Edition 5725-C95

Process Server Standard

Process Center Standard

Process Server Std Non-Prod

Tools

5725-C97

Integration Designer

Process Designer

New Packaging 5737-A57

BPM Server

Process Server

Process Center
(with web Process Designer)

Process Federation Server

BPM Server Non-Prod

Process Server Non-Prod

5725-C97

Integration Designer

Agenda

Single BPM Edition

Upgrade and Migration

Web Process Designer

IBM BPM Analytics

IBM Cloud Integration

Process Federation Server

Responsive Portal

New API

BPM on Cloud, SOE, Quality, Serviceability

Release to Release Continuity

From		To							
Version	EOS	BPM	BPM	BPM	BPM	BPM	BPM	BPM	BPM
		751x	800x	801x	850x	855	856	857	860
BPM 750	09/2016	Upgrade	Migration	Migration	Migration	Migration	Migration	Migration	Migration
BPM 751	09/2016	Upgrade	Migration	Migration	Migration	Migration	Migration	Migration	Migration
BPM 800	09/2017		Upgrade	Upgrade	Migration	Migration	Migration	Migration	Migration
BPM 801	09/2017			Upgrade	Migration	Migration	Migration	Migration	Migration
BPM 850	09/2019				Upgrade	Upgrade	Upgrade	Upgrade	Upgrade

- BPM 8.5 EOS is Sep-30-2019 (**extended recently** from original 2018) with extended support of Sep-30-2022
- BPM 8.6
 - Despite 2nd digit version change 8.5.x to 8.6 in a simple upgrade!
 - New release, resets lifecycle clock for customer planning
 - Continuous delivery lifecycle policy with 3 years support (plus min 1 year extended)



Release to Release Continuity

- BPM 8.5 EOS
 - <https://www-01.ibm.com/software/support/lifecycleapp/PLCSearch.wss?q=business+process+manager+8.5&ibm-search=Search>
- BPM 8.6 EOS
 - <https://www-01.ibm.com/software/support/lifecycleapp/PLCSearch.wss?q=business+process+manager+8.6&ibm-search=Search>

Upgrading from 8.5.x to 8.6

- Use IBM Install Manager to update the packages

Update Packages

Select a package group to find updates for.

Package Group Name	Directory
IBM Integration Designer	C:\IBM\IID
IBM Process Designer	C:\IBM\ProcessDesigner\v8.5
IBM WebSphere Application Server V8.5	C:\IBM\WebSphere\AppServer
IBM WebSphere Application Server V8.5_1	C:\IBM\FNWAS

- Upgrade database schema

```
Administrator: Command Prompt - DBUpgrade.bat -profileName qbpmaps
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

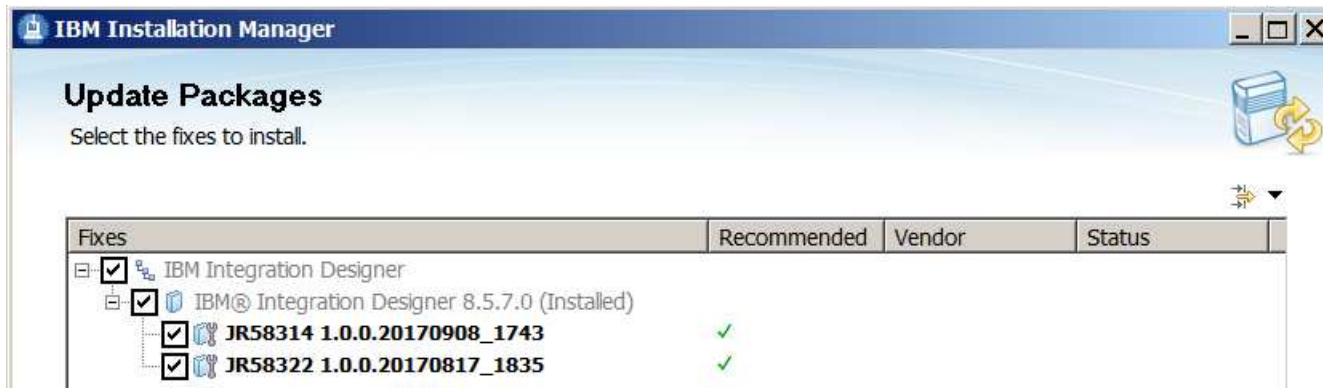
C:\Users\Administrator>cd C:\IBM\WebSphere\AppServer\bin
C:\IBM\WebSphere\AppServer\bin>DBUpgrade.bat -profileName qbpmaps
```

- Two additional steps (different from 8.5.X upgrades)
 1. Java 8 needs to be downloaded and installed (WAS limitation)
 2. 3rd party JDBC drivers need to be downloaded and installed (IBM legal)



Upgrading to IID 8.5.7 CF 2017.09

- Delivered an IID 8.5.7 CF 2017.09
 - Compatible with both BPM 8.5.7 and BPM 8.6
 - IID 8.5.7 CF 2017.09 would EOS 1 year (April/Sept) after IID 8.6 is announced
 - IID 8.6 would be delivered in the future based on latest RAD/eclipse
- Install: <http://www-01.ibm.com/support/docview.wss?uid=swg1JR58314>



Agenda

Single BPM Edition

Upgrade and Migration

Web Process Designer

IBM BPM Analytics

IBM Cloud Integration

Process Federation Server

Responsive Portal

New API

BPM on Cloud, SOE, Quality, Serviceability

BPM UI Toolkit Quality Initiative

Available with CF 2017.06 **BPM UI toolkit (8.6.0.0)**

- Improved WYSIWYG behavior
- More consistent and thorough theme support
- Functional runtime defects
- Improved national languages support
 - i.e. bidi support in Date Coach View
- Improved accessibility support

Content Management Toolkit

Content Management 8.5.7

- Document Explorer Content Management
- Document List Content Management
- Document Viewer Content Management
- Heritage Document Explorer Content Manag...
- Heritage Document List Content Management
- Heritage Document Viewer Content Manage...

Content Management 8.6

- BPM Document List Content Management
- BPM File Dropzone Content Management
- BPM File List Content Management
- BPM File Properties Content Management
- BPM File Revisions Content Management
- BPM File Uploader Content Management
- Document Explorer Content Management
- Document Reference Content Management
- ECM Document List Content Management
- ECM File List Content Management
- ECM File Properties Content Management
- ECM File Revisions Content Management
- ECM File Uploader Content Management
- ECM Folder List Content Management
- File Viewer Content Management
- Heritage Document Explorer Content Manage...
- Heritage Document List Content Management
- Heritage Document Viewer Content Managem...
- Responsive Document Explorer Content Man...
- Responsive Document List Content Managem...
- Responsive Document Viewer Content Manag...

Work with IBM BPM local documents attached to a process instances or references to External ECM documents

Explore BPM documents or ECM document references attached to a process instance

Work with External ECM documents Process instance, must provide ECM server definition for these documents

View documents content either documents or document references



Content Management Toolkit

BPM Document List

Displays (in tabular form) files in the IBM BPM content store.

- Provides the ability to upload, delete, and change the properties of documents
- Allows users to view revisions associated with a file.
- Aggregates BPM File List, BPM File Properties, BPM File Revisions, and BPM File Uploader controls as a simpler-to-use but less customizable alternative to the modular controls it contains.

BPM File Dropzone

Drag or select files to store in the IBM BPM document store.

BPM File List

Displays (in tabular form) files and documents in the IBM BPM content store.

BPM File Properties

Show, view, change, and delete properties associated with a BPM file or document.

BPM File Revisions

Displays (in tabular form) revisions of an BPM file or document given the ID of that document.

- Events can be fired from user actions on the list, such as by clicking a file.

BPM File Uploader

Select and upload a file from their computer.

- The file can be given specific properties and can be targeted to a particular BPM folder.









Document Explorer

Displays documents in the IBM BPM content store and any other referenced ECM folders and documents in the folder structure of a process instance.

- Authorized users, can search, create, delete and rename folders; upload, view, check out and remove documents.



Content Management Toolkit

-  **Document Reference** Displays referenced files and folders.
-  **ECM Document List** Displays (in tabular form) files and documents from a folder in a configurable ECM store.
 - Events can be fired from user actions on the list, such as clicking on a file to view its content.
 - Files can also be deleted from the list, if allowed through configuration.
-  **ECM File List** Displays (in tabular form) files and documents from a folder in a configurable ECM store.
-  **ECM File Properties** View, change, and delete properties associated with an ECM file or document.
-  **ECM File Revisions** Displays (in tabular form) revisions of an ECM file or document given the ID of that document.
 - Events can be fired from user actions on the list, such as by clicking a file.
-  **ECM File Uploader** Select and upload a file (the file can be given specific properties) to an ECM folder.
-  **ECM Folder List** Displays (in tabular form) folders from the ECM content store.
 - Events can be fired from user actions on the list, such as clicking a folder.
 - Folders can also be deleted from the list, if allowed through configuration.
-  **File Viewer** View files that have been uploaded by using either the BPM File Dropzone control or BPM File Uploader control.
 - Use the File Viewer control with the BPM File List Control.



ECM Document List Coach View

ECM Document List


ECM Document List ... Load More ... Refresh + Add...

Name	Last Modified	Version	
!!!!!!bpmHelp.png	2017-09-14	7.0	[X] [Pencil] [Copy]
!!!!!!activityID.png	2017-09-06	2.0	[X] [Pencil] [Copy]
!!!!!!BEE_CT_jscoverSample.iml	2017-09-04	1.0	[X] [Pencil] [Copy]
!!!!!!PaulPacholski140x140.jpg	2017-09-27	1.0	[X] [Pencil] [Copy]
!!!bpmui.txt	2017-08-23	1.0	[X] [Pencil] [Copy]

Showing 1 to 5 of 10 entries

Previous | 1 | 2 | Next

File Viewer ↓ Fit to height ↔ Fit to width 🖼️ Open in new window



Can be used without Process Designer
 You must point to the correct ECM server in the View Configuration

OK

The screenshot displays two windows from a software application. The top window, titled 'Details', has a dark blue header. Below the header, the 'Name' field is highlighted with a red box and contains the text 'ECM_SERVER'. The 'Type' field is set to 'Enterprise Content Management Server'. The 'Description' field is empty. Below these fields, there is a 'Default' button with a plus icon. The bottom section of the 'Details' window contains various configuration fields: 'Host name' (redacted), 'Port' (9080), 'Context path' (/fncmis), 'Secure server' (unchecked), 'Repository' (TARGET), 'User ID' (tonychau), 'Password' (redacted), 'Always use this connection information' (checked), 'ECM document authorization service' (IS1), and 'Event broadcasters' (none). There are 'Select...' and 'New...' buttons for the authorization service and event broadcasters. A 'Test connection' button is at the bottom left. The bottom window, titled 'Properties', has a light gray header. It contains a 'General' tab and a 'Validation Errors' section. The 'Content management' section is expanded, showing 'Content management advanced' settings. The 'ECM server configuration name' field is highlighted with a red box and contains the text 'ECM_SERVER'. Other fields include 'Document object type ID' and 'Folder path'. Red arrows indicate the flow from the 'Details' window to the 'Properties' window.

BPM Document List Coach View

BPM Document List


BPM Document List

Refresh

Add...

Name	File name or URL	Last Modified	Version
<u>BPM86 SMALL.jpg</u>	BPM86 SMALL.jpg	2017-09-27	1.0

Showing 1 entries

 File Viewer

IBM Business Process Manager v8.6

ONE PLATFORM

IBM Business Process Manager

Based on industry-leading technology from IBM

Business Process Automation

Business Process Integration

Business Process Analytics

MANY STYLES OF WORK

Supports the spectrum of work types, including:

Automated, rule-based, event-driven

Complex, multi-step, multi-tenant

Simple, single-step, single-tenant

Available anytime, anywhere, anywhere

DRIVING INNOVATION AT SCALE

IBM Operational Decision Manager v8.6

IBM Robotic Process Automation with Automation Anywhere v10.0

OK

Folders

Root Process Folder

Folder Management

Allow locally managed documents

Allow locally managed folders

Allow external document references

Allow external folder references

To use it with Process Instance, you must enable Folder Management options in Process Settings to be able to use Internal BPM Document repository for local documents/folder and external document/folder references



Determine Artifact Usage Across Toolkits

- Prior to v8.6 you could only view dependencies within a ProcessApp or a Toolkit



- In v8.6 you can now view the artifacts and their dependencies that are used across all toolkits in the IBM Process Center repository by choosing the new **Global Scope** option.
 - You can find out with what other Toolkits or ProcessApps use an artifact defined in a Toolkit snapshot

Determine Artifact Usage Across Toolkits

The screenshot shows the 'UI Template (Read-only)' interface. The left sidebar contains a list of categories: Header and Footer, Processes, User Interface, Services, Events, Teams, Data, Performance, Files, Toolkits, and Smart Folders. The main panel displays a tree view of UI templates under the 'Type' filter. The tree structure is as follows:

- UI Template
 - Referenced By (Global Scope) (8)
 - Header and Footer (1)
 - Client-Side Human Services (1)
 - TEST Header and Footer (1)
 - TEST (1)
 - Heritage Human Services (1)
 - Human Service
 - Travel Approval (3)
 - Client-Side Human Services (3)
 - Approver
 - Request
 - View Response
 - Travel Approval COMPLETED (3)
 - Client-Side Human Services (3)
 - Approver
 - Request
 - View Response

Annotations and steps:

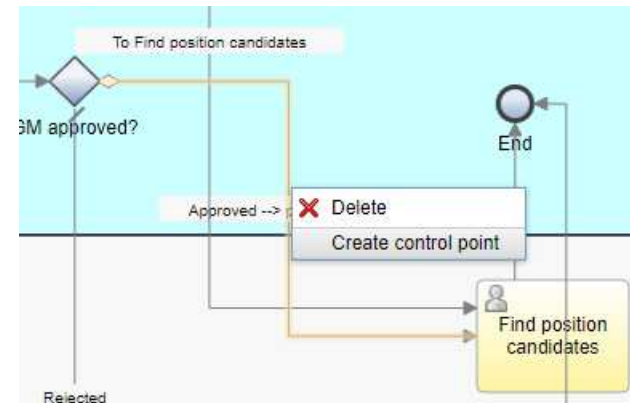
1. We opened a snapshot of **Header and Footer Toolkit**
2. We are looking at the use of **UI Template Coach View**
3. Click **Referees icon**
4. Click **Global Scope icon**
5. See the usage across **Process Center!** For example....
 - In **Travel Approval ProcessApp**
 - This Coach View is used in **three CSHSes**
1. You need to open a **snapshot** (not the tip!)

Showing track as of 4.0

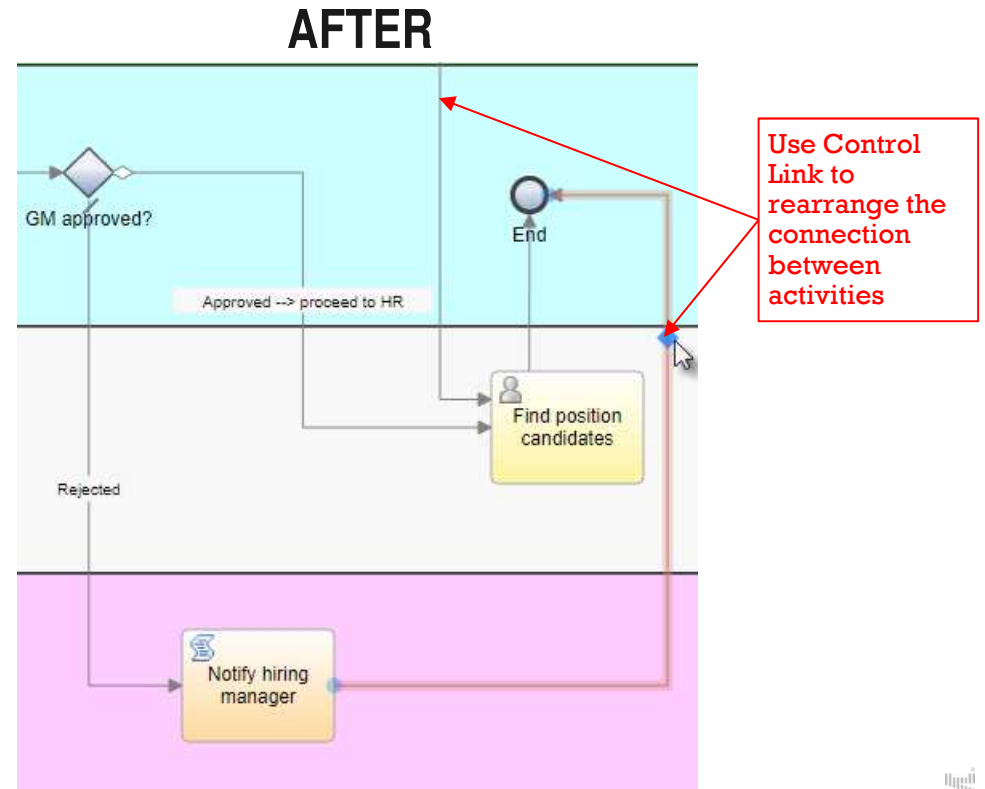
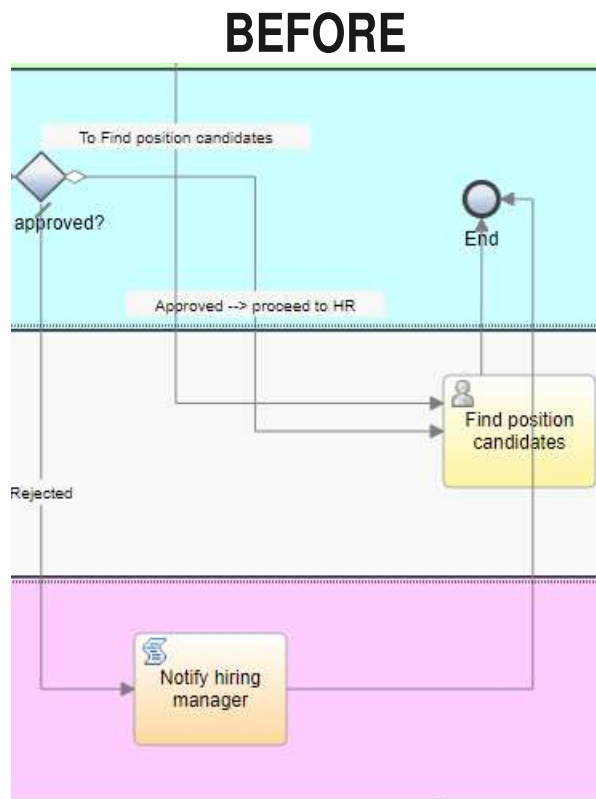
JK Bank Inc.

Control Points of Diagram Links

- In very busy flows sometimes the links connecting activities cross over areas that it shouldn't thus making the diagram hard to follow
- In v8.6 you can add a **control point** to a link in the flow and use it to make a link flow around an activity or other links



Control Points of Diagram Links



Deployment Service Flow available in Web PD

- Prior to v8.6 Installation Service was a Heritage Service and only visible/editable in Desktop PD
- In v8.6 Deployment Services is a Service Flow and is available in Web PD
- Installation Service is converted to Deployment Service in Service Conversion in Process App Settings

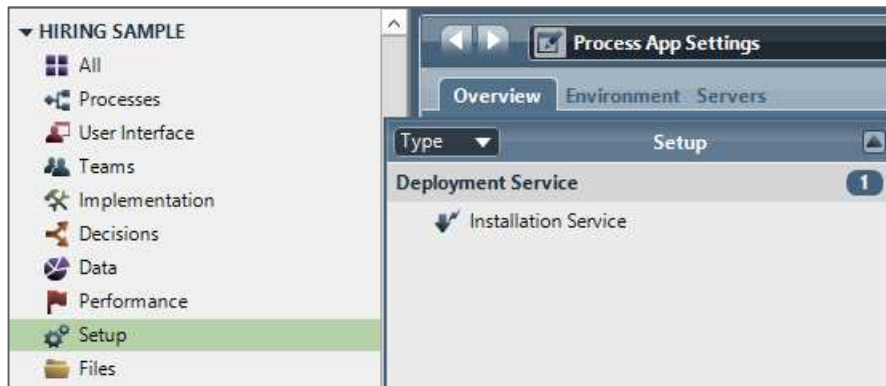
What is Deployment Service?

Flow When you create a process application, a deployment service flow is created that is used when you install a snapshot. You can customize the deployment service flow to handle actions in your target environment, such as creating or updating database tables, updating environment variables, and determining which snapshots are already installed.

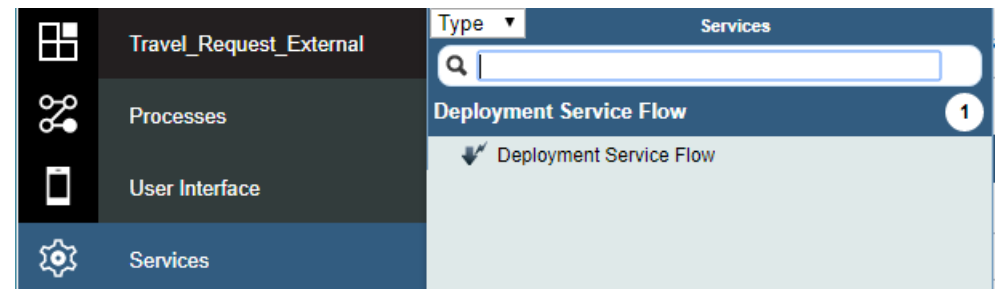


Deployment Service Flow available in Web PD

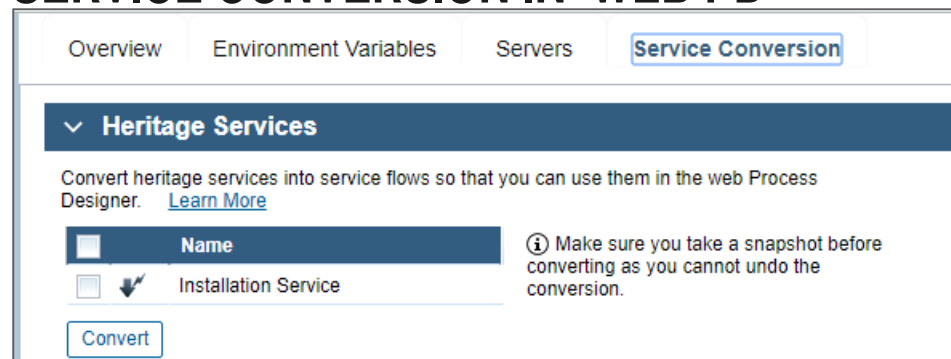
IN DESKTOP PD



IN WEB PD

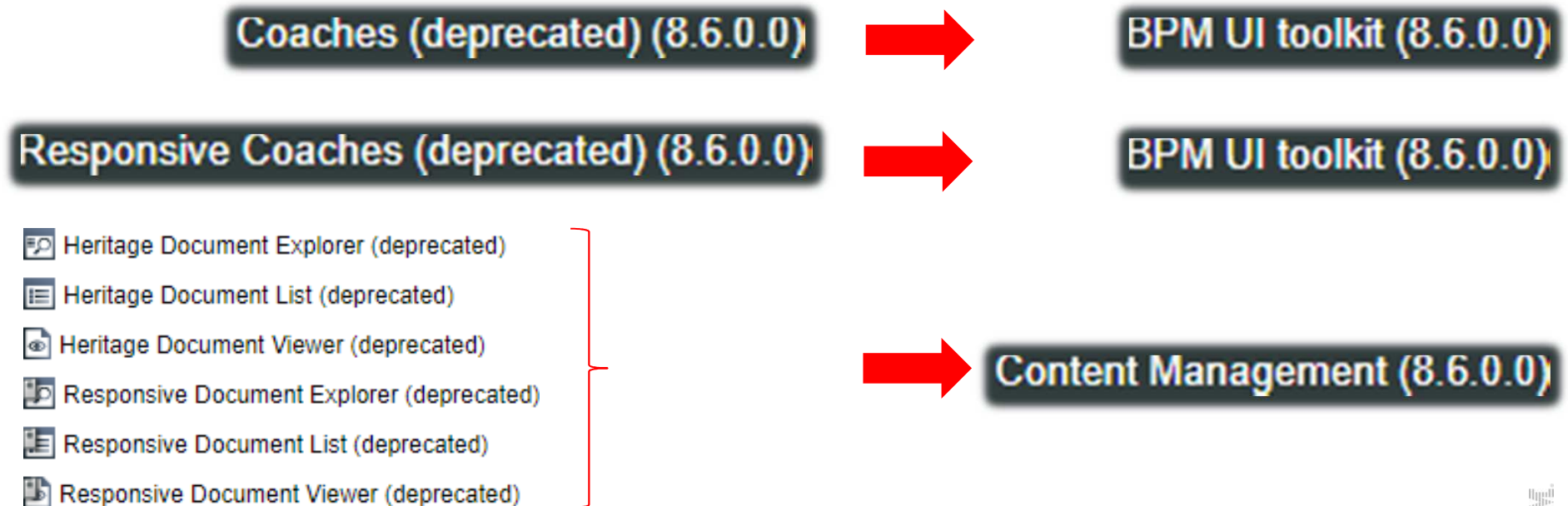


SERVICE CONVERSION IN WEB PD



Convert Deprecated Coach Views

In v8.6 we added automated conversion of deprecated Coach Views contained in: Custom Coach Views and Coaches in CSHS and HHS



UI Conversion in Process App Settings

The screenshot displays the 'Process App Settings' interface. The top navigation bar includes 'DESIGNER' and 'INSPECTOR' tabs, along with various icons and a user profile 'admin'. The left sidebar lists categories: 'Coaches (deprecated) (8.6.0.0)', 'Content Management (8.6.0.0)', 'All', 'Processes', 'User Interface', 'Services', and 'Events'. The main content area has tabs for 'Overview', 'Environment Variables', 'Servers', and 'UI Conversion' (highlighted with a red box). Below the 'UI Conversion' tab, there is a section titled 'UI Conversion' with a description: 'Convert deprecated coaches and coach views into BPM UI coach views that can be used on multiple device types. [Learn More](#)'. A sub-section 'Artifacts Using Deprecated Coach Views' contains a table with one row: 'Client-Side Human Service'. A 'Convert' button is located below the table. A modal dialog titled 'Convert Deprecated Coach Views' is open, showing the same 'Artifacts Using Deprecated Coach Views' table and a 'Set theme:' dropdown menu set to 'SPARK UI Theme (BPM UI tc)'. The dialog has 'FINISH' and 'CANCEL' buttons at the bottom.

Process App Settings CREATE NEW

UI Conversion

UI Conversion
Convert deprecated coaches and coach views into BPM UI coach views that can be used on multiple device types. [Learn More](#)

Artifacts Using Deprecated Coach Views

<input checked="" type="checkbox"/>	Name
<input checked="" type="checkbox"/>	Client-Side Human Service

Convert

Convert Deprecated Coach Views
Convert the deprecated coach views in the selected artifacts into their corresponding BPM UI coach views.

☒ Set theme: SPARK UI Theme (BPM UI tc)

FINISH **CANCEL**

Coaches Toolkit Conversion to BPM UI Toolkit

Coach Views (introduced in V8.0)

Review Special Claim

Insured	Amounts
Name <input type="text"/>	Approved Claim Limit <input type="text" value="\$0.00"/>
Policy No <input type="text"/>	Estimated Repair Charge <input type="text" value="\$1,010.50"/>
Date of Birth <input type="text" value="9/6/2017"/>	Claim Payment After Deductible <input type="text" value="\$910.50"/>
Indicate Claim Decision <input type="radio"/> Approve <input checked="" type="radio"/> Deny	
<input type="button" value="Submit"/>	




Coach Views (BPM UI 8.6)

Review Special Claim

Insured	Amounts
Name <input type="text"/>	Approved Claim Limit <input type="text" value="\$0"/>
Policy No <input type="text"/>	Estimated Repair Charge <input type="text" value="\$1,011"/>
Date of Birth <input type="text" value="9/12/2017"/>	Claim Payment After Deductible <input type="text" value="\$911"/>
<input type="checkbox"/> Indicate Claim Decision	
<input type="button" value="Submit"/>	

Responsive Coaches Conversion to BPM UI Coaches

Responsive Coach Views (8.5.7)

 JK Bank Ltd. - Create Account Application

Personal Data

TitleLast NameSocial Insurane Number

First NameeMailDate of Birth

Middle InitialsPhone Num.

Residence Data

Street Num.Apt Num.Province

Street NameCityZIP

Employment Data

IndustryEmployerPhone Num.

Occupation

Actions

CLEAR DATA


CREATE ACCOUNT

EXIT

ACCOUNT NUMBER:
CHQ37986850

JK Bank Ltd.

Coaches Views (BPM UI 8.6)

 JK Bank Ltd. - Create Account Application

Personal Data

TitleLast NameSocial Insurane Number

First NameeMailDate of Birth

Middle InitialsPhone Num.

Residence Data

Street Num.Apt Num.Province

Street NameCityZIP

Employment Data

IndustryEmployerPhone Num.

Occupation

Actions

CLEAR DATA

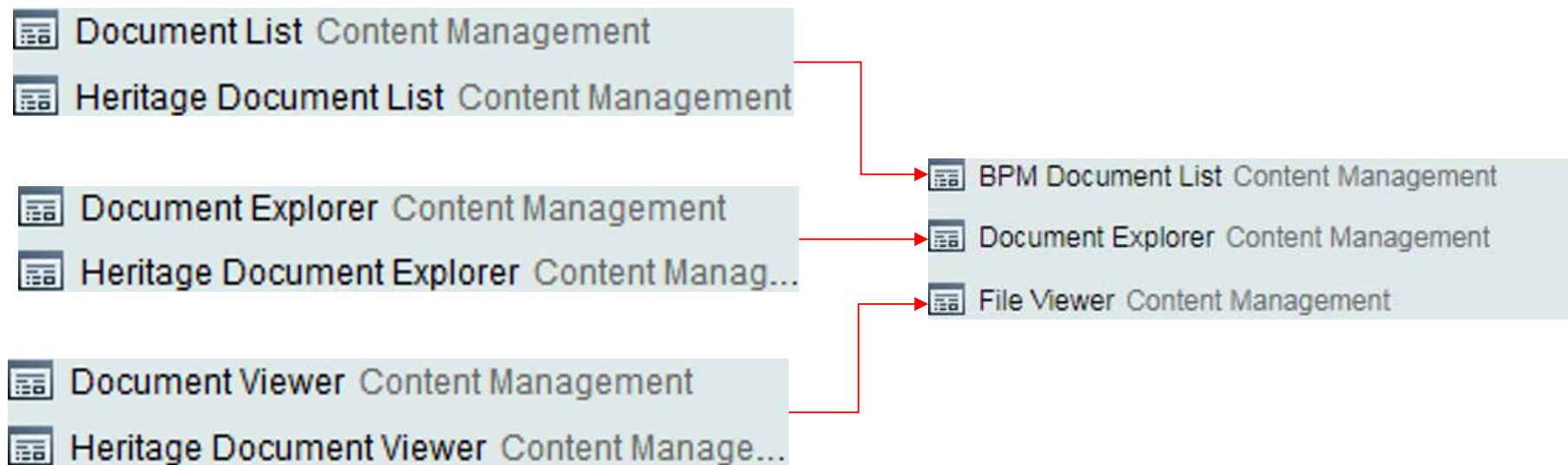
CREATE ACCOUNT

EXIT

ACCOUNT NUMBER: CHQ24448511

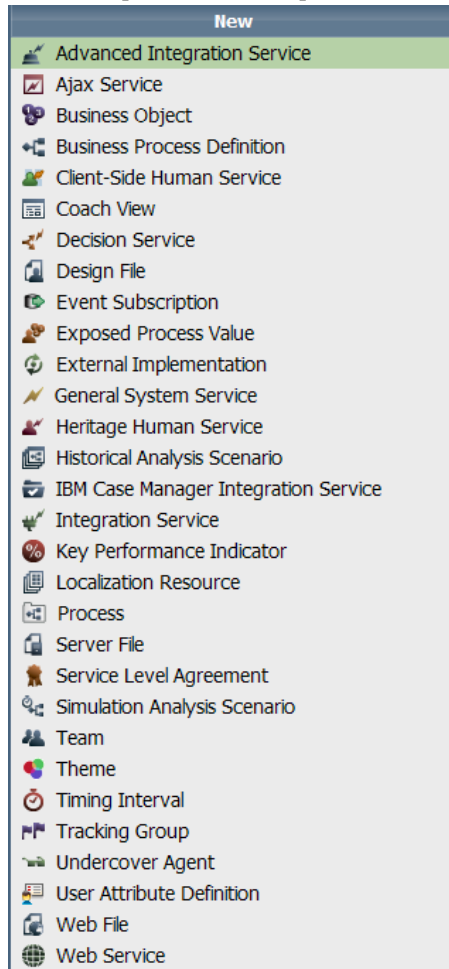
JK Bank Ltd.

Legacy Content Management Coach View Conversion

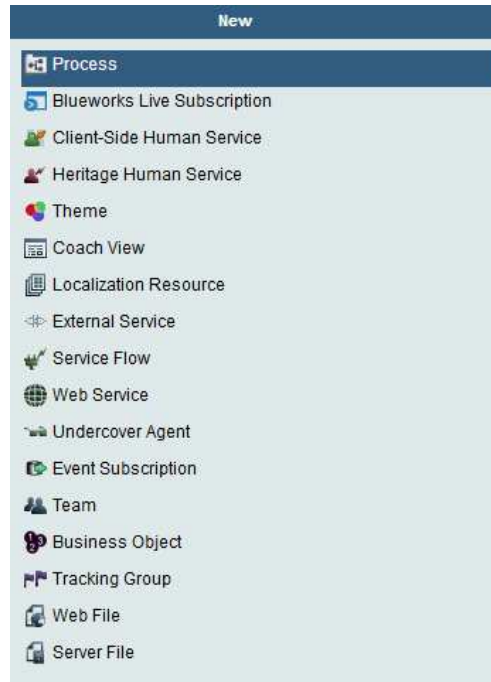


NOTE: For now, configuration options are not explicitly migrated. Neither are data bindings

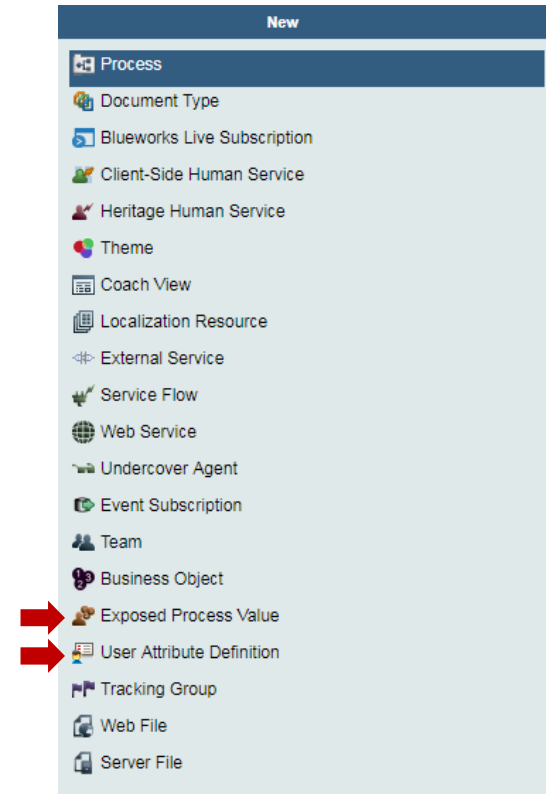
Desktop PD (deprecated)



Web PD 8.5.7 2017.06

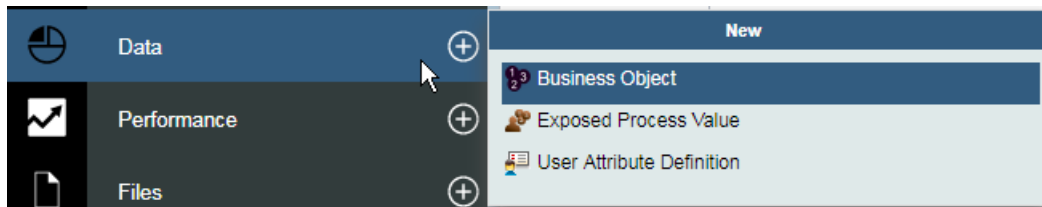


Web PD 8.6



User Attribute Definition and EPVs

- Author and edit **user attribute definitions** and **exposed process values** in the web Process Designer
- No conversion!
 - Both Desktop and Web Process designer can use it interchangeably to author these artifacts.



What are User Attribute Definitions?

A user attribute definition enables you associate unique capabilities or qualities with one or more users

What are EPVs?

EPVs are process variables you want to expose to specific users. These variables can be modified by the users while instances of a process are running and are visible to all running process instances

User Attribute Definition and EPV Editors

New User Attribute Definition

User attribute definitions are custom attributes that can form the basis for rules that define team membership. For example, if you want to select participants depending on location, you might define a user attribute definition that includes a 'location' attribute, and create a team rule that refers to that attribute value.

Name:

New Exposed Process Value

Exposed Process Values (EPVs) enable users to set or alter variable values while instances of a process are running.

Name:

User Attribute Definition

Common

Name: UAD
Modified: admin (Oct 2, 2017, 12:32:14 PM)
Documentation:

Type

Business object:

String

 System Data

Possible Values

Source: ☐ Any valid value ☒ List

Value List

value1

value2

Exposed Process Value

Common

Exposed Process Value Variables

firstShiftTeam (String)

Exposing

Exposed to:

Managers

 System Data

Details

Variable Details

External name: firstShiftTeam
Variable name: variable1
External description:

Variable type:

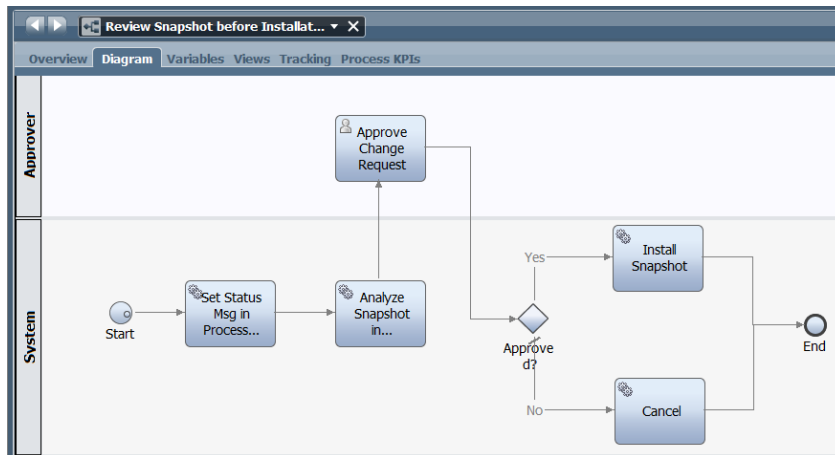
String

 System Data

Default value: TeamA
Use new values: ☐

Governance Processes

- Prior to v8.6 governance processes were **BPD-based**

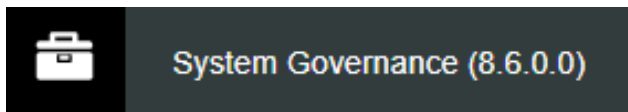


- In v8.6 you can author and edit **Process-based** governance processes in the web Process Designer

What are Governance Processes?

The Installation Request Process controls the installation of process applications (it can be used to prevent installation). Snapshot Status Change Process or to notify users whenever a snapshot is created or changes status.

Creating a Governance Processes in Web PD




You must have the System Governance Toolkit

New Process

A process captures a set of activities and the data and content to support the activities. These activities can be part of a structured flow, ad-hoc activities that are not part of a structured flow, or a combination of the two.

Name:

If you are creating a Process for governance, then select a template from the System Governance toolkit. The template will ensure compatibility between your Process and a specific governance event.


 [Snapshot Status Change Template](#) System Governance

New Process

A process captures a set of activities and the data and content to support the activities. These activities can be part of a structured flow, ad-hoc activities that are not part of a structured flow, or a combination of the two.

Name:

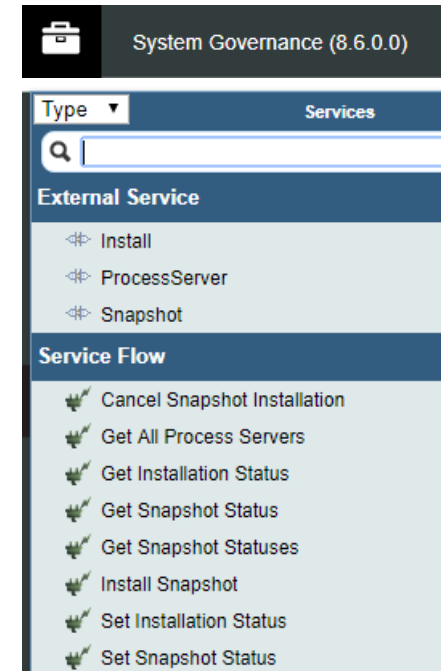
If you are creating a Process for governance, then select a template from the System Governance toolkit. The template will ensure compatibility between your Process and a specific governance event.

 [Installation Requested Template](#) System Governance

Select either:
Installation Request
Snapshot Status Change

Governance Process - Desktop PD Users

- Desktop PD users continue to be able to create custom governance BPDs
- However if they want to use governance services they will need to have the pre-8.6 Governance Toolkit because 8.6 Governance toolkit uses Services and Service Flows
- Governance BPDs created in Desktop PD can be converted to Processes

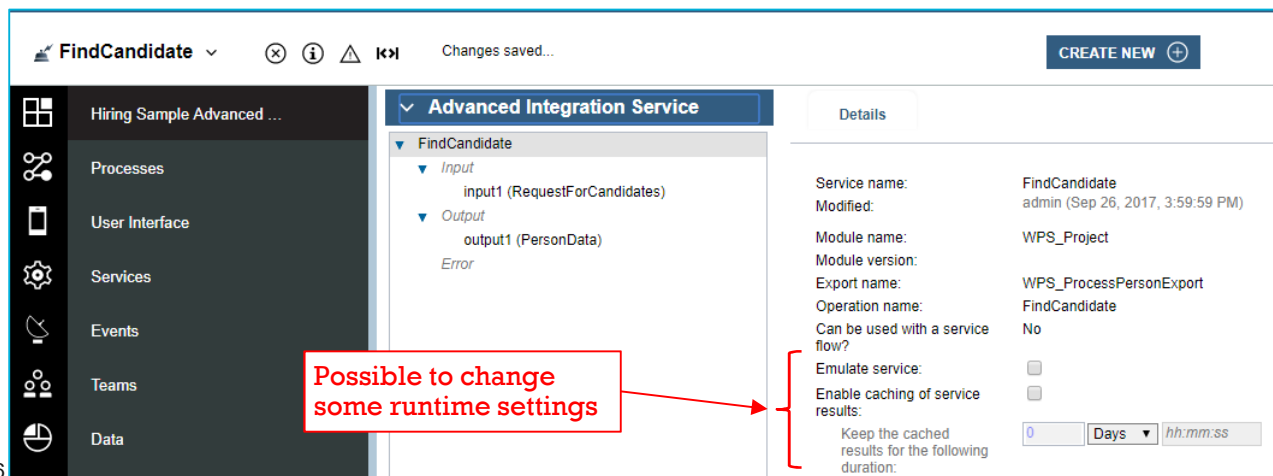


AIS Service in Web Process Designer

- Prior to V8.6 you could not open the AIS definition in Web PD
- In V8.6 you AIS editor was added.
 - Possible to change some runtime settings
 - However there is no way to change AIS definition.

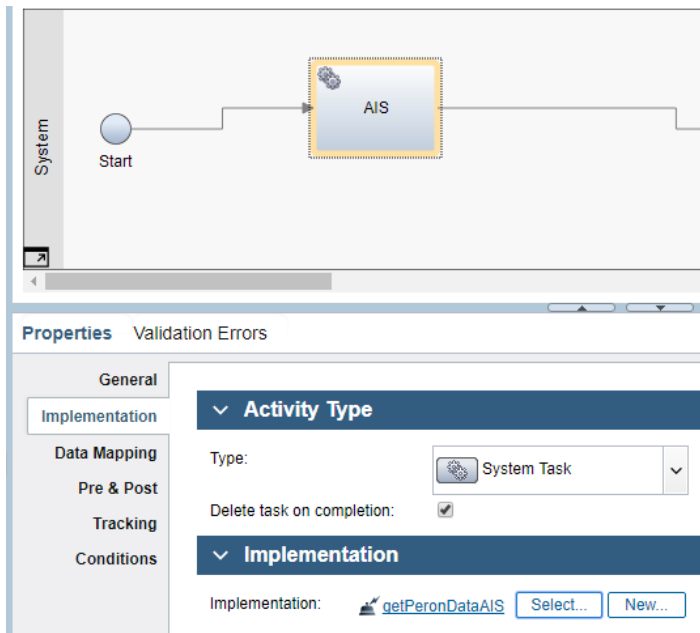
What is Advanced Integration Service?

AIS is used to model a call to a service that is developed in IBM Integration Designer. AIS can be invoked from a BPDs, Processes and from a Heritage Services and Service Flows. AIS is implemented in IBM Integration Designer.

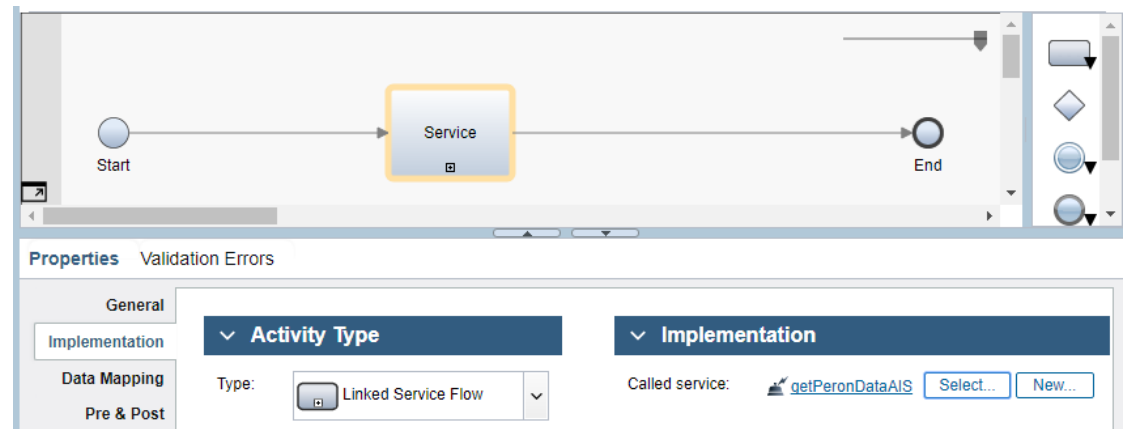


AIS Use in Web PD (available prior to v8.6 – review)

Process



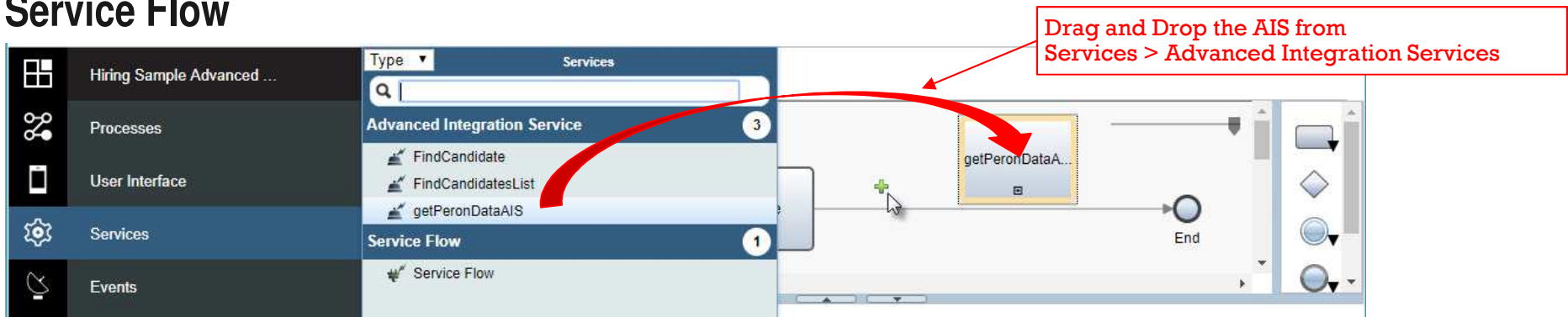
Service Flow



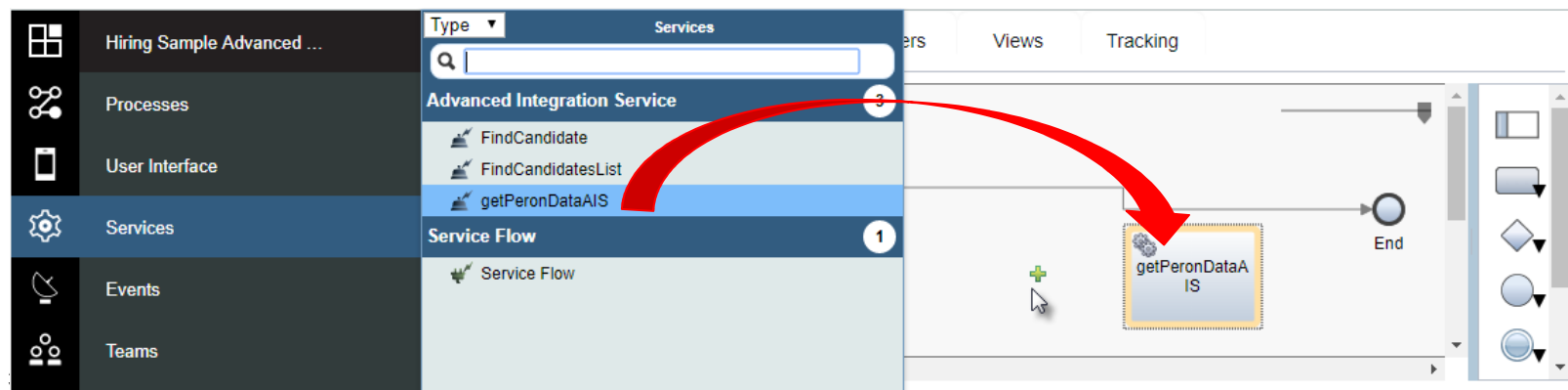
- Set Implementation and select from the AIS
- For Service Flows the Type must be set to Linked Service Flow and for Process to System Task

AIS Use in Web PD (available prior to v8.6 – review)

Service Flow



Process



Agenda

Single BPM Edition

Web Process Designer

IBM BPM Analytics

IBM Cloud Integration

Process Federation Server

Responsive Portal

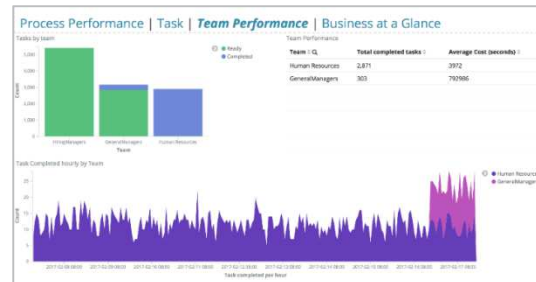
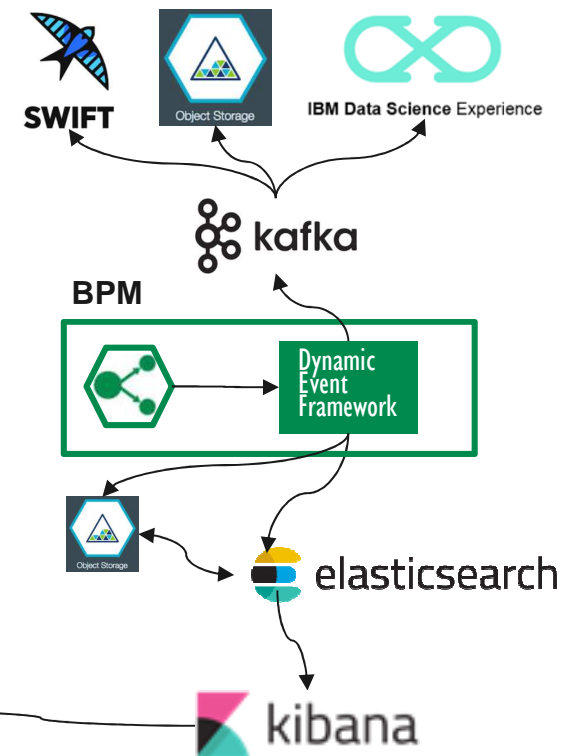
New API

BPM on Cloud, SOE, Quality, Serviceability, Migration

Updated IBM BPM Analytics **TECHNOLOGY DEMONSTRATION**

BPM can stream process events to **elasticsearch** to enable self service reporting using **Kibana**

- DEF Connector for converting and streaming BPM events
- Sample code of Kibana based BPM Operational Dashboards
- Use Object Storage to archive / dearchive
- Support sending DEF events to the Kafka through the BPMEmitter (configurable – default is elasticsearch)
- Support archive/restore the raw events to/from OpenStack Swift or IBM Object Storage (Bluemix service)



Install IBM BPM Analytics Technology Demonstration

- Download: https://github.com/ibmbpm/bpm_analytics

- Contents:

- [BPMEventEmitter.war](#)
 - Receives tracking events from DEF and transforms to JSON
- [EventSummaryAgent.tar](#)
 - Monitors the new events added in the configured elasticsearch index and then generate summary events
- [BPMDashboardKibana.zip](#)
 - Contains five Kibana dashboards
- [IBM BPM Analytics - Develop your own dashboard.pdf](#)
 - How to develop custom dashboards
- [IBM Business Process Manager Analytics.pdf](#)
 - Install instructions

NEW

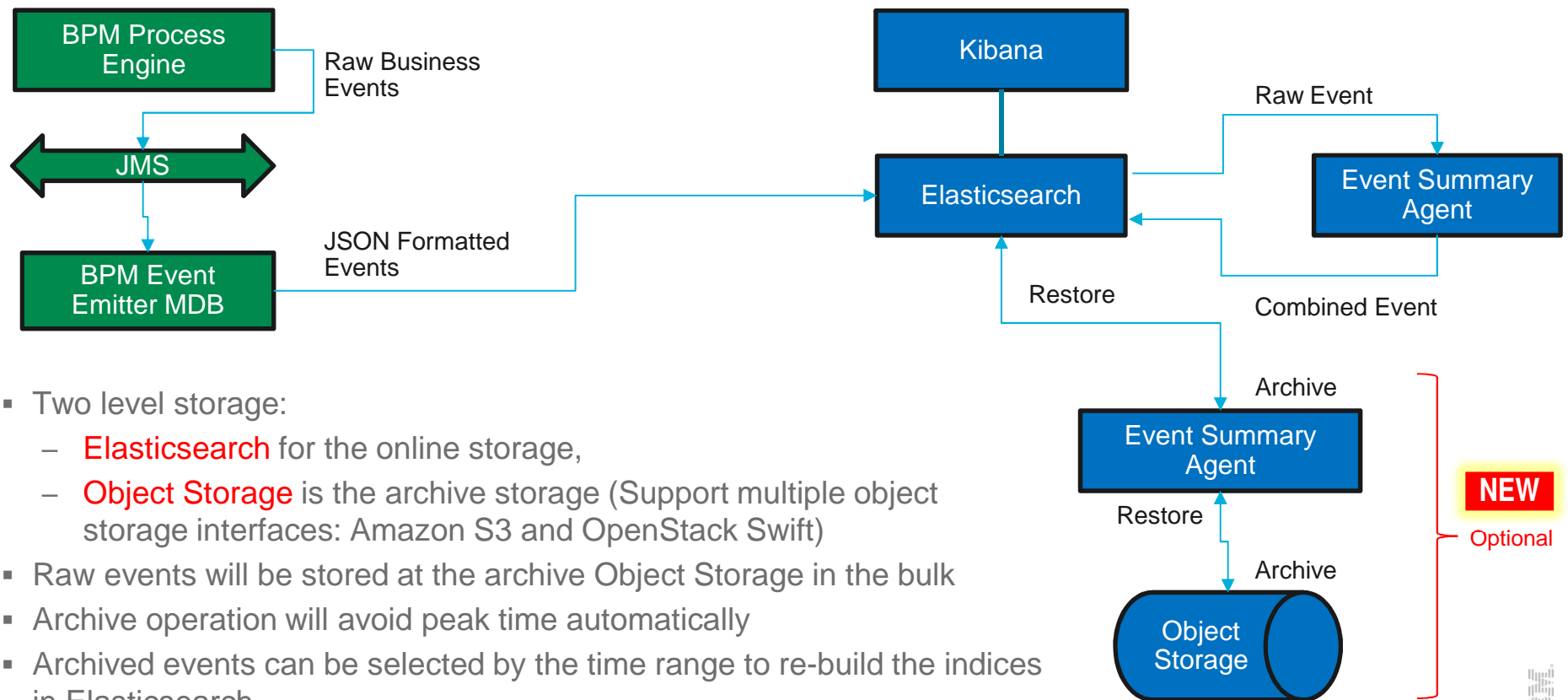
- Removed. Now is part of the BPM and Installed with the product. Use single command to enable it.
- Enhanced performance of the DEF emitter
- Added new Task Event type

NEW

- New document.
- Includes “Create My First Dashboard” tutorial.
- Leverages some of the enhancements to the event framework to make it easier to create complex dashboards

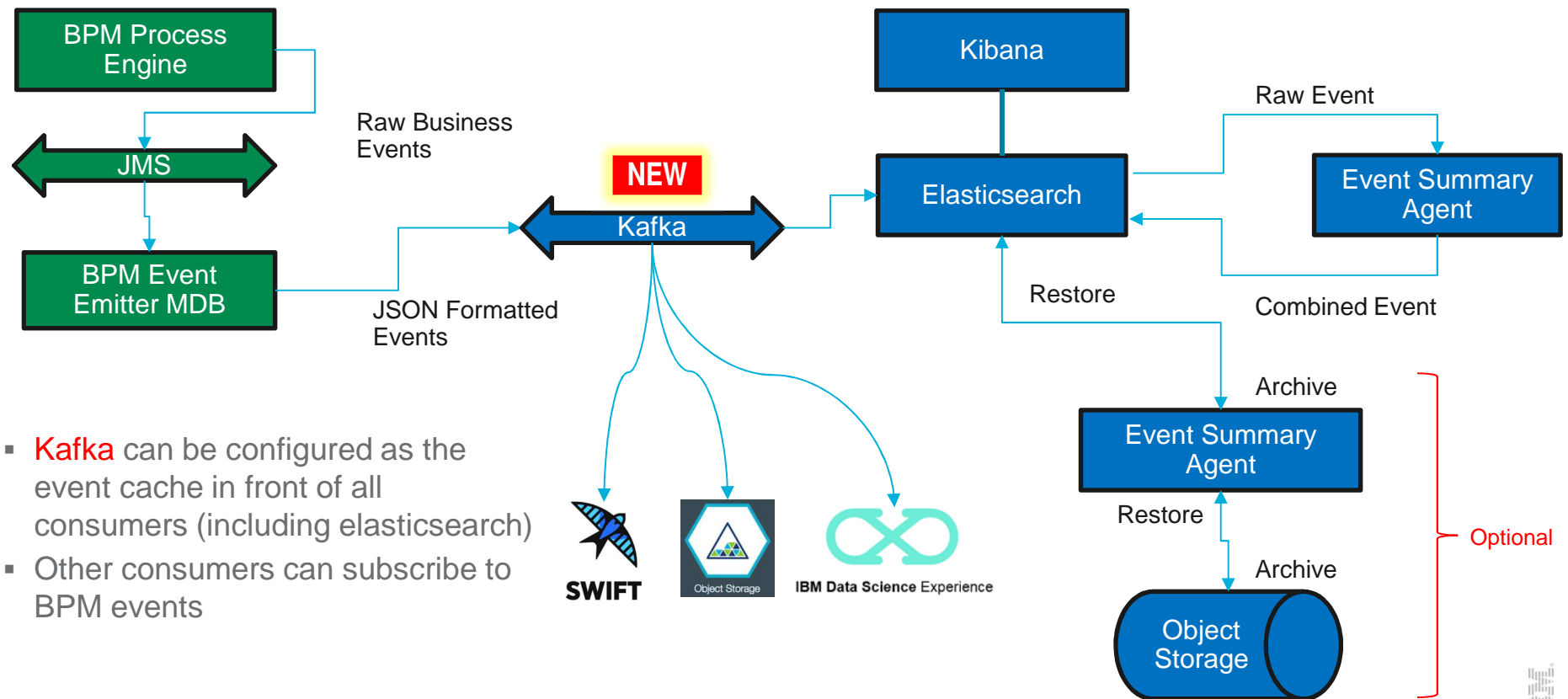


BPM Analytics Tech. Preview - Default Topology

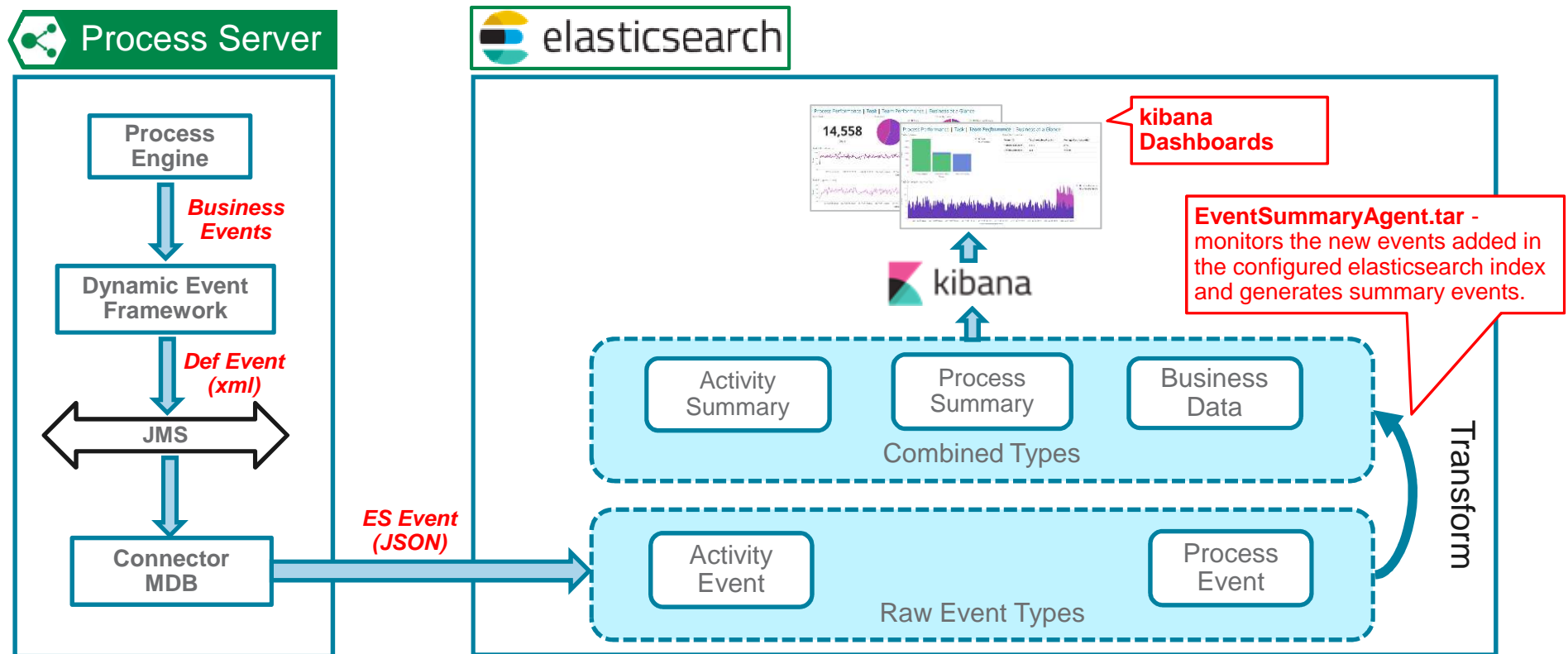


- Two level storage:
 - **Elasticsearch** for the online storage,
 - **Object Storage** is the archive storage (Support multiple object storage interfaces: Amazon S3 and OpenStack Swift)
- Raw events will be stored at the archive Object Storage in the bulk
- Archive operation will avoid peak time automatically
- Archived events can be selected by the time range to re-build the indices in Elasticsearch

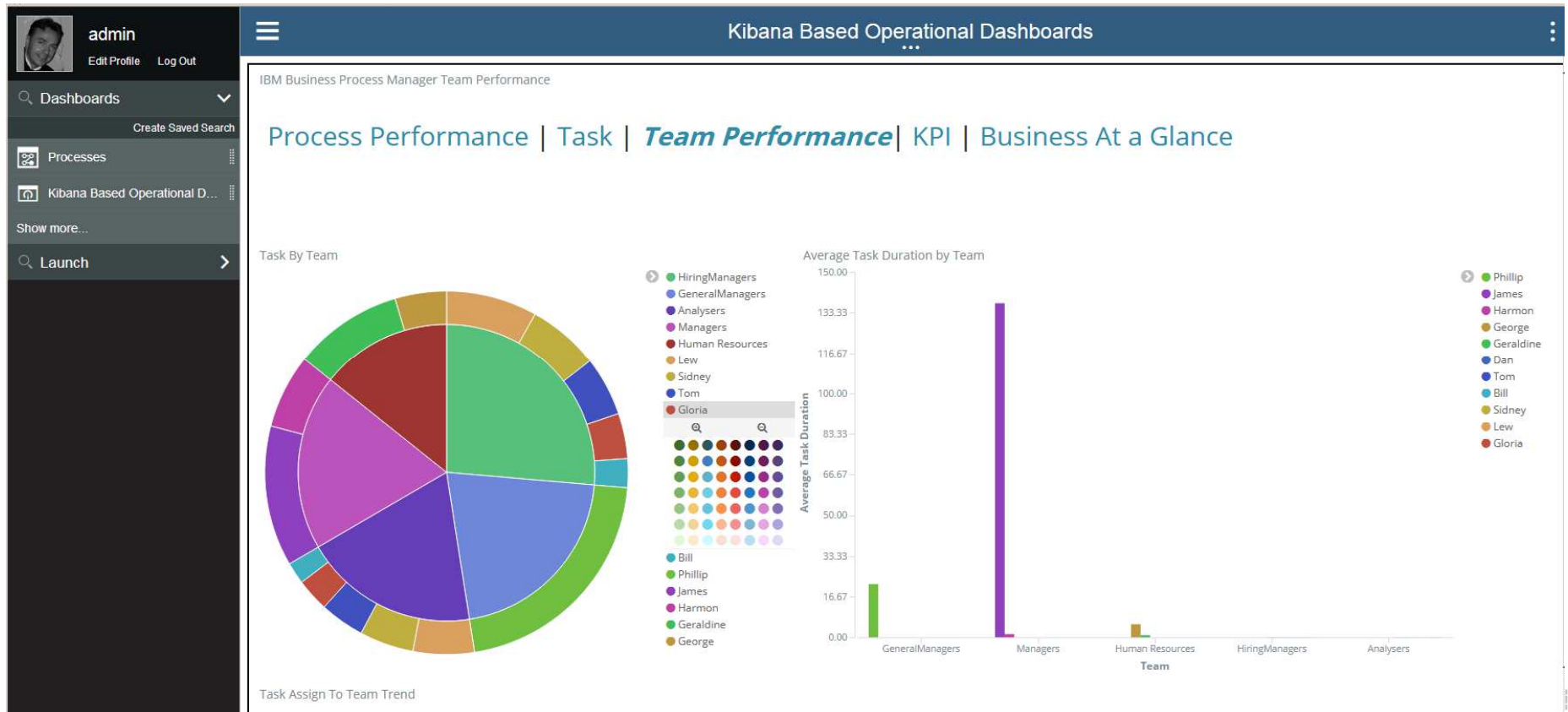
BPM Analytics Tech. Preview - Kafka Topology



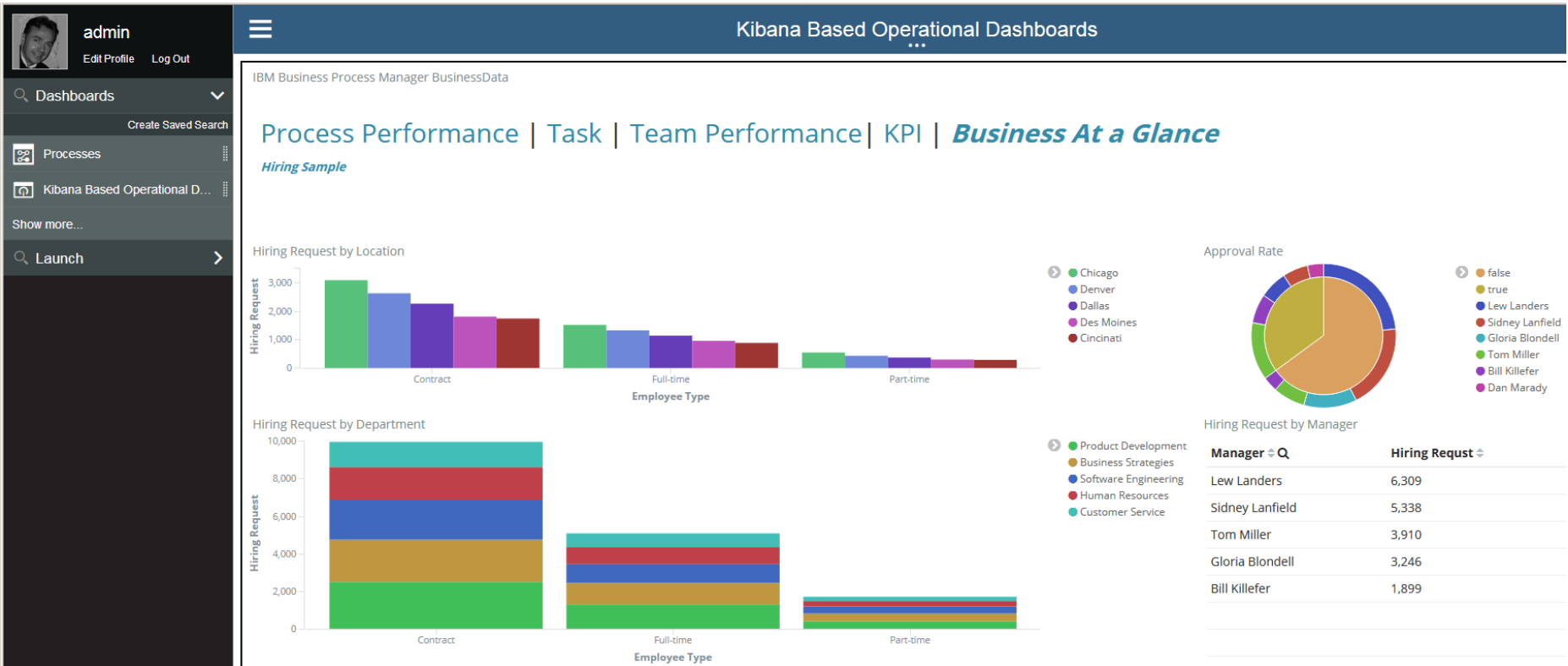
IBM BPM Analytics Architecture – Kibana Dashboards



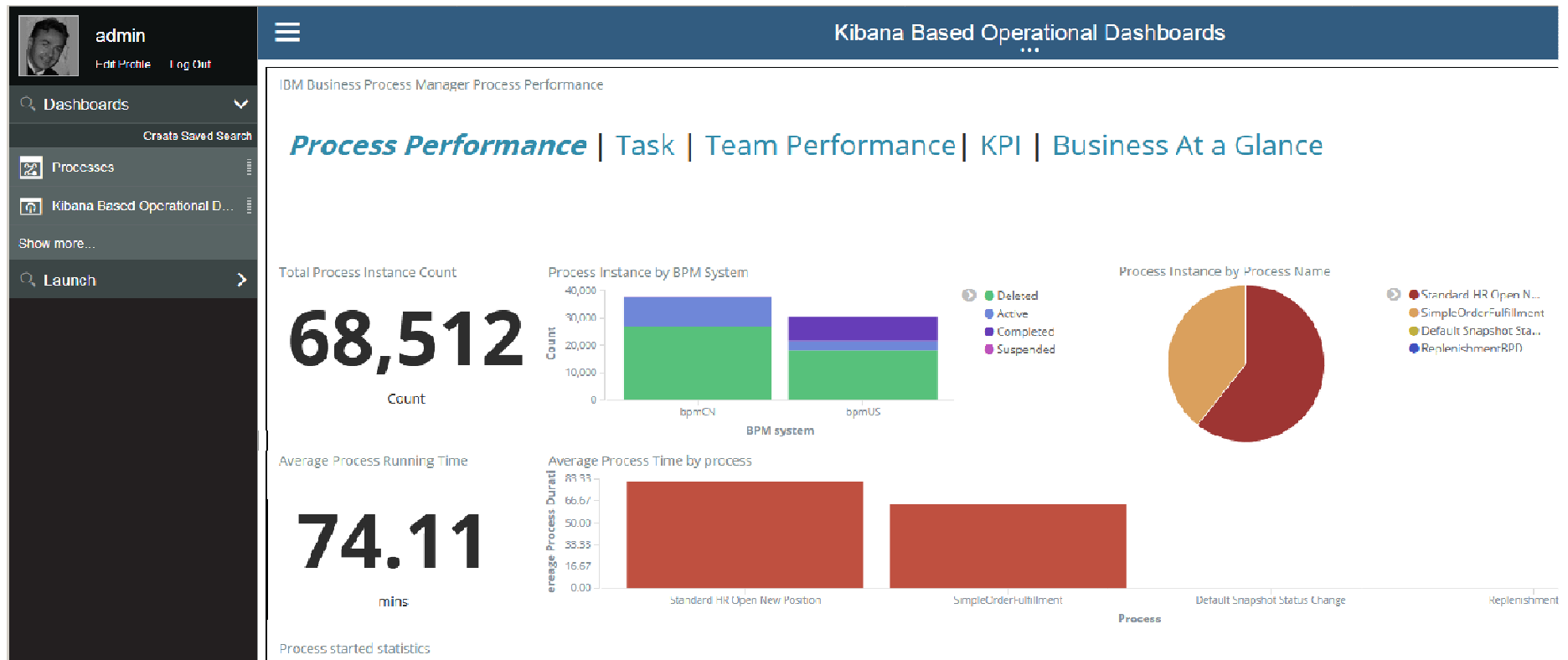
Display Kibana Dashboards in BPM Process Portal



Display Kibana Dashboards in BPM Process Portal



Display Kibana Dashboards in BPM Process Portal



Agenda

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BPM on Cloud, SOE, Quality, Serviceability, Migration

Use IBM App Connect on Bluemix



- Use IBM App Connect to connect IBM BPM processes to applications and services such as Salesforce, Marketo, Google sheets, Google Drive, Dropbox, and more
- The integration with IBM App Connect supports both **outbound** invocations and event-driven **inbound** invocations from and to your IBM BPM process applications.



IBM BPM Connectivity would be a nice addition!




App Connect and BPM

- You can use two interaction modes
 - BPM Processes invoke App Connect endpoints
 - App Connect notifies BPM processes of external events

Use HTTP connector to invoke REST API to launch a process



PROCESS

 **Google Sheets** pjpacholski@gmail.com

Google Sheets is a web-based app that helps you to create, update, and modify spreadsheets, and share the data with your colleagues in real time and online.

[Update Account](#)

[Remove Account](#)

[More Info](#)

Google Sheets events
The event is the trigger that makes your flow start working.

Google Sheets actions
The action is the task you want your flow to complete.

Complete appended row

New spreadsheet

Create row

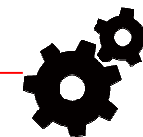
Create spreadsheet

Create worksheet

Retrieve rows

Retrieve spreadsheets

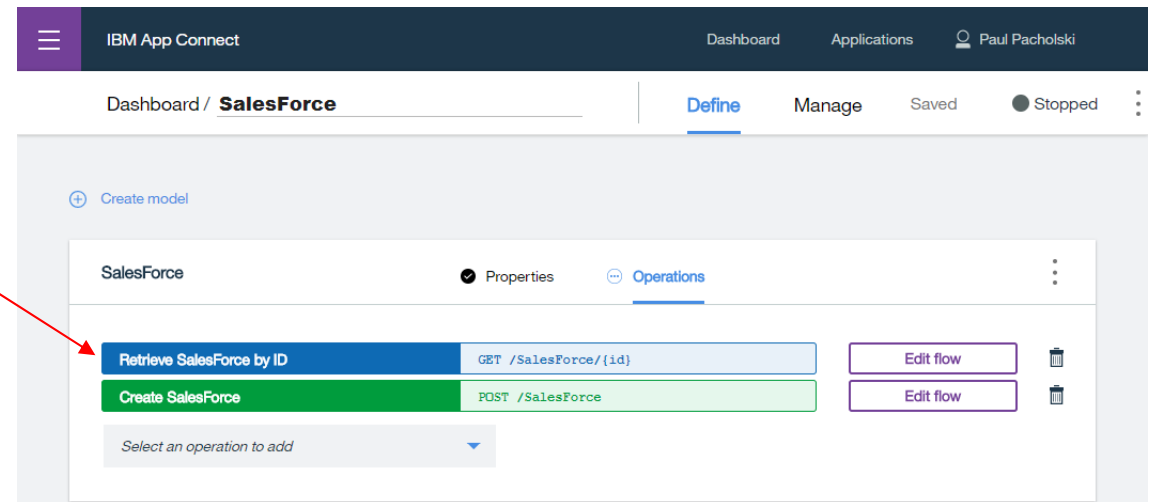
Provide Open API (swagger) file to BPM



PROCESS

Use IBM App Connect to Create Managed API

Services and Application in App Connect provide a list of exposed API



Edit flow to provide Request / Response data mapping or call other services



Use IBM App Connect – Get Connection Info

The screenshot shows the IBM App Connect interface. The top navigation bar includes a menu icon, 'IBM App Connect', and links for 'Dashboard', 'Applications', and a user profile 'Paul Pacholski'. Below this, a breadcrumb trail shows 'Dashboard / Salesforce'. The main content area has tabs for 'Define', 'Manage' (which is active), 'Saved', and 'Stopped'. The 'Manage API' section contains a text block explaining how to manage an API by downloading an OpenAPI document. Below this text are two buttons: 'Download API' and 'Manage API with IBM API Connect'. Further down, there are three input fields: 'API base URL' with the value 'https://apis-2.appconnect.ibmcloud.com/MtQFDM', 'Username' with the value 'appconuser01', and 'Password' with a masked value. Each input field has a 'Copy to clipboard' link to its right. Two red annotations with arrows point to specific elements: one points to the 'Download API' button and is accompanied by a file icon and the text 'SalesForce.json'; the other points to the 'Username' field and is accompanied by the text 'Use security credentials to define a REST server in INBM BPM'.

Use Download API to export Open API (swagger) file to create Service in IBM BPM

SalesForce.json

Use security credentials to define a REST server in INBM BPM

Manage API

You can manage your API by downloading the OpenAPI™ document and importing it into your API Management tool with the URL and credentials below. The URL displayed below is the base URL for the API. The full URL will be in the form of {API base URL}/{path}, where {path} is based on the model name and found on the operations page.


Download API **Manage API with IBM API Connect**


API base URL [Copy to clipboard](#)

Username [Copy to clipboard](#)

Password [Copy to clipboard](#)

Create App Connect External Service

 **SalesForce.json**




New External Service

An external service lets you call a service or application that is external to IBM BPM. [Learn More](#)


Select the operations to include in the generated external service.


<input checked="" type="checkbox"/> Operation Name
<input checked="" type="checkbox"/> SalesForce.create
<input checked="" type="checkbox"/> SalesForce.findById

< BACK NEXT > FINISH CANCEL




Details

Name: SalesForceServer
Type: REST Server
Description: **B I U** | 


Default 

Host name: apis-2.appconnect.ibmcloud.com
Port:
Secure server: ☒
SSL configuration:
Authentication
Authentication: Username and password (basic authentication)
User name: appconuser01
Password:
Invocation credential:
Request and Response Timeout
Request timeout (ms): 30,000
Response timeout (ms): 60,000

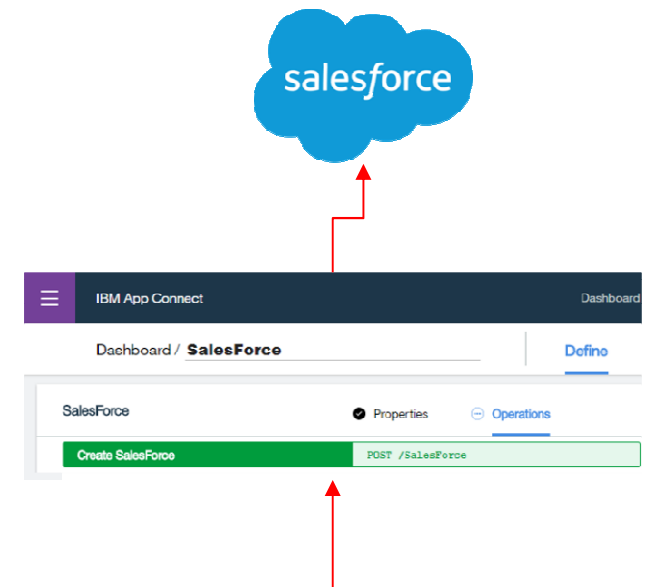
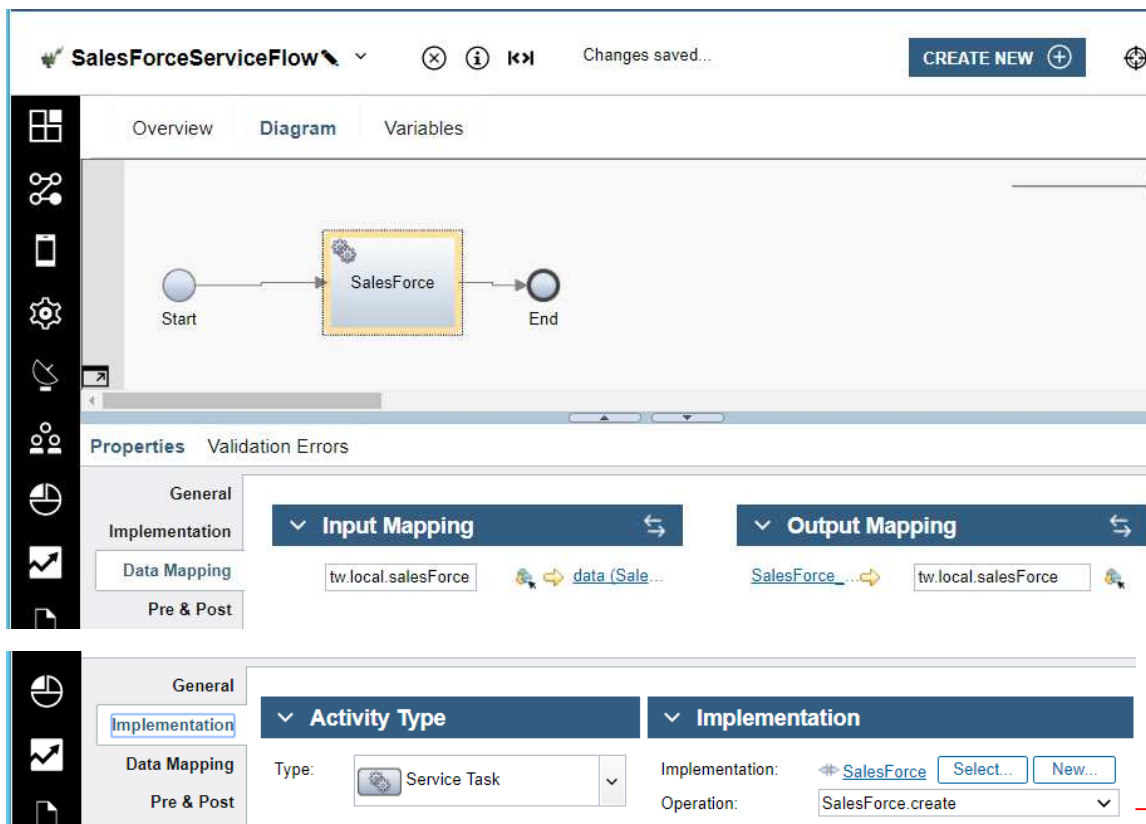
Business Object

 SalesForce (Discovered) **1**


External Service

 SalesForce **1**

Invoke Salesforce.com endpoint from Service Flow



IBM BPM and IBM Cloud Product Insights



Product Insights

Connect IBM products to track inventory and understand usage

IBM

- Cloud Product Insights enables customers to register IBM products (on-premise or on-cloud), so that platform data is captured during registration and usage data is captured during run-time.
- Platform data is useful for support when diagnosing issues and for sales to understand how many deployments we have for a specific configuration.

- Use the IBM Cloud Product Insights service to access dashboards for usage information for your Business Process Manager instances
- In v8.6 we have added the following metrics:
 - Concurrent users
 - BPD instances: Started, Completed, Failed, Terminated
 - BPEL instances: Started, Completed, Failed, Terminated

IBM BPM Product Insights (Bluemix) Integration

- Requires configuration steps in BPM and in Bluemix

The screenshot shows the IBM Bluemix Integrate console. The top navigation bar includes 'Docs', '283 Trial Days Remaining', 'Paul Pacholski's Account', 'US South', 'pacholsk@ca.ibm.com', and 'dev'. The main header has 'IBM Bluemix Integrate', 'Catalog', 'Support', and 'Manage'. The left sidebar lists 'Getting started', 'Manage' (selected), 'Service credentials', and 'Connections'. The main content area shows the 'Product Insights-zx' integration page. It includes a 'Back to All Products' link, the title 'IBM Business Process Manager Server', the minimum version '8.6.0.0', and a link to the 'IBM Business Process Manager KnowledgeCenter'. Under the 'PREREQUISITES' section, there is a list item for 'HTTP Proxy' and 'Gateway'. The 'Gateway' option is selected, and the text explains that if the IBM Business Process Manager does not have a direct connection to the Internet, it can communicate with the Product Insights service using either an HTTP Proxy or the Product Insights Gateway. A link to 'More information is at this community page' is provided. Below this, there is a section titled 'How to register an instance' and a paragraph stating that the following instructions will configure the IBM Business Process Manager Server instance to connect to the Product Insights service and report usage and registration.

Detailed install and configuration instructions for both Bluemix and BPM are shown below...

IBM BPM Product Insights (Bluemix) Integration

High level steps in BPM

- Update BPM profile (or create with Product Insights if installing new one)

```
to create: BPMConfig -create -de <properties file> or  
to update: BPMConfig -upgrade -de <properties file> -component ProductInsights
```



- Create was-productinsights.properties (set url to Product Insights Gateway)

```
# required  
url=<target url>  
apiKey=<apiKey>  
#  
# optional lines below. Remove the '#' if the line is used.  
#  
# trustStore=<trustStore>  
# trustStorePassword=<trustStore password>  
# groups=<groups>  
# proxyUrl=<proxy url>  
# proxyUser=<proxy userid>  
# proxyPassword=<proxy password>
```



- Configure security (i.e. TrustStore, TrustStorePassword)



IBM BPM Product Insights - Overview

The screenshot displays the IBM Bluemix Integrate console interface for Product Insights. The top navigation bar shows the user's account (Paul Pacholski's Account) and trial status (369 Trial Days Remaining). The left sidebar contains navigation links: Getting started, Manage, Service credentials, and Connections. The main content area is titled 'Integrate / Product Insights-lb' and 'Product Insights-lb'. It features a search bar and a list of products. The selected product is 'IBM Business Process Manager Process Center (Advanced)'. The details view shows the instance identifier and a list of metrics under the 'Usage' tab. Red callout boxes highlight specific sections: 'Details' (Software versions, Operating system details, APARs, etc.), 'Advisor' (Recommended Bluemix Services, Recommended BPM Updates), and 'Usage' (BPM processes and WAS statistics).

Details
Software versions,
Operating system
details, APARs, etc..

Advisor
Recommended Bluemix Services
Recommended BPM Updates

Usage
BPM processes and
WAS statistics

Products

View all

IBM Business Process Manager Proc... (6)

IBM Business Process Manager Process Center (Advanced)
ADMINIB-GPNKT2H.fritz.box
/d:/installs/201706/advpc?PCCell1Node1AppClusterMember18/d:/install...
Instance Identifier: PCCell1Node1AppClusterMember18/d:/installs/2017...

IBM Business Process Manager Process Center (Advanced)
ADMINIB-GPNKT2H.fritz.box
/d:/installs/201706/advpc?PCCell1Node2AppClusterMember20/d:/install...
Instance Identifier: PCCell1Node2AppClusterMember20/d:/installs/201...

Usage

Started BPD Instances

Available Processor Minutes

Available Processors

Committed Java Virtual Machine Memory

Completed BPD Instances

Completed BPPEL Instances

Concurrent Users

CPU Time

Maximum Java Virtual Machine Memory

Minimum Java Virtual Machine Memory

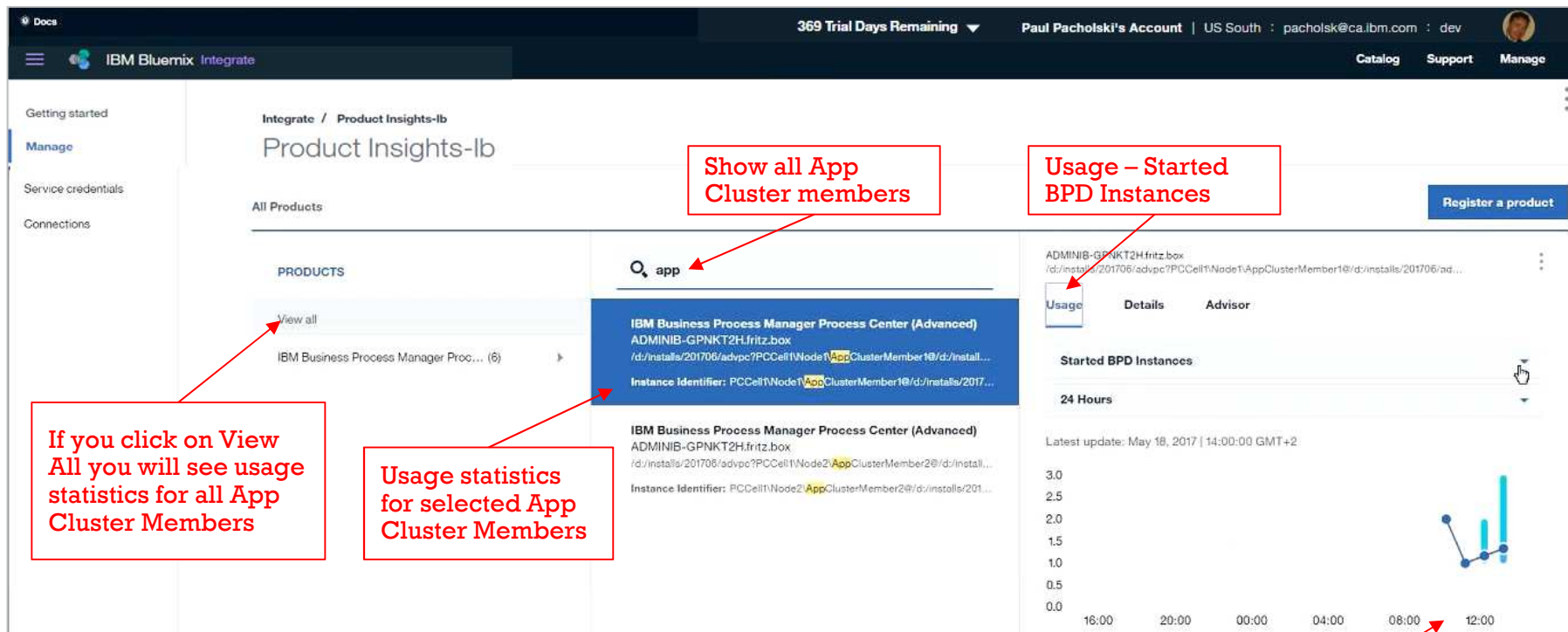
Started BPD Instances

Started BPPEL Instances

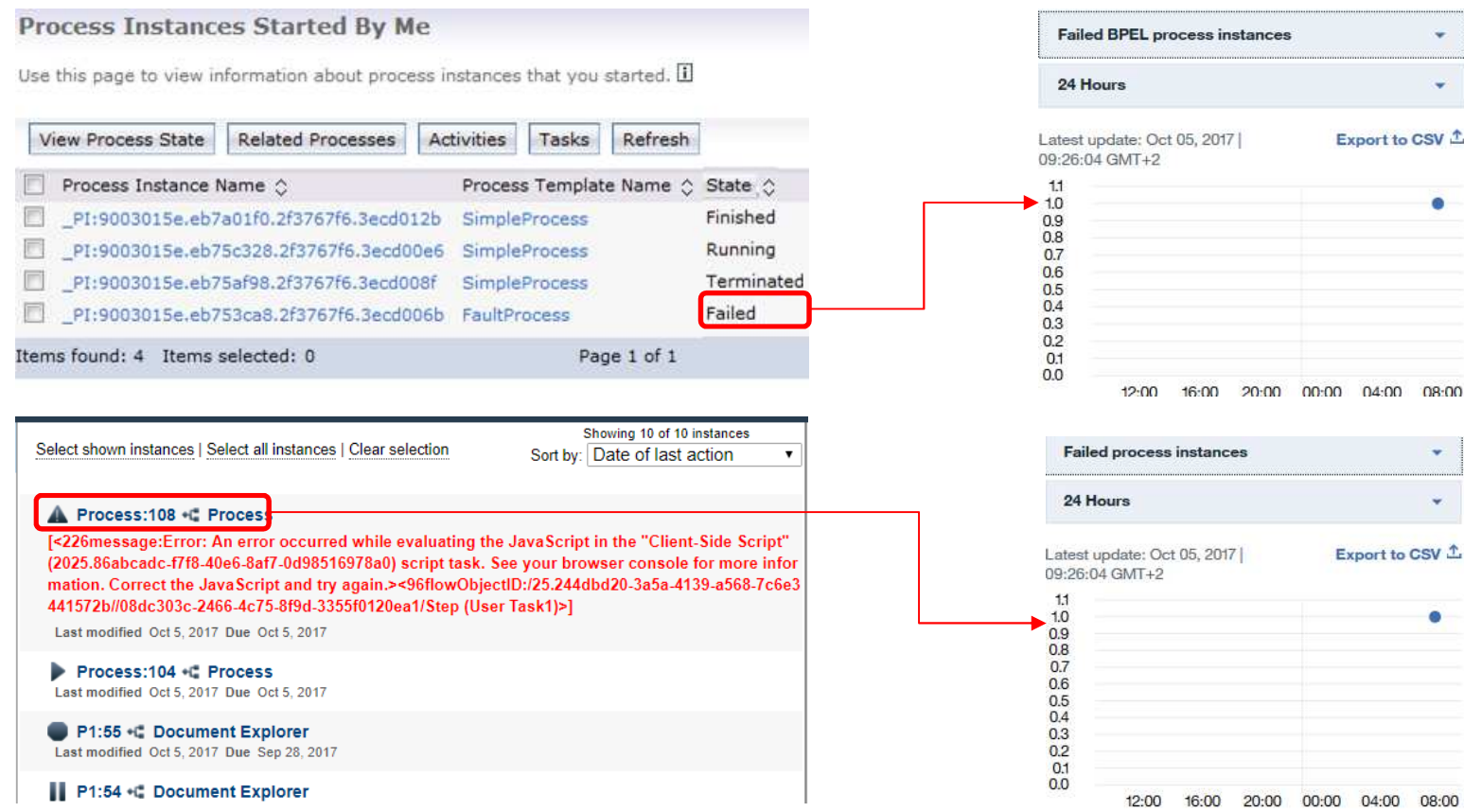
Total Physical Memory

Used Java Virtual Machine Memory

IBM BPM Product Insights – Overview



IBM BPM Product Insights – New Features



Agenda

Single BPM Edition

Web Process Designer

IBM BPM Analytics

IBM Cloud Integration

Process Federation Server

Responsive Portal

New API

BPM on Cloud, SOE, Quality, Serviceability, Migration

Improved PFS Administration and Operations

- Saved searches export
 - Improved the Transfer REST API (introduced in CF2017.06) to allow to import saved search definitions exported from the Process Federation Server database.
- Improved performance of BPEL and BPD indexers by adding additional properties to server.xml file
 - dbIndexLogBatchSize, useIndexLogFile, useIndexLogFile, useIndexLogFile, maxIndexLogFileSize, maxIndexLogFileSize, useIndexLogFile
- Control a duration between requests (to federated IBM BPM systems) to refresh cached saved search metadata using a new server.xml configuration parameter
 - bdFieldsCheckInterval



Agenda

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BPM on Cloud, SOE, Quality, Serviceability, Migration

Launch External Task UI - Overview

- Authoring for BPMN Processes
 - In **External Implementation** specify a URL and pass the **task id in the URL**
 - When federated, the system will automatically add a parameter (restUrlPrefix) to identify from which process server the task originated.
 - The parameter is used in your custom web-app to call **BPM REST API to claim the task, retrieve and save task data, and to complete task**
- Authoring for BPEL
 - Same as above except HTM API are used to interact with Human Activities



Using External Task UI – how does it work?

 ExternalActivityWithTaskID-URLFullyQualified' and 'Operation: ExternalActivityWithTaskID-URLFullyQualified'."/>

This User Task is implemented as an external JSP

Properties Validation Errors

General

Implementation


Data Mapping

Assignments

Pre & Post

Activity Type

Implementation

Implementation:  ExternalActivityWithTaskID-URLFullyQualified Select... New...

Operation: ExternalActivityWithTaskID-URLFullyQualified

The External Task UI implementation JSP is required use BPM RETS API to:

- claim task,
- copy task data,
- set task data,
- complete task

Add...		Remove		Submit Action		
<div></div>						
Select	Name	Edition	Edition State	Type	Status 	Action
You can administer the following resources:						
<input type="checkbox"/>	ExternalImplementationSampleEAR	Base edition	Active	Java 2 Platform, Enterprise Edition		<div>Start </div>

JSP pointing to external EAR.
Passing to the JSP via URL parameters

- taskId to invoke from JSP REST API for this task instance
- Task data passed from the process instance

 tw.system.task_id#>'. Red arrows indicate the flow of information: from the 'Implementation' property in the top screenshot to the 'External Service' list, and from the 'URL Template' to the 'URL' field in the bottom screenshot."/>

External Service

ExternalActivityWithTaskID-URLFullyQualified

ExternalActivityWithTaskID-URLFullyQualified

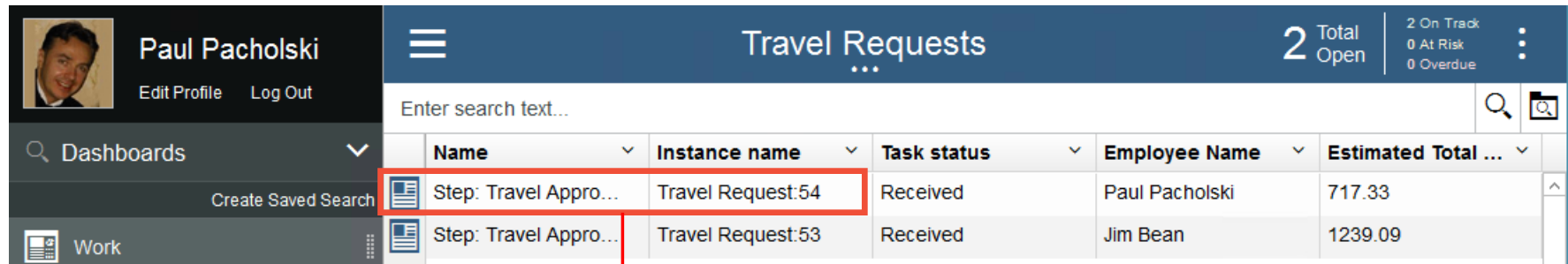
Travel Request

Details Binding

URL Template

URL: https://local1.vcloud.bpm.ibm.com:9082/ExternalImplementationSample/ExternalImpl.jsp?taskId= tw.system.task_id#>

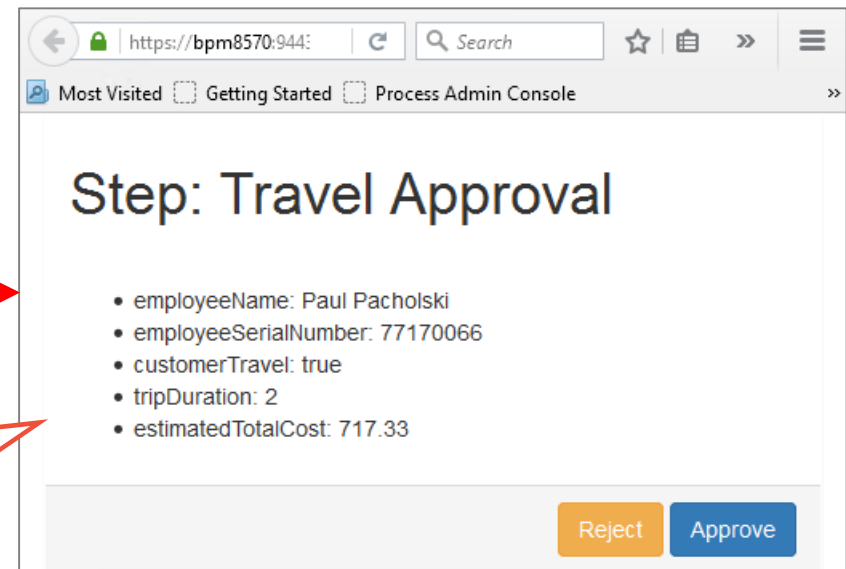
Using External Task UI – how does it work?



Travel Requests						2 Total Open	2 On Track 0 At Risk 0 Overdue
Enter search text...						Q	Q
Name	Instance name	Task status	Employee Name	Estimated Total ...			
Step: Travel Appro...	Travel Request:54	Received	Paul Pacholski	717.33			
Step: Travel Appro...	Travel Request:53	Received	Jim Bean	1239.09			

Note: BPM Process Portal does not show the claim dialog for external activities. The external activity must perform that action via REST.

External Task Completion UI



https://bpm8570:944: Search

Most Visited Getting Started Process Admin Console

Step: Travel Approval

- employeeName: Paul Pacholski
- employeeSerialNumber: 77170066
- customerTravel: true
- tripDuration: 2
- estimatedTotalCost: 717.33

Reject Approve

New “do not claim external UI” configuration setting

Resource environment providers

Resource environment providers > Mashups > ConfigService > Custom properties

Use this page to specify custom properties that your enterprise information system (EIS) requires for the resource providers ar

Preferences

New... Delete

Select Name Value

You can administer the following resources:

<input type="checkbox"/>	com.ibm.bpm.portal.doNotClaimExternalUI	false
--------------------------	---	-------

To turn off the ability to claim tasks that were implemented by using an external user interface (that is, not based on a coach), set the **com.ibm.bpm.portal.doNotClaimExternalUI** mashup configuration property to true. This property controls the Process Portal behavior, not runtime behavior. For example, if a flow is designed to automatically claim tasks when a process starts, this property does not affect the flow behavior.

- Across all task lists in the Work, Team, and Performance, Process Instance dashboards claiming the task was inconsistent (some of them claimed the task automatically)
- To make the implementation of external UI consistent you can now specifically not to claim the tasks that were implemented as an external user interface
- Use the new **com.ibm.bpm.portal.doNotClaimExternalUI** mashup configuration property

Improved BPM Process Portal Performance

- Prior to v8.6 with a large number of **Dashboards** and **Saved Searches** IBM Process Portal suffered from performance issues:
 - Slow to open
 - Became unresponsive every 60 seconds (due to auto-refresh)
 - Unresponsive when performing Saved Search operations: create, edit, delete
- In v8.6 we introduced two configurable lazy-load settings
 - Customer can expect up to **50% improvement** in both federated/non-federated environments



BPM Process Portal Lazy-load Configuration

Resource environment providers

[Resource environment providers](#) > [Mashups ConfigService](#) > Custom properties

- **com.ibm.bpm.portal.launchList.showMore.strategy**
 - **incremental** (default value)
each click on Show More displays the additional number of saved searches that is defined by the value of the count parameter. If the list contains more elements than the count value, the user must click Show More again to display the next ones.
 - **full**
loads the complete list of elements to display when the user clicks Show More.
 - **preload**
loads the complete list of elements for immediate display, without waiting for the user to click Show More. This value reflects the previous default behaviour and is not recommended because it reduces display performance.
- **com.ibm.bpm.portal.launchList.showMore.count**
 - default is 25.
 - value that is not strictly positive (such as characters or a negative value) is defaulted to 25
 - positive value from 0 to 9 are defaulted to 10



Lazy Loading of Saved Searches and Dashboards

admin Edit Profile Log Out

Dashboards Create Saved Search

Work Processes Process Performance Team Performance Show more... (15)

Click

15 Saved Searches to show

admin Edit Profile Log Out

Dashboards Create Saved Search

Work Processes Process Performance Team Performance Show less...

A1 A2 A5 A6 AAA AAA3 BBB BBBB2 CCC D1 Show more... (5)

Click

5 Saved Searches to show

admin Edit Profile Log Out

Dashboards Create Saved Search

Work Processes Process Performance Team Performance Show less...

A1 A2 A5 A6 AAA AAA3 BBB BBBB2 CCC D1 D4 F1 Q1 S1 S2

Resource environment providers

Resource environment providers > Mashups ConfigService > Custom properties

Use this page to specify custom properties that your enterprise information system (EIS) requires for the resource providers and resource factories that you configure. For example, most database vendors require additional custom properties for data sources that access the database.

Preferences

New... Delete

Value Filter: 10

To filter the following table, select the column by which to filter, then enter filter criteria (wildcards: *,?,%).

Filter Value Search terms: 10 Go

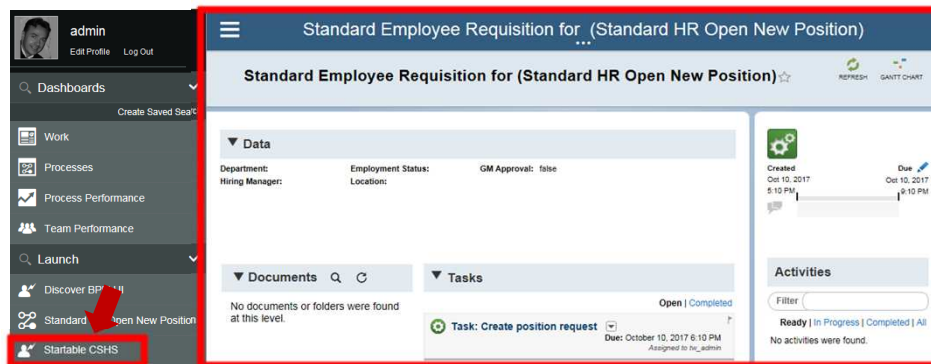
You can administer the following resources:

Select	Name	Value	Description	Required
<input type="checkbox"/>	com.ibm.bpm.portal.launchList.showMore.count	10		false

Total 157 Filtered total: 1

Show More Count variable set to 10

BPM Process Portal Performance Improvements

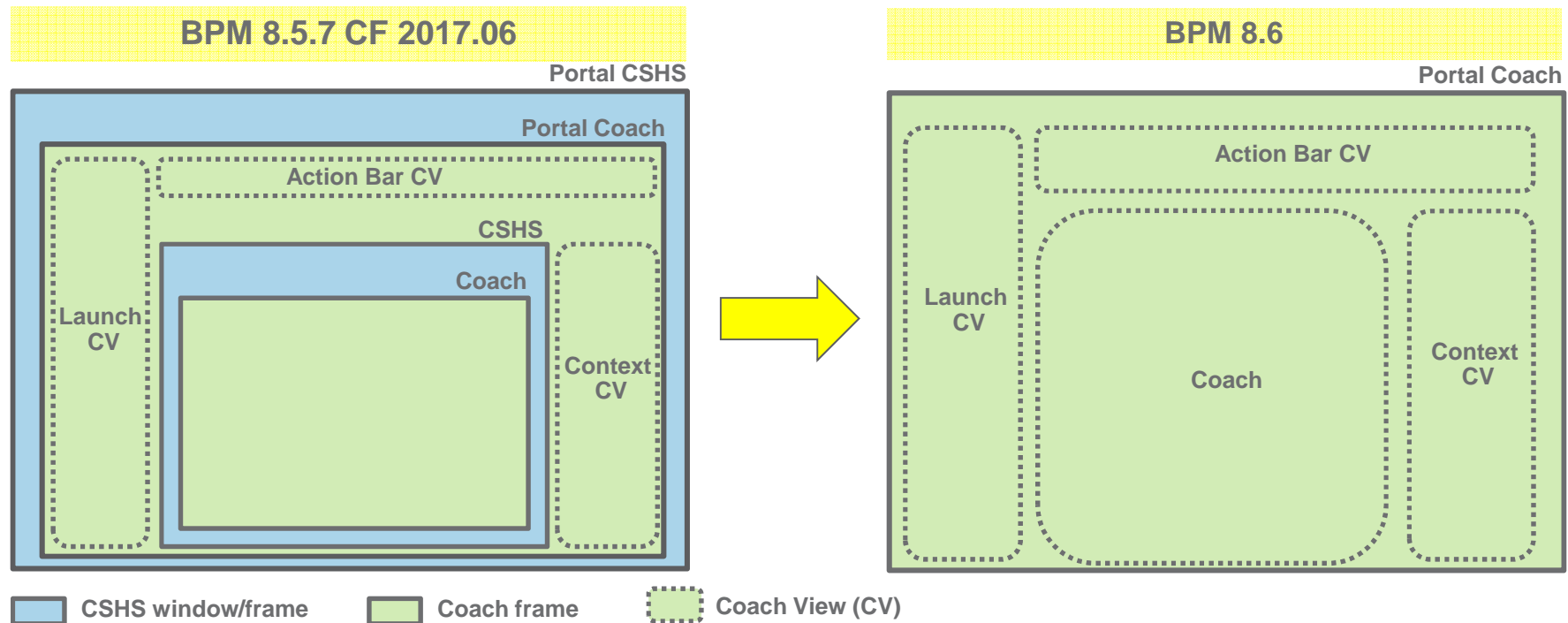


Improved performance by approximately 40 to 60% of

- **Startable CSHS Service**
- **Process Instance UI**

- In 8570 CF 2017.06 we used similar technique to optimize other part of BPP Process Portal
 - DOM simplification
 - Better visual rendering on iOS device
 - Smaller footprint
 - Remove 1 iFrame (browser) and 1 Dojo instance (CSHS)
 - Quicker to load and refresh

Process Portal Performance - Architecture Changes



- Only Process Portal Toolkit implementation and runtime changes
 - Customers that modified BPM Process Portal do not need to change their code

Agenda

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IBM BPM Analytics

IBM Cloud Integration

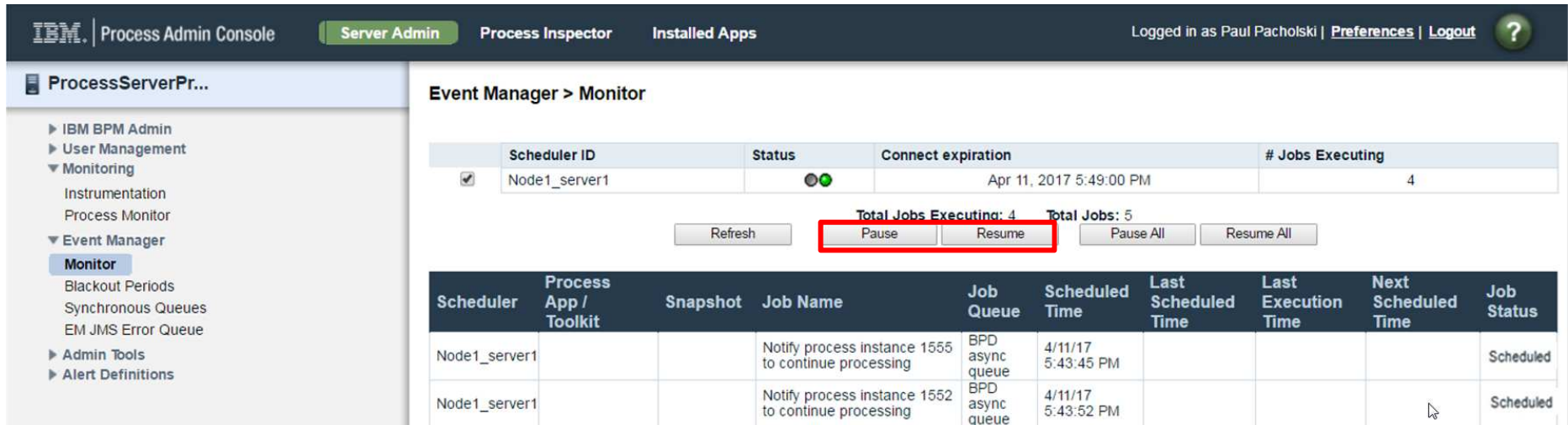
Process Federation Server

Responsive Portal

New API

BPM on Cloud, SOE, Quality, Serviceability, Migration

New Event Manager REST API



The screenshot shows the IBM Process Admin Console interface. The top navigation bar includes 'Process Admin Console', 'Server Admin', 'Process Inspector', and 'Installed Apps'. The user is logged in as Paul Pacholski. The left sidebar shows the 'Event Manager' menu with 'Monitor' selected. The main content area is titled 'Event Manager > Monitor' and displays a table of schedulers. Below the table, there is a summary of jobs and a list of scheduled jobs. The 'Pause' and 'Resume' buttons are highlighted with a red box.

Scheduler ID	Status	Connect expiration	# Jobs Executing
<input checked="" type="checkbox"/> Node1_server1		Apr 11, 2017 5:49:00 PM	4

Total Jobs Executing: 4 Total Jobs: 5

Refresh Pause Resume Pause All Resume All

Scheduler	Process App / Toolkit	Snapshot	Job Name	Job Queue	Scheduled Time	Last Scheduled Time	Last Execution Time	Next Scheduled Time	Job Status
Node1_server1			Notify process instance 1555 to continue processing	BPD async queue	4/11/17 5:43:45 PM				Scheduled
Node1_server1			Notify process instance 1552 to continue processing	BPD async queue	4/11/17 5:43:52 PM				Scheduled

- Pause and resume Event Manager by using a new REST API
 - </rest/bpm/wle/v1/eventmgr/pause>
 - </rest/bpm/wle/v1/eventmgr/resume>
- For example, use the API to pause and resume operations for Event Manager when installing software patches during scheduled IBM BPM maintenance



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BPM on Cloud, SOE, Quality, Serviceability, Migration

Java 8 in BPM 8.6





Application servers

[Application servers](#) > [server1](#) > Java SDKs

This page lists the software development kits (SDKs) that are installed on the server. These SDKs are available to the servers.

+ Preferences

Make Default


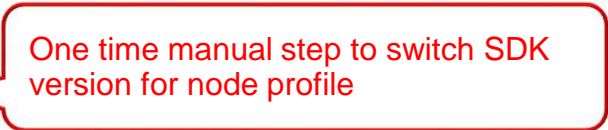
   

Select	Name	Version	Location	Bits	Default
You can administer the following resources:					
<input type="checkbox"/>	1.8_64_bundled	1.8	\${WAS_INSTALL_ROOT}/java	64	true

Total 1

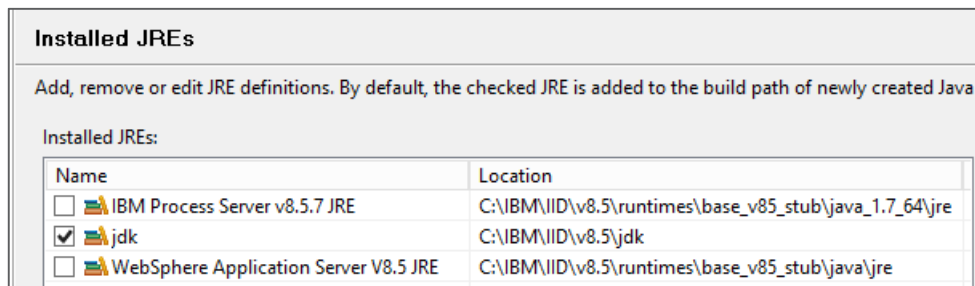
- WAS V8.5 with Java SE 6, will no longer be support for the Java SE 6 after April 2018
- WAS Support for the Java SE 7.x versions will be discontinued after September 2019
- BPM V8.6.0 (IBM BPM Server) now uses the newest Java version supported on WebSphere Application Server V8.5.5.x.
- **IBM BPM Server now supports Java 8 as the only Java version.**

Impact on Upgrade from BPM 8.5.X – 2 More Steps

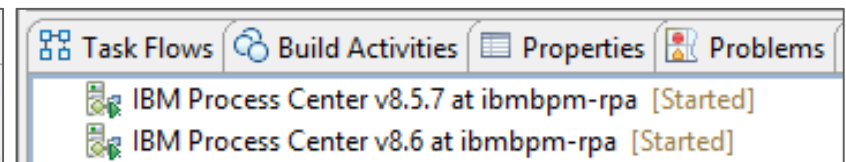
1. IM update WAS to 8.5.5.12
2. **IM install Java SE 8 extension package** 
3. IM update BPM to 8.6 - Java SE 8 will set as default command SDK and default SDK for new profile automatically.
4. DBUpgrade to upgrade database
5. Start dmgr (profile upgrade + bootstrap + BPMUpdateSystemApp) - During profile upgrade, switch SDK version to Java SE8 for dmgr profile or stand-alone profile automatically
6. **Switch node java version** 
7. Start node
8. Start DE

IBM Integration Designer & Desktop PD Java Version

- **Desktop PD** V8.5.7. CF201709 continues to use a Java 7 runtime and is deprecated. 
- **IID** 201709 iFix JR58314 switches to use Java7 runtime, and also support Java 8 based server.



IID 2017.09 still uses Java 1.7 and 1.6 for snippets



IID 2017.09 can deploy to booth 8.5.7 and 8.6 Servers. 8.6 Servers use Java 8

IBM BPM Security Enhancements

- Protection against **Cross-Site Request Forgery (CSRF)** improved in two areas:
 - If you enable the Referer header whitelist feature, the server will now accept parameter free GET requests even for Referer header values that are not whitelisted. This allows you to embed a link to your Process Portal or other BPM web interfaces on e.g. a wiki page without whitelisting the wiki host.
 - If you enable the CSRF session tokens, you can now also protect URLs that start with /teamworks/cs_ These URLs refer to pages in Process Admin Console that submit HTML form data to the server. See [JR58302](#)
- For details on enabling CSRF protection, see [Security-hardening properties.](#)
- Hardened security is a **HTTP methods whitelist**.
 - Vulnerability scanners have reported findings for tests in which they tampered with HTTP methods. In particular the HTTP method TRACE is a concern for penetration testers. Per [RFC](#) a server reflects the exact HTTP request as it was received by the server.
 - In scenarios with web servers, reverse proxy and other intermediaries, HTTP headers might be injected to control the request flow through the network. Using the TRACE method, an attacker might gain insight into these setups. BPM 8.6 has a whitelist for acceptable HTTP methods described in [Security-hardening properties.](#)
 - The default whitelist is very restrictive. If you are one of the few customers customizing Heritage Portal themes using WebDAV, you need to whitelist WebDAV methods temporarily.
- The new version of [Interpreting IBM Security AppScan findings for IBM Business Process Manager](#) has been restructured and provides more background information.
- For complete details see [Jens' security blog](#)



Jens Engelke

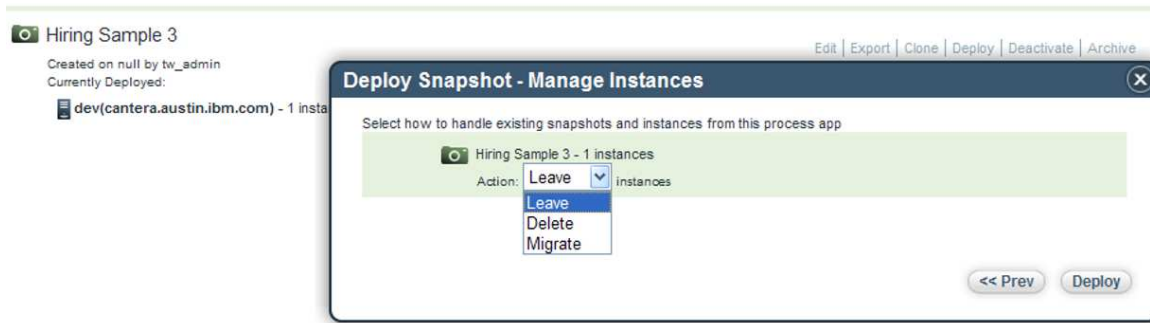


Create Oracle and SQL Server Driver Paths

- In v8.6 the Oracle and SQL Server JDBC drivers that previously came with IBM BPM have been removed (legal requirement)
- Expose new property named **jdbcDriverPath** in BPM Configuration, Typical Install, and DE Wizard
- Expose new properties named **bpm.dmgr.jdbcDriverPath** and **bpm.de.node.#.jdbcDriverPath** Silent Install



New Process Instance Migration API



- Prior to v8.6 it was not possible to fully automate process instance migration, tasks with orphaned tokens needed to be migrated manually using the BPM Process Admin Console
- In v8.6 a new API allows to specify orphaned token policy:
 - **TWProcessInstance#migrateWithPolicyTo (targetSnapshot, policyFileUrl)**
 - Migrates an instance and its context to the specified snapshot and applies orphaned token policy file. Using this API has the same effect as migrating inflight data from the Process Admin console.

BPM on Cloud Improved User Password Security

- Enforce more securer passwords for user accounts
- Required for compliance with FedRamp, HIPAA and ISO specifications

First name	
<input type="text" value="test"/>	
Last name	
<input type="text" value="test"/>	
Password	
<input type="password" value="....."/>	
Confirm Password	
<input type="password" value="....."/>	
The password does not satisfy the password policy:	
Minimum length: 12	
Minimum number of uppercase characters: 1	
Minimum number of lowercase characters: 1	
Minimum number of numeric characters: 1	
Minimum number of special characters: 1 (_- @.,?/!#\$%&* O{}[]=)	
Password history: 24	



BPM on Cloud NPS

- Provide a simple survey of users to gather feedback on how satisfied users are with BPM on Cloud

The screenshot shows the IBM BPM on Cloud dashboard. A modal window is open in the center, displaying an NPS survey. The modal has the IBM logo in the top right corner. The survey text reads: "Please take a moment to answer a few short questions about your experience." The first question is "How likely are you to recommend IBM Business Process Manager (IBM BPM) on Cloud to a colleague or business partner?". Below the question is a horizontal scale from 0 to 10. The scale is labeled "Not at all likely" on the left and "Extremely likely" on the right. The number 9 is highlighted in blue. Below the scale is a text input field with the text "Great Product!". A "Submit" button is located at the bottom right of the modal. At the bottom of the modal, there are three links: "Powered by Medallia", "IBM Privacy Policy", and "Medallia Privacy Policy". The background of the dashboard shows sections for "My applications", "Development", "Process Center", and "Performance Admin".

IBM BPM on Cloud

My applications

Development

Process Center

Install and run process applications and manage running instances on Process Center servers.

Launch

Available Downloads

IBM® Process Designer

IBM® Integration Designer

Performance Admin

Use the Performance Admin Console to work with Performance Data Warehouse queues, manage data transfer errors, and monitor overall performance. The Business Performance Data Warehouse retrieves and stores tracked performance data, which enables users in IBM Process Designer to create reports and also analyze processes using the Optimizer.

Collaborate on tasks and view the performance of individuals, teams, and processes on dashboards.

Launch

More info

Launch

More info

IBM

Please take a moment to answer a few short questions about your experience.

How likely are you to recommend IBM Business Process Manager (IBM BPM) on Cloud to a colleague or business partner?

Not at all likely

Extremely likely

0 1 2 3 4 5 6 7 8 9 10

What are the reasons for your score?

Great Product!

Submit

Powered by Medallia

IBM Privacy Policy

Medallia Privacy Policy

New BPM Performance Dashboard

New dashboard in Process Admin Console provides BPM Database health information related to BPM performance

- Overview of number of BPM artifacts in the system:
 - Process Instances, grouped by state
 - Tasks, grouped by state
 - Users
 - Groups by group type
 - Top10 largest groups
 - Named and unnamed ProcessApp and Toolkit snapshots
 - Orphaned Toolkit Snapshots snapshots
 - Environment variables, Exposed process variables, durable messages, ...
- Process Instance / Task creation history charts to correlate past situations of performance degradation
- Information on housekeeping activities for each BPM artifact
- Automatic generation of WSAdmin commands to delete snapshots, delete instances, etc...
- Warnings to alert BPM admin:
 - High amount of completed process instances
 - Bad practices database configuration
- Export functionality (CSV, Excel), with additional information on database state
 - Last statistics date for BPM tables and indexes
 - BPM table cardinality
 - Structure of indexes on BPM tables
 - Database configuration



Performance Dashboard

IBM | Process Admin Console | **Server Admin** | Process Inspector | Installed Apps | Logged in as admin | [Preferences](#) | [Logout](#) ?

ProcessServerPr...

- ▶ IBM BPM Admin
- ▶ User Management
- ▶ Monitoring
- ▶ Event Manager
- ▶ Admin Tools
- ▶ Alert Definitions
- ▼ Performance
 - Performance Dashboard**

Performance > Performance Dashboard

View statistics (both real time and historical) that are relevant for BPM database performance and performance indicators that influence the performance of your BPM system. Get housekeeping tips for improving performance and generate wsadmin commands for snapshot cleanup. To get started, click **Load Data**.

⚠ The DB2 database configuration parameter 'locktimeout' is set to -1

Process Instance Data <

Task Data <

Group Data <

Snapshot Data <

Other Data <

Refresh **Export** ☐ Microsoft Excel 2007

Proactive Housekeeping Tips and Best Practices – ALERTS!
Prevent production performance issues
No need to involve DBA to identify Database issues

Performance Dashboard

Process Instance Data

☐ Status

Count

<input type="checkbox"/> Active	9
<input checked="" type="checkbox"/> Completed	1
<input type="checkbox"/> Failed	1
<input type="checkbox"/> Terminated	1
<input type="checkbox"/> Suspended	1

Show Snapshot Data

Show History Data

Housekeeping

Per page: 10

Snapshot ID	Snapshot acronym	Process Instances in selected statuses	Total number of tasks
<input checked="" type="radio"/> 29d9b76e-4ed3-44c3-a65d-68f0a56e6297	29d9b76e-4ed3-44c3-a65d-68f0a56e6297	1	3

Previous

1

Next

AdminTask.BPMArchive([-containerSnapshotAcronym 29d9b76e-4ed3-44c3-a65d-68f0a56e6297 -containerAcronym TAD2 -containerTrackAcronym Main])

AdminTask.BPMSnapshotCleanup([-containerSnapshotAcronyms 29d9b76e-4ed3-44c3-a65d-68f0a56e6297 -containerAcronym TAD2 -containerTrackAcronym Main])

**Automatic generation of
WSAdmin commands**
Just copy/past and run
All parameters are prefilled!

Performance Dashboard

Snapshot Data

Performance Indicator

☐ Number of process application snapshots (named) without orphaned snapshots
 ☐ Number of Process Application Snapshots (unnamed)
 ☒ Number of toolkit snapshots (unnamed)
 ☐ Number of process application snapshots (named)
 ☐ Number of toolkit snapshots (named)
 ☐ Number of orphaned Toolkit Snapshots

Show Snapshot Data

Snapshot ID

☐ 5dfc5eca-e662-4265-8c3d-ed19055e7768
 ☐ d14c71c9-454c-4576-b108-b441c5877c7f
 ☐ 2b73dd6a-31dc-4b32-b1af-a858743e1370
 ☐ e01d46a5-6dc9-4545-9940-7e843777321d
 ☐ 091c559c-c82f-4309-8050-1b66d98f6100
 ☐ 45d2f595-26cc-48b7-885e-e85e57d4d90c
 ☐ 29dbc7ff-aace-481a-ba72-be56c0180448
 ☐ 24d7efbe-2444-43d4-9c26-7938f5a1c101
 ☐ a6a5cd8c-64ca-484e-b3ad-13ff55317cbc
 ☐ c3230282-22ff-4728-8d68-be2aec89484d

Count

13
123
13
13
12
2

Container acronym

TWSYS
TWSYS
TWSYS
SYSC
SYSRC
SYSRC
SYSCM
SYSD
SGW
SYSBPMUI

Housekeeping

Housekeeping Tips

You can purge snapshot data by using the Process Admin Console:

- IBM BPM Admin > Health Management

Or by using these wsadmin commands:

- BPMDeleteSnapshot
- BPMSnapshotCleanup

The following wsadmin commands also purge related snapshot data.

- BPMRemoveProcessApplication
- BPMRemoveToolkit

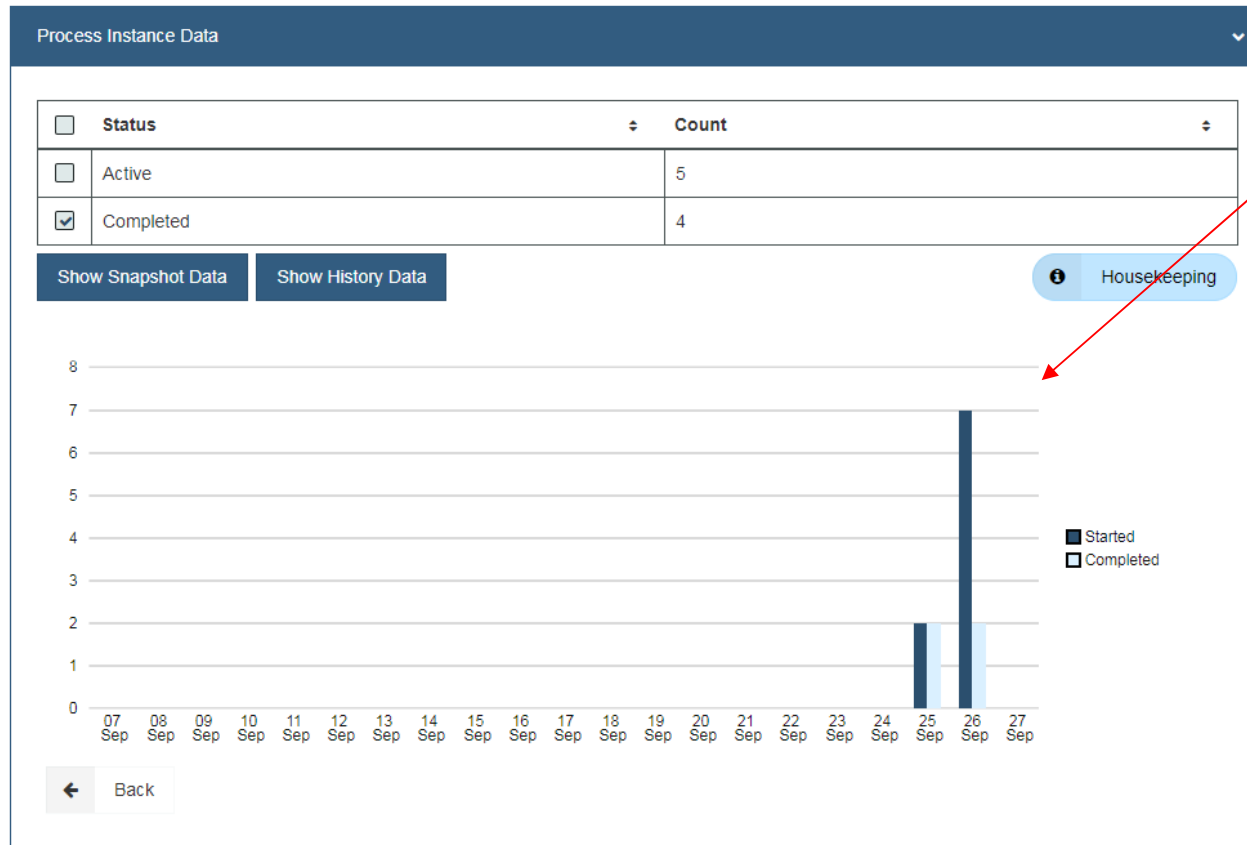
For more housekeeping tips, see:

- BPMShowOrphanedToolkits command
- Purging data in IBM BPM
- Deleting unnamed snapshots from a Process Center server, automated method

OK

Proactive Housekeeping Tips and Best Practices – Tips!
 Example: snapshot cleanup including the unnamed snapshots. Unnamed snapshot proliferation impacts Process Designer performance!

Performance Dashboard



Process Instance Count with History

Examine how Active and Completed instance count fluctuate over time to detect peak times and help with infrastructure planning to accommodate peak demand!

Statement of Environment Updates

IBM Process Federation Server

- Liberty 17.0.0.3

IBM BPM

- WAS 8.5.5.12
- Firefox 54 browsers
- Google Chrome 59 browser
- Support Freedom Scientific JAWS screen reader 18
- SUSE Linux Enterprise Server 12.2
- AIX 7.2 Hypervisor
- RHEL POWER 8 LE h/w
- Installation Manager 1.8.7
- DB2 11.1 AWSE (typical install)
- Safari 10.1 browserDB2 for z/OS 12.1
- Bundle IBM Security Access Manager 9.0.2.1
- Red Hat KVM 6.7-6.9
- SLES 12.2



Fixes

72 fixes are included in BPM 8.6

Fixes that involve security are indicated with a check mark: ✓.

IBM Business Process Manager V8.6

APAR	Security APAR	Behavior Change	Title
JR68043	✓		SECURITY APAR CVE-2017-1424 HTML INJECTION VULNERABILITY IN IBM BPM SOCIAL FEATURES
JR68044	✓		SECURITY APAR CVE-2017-1425 - CROSS-SITE-SCRIPTING VULNERABILITY IN COACH NG ERROR HANDLING
JR68150	✓		SECURITY APAR CVE-2013-0464 - BUSINESS SPACE HELP IS VULNERABLE TO A CROSS-SITE (XSS) SCRIPTING ATTACK
JR68188	✓		SECURITY APAR - CVE-2017-1527 - THE XML EXTERNAL ENTITY EXPANSION VULNERABILITY AFFECTS IBM BPM
JR68231	✓		SECURITY APAR - MULTIPLE CVEs - VULNERABILITIES IN NODE.JS MIGHT AFFECT THE IBM BPM CONFIGURATION EDITOR
JR68241	✓		SECURITY APAR - CVE-2017-1539 - GROUP MEMBERSHIPS OF SECURITY GROUPS ARE SYNCHRONIZED WITH INTERNAL GROUPS THAT SHARE THE SAME NAME
JR68292	✓		SECURITY APAR - CVE-2017-1530, CVE-2017-1531 - PERSISTED CROSS-SITE SCRIPTING VULNERABILITIES IN IBM BPM CONSOLES
JR68297	✓		SECURITY APAR - MULTIPLE VULNERABILITIES IN IBM JAVA SDK AFFECT IBM PROCESS DESIGNER
JR68000		Business objects with date properties will keep their millisecond precision.	CLIENT-SIDE HUMAN SERVICE REMOVES MILLISECONDS FROM THE DATE PROPERTIES OF A BUSINESS OBJECT
JR68078		WebDAV HTTP methods and TRACE are no longer supported by default. Enabling WebDAV for customizing Heritage Portal or Business Space themes requires manual whitelisting.	NO RESTRICTION FOR HTTP METHODS
JR68192		IBM BPM date and time data types are displayed more consistently.	THE PROCESS INSPECTOR DATA SECTION IN THE WEB PROCESS DESIGNER DOESN'T SHOW HH:MM:SS FOR THE DATE OR TIME VARIABLES
JR68243		Only the expected duplicate artifact is shown.	THE HERITAGE HUMAN SERVICE AND COACH VIEW ARE GENERATED WHEN YOU DUPLICATE A BUSINESS OBJECT IN A TOOLKIT
JR68204			PAGINATION DOES NOT WORK FOR HERITAGE HUMAN SERVICES
JR64140			IBM PROCESS DESIGNER MIGHT STILL LIST THE BLUEWORKS LIVE PROCESS SUBSCRIPTION AFTER IT HAS BEEN DELETED



