



IBM Software Group

# Developing Human Services with Coaches in IBM Business Process Manager 8

--- What to do, when it does not work?

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WebSphere® Support Technical Exchange



# Agenda

- Human Service Overview
- Application Development
- Problem Determination
- Recommendations



# Agenda

- Human Service Overview
  - ▶ Key Features
  - ▶ Coach and Heritage Coach
  - ▶ Coach Improvements



# Key Features

- Define human machine interaction
- User interface experience
- Task flow driven
- User role authorization
- Web based (potential mobile support)
- Coach and Heritage Coach



# Coach and Heritage Coach

Coach	Heritage Coach
Coach view	Not available
Web 2.0	Web 1.0
Client side	Server and Client
Boundary event	One button
Collaboration	Not available
data-view id	div node

# Coach and Heritage Coach

- Coexist in one service
- Non-compatible in one user interface
- Heritage Coach development support
- Coach development support



# Coach Improvements

- Simplicity, extensibility, flexibility
  - ▶ Reusability
  - ▶ Data coupling
  - ▶ Event driven
- Client side programming
  - ▶ Responsiveness (Async Ajax)
  - ▶ Performance implication
- Localization
- Mobility ready



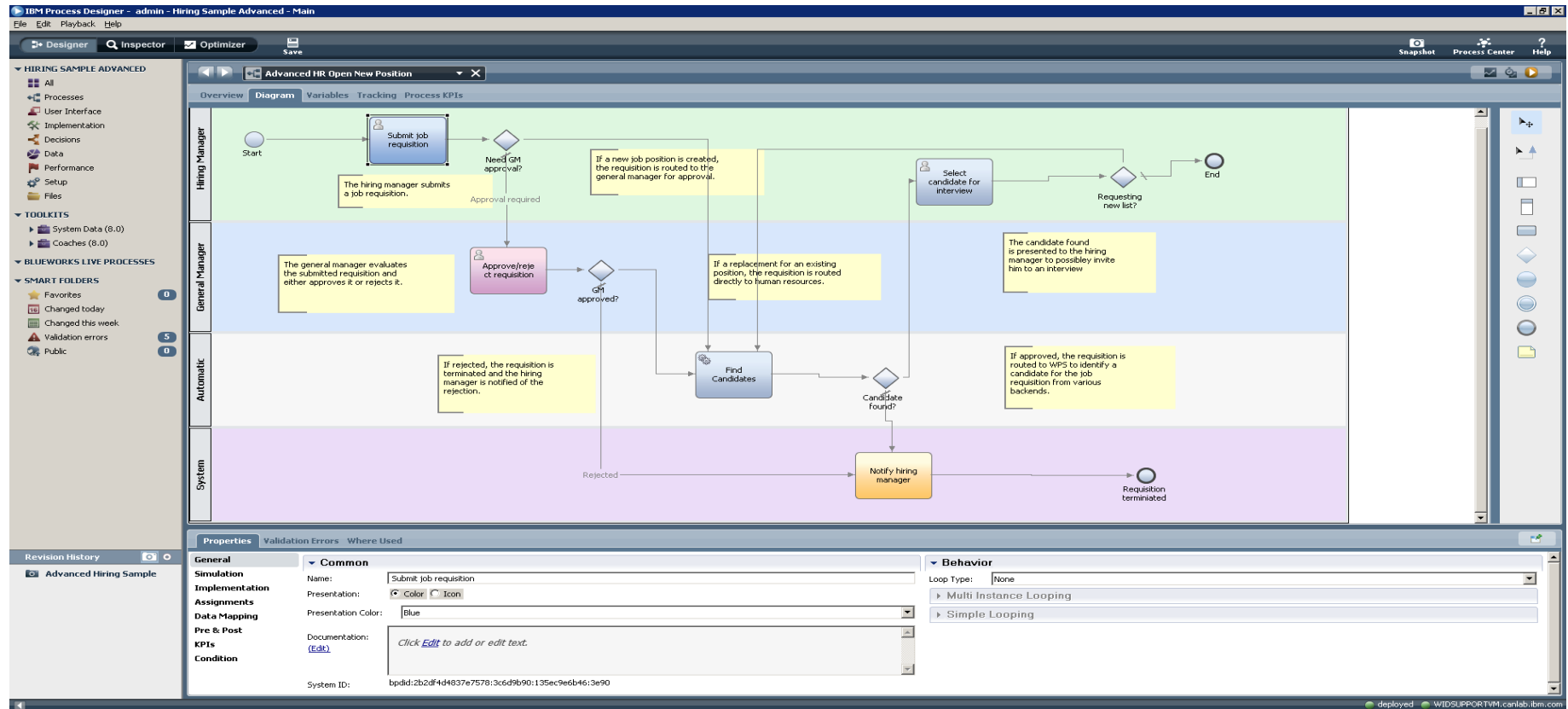
# Agenda

- Application Development
  - ▶ Human Service
  - ▶ Coach

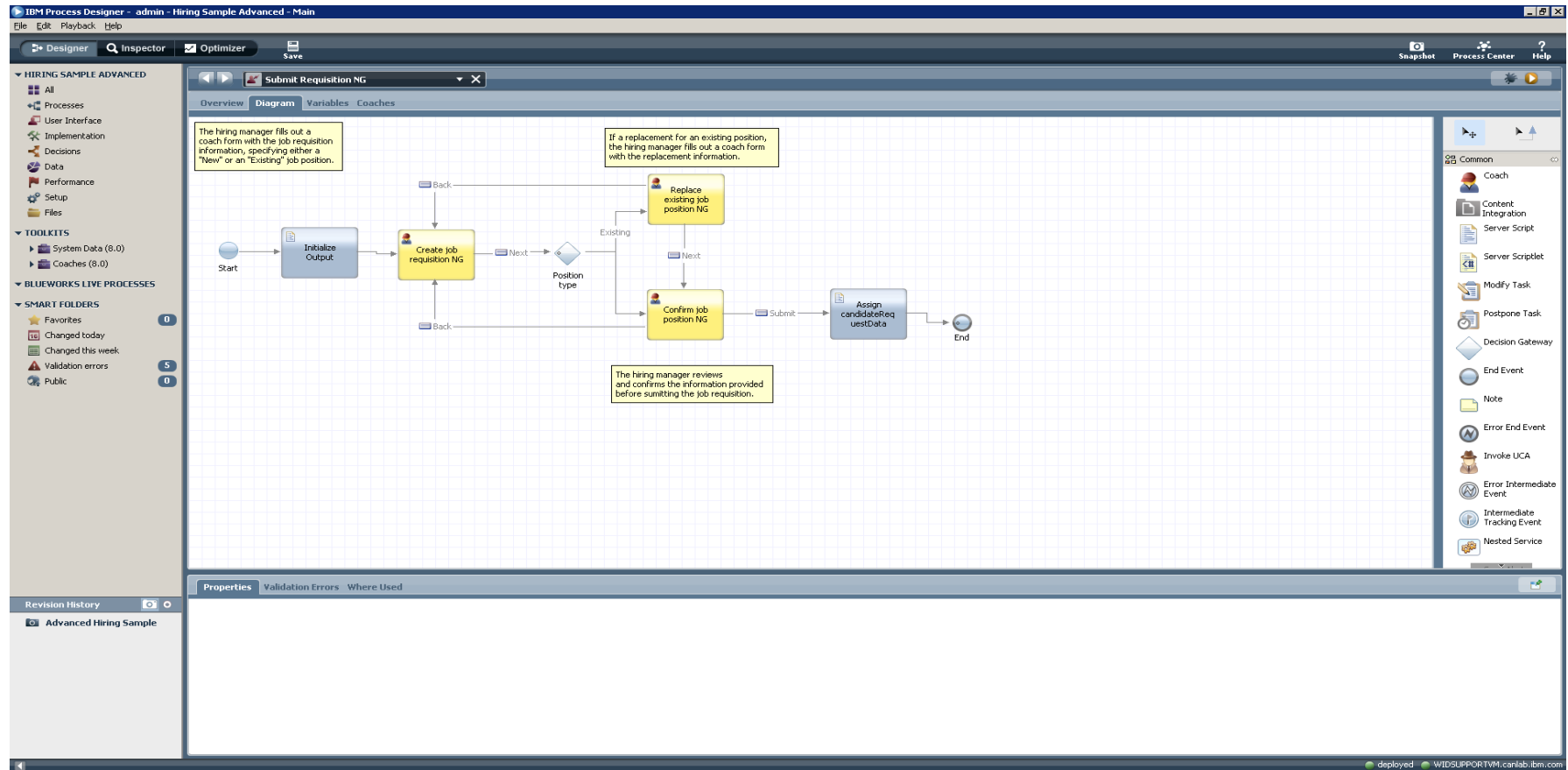




# Human Service



# Human Service



# Coach

- Component central
- Data focus
- Event driven
- Iterative development
- Collaboration

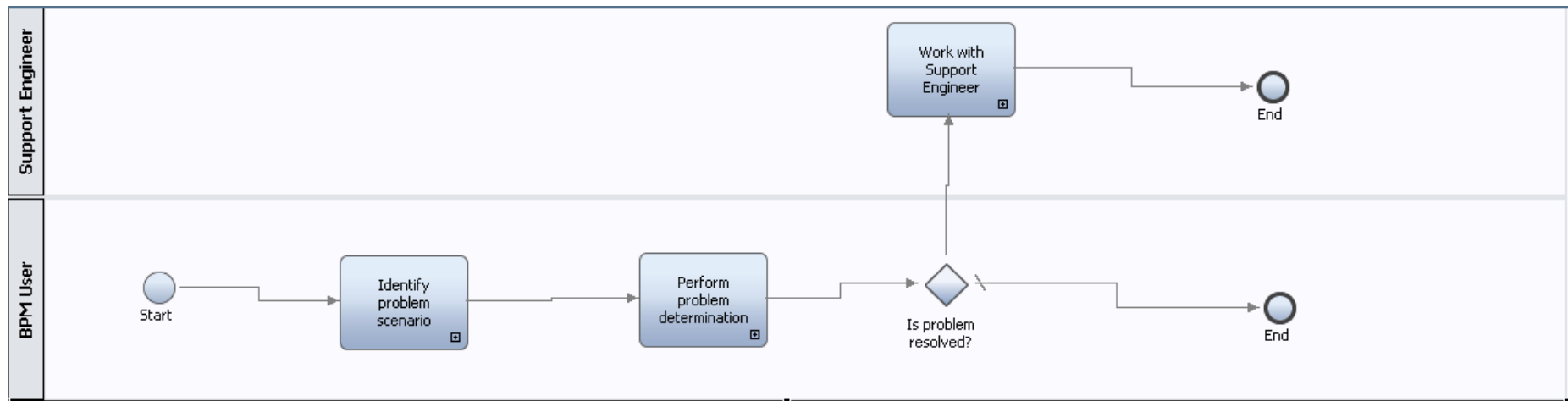


# Agenda

- Problem Determination
  - ▶ Overview
  - ▶ Authoring
  - ▶ Execution
  - ▶ Performance



# Overview



# Overview

- Identify problem scenario
  - ▶ Can the problem be reproduced?
  - ▶ What are the symptoms of the problem?
  - ▶ When, where, and under what condition?
  - ▶ Step-by-Step description of how the problem occurs



# Overview

- Perform problem determination
  - ▶ Product version
  - ▶ Is Process Designer the same version as Process Center that it connects to?
  - ▶ Fix update from IBM support site
  - ▶ Logs and trace
- Work with support engineer
  - ▶ [mustGather \(http://www-01.ibm.com/support/docview.wss?uid=swg21569731\)](http://www-01.ibm.com/support/docview.wss?uid=swg21569731)
  - ▶ information from steps, identify problem scenario, perform problem determination



# Overview

- log into your WAS console:  
<https://localhost:9043/ibm/console>
- Expand "Troubleshooting"
- Click "Logs and Trace"
- Click "Change log level details"
- Expand "All Components"
- scroll down and expand "com.lombardissoftware.component.\*"
- Click "com.lombardissoftware.component.coachng" and choose "All messages and trace"
- Click "Ok"
- Save





# Authoring

- Logs and Trace
  - ▶ ae.log
  - ▶ Enable -coachViewDevMode flag in eclipse.ini



# Execution

- Additional Checklist
- Debug
- Logs and Trace



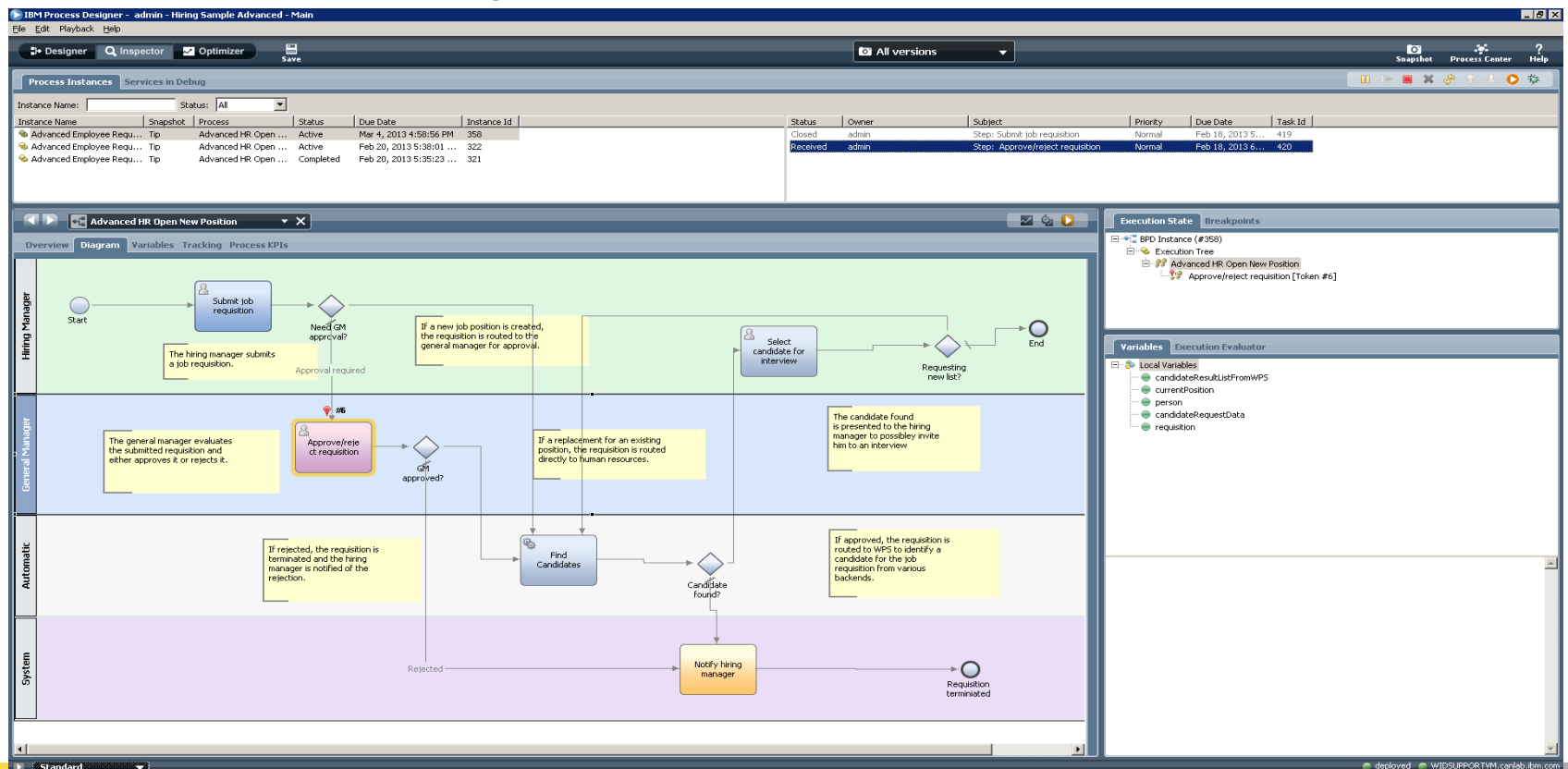
## Additional Checklist

- Is the System Toolkit up to date?
- Is the problem browser specific?
- Is the browser supported? <http://www-01.ibm.com/support/docview.wss?uid=swg27023005>
- Any validation errors?



# Debug

## ■ Open debug session in Inspector



# Debug

- Inspector shows that the data variable is populated (show in execution evaluator) and the process flow moves onto next step

The screenshot displays the IBM Process Designer interface. The top pane shows a table of process instances. The bottom pane shows the process flow diagram for 'Advanced HR Open New Position'.

Instance Name	Status	Process	Due Date	Instance Id	Status	Owner	Subject	Priority	Due Date	Task Id
Advanced Employee Requ...	Tip	Advanced HR Open ...	Mar 4, 2013 12:54:37 ...	357	Closed	admin	Step: Submit job request	Normal	Feb 6, 2013 6:...	372
Advanced Employee Requ...	Tip	Advanced HR Open ...	Feb 20, 2013 5:38:01 ...	322	Received	(ROLE) G...	Step: Approve/reject request	Normal	Feb 16, 2013 5...	418
Advanced Employee Requ...	Tip	Advanced HR Open ...	Feb 20, 2013 5:38:01 ...	321						

The process flow diagram shows the following steps:

- Start** (Hiring Manager)
- Submit job request** (Hiring Manager)
- Need GM approval?** (Decision)
- Approve/reject request** (General Manager)
- GM approved?** (Decision)
- Find Candidates** (Automatic)
- Candidate found?** (Decision)
- Notify hiring manager** (System)
- Request terminated** (End)

The **Execution Evaluator** shows the following XML data:

```
<variable type="Request">
  <reqNum type="String"><[CDATA[114]]></reqNum>
  <requestor type="String"><[CDATA[Admin Test]]></requestor>
  <status type="String"><[CDATA[Full time]]></status>
  <approvalNeeded type="Boolean"><[CDATA[false]]></approvalNeeded>
  <date type="Date"><[CDATA[2013/02/06 17:35:25.0 EST]]></date>
  <department type="String"><[CDATA[Product Development]]></department>
  <location type="String"><[CDATA[Concord]]></location>
  <emphNum type="Integer"><[CDATA[1]]></emphNum>
  <gmApproval type="String"><[CDATA[approved]]></gmApproval>
  <gmComments type="String"><[CDATA[ ]]></gmComments>
  <instanceId type="String"><[CDATA[321]]></instanceId>
  <hrCandidateAvailable type="Boolean"><[CDATA[false]]></hrCandidateAvailable>
</variable>
```

# Debug

- Use "step" to debug, and "Run" to complete the service to move onto next activity

Service: GM Approval NG  
Item Type: Decision Gateway  
Item Name: Approved?

Name	Type	Value
approvalDecision	Boolean	false
currentPosition	Position	<pre>&lt;object type="Position"&gt;   &lt;property name="replacement" type="Person"&gt;     &lt;property name="lastName" type="String"&gt;Miller&lt;/property&gt;     &lt;property name="notes" type="String"&gt;&lt;/property&gt;     &lt;property name="payType" type="String"&gt;Exempt&lt;/property&gt;     &lt;property name="supervisor" type="String"&gt;Frank Smith&lt;/property&gt;     &lt;property name="firstName" type="String"&gt;Bob&lt;/property&gt;     &lt;property name="payLevel" type="String"&gt;8&lt;/property&gt;     &lt;metadata&gt;       &lt;property name="dirty" type="Boolean"&gt;true&lt;/property&gt;       &lt;property name="shared" type="Boolean"&gt;false&lt;/property&gt;       &lt;property name="key" /&gt;       &lt;property name="version" /&gt;     &lt;/metadata&gt;   &lt;/property&gt;   &lt;property name="positionType" type="String"&gt;New&lt;/property&gt;   &lt;property name="id" type="String"&gt;358-0&lt;/property&gt;   &lt;property name="jobTitle" type="String"&gt;HR Consultant&lt;/property&gt;   &lt;metadata&gt;     &lt;property name="dirty" type="Boolean"&gt;true&lt;/property&gt;     &lt;property name="shared" type="Boolean"&gt;false&lt;/property&gt;     &lt;property name="key" /&gt;     &lt;property name="version" /&gt;   &lt;/metadata&gt; &lt;/object&gt;</pre>
requisition	Requisition	<pre>&lt;object type="Requisition"&gt;   &lt;property name="instanceId" type="String"&gt;358&lt;/property&gt;   &lt;property name="hireCandidateAvailable" type="Boolean"&gt;false&lt;/property&gt;   &lt;property name="requestor" type="String"&gt;Roland Peisk&lt;/property&gt;   &lt;property name="status" type="String"&gt;Part time&lt;/property&gt;   &lt;property name="department" type="String"&gt;Human Resources&lt;/property&gt;   &lt;property name="location" type="String"&gt;Atlanta&lt;/property&gt;   &lt;property name="reqNum" type="String"&gt;1141&lt;/property&gt;   &lt;property name="approvalNeeded" type="Boolean"&gt;false&lt;/property&gt;   &lt;property name="gmApproval" type="String"&gt;&lt;/property&gt;   &lt;property name="gmComments" type="String"&gt;Budget freeze till the end of the year&lt;/property&gt;   &lt;property name="date" type="Date"&gt;     &lt;fullYear&gt;2013&lt;/fullYear&gt;     &lt;month&gt;3&lt;/month&gt;     &lt;date&gt;30&lt;/date&gt;     &lt;dayOfWeek&gt;3&lt;/dayOfWeek&gt;     &lt;hours&gt;17&lt;/hours&gt;     &lt;minutes&gt;0&lt;/minutes&gt;     &lt;seconds&gt;1&lt;/seconds&gt;     &lt;milliseconds&gt;0&lt;/milliseconds&gt;   &lt;/property&gt;   &lt;property name="empNum" type="Integer"&gt;1&lt;/property&gt;   &lt;metadata&gt;     &lt;property name="dirty" type="Boolean"&gt;true&lt;/property&gt;     &lt;property name="shared" type="Boolean"&gt;false&lt;/property&gt;     &lt;property name="key" /&gt;     &lt;property name="version" /&gt;   &lt;/metadata&gt; &lt;/object&gt;</pre>

Namespace: local

Namespace: system

# Debug

- Check browser version
- Download and install compatible Firebug or Fiddler



# Debug

- Firebug features
  - ▶ Firebug a Firefox extension
  - ▶ Firebug Lite supports major browsers
  - ▶ JavaScript debugging
  - ▶ HTML inspection
  - ▶ Net traffic analysis





# Debug

- Fiddler features
  - ▶ Support all browsers
  - ▶ Net traffic capture and filtering
  - ▶ Session analysis
  - ▶ Record and playback traffic



# Debug

- Add debugger in Coach JavaScript code
- Coach component tracing (Slide 29)
- Coach Global API (future releases)



# Logs and Trace

- Client side Logs and Trace
- Generated HTML, when problem occurs



# Performance

- Additional Check list (Slide 19)
- Logs and Trace
- Code Gen Performance



# Logs and Trace

- BPM 8.0.1
- Log into admin console:  
<https://localhost:9043/ibm/console/logon.jsp>
- Expand Resources->Resource Environment->Resource Environment Providers
- Click Mashups\_ConfigService
- Click Custom Properties
- Click the filter button, and search by name for 'isDebug'
- Once you find it, click it.
- Toggle it's value from 'false' to 'true', and visa-versa.
- Apply and save the configuration.
- restart server and clear browser cache



# Code Gen Performance

- log into your WAS console:  
<https://localhost:9043/ibm/console>
- Expand "Troubleshooting"
- Click "Logs and Trace"
- Click "Change log level details"
- Expand "All Components"
- scroll down and expand "com.lombardissoftware.component.\*"
- expand "com.lombardissoftware.component.coachng"
- expand "com.lombardissoftware.component.coachng.worker"
- Click  
"com.lombardissoftware.component.coachng.worker.CoachN  
GWorker", and choose "All messages and trace"
- Click "Ok"
- Save



# Recommendations

- Iterative development
- Promote asset reuse
- Follow Coach development good practices
- Perform unit testing
- Leverage client side debugging tools
- Provide usage example



# References

- IBM® Business Process Manager V8.0.1 Information Center:  
<http://pic.dhe.ibm.com/infocenter/dmndhelp/v8r0m1/index.jsp?topic=%2Fcom.ibm.wbpm.main.doc%2Fic-homepage-bpm.html>
- Firebug: <https://getfirebug.com/>
- Fiddler: <http://fiddler2.com/>
- IBM® DeveloperWorks Business Process Manager:  
<http://www.ibm.com/developerworks/bpm/>
- IBM® Business Process Management Products Support Blog:  
[https://www.ibm.com/developerworks/community/blogs/WebSphere\\_Process\\_Server/?lang=en](https://www.ibm.com/developerworks/community/blogs/WebSphere_Process_Server/?lang=en)
- IBM® Business Process Manager Support: [https://www-947.ibm.com/support/entry/portal/overview/software/websphere/ibm\\_business\\_process\\_manager\\_advanced](https://www-947.ibm.com/support/entry/portal/overview/software/websphere/ibm_business_process_manager_advanced)





# Special Thanks...

**Grant Taylor** (IBM Business Process Manager Development)

**Paul Pacholski** (IBM Websphere Technical Sales)



# Additional WebSphere Product Resources

- Learn about upcoming WebSphere Support Technical Exchange webcasts, and access previously recorded presentations at:  
[http://www.ibm.com/software/websphere/support/supp\\_tech.html](http://www.ibm.com/software/websphere/support/supp_tech.html)
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<http://www.ibm.com/software/websphere/support/d2w.html>
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