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Accelerated Value Program
ibm.com/software/support/acceleratedvalue/

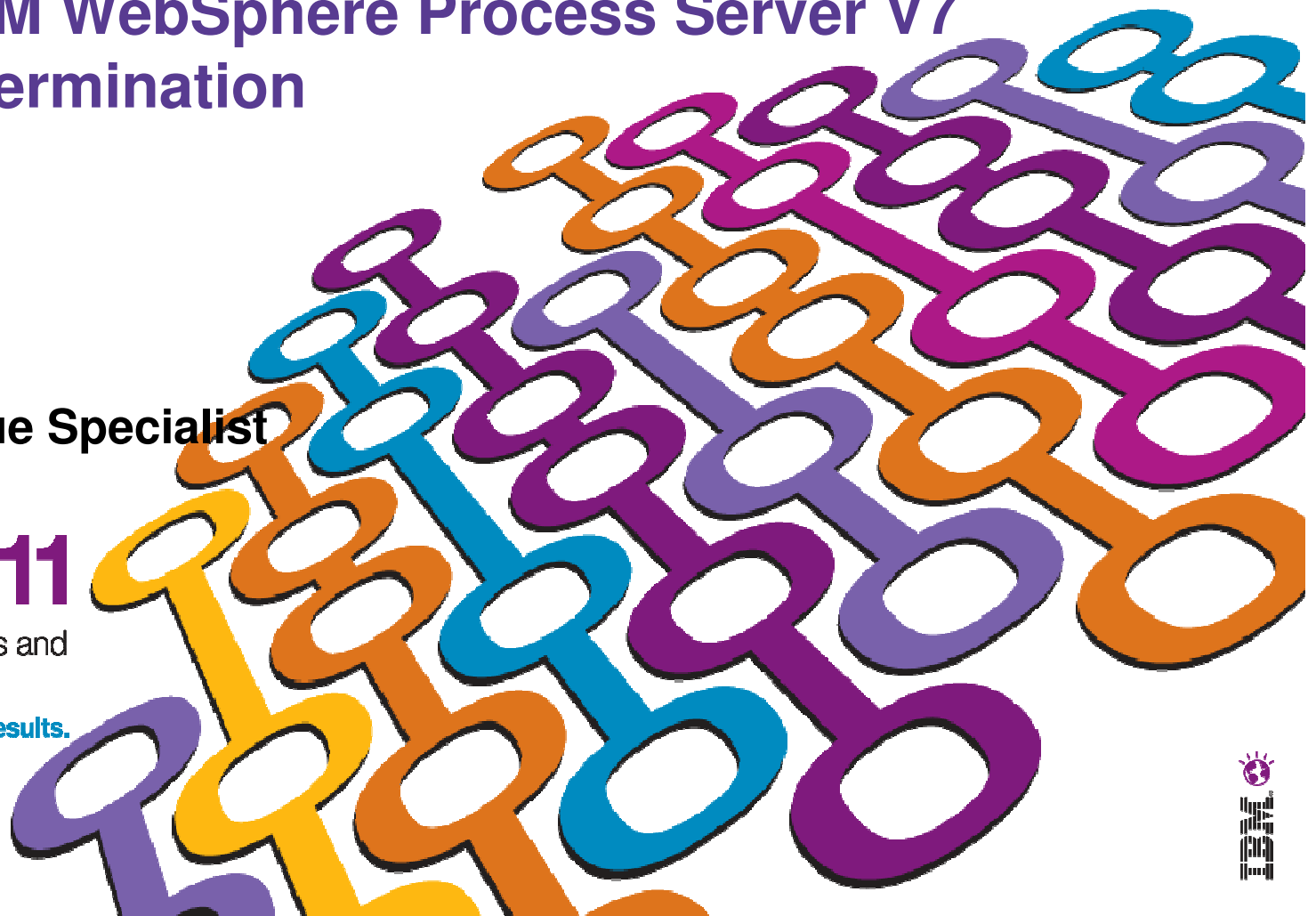# AVP-2932 IBM WebSphere Process Server V7 Problem Determination

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Impact2011

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IT Leaders Work

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Agenda

- Troubleshooting Overview

- SCA Exceptions Types

- Invocation Styles

- Recovery and Failed events

- Problem Determination Tools

- Lab Introduction

Troubleshooting WPS (1 of 2)

What, Where, When?

- Service not responding?

- Application/service failed to start?

- Performance problems?

- Unexpected behavior?

- SCA problems?

- Timeouts?

- Duplicate messages?

- Failed event creation?

- Stuck messages?

- Is it repeatable?

- Any error messages generated?

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Troubleshooting WPS (2 of 2)

Next Steps

- Determine where is the problem coming from (WPS, Database, WAS?).

- Problem isolation

- Consider short term fixes

- Research existing fixes (APARS) or updates

- Are there any work-arounds that can be used

- Search the Knowledge base

- Work with IBM Support to troubleshoot and fix the problem

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SCA Exception Types

Service business exception

- Business level exception which are expected

- Should not crash the service

- Does not rollback transaction

- No Failed Event

Service runtime exception

- System level exception that are not expected.

- Nullpointer, out of memory etc.

- May rollback transaction

- May generate Failed Events

Invocation Styles

Synchronous

- Same thread
- Caller blocked

Asynchronous

- Different thread
- Caller not-blocked
- 3 Types
  - One way
  - Deferred response
  - Request with callback

Transaction Propagation and Failed Events

	Synchronous	Asynchronous
Transaction Propagate	Possible	Not possible
Business Exception	Back to caller	Back to caller
Runtime Exception	Back to caller	Failed Event

Recovery for Failed Invocations

- WPS offers a way to resubmit an event that encountered a ServiceRuntimeException during async invocations via the FEM

  – Reliability Qualifier should be set to Assured

- SIBus has some default retry logic

- Events may end up in the exception destination – System exception destination

- Long running business processes uses Business Flow Manager (BFM) retention-Q and hold-Q for exception handling, and retry logic

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Problem Determination Tools (1 of 3)

Health Monitor Widget in Business Space

- Destination Queue depths on the bus

- Topology/cluster status

- System component status

- System databases

- Failed events

- System messaging engines

SI Bus browser added as of 6.2

Tracing

FFDC – first failure data capture

System logs

- SystemOut
- SystemErr

Server logs view in WID

- Powerful filtering mechanism availability

Problem Determination Tools (3 of 3)

Cross Component Tracing (XCT)

- WAS ND environment

- Business Objects

- Business Processes – micro-flows and long running

- All invocation styles

  - Synchronous

  - Asynchronous – All flavors

- Integrated with Test client

- Support HTTP, JMS, and MQ bindings

IBM Guided Activity Assistant

- ISA tools

- Searches support docs/knowledge base

Lab Overview

- Will be using WebSphere Integration Developer

  – WPS Test Environment

- Step 1 – Setup workspace

- Step 2 - Import existing SOA solution

- Step 3a – Problem definition and determination

  – Logs

  – XCT

  – System Health Monitor

- Step 3b – Problem resolution

- Step 4 – Clean up and finish up

Feedback

- Please complete the survey for this session
  - AVP-2932 Hands-on lab IBM WebSphere Process Server Problem Determination

Thank you…

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