

Proactive Outage Avoidance with IBM Service Management Suite for z/OS (SMSz) V1.3

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Session #17594

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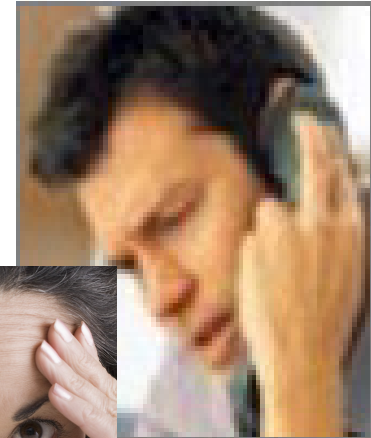
Agenda

▪ Introduction

- IBM Service Management Suite for z/OS
- Updates
 - IBM Service Management Suite
 - OMEGAMON Perf Mgmt Suite for z/OS 5.3.1
 - Operations Analytics
- Integration Value
- Summary

What happens at your site when a problem happens?

- **All sites have different configurations and unique expectations**
 - How do problems get communicated?
 - What type of alerting happens?
 - Are all your teams disparate groups?
 - Do you have “War Room” meetings?
 - How do you Identifying Complex Problems?
 - Are your teams challenged to do more with less?
- How do you address these issues?



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So What is being announced?



August 10, 2015 Announce

Suites:

- Service Management Suite for z/OS 1.3.0
- OMEGAMON Performance Management Suite for z/OS 5.3.1
- OMEGAMON for z/OS Management Suite 5.3.1



Individual Products:

- OMEGAMON XE for IMS on z/OS V5.3.0
- OMEGAMON XE for Mainframe Networks V5.3.0
- OMEGAMON Dashboard Edition on z/OS V5.3.0 (Interim Feature)

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Service Management provides opportunities to Lower Costs and Accelerate Innovation



Service Management Suite for z/OS

Applications & Infrastructure Performance

Operations

Automation

Analytics

System Automation

OMEGAMON

System Automation

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Agenda

- Introduction

- **IBM Service Management Suite for z/OS**

- Updates

 - IBM Service Management Suite

 - OMEGAMON Perf Mgmt Suite for z/OS 5.3.1

 - NetView 6.2.1 Updates

- Integration Value

- Summary

Provides comprehensive service management capabilities for IBM z Systems



One Solution

Single offering that contains capabilities to manage z/OS and all key subsystems

High Availability & Automated Operations

Improve Service Levels and reduce system downtime

Network Management

Maintain the highest degree of availability of your z Systems networks

Performance Management

Real-time and historical performance and availability management

Asset Discovery

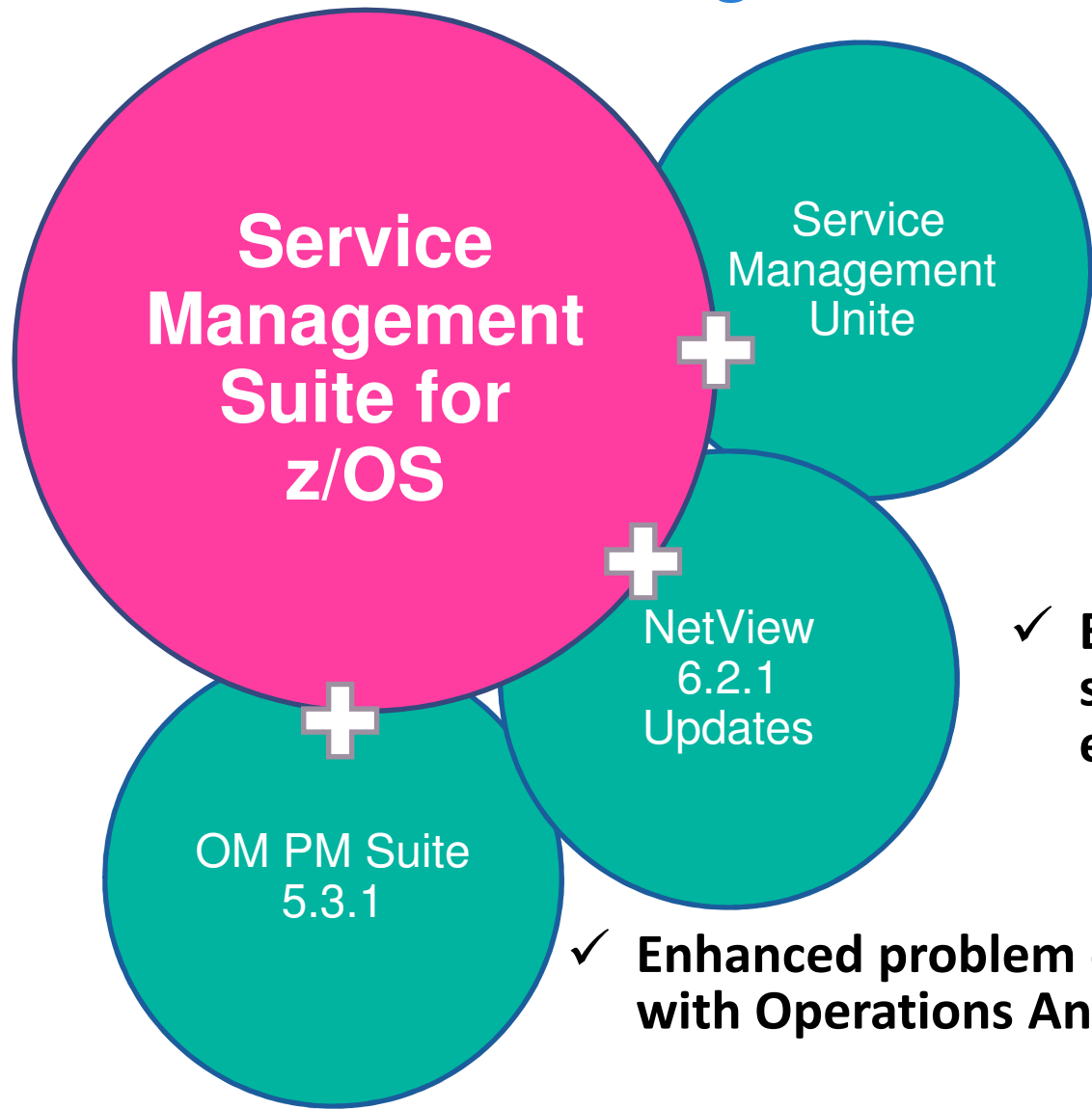
Who is using what, where and when

Dashboards

Single point of control to monitor and operate your applications

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NEW: Service Management Suite for z/OS 1.3



✓ **Modern Web UI for automated operations of z and non-z Systems environments**

✓ **Enhanced automation to support larger environments**

✓ **Enhanced problem determination with Operations Analytics**

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Service Management Suite for z/OS 1.3



Service Management Suite V1.1.0

System Automation for z/OS V3.5

NetView for z/OS V6.2.1

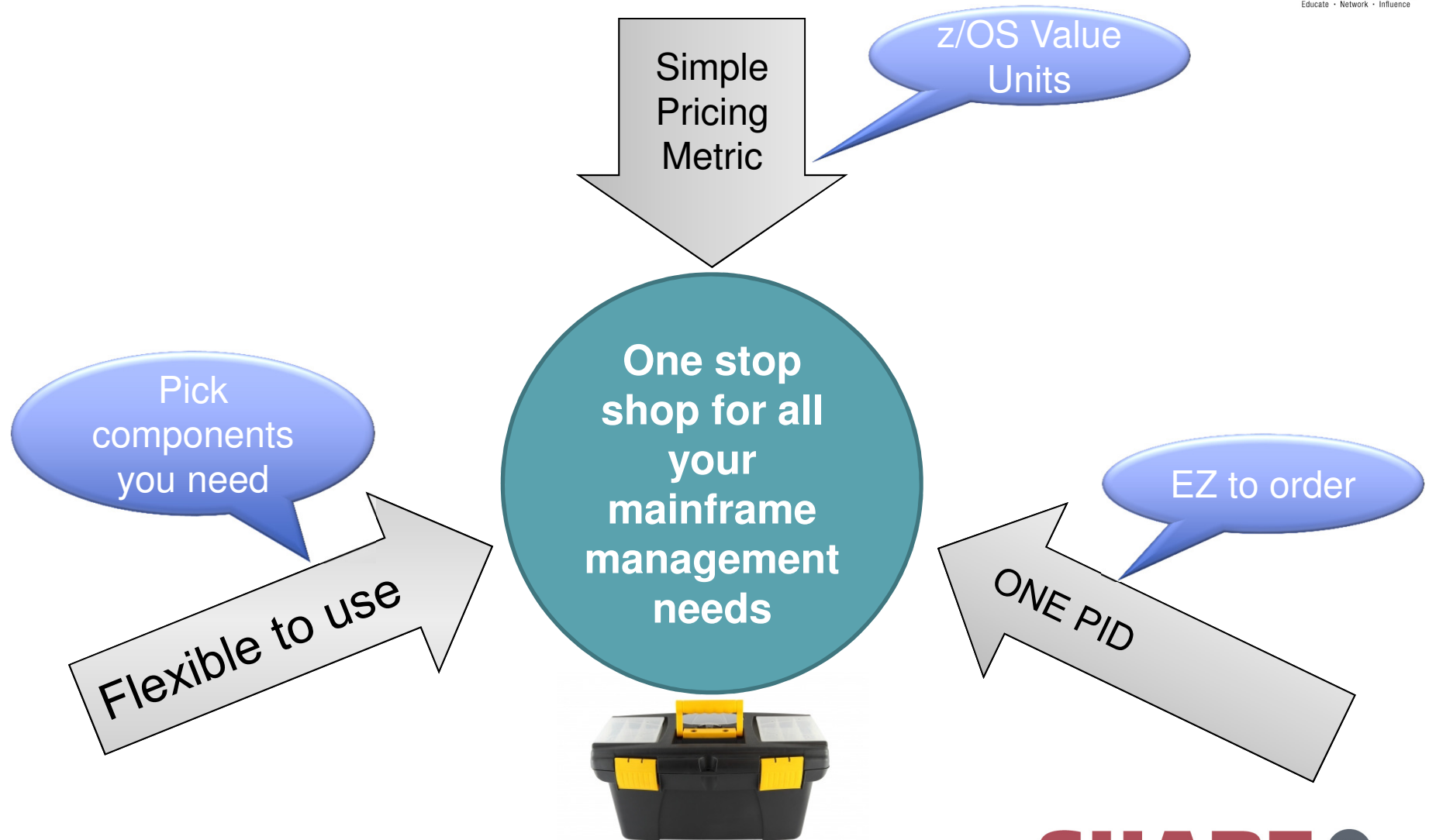
Tivoli Asset Discovery V8.1

OMEGAMON z/OS Perf Mgmt Suite

- ✓ OMEGAMON XE for DB2 PE V5.3.0
- ✓ OMEGAMON XE for Messaging on z/OS V7.3.0
- ✓ OMEGAMON XE for CICS V5.3.0
- ✓ OMEGAMON XE for IMS V5.3.0
- ✓ OMEGAMON Dashboard Edition on z/OS 5.3.0
- ✓ OMEGAMON XE for z/OS V5.3.0
- ✓ OMEGAMON XE for Mainframe Networks V5.3.0
- ✓ OMEGAMON XE for Storage V5.3.0
- ✓ ITCAM AD V7.1 (only ITCAM for WR component)
- ✓ Composite Application Manager for Web Resources on z/OS 7.1.0
- ✓ Operations Analytics Log Analysis
 - OMEGAMON z/OS Insight Pack

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Financial Benefits & Business Value



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Image taken from FreeDigitalPhotos.net

Agenda



- Introduction
- IBM Service Management Suite for z/OS

- **Updates**

- **IBM Service Management Unite**

- OMEGAMON Perf Mgmt Suite for z/OS 5.3.1

- Operations Analytics

- Integration Value

- Summary

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Service Management Unite - What is it?

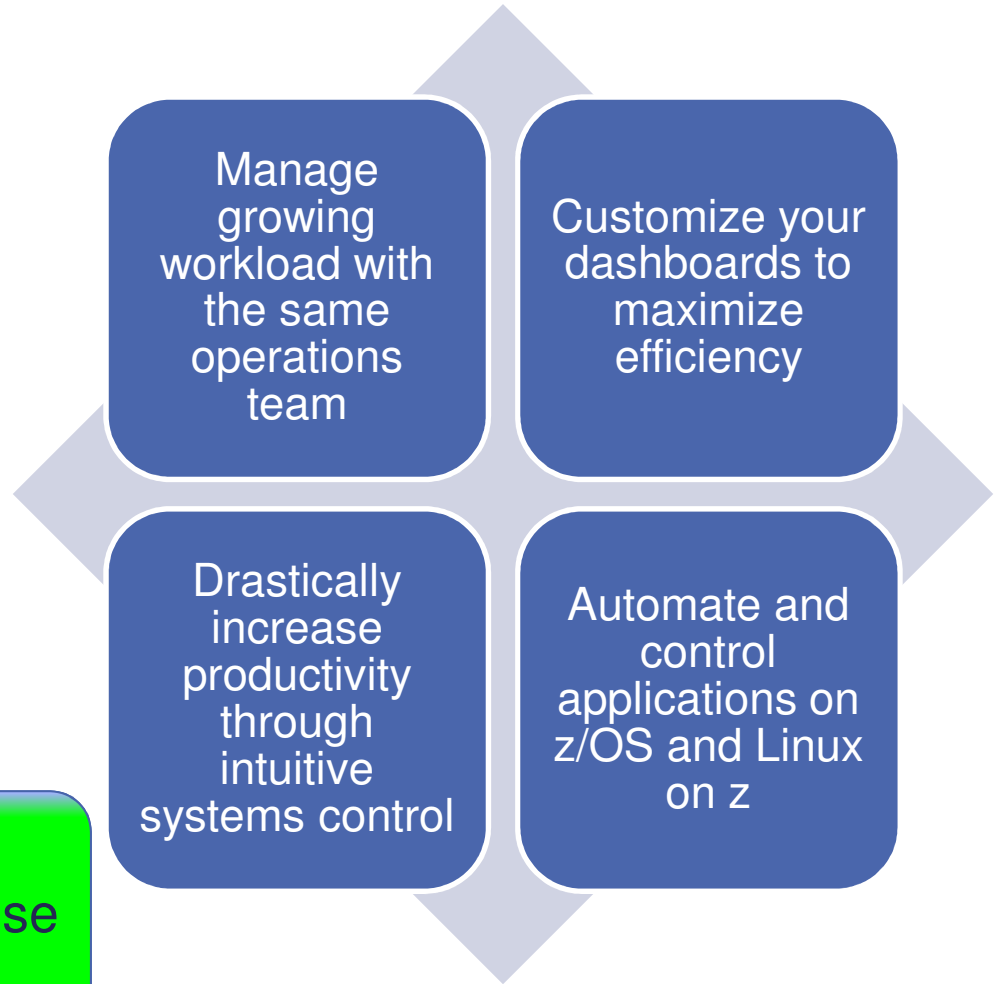
A modernized, state-of-the-art service management dashboard for visibility and operations of IBM z Systems



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Images taken from FreeDigitalPhotos.net

Service Management Unite – A new way to operate your mainframe



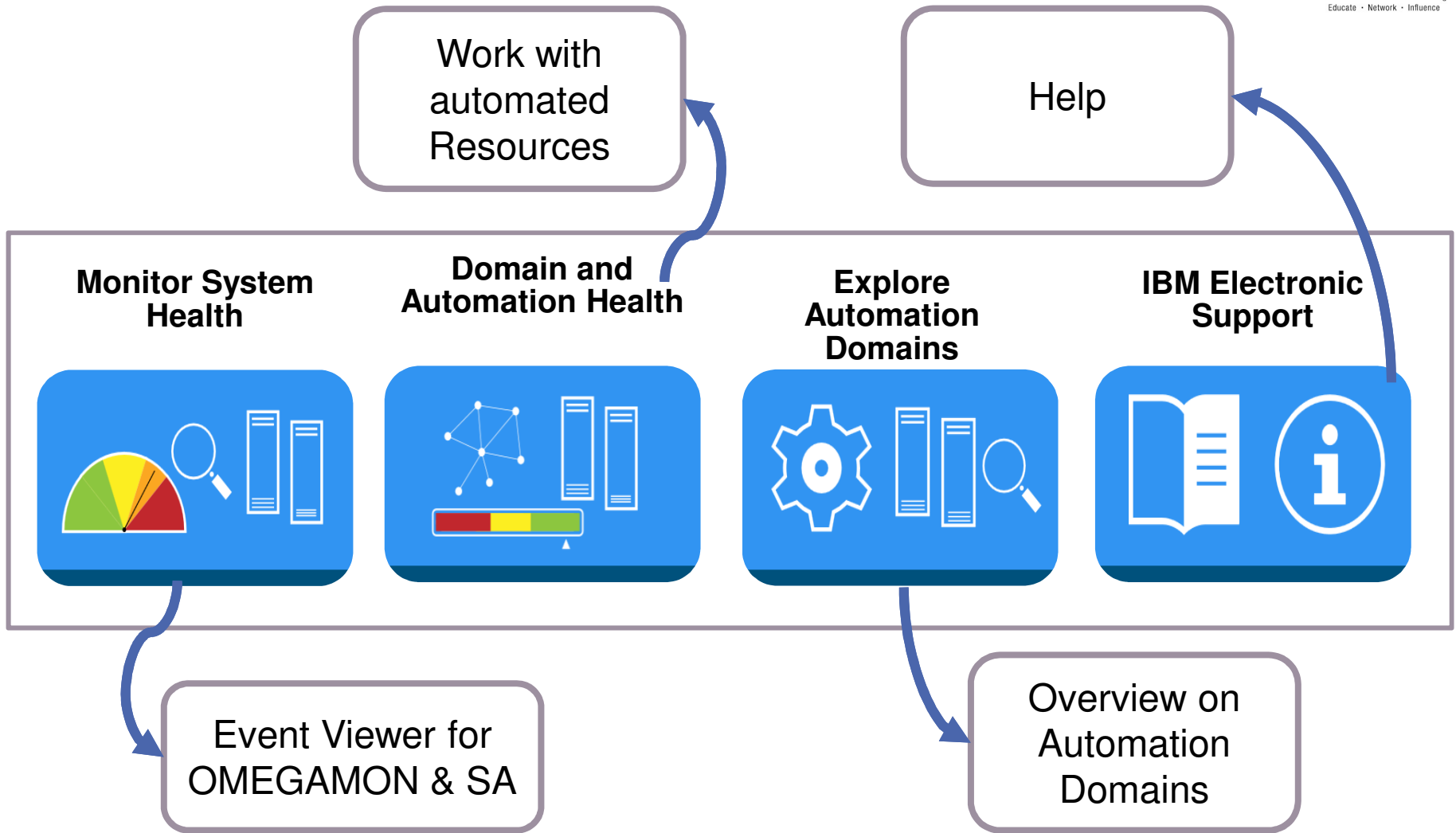
It's a real WOW
Isolate, analyze and diagnose problems twice as fast (*)

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(*) based on initial measurements.



Service Management Unite - What is it?










Monitor System Health


zOS System Health
0  5  4 

Health Status ▾ ?

Monitoring Components










-  CICS Critical(1)
-  MQ Critical(3)
-  DB2
-  z/OS
-  IMS
-  Networks
-  WAS

Automation Domains

-  TESTPLX INGXSGAO Critical(1) Warning(4)





Events ▾ ?

Actions ▾


Severity	1 ▲	Ack	2 ▲	Source	Summary	Time	3 ▲	Category
	Critical	Open		MVST.CICSAOR1	Short Term Percentage Exceeded for CDB2RDYQ	2015-08-01 01:27:09		Situation OM CICS
	Critical	Open		TIM_MOVE/APG	Automation resource with Compound State of "Error". Operational State: "Error"	2015-08-06 14:29:26 +		SA Event
	Critical	Open		WMQA:MVST:MQESA	EAP problem with started sender channel	2015-08-07 21:49:19		Situation OM MQ
	Critical	Open		WMQA:MVST:MQESA	EAP problem with started sender channel	2015-08-07 21:49:19		Situation OM MQ
	Critical	Open		WMQA:MVST:MQESA	EAP problem with started sender channel	2015-08-07 21:49:19		Situation OM MQ
	Warning	Open		TESTPLX INGXSGAO	"Log requires attention"			SA Event
	Warning	Open		EAP_2/APG/TESTMVS	Automation resource with Compound State of "Warning". Operational State: "The resource is performing poorly"	2015-08-06 14:30:45 +		SA Event
	Warning	Open		EAP_3/APG/TESTMVS	Automation resource with Compound State of "Warning". Operational State: "The resource is performing poorly"	2015-08-06 14:30:59 +		SA Event
	Warning	Open		BASE_FP/APG/TESTMVS	Automation resource with Compound State of "Warning". Operational State: "The resource is performing poorly"	2015-08-10 05:00:01 +		SA Event

Explore Automation Domains

Domains ▼ ?

 Actions ▼ <input type="text" value="Search"/>				
Name	Domain Health State	Communication State	Log Status	OS Name
 TESTPLX INGXS	 Error	 All communication p	 Log requires attentio	z/OS
 TESTMVS				z/OS

Resources

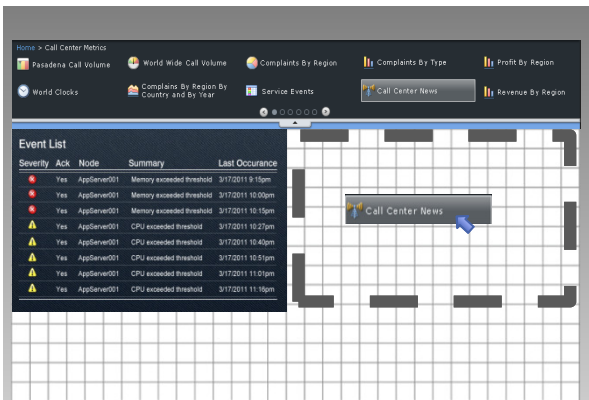
 Actions ▼ <input type="text" value="Search"/>					
Name	Compound State	Observed State	Desired State	Automated	Operator Request
No items to display					

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What is DASH?

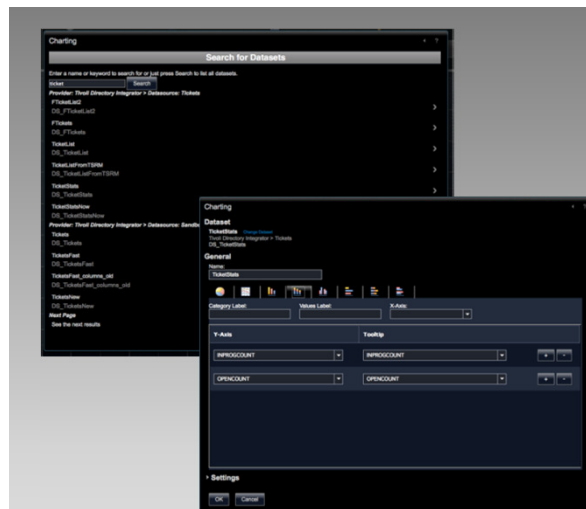


- DASH (Dashboard Application Services Hub) is a common shared component (shipped as part of JazzSM)
- It provides integration of product and 3rd party data via a rich set of interactive widgets
- Hosts product UIs



- Create custom dashboards using drag & drop
- Integrated web-based editor

Create



- Assemble your own custom view
- Access data from IBM and 3rd party
- Use pre-defined product UIs

View



- Assign security to dashboards
- Provision the dashboards for Desktop and Mobile

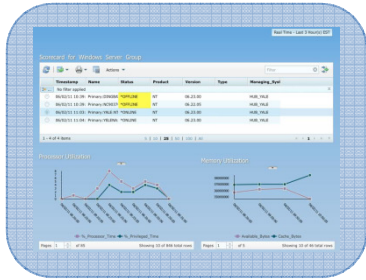
Share

IBM Orlando 2013

Common Data Access, Common Visualizations



Solution Out-of-the-box Views



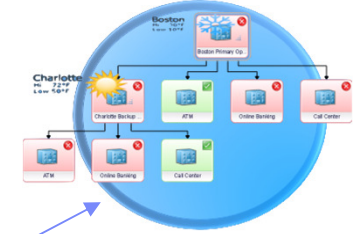
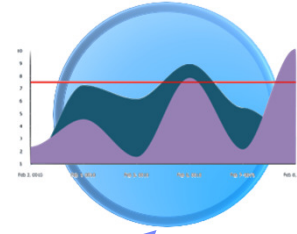
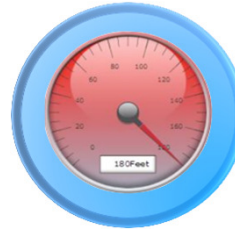
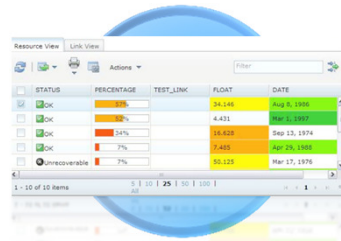
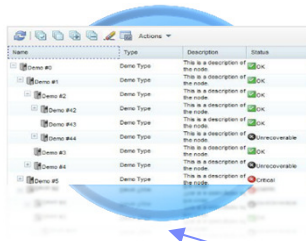
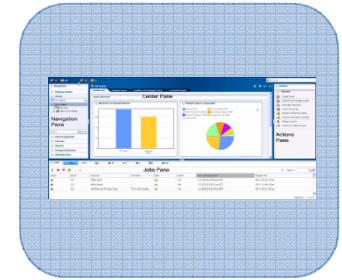
Customized Views for Clients



Widgets for Mobile

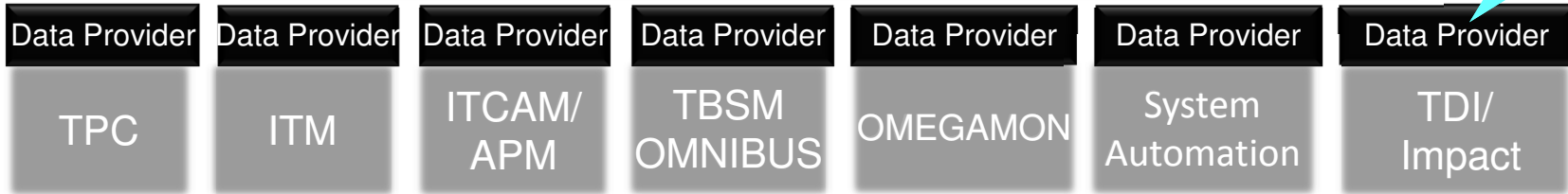


Purpose-built UIs

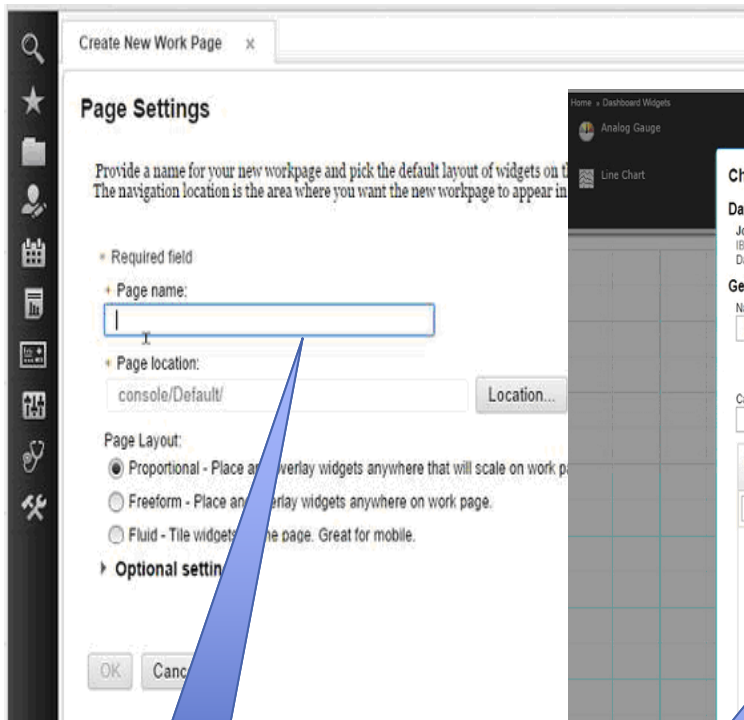


REST Interface

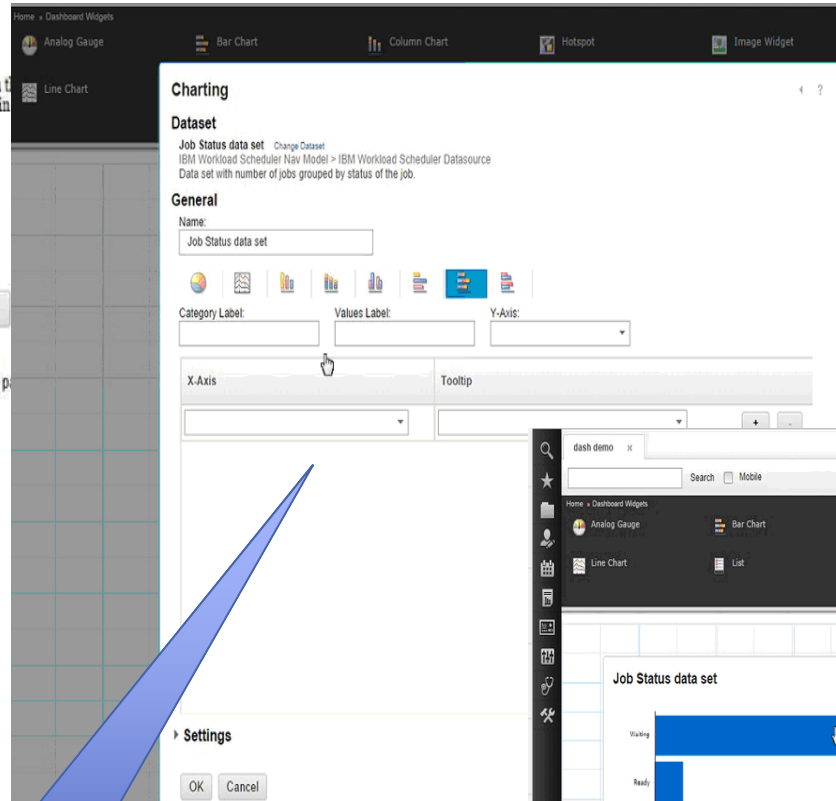
This allows you to integrate 3rd party data



It's customizable: Build Custom Views using DASHBuilder

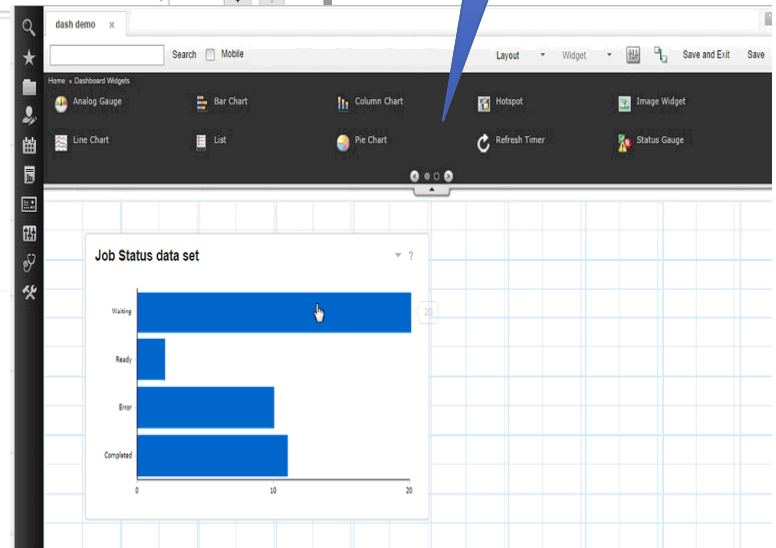


Create a new page



Choose widget and configure

Save widget settings



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So How does it work?



The following charts describe 3 typical problems that can be solved with Service Management Unite

Scenarios:

- MQ Channel Not Running
- Restore Service outage during maintenance
- Restore Service of degraded workload

Scenario 1: MQ Channel Not Running

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Receive a Critical MQ Event



The screenshot shows the IBM System Health console interface. On the left, there is a 'Health Status' sidebar with monitoring components like CICS, MQ, DB2, z/OS, IMS, Networks, and WAS. The main area displays a table of events sorted by severity. The top event is highlighted with a blue box.

Severity	Ack	Source	Summary	Time	Cat
Critical	Open	WMQA:MVST:MQESA	EAP problem with started sender channel	2015-08-05 17:47:06	Situa
Critical	Open	WMQA:MVST:MQESA	EAP queue is not being read	2015-08-05 17:47:05	Situa
Critical	Open	WMQT:MVST:MQESA	EAP queue has oldest message age too high	2015-08-03 23:00:07	Situa
Critical	Open	WMQT:MVST:MQESA	EAP queue has high depth	2015-08-03 22:29:05	Situa
Critical	Open	WMQT:MVST:MQESA	EAP queue has oldest message age too high	2015-08-03 17:37:07	Situa
Critical	Open	MVST:CICSAOR1	Short Term Percentage Exceeded for CDB2RDYQ	2015-08-01 01:27:09	Situa

The operator views both monitoring and automation exception events sorted by severity on the consolidated event viewer customized for her area of support.

As the event viewer has the events sorted by priority, the operator selects the top event not acknowledged by another operator.

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Open Event Details



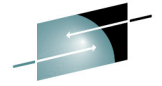
The screenshot shows the IBM System Health console. On the left, the 'Health Status' sidebar lists monitoring components: CICS (Critical(1)), MQ (Critical(5)), DB2, z/OS, IMS, Networks, WAS, and Automation Domains (TESTPLX.INGXSGA0 Critical(1)). The main 'Events' table displays the following data:

Severity	Ack	Source	Summary	Time	Cat
Critical	Open	WMQA:MVST:MQESA	EAP problem with started sender channel	2015-08-05 17:47:06	Situa
Critical	Open	WMQA:MVST:MQESA	EAP queue is not being read	2015-08-05 17:47:05	Situa
Critical	Open	WMQT:MVST:MQESA	EAP queue has oldest message age too high	2015-08-03 23:00:07	Situa
Critical	Open	WMQT:MVST:MQESA	EAP queue has high depth	2015-08-03 22:29:05	Situa
Critical	Open	WMQT:MVST:MQESA	EAP queue has oldest message age too high	2015-08-03 17:37:07	Situa
Critical	Open	MVST:CICSAOR1	Short Term Percentage Exceeded for C...	2015-08-01 01:27:09	Situa

A blue callout bubble points to the context menu of the second event, which includes the following options:

- View Event Details
- View MQ Queue Manager Details for WMQA
- Properties...

See EAP channel not running; right click on it; click on MQ Queue Manager Details (2 clicks)



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View key performance graphs and tables

IBM Dashboard Application... | https://ext19lnx.demos.ibm.com:16311/ibm/console/navigation.do?XSS=...

SYSTEM HEALTH | MQ QUEUE MANAGER DETAILS

MQ Queue Manager Details

Selected QMgr

QMgr Name: WMQA
Host Name: MVST
QMgr Health: ⚠ Warning
Channel Status: Running
Command Server Status: Waiting
Connection Count: 37

Top 5 Queues with High Depth

No data found.

Top 5 Queues Not Being Read

EAP.S1.XMI...

Top 5 Queues Oldest Message Age (sec)

Queue Name	Oldest Message Age (sec)
EAP.S1.XMI...	127
IBMQREP.A... RESTARTQ	316755277
DSNA.REST...	169839469
IBMQREP.A...	267940190
DSNB.REST... RESTARTQ	222416848

QMgr Statistics

Message Rates

- MQGET Per Second: 24.8
- MQPUT Per Second: 18
- MQPUT1 Per Second: 0

Log Manager

- Log Buffer Waits: 0
- Write Log Per Minute: 0
- Read Log Per Minute: 0
- Percent Read Logs Delayed: 0
- Archive Read Log Percent: 0

All Buffer Pools

- Lowest Percent Available: 98.5
- GetPage I/O Percent: 0

Current Channels Not Running

Channel Name	Connection Name	Channel Type	XmitQ Name
EAP.S1.WMQA.TO\	192.94.47.64	Sender	EAP.S1.XMIT.Q
WMQA.TO.WAS601	9.39.64.103(11414)	Sender	WAS601

Total: 2 Selected: 0

Top 5 Xmit Queues with Messages

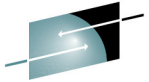
EAP.S1.XMI...

Dead Letter Queue

DLQ Name	DLQ Depth	DLQ Maximum
WMQA.DEAD.QUEL	0	999,999,999

Total: 1 Selected: 0

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View key performance graphs and tables

The screenshot displays the IBM MQ Queue Manager Details dashboard. On the left, the 'Selected QMgr' section shows details for QMgr Name: WMQA, Host Name: MVST, and QMgr Health: Warning. Below this is the 'QMgr Statistics' section with message rates and log manager data.

The main dashboard features several key performance indicators:

- Top 5 Queues with High Depth:** A bar chart showing 'Queue Name' vs '% Full'. A red vertical line is drawn at approximately 80% full.
- Top 5 Queues Not Being Read:** A bar chart showing 'Queue Name' vs 'Current Depth'. The top queue is EAP.S1.XMI...
- Top 5 Queues Oldest Message Age (sec):** A horizontal bar chart showing 'Queue Name' vs 'Oldest Message Age'. The top queue is RESTARTQ with an age of 222416901 seconds.
- Current Channels Not Running:** A table listing channels that are not running. The first row is selected:

Channel Name	Connection Name	Channel Type	XmitQ Name
EAP.S1.WMQA.TO.\	192.84.47.64	Sender	EAP.S1.XMI...
WMQA.TO.WAS601.	9.39.64.103(11414)	Sender	
- Top 5 Xmit Queues with Messages:** A bar chart showing 'Queue Name' vs 'Current Depth'. The top queue is EAP.S1.XMI...
- Dead Letter Queue:** A table showing DLQ Name, DLQ Depth, and DLQ Maximum. The entry is WMQA.DEAD.QUEL with a depth of 0 and a maximum of 999,999,999.

The operator selects the row representing that channel from the Channels Not Running table and navigates to the Channels Not Running problem isolation page in context of the identified channel.

Isolate the Problem

▪ View each widget on page: “Selected Channel,” “Remote Channel,” “Recent Transmission Rate,” “Queue Manager Events,” “Transmission Queue,” “Suggested Actions” (0 clicks)

Selected Channel

Channel	
Channel Name:	EAP.S1.WMQA.TO.WMQT
Connection Name:	192.84.47.64
Channel Type:	Sender
QMGr Name:	WMQA
Host Name:	MVST
Status	
Channel Status:	Retrying
Current Action State:	Other
In-Doubt Status:	No
XmitQ Name:	EAP.S1.XMIT.Q1
Last Msg Date & Time:	2015-08-05 17:46:51

Remote Channel

Queue Manager Status	
Queue Manager Name:	WMQT
Queue Manager Status:	Running
Host Name:	MVST
Channel Status	
Channel Name:	EAP.S1.WMQA.TO.WMQT
Channel Status:	Running
Host Name:	MVST

Recent Transmission Rate

Sample Date and Time	Transmit KiloBytes per Second
4:42 PM	1.0
4:48 PM	1.0
4:54 PM	1.0
5:00 PM	1.0
5:06 PM	1.0
5:12 PM	1.0
5:18 PM	1.0
5:24 PM	1.0
5:30 PM	1.0
5:36 PM	1.0
5:42 PM	1.0
5:48 PM	0.0

Suggested Actions

MQSeries_MQ_Channel_Not_Running

Problem Description:
A channel is currently not running.

Suggested Actions:
A channel that has been previously started, called a current channel, may not be in running status for several reasons. Check system log messages and the network for any problems that require resolution.

Problem	Solution
The channel is in stopped status.	Start the channel again.
The channel is in retrying status.	Check whether the receiving side has the appropriate listener

Transmission Queue

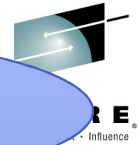
Queue	
Queue Name:	EAP.S1.XMIT.Q1
QMGr Name:	WMQA
Host Name:	MVST
Status	
Current Depth:	587
Oldest Message Age:	293
Average Queue Time:	156
Input Opens:	0
Output Opens:	1
Uncommitted Messages:	No
Last Put Date & Time:	2015-08-05 17:51:45

Queue Manager Events

Event Date and Time	Event	Resource Name	Application Identifier	Application Type	Event Qualifier	Event User ID
Aug 5, 2015 3:46:52	Channel_Stopped	EAP.S1.WMQA.TO.1	WMQA	QMGR	Channel Stopped Re	
Aug 5, 2015 3:47:02	Channel_Stopped	EAP.S1.WMQA.TO.1	WMQA	QMGR	Channel Stopped Re	
Aug 5, 2015 1:08:03	Channel_Stopped_B	EAP.S1.WMQA.TO.1	WMQA	QMGR	Channel Stopped Dis	
Aug 5, 2015 3:50:13	Channel_Stopped	EAP.S1.WMQA.TO.1	WMQA	QMGR	Channel Stopped Re	
Aug 5, 2015 2:51:16	Channel_Stopped	EAP.S1.WMQA.TO.1	WMQA	QMGR	Channel Stopped Re	

Total: 7 Selected: 0

Isolate the Problem



Selected Channel is in Retrying status

Need to see remote channel

Selected Channel

Channel	
Channel Name:	EAP.S1.WMQA.TO.WMQT
Connection Name:	192.84.47.64
Channel Type:	Sender
QMgr Name:	WMQA
Host Name:	MVST
Status	
Channel Status:	Retrying
Current Action State:	Other
In-Doubt Status:	No
XmitQ Name:	EAP.S1.XMIT.Q1
Last Msg Date & Time:	2015-08-05 17:46:51

Remote Channel

Channel	
Channel Name:	EAP.S1.WMQA.TO.WMQT
Connection Name:	::ffff:192.84.47.64
Channel Type:	Receiver
Channel Status:	Stopped
Current Action State:	Other
In-Doubt Status:	No
Message Count:	18,879

Recent Transmission Rate

Suggested Actions

MQSeries_MQ_Channel_Not_Running

Problem Description:
A channel is currently not running.

Suggested Actions:
A channel that has been previously started, called a current channel, may not be in running status for several reasons. Check system log messages and the network for any problems that require resolution.

Problem	Solution
The channel is in stopped status.	Start the channel again.
The channel is in retrying status.	Check whether the receiving side has the appropriate listener

Transmission Queue

Queue	
Queue Name:	EAP.S1.XMIT.Q1
QMgr Name:	WMQA
Host Name:	MVST
Status	
Current Depth:	587
Oldest Message Age:	293
Average Queue Time:	156
Input Opens:	0
Output Opens:	1
Uncommitted Messages:	No
Last Put Date & Time:	2015-08-05 17:51:45

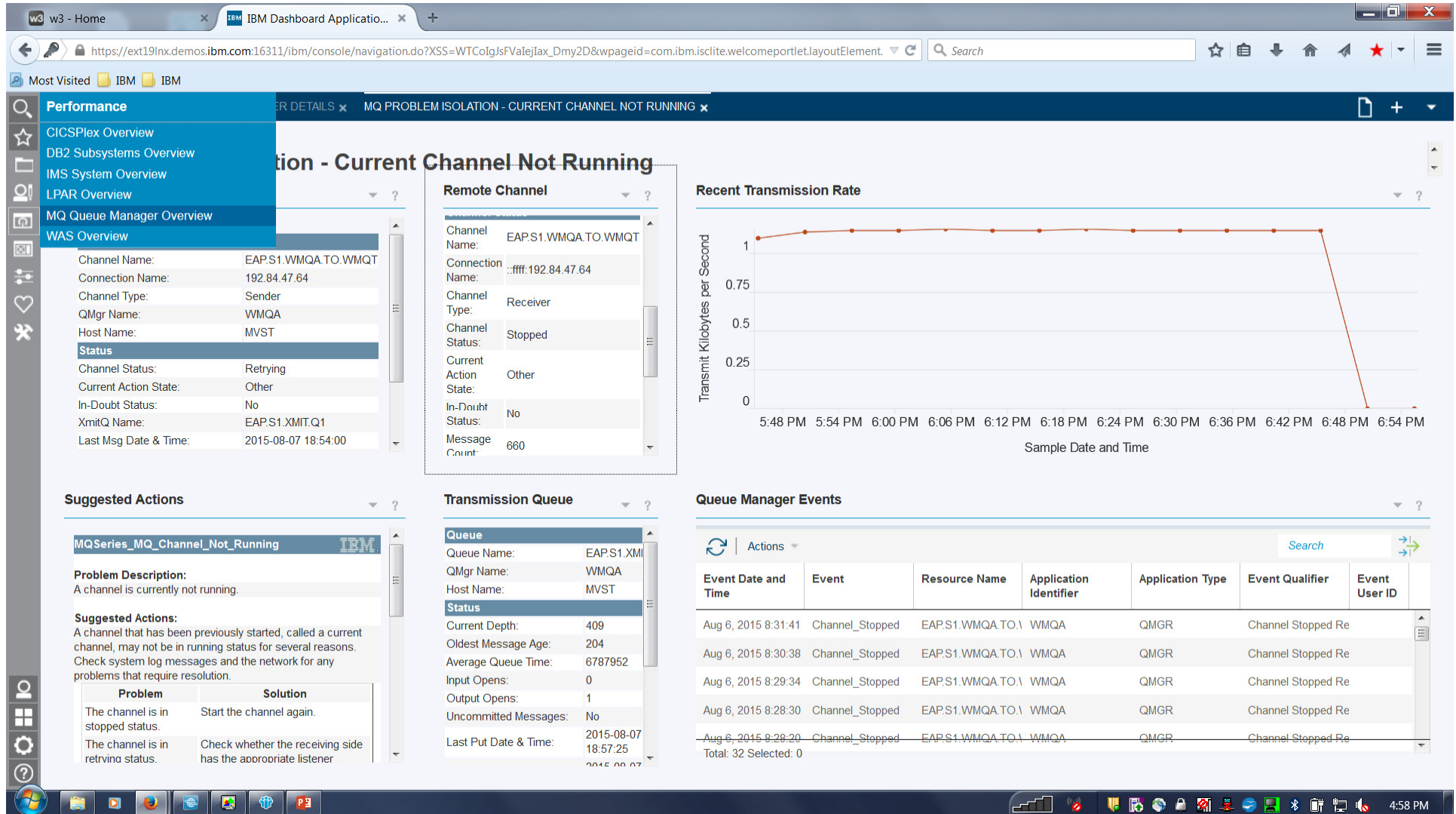
Queue Manager Events

Event Date and Time	Event	Resource Name	Application Identifier	Application Type	Event Qualifier	Event User ID
Aug 5, 2015 3:46:52	Channel_Stopped	EAP.S1.WMQA.TO.1	WMQA	QMGR	Channel Stopped Re	
Aug 5, 2015 3:47:02	Channel_Stopped	EAP.S1.WMQA.TO.1	WMQA	QMGR	Channel Stopped Re	
Aug 5, 2015 1:08:03	Channel_Stopped_B	EAP.S1.WMQA.TO.1	WMQA	QMGR	Channel Stopped Dis	
Aug 5, 2015 3:50:13	Channel_Stopped	EAP.S1.WMQA.TO.1	WMQA	QMGR	Channel Stopped Re	
Aug 5, 2015 2:51:16	Channel_Stopped	EAP.S1.WMQA.TO.1	WMQA	QMGR	Channel Stopped Re	

Total: 7 Selected: 0

Isolate the problem

- Need to start stopped channel on remote queue manager WMQT; click on Performance button, then on MQ Queue Manager Overview



The screenshot displays the IBM MQ Queue Manager Overview console. The main title is "MQ PROBLEM ISOLATION - CURRENT CHANNEL NOT RUNNING". The left sidebar shows the navigation menu with "MQ Queue Manager Overview" selected. The main content area is divided into several sections:

- Channel Details:**
 - Channel Name: EAP.S1.WMQA.TO.WMQT
 - Connection Name: 192.84.47.64
 - Channel Type: Sender
 - QMGR Name: WMQA
 - Host Name: MVST
 - Status: Stopped
 - Current Action State: Other
 - In-Doubt Status: No
 - XmitQ Name: EAP.S1.XMIT.Q1
 - Last Msg Date & Time: 2015-08-07 18:54:00
- Remote Channel:**
 - Channel Name: EAP.S1.WMQA.TO.WMQT
 - Connection Name: 192.84.47.64
 - Channel Type: Receiver
 - Channel Status: Stopped
 - Current Action State: Other
 - In-Doubt Status: No
 - Message Count: 660
- Recent Transmission Rate:** A line graph showing "Transmit Kilobytes per Second" on the y-axis (0 to 1) and "Sample Date and Time" on the x-axis (5:48 PM to 6:54 PM). The rate is stable at approximately 1.0 KB/s until 6:42 PM, then drops sharply to 0 by 6:48 PM.
- Suggested Actions:**
 - Problem Description:** A channel is currently not running.
 - Suggested Actions:** A channel that has been previously started, called a current channel, may not be in running status for several reasons. Check system log messages and the network for any problems that require resolution.
 - Problem Solution Table:**

Problem	Solution
The channel is in stopped status.	Start the channel again.
The channel is in retrying status.	Check whether the receiving side has the appropriate listener
- Transmission Queue:**
 - Queue Name: EAP.S1.XMIT.Q1
 - QMGR Name: WMQA
 - Host Name: MVST
 - Status:
 - Current Depth: 409
 - Oldest Message Age: 204
 - Average Queue Time: 6787952
 - Input Opens: 0
 - Output Opens: 1
 - Uncommitted Messages: No
 - Last Put Date & Time: 2015-08-07 18:57:25
- Queue Manager Events:** A table listing recent events:

Event Date and Time	Event	Resource Name	Application Identifier	Application Type	Event Qualifier	Event User ID
Aug 6, 2015 8:31:41	Channel_Stopped	EAP.S1.WMQA.TO.1	WMQA	QMGR	Channel Stopped Re	
Aug 6, 2015 8:30:38	Channel_Stopped	EAP.S1.WMQA.TO.1	WMQA	QMGR	Channel Stopped Re	
Aug 6, 2015 8:29:34	Channel_Stopped	EAP.S1.WMQA.TO.1	WMQA	QMGR	Channel Stopped Re	
Aug 6, 2015 8:28:30	Channel_Stopped	EAP.S1.WMQA.TO.1	WMQA	QMGR	Channel Stopped Re	
Aug 6, 2015 8:28:20	Channel_Stopped	EAP.S1.WMQA.TO.1	WMQA	QMGR	Channel Stopped Re	
Total: 32 Selected: 0						

Isolate the problem



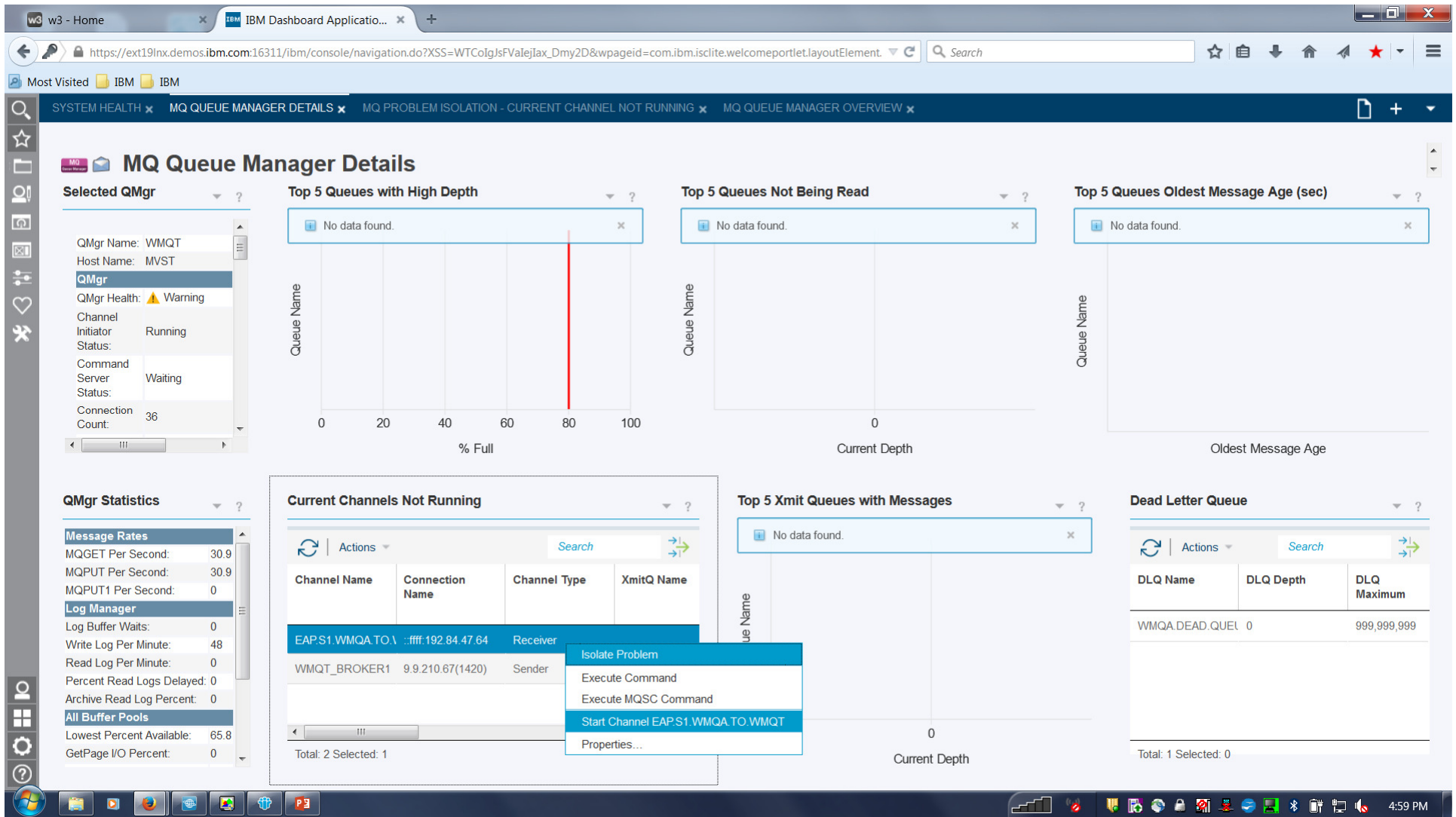
- See WMQT in list, right click on it and then click on MQ Queue Manager Details

The screenshot shows the IBM MQ Queue Manager Overview console. The main table displays the status of various Queue Managers. The 'WMQT' entry is highlighted in blue, and a context menu is open over it, showing options like 'View MQ Queue Manager Details for WMQT', 'Execute Command', 'Execute MQSC Command', and 'Properties...'. The console also includes sections for 'MQ Log Analytics' and 'Selected QMgr' (WMQT, Hostname: MVST).

Evaluated Status	QMgr Name	Host Name	QMgr Health	Queue Health	Channel Health	QMgr Status	Channel Initiator Status	Command Server Status	Connection Count	Current MQEver
✖ QMgr Status	WMQB	MVST	Critical	Unknown	Unknown	Stopped	Stopped	Stopped	0	0
✖ Cur MQEvents	WMQA	MVST	Warning	Critical	Critical	Running	Running	Waiting	36	5
✖ Cur MQEvents	WMQT	MVST	Warning	Warning	Critical	Running	Running	Waiting	36	3

Start Channel

- See EAP channel not running (receiver), right click on it and click on Start Channel

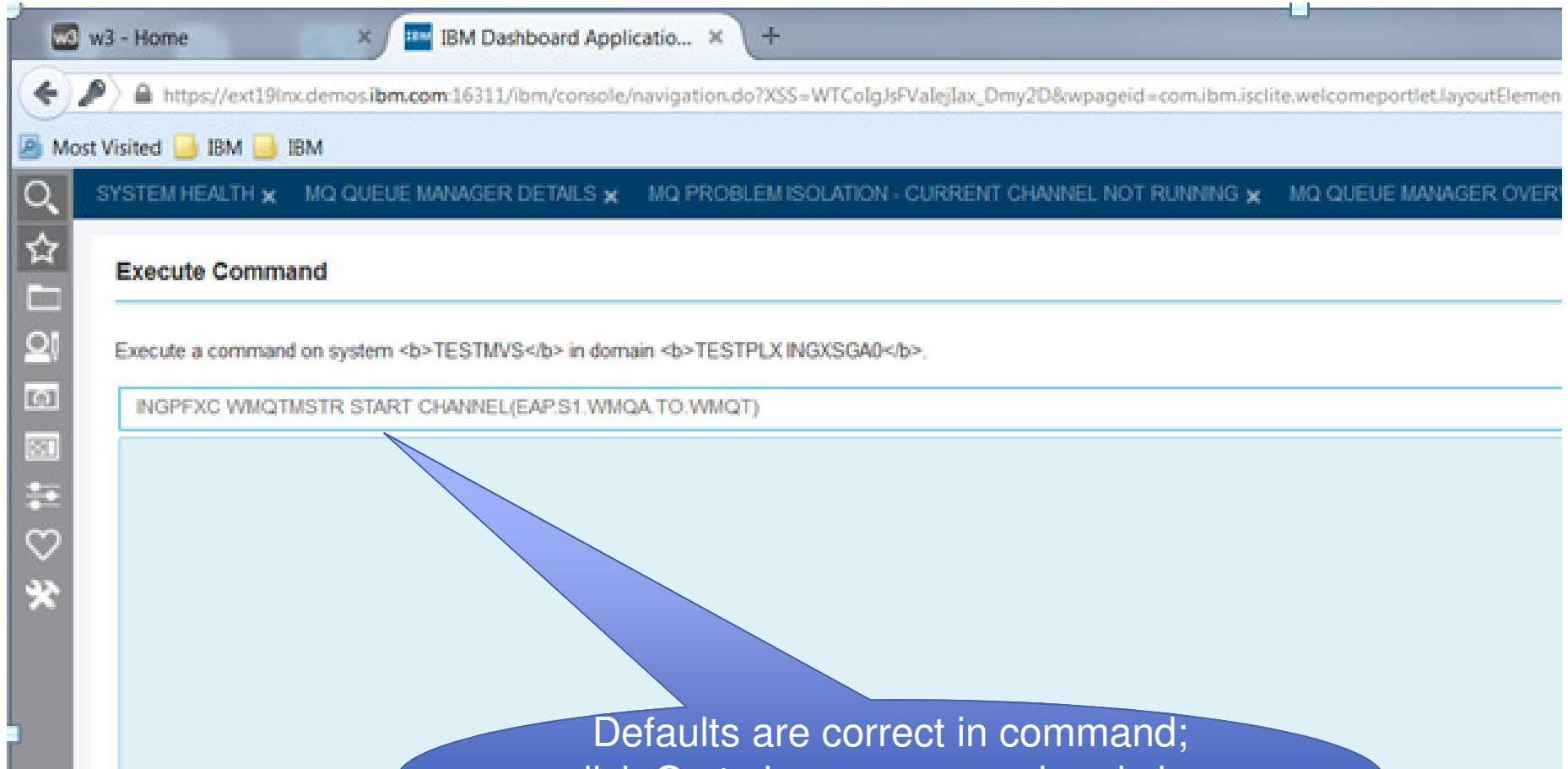


The screenshot shows the IBM MQ Queue Manager Details console. The 'Selected QMgr' section shows 'WMQT' with a 'Warning' health status. The 'Current Channels Not Running' table lists two channels: 'EAP.S1.WMQA.TO.V' (Receiver) and 'WMQT_BROKER1' (Sender). A right-click context menu is open over the 'EAP.S1.WMQA.TO.V' channel, with the 'Start Channel EAP.S1.WMQA.TO.WMQT' option highlighted. Other panels show 'Top 5 Queues with High Depth' (80% full), 'Top 5 Queues Not Being Read', 'Top 5 Queues Oldest Message Age', 'QMgr Statistics', and 'Dead Letter Queue'.

Channel Name	Connection Name	Channel Type	XmitQ Name
EAP.S1.WMQA.TO.V	ffff.192.84.47.64	Receiver	
WMQT_BROKER1	9.9.210.67(1420)	Sender	

DLQ Name	DLQ Depth	DLQ Maximum
WMQA.DEAD.QUEL	0	999,999,999

Start Channel



Execute Command

Execute a command on system **TESTMVS** in domain **TESTPLX INGXSGA0**.

```
INGPFXC WMQTMSTR START CHANNEL(EAP.S1.WMQA.TO.WMQT)
```

Start Channel: Execute Command



Execute a command on system TESTMVS in domain TESTPLX INXSGA0.

Command:

```
Command: INGPFXC WMQTMSTR START CHANNEL(EAP.S1.WMQA.TO.WMQT)
Output:
WMQT START CHANNEL(EAP.S1.WMQA.TO.WMQT)
CSQM134I WMQT CSQMSCHL START CHANNEL(EAP.S1.WMQA.TO.WMQT) COMMAND
ACCEPTED
CSQ9022I WMQT CSQXCRPS ' START CHANNEL' NORMAL COMPLETION
```

Defaults are correct in command; click Go to issue command and view response

Problem Resolved: Channel Running



IBM Dashboard Application... | https://ext19lnx.demos.ibm.com:16311/ibm/console/navigation.do?XSS=WTCoIgsFValeJlax_Dmy2D&wpageid=com.ibm.isclite.welcomeportlet.layoutElement

SYSTEM HEALTH | MQ QUEUE MANAGER DETAILS | MQ PROBLEM ISOLATION - CURRENT CHANNEL NOT RUNNING | MQ QUEUE MANAGER OVERVIEW | EXECUTE COMMAND

MQ Queue Manager Details

Selected QMgr

QMgr Name: WMQT
 Host Name: MVST
QMgr
 QMgr Health: ⚠ Warning
 Channel Initiator: Running
 Status:
 Command Server Status: Waiting
 Connection Count: 36

Top 5 Queues with High Depth

No data found.

Top 5 Queues Not Being Read

No data found.

Top 5 Queues Oldest Message Age (sec)

No data found.

QMgr Statistics

Message Rates

MQGET Per Second: 30.9
 MQPUT Per Second: 30.9
 MQPUT1 Per Second: 0

Log Manager

Log Buffer Waits: 0
 Write Log Per Minute: 48
 Read Log Per Minute: 0
 Percent Read Logs Delayed: 0
 Archive Read Log Percent: 0

All Buffer Pools

Lowest Percent Available: 65.8
 GetPage I/O Percent: 0

Current Channels Not Running

Channel Name	Connection Name	Channel Type	XmitQ Name
WMQT_BROKER1	9.9.210.67(1420)	Sender	BROKER1

Total: 1 Selected: 1

Top 5 Xmit Queues

No data found.

Top 5 Queues Oldest Message Age (sec)

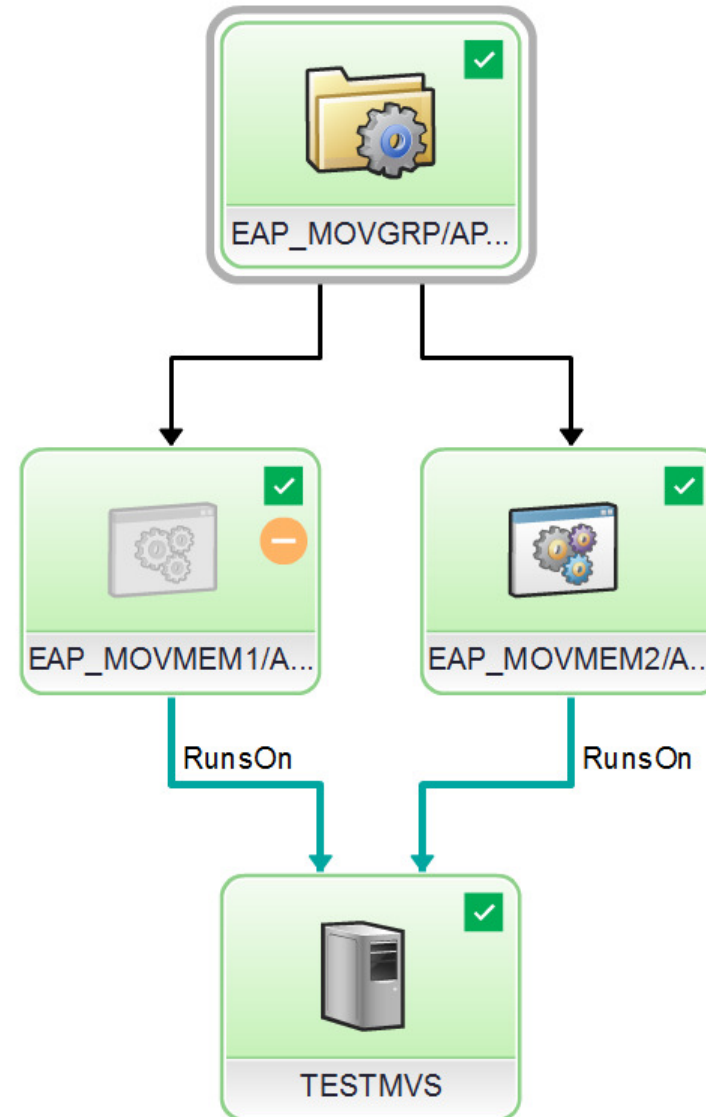
Queue Name	DLQ Maximum
WMQA.DEAD.QUEL	0
	999,999,999

Total: 1 Selected: 0

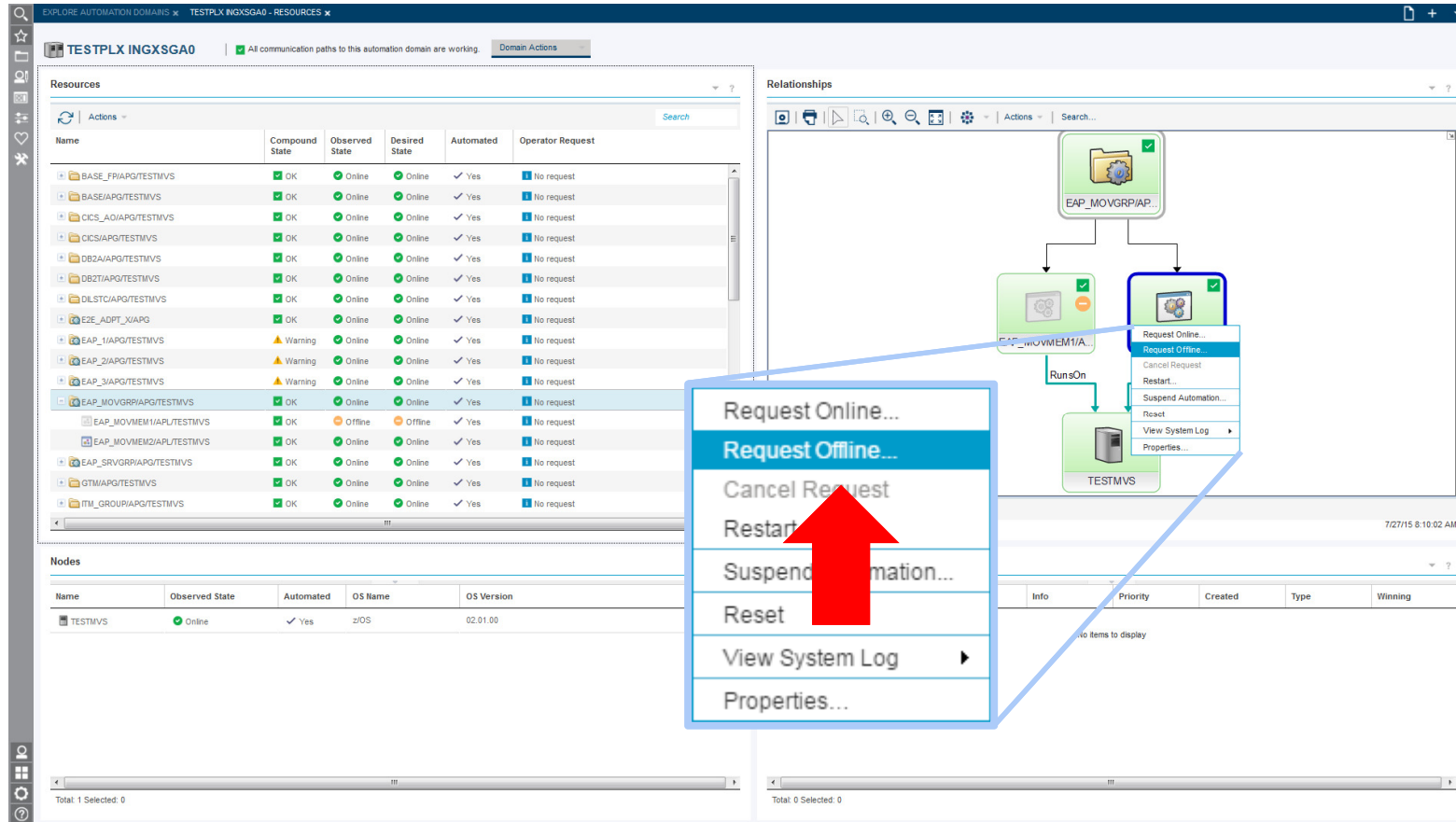
See that EAP channel is no longer listed as not running

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

User Scenario 2: Restore Service outage during maintenance



Shutdown Resource for maintenance



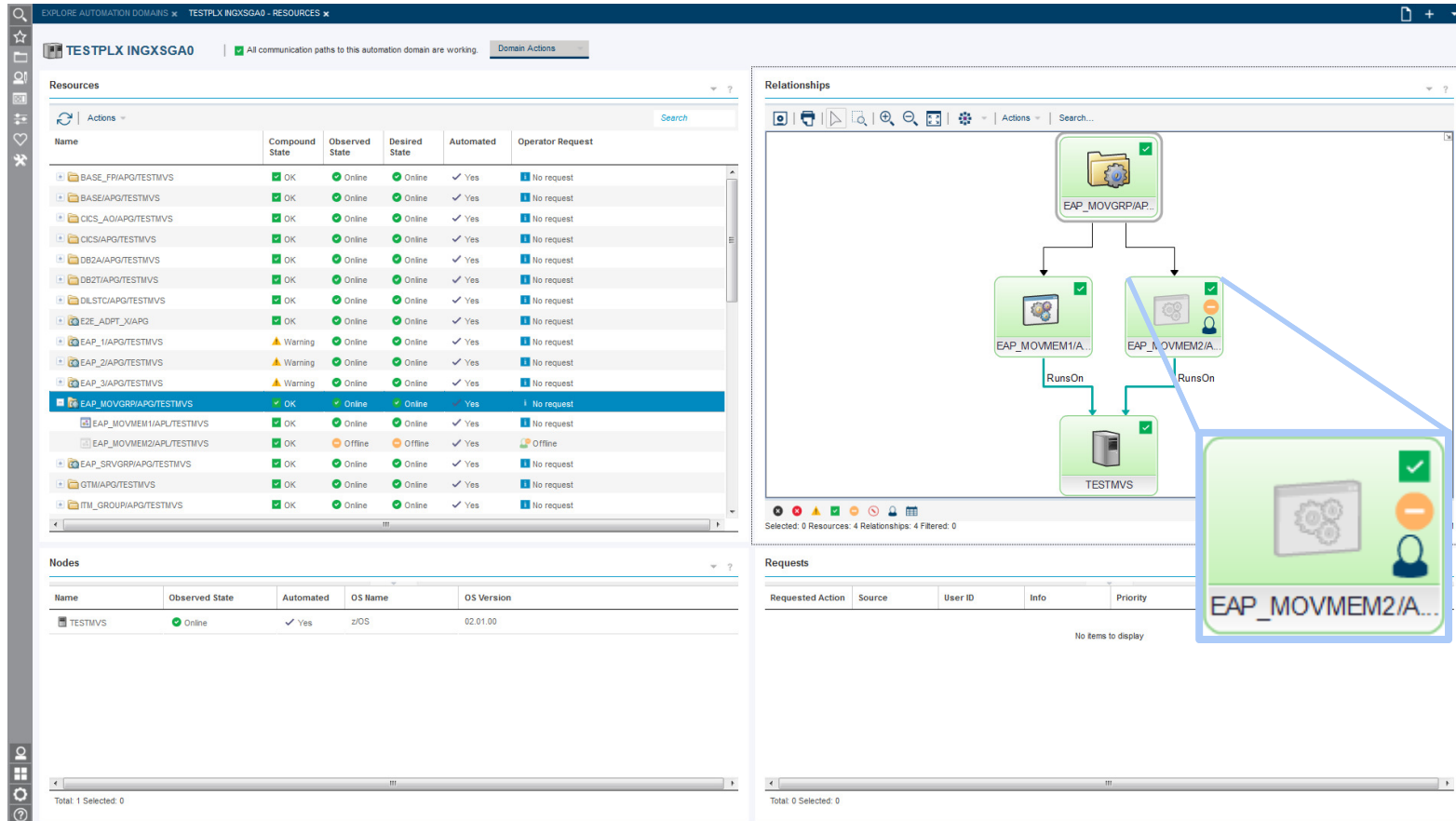
The screenshot displays the TestPLX NGXSGAO interface. On the left, the 'Resources' table lists various resources with their states. On the right, the 'Relationships' diagram shows a hierarchy of resources. A context menu is open over the 'EAP_MOVMEM1A...' resource, with 'Request Offline...' highlighted by a red arrow.

Name	Compound State	Observed State	Desired State	Automated	Operator Request
BASE_FPIAPG/TESTMVS	OK	Online	Online	Yes	No request
BASE_IAPG/TESTMVS	OK	Online	Online	Yes	No request
CICS_AQIAPG/TESTMVS	OK	Online	Online	Yes	No request
CICS_IAPG/TESTMVS	OK	Online	Online	Yes	No request
OB2A/APG/TESTMVS	OK	Online	Online	Yes	No request
OB2I/APG/TESTMVS	OK	Online	Online	Yes	No request
DILSTCIAPG/TESTMVS	OK	Online	Online	Yes	No request
E2E_ADPT_XIAPG	OK	Online	Online	Yes	No request
EAP_I1APG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_2IAPG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_3IAPG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_MOVGRIAPG/TESTMVS	OK	Online	Online	Yes	No request
EAP_MOVMEM1IAPL/TESTMVS	OK	Offline	Offline	Yes	No request
EAP_MOVMEM2IAPL/TESTMVS	OK	Online	Online	Yes	No request
EAP_SRVGRIAPG/TESTMVS	OK	Online	Online	Yes	No request
GTM/APG/TESTMVS	OK	Online	Online	Yes	No request
ITM_GROUP/APG/TESTMVS	OK	Online	Online	Yes	No request

Name	Observed State	Automated	OS Name	OS Version
TESTMVS	Online	Yes	z/OS	02.01.00

Shutdown Resource for maintenance

Resource stopped successfully



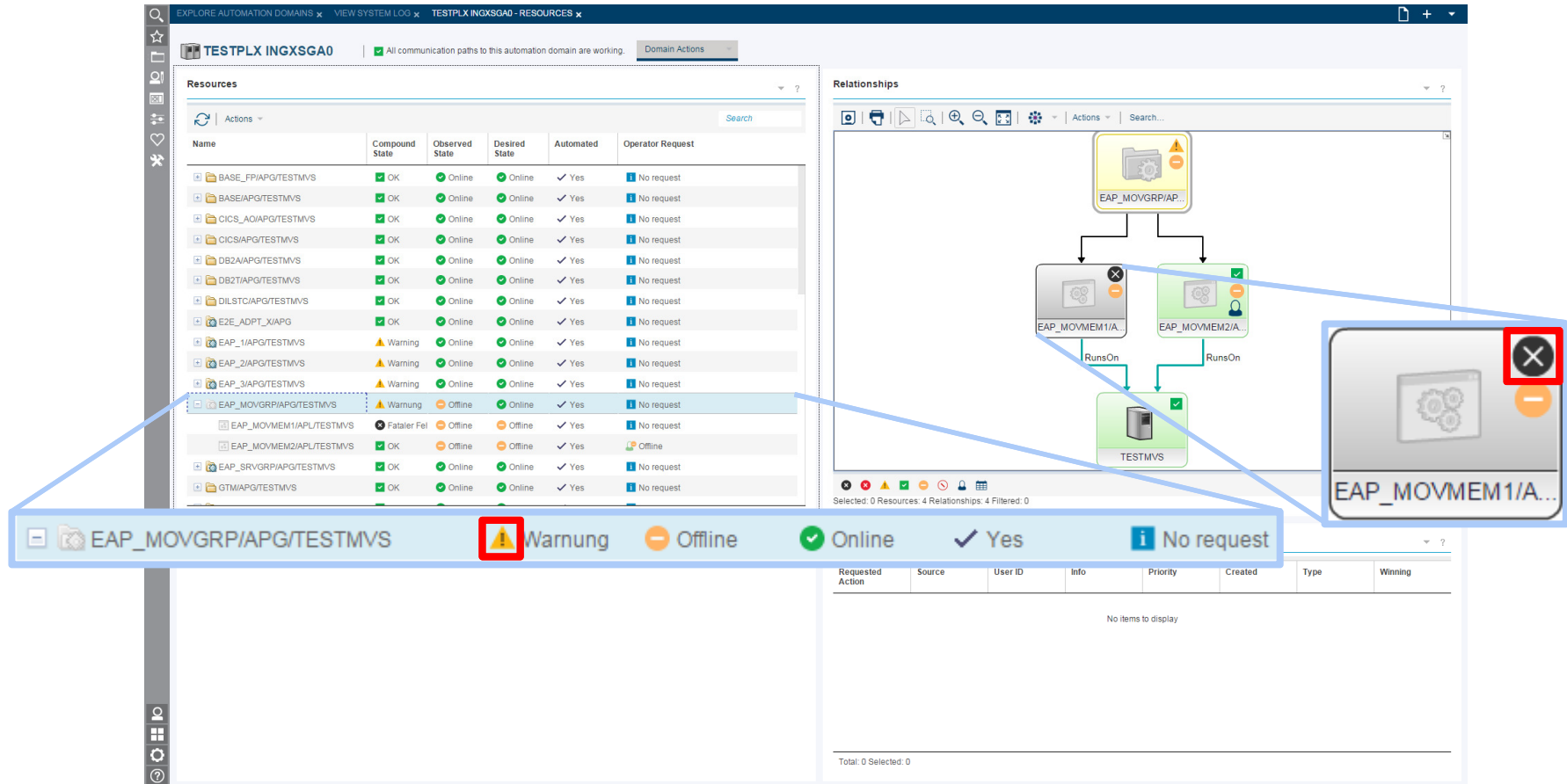
The screenshot shows the 'TESTPLX INGXSGAO - RESOURCES' interface. The 'Resources' table lists various resources with their states. The 'Relationships' pane shows a dependency graph where 'EAP_MOVGRP/AP...' is at the top, branching into 'EAP_MOVMEM1/A...' and 'EAP_MOVMEM2/A...'. 'EAP_MOVMEM2/A...' is highlighted with a blue box, and a callout shows its details, including a green checkmark and a red stop button. The 'Requests' pane is empty.

Name	Compound State	Observed State	Desired State	Automated	Operator Request
BASE_FPI/APG/TESTMVS	OK	Online	Online	Yes	No request
BASE_IAPG/TESTMVS	OK	Online	Online	Yes	No request
CICS_AQ/APG/TESTMVS	OK	Online	Online	Yes	No request
CICS/APG/TESTMVS	OK	Online	Online	Yes	No request
OB2A/APG/TESTMVS	OK	Online	Online	Yes	No request
OB2I/APG/TESTMVS	OK	Online	Online	Yes	No request
DLSTC/APG/TESTMVS	OK	Online	Online	Yes	No request
EZE_ADPT_X/APG	OK	Online	Online	Yes	No request
EAP_1I/APG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_2I/APG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_3I/APG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_MOVGRP/APG/TESTMVS	OK	Online	Online	Yes	No request
EAP_MOVMEM1/IAPL/TESTMVS	OK	Online	Online	Yes	No request
EAP_MOVMEM2/IAPL/TESTMVS	OK	Offline	Offline	Yes	Offline
EAP_SRVGRP/APG/TESTMVS	OK	Online	Online	Yes	No request
GTM/APG/TESTMVS	OK	Online	Online	Yes	No request
ITM_GROUP/APG/TESTMVS	OK	Online	Online	Yes	No request

Name	Observed State	Automated	OS Name	OS Version
TESTMVS	Online	Yes	z/OS	02.01.00

Shutdown Resource for maintenance

Problem: Backup resource crashes during startup



The screenshot displays the TESTPLX INGXSGA0 interface. The Resources table lists various resources with their states. A red box highlights a warning icon for the resource EAP_MOVGRP/APG/TESTMVS. The Relationships diagram shows a hierarchy of resources, with a red box highlighting a crash icon for EAP_MOVMEM1/A....

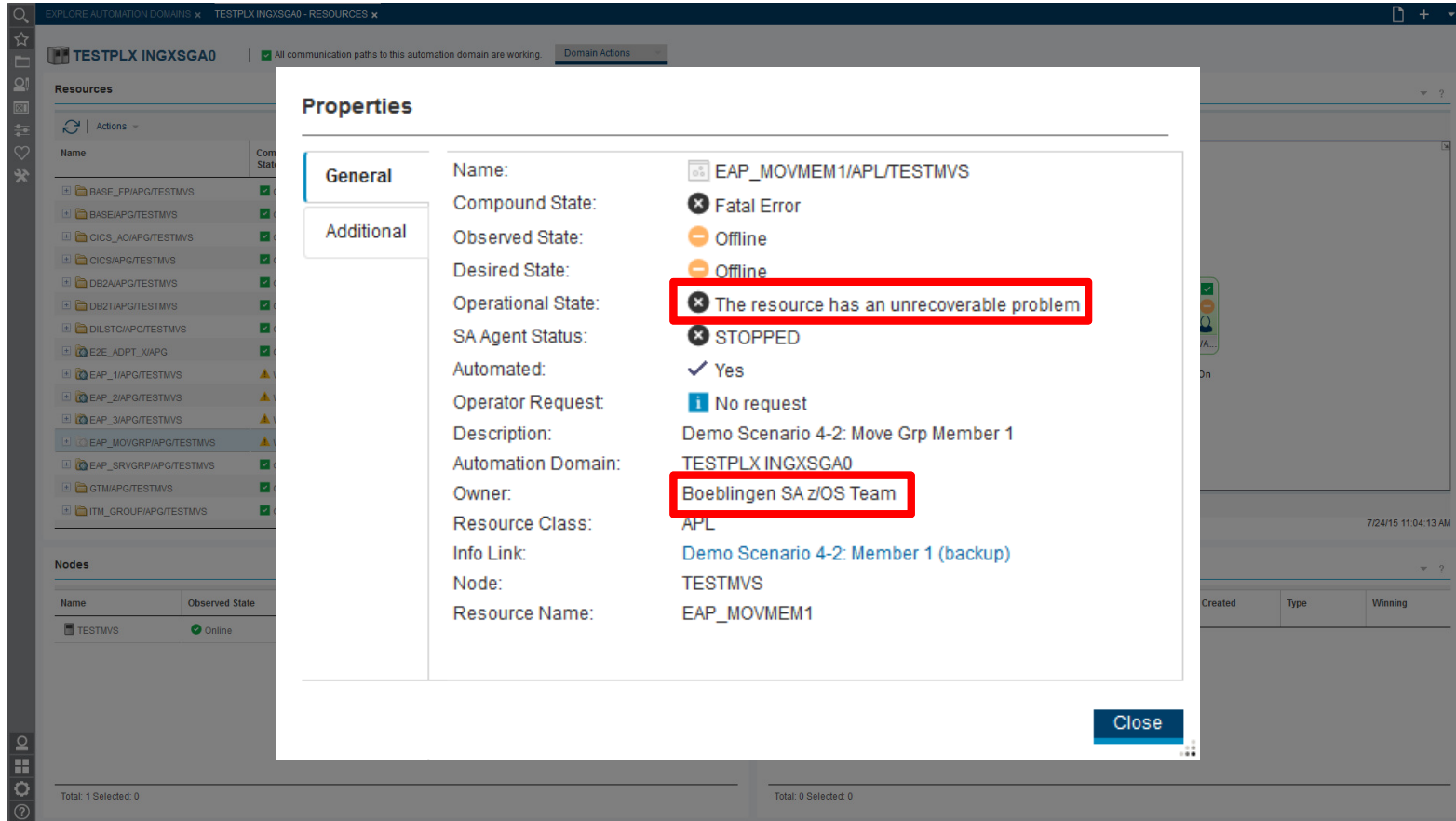
Name	Compound State	Observed State	Desired State	Automated	Operator Request
BASE_FPI/AG/TESTMVS	OK	Online	Online	Yes	No request
BASE/APG/TESTMVS	OK	Online	Online	Yes	No request
CICS_AQ/APG/TESTMVS	OK	Online	Online	Yes	No request
CICS/APG/TESTMVS	OK	Online	Online	Yes	No request
DB2A/APG/TESTMVS	OK	Online	Online	Yes	No request
DB2T/APG/TESTMVS	OK	Online	Online	Yes	No request
DILSTC/APG/TESTMVS	OK	Online	Online	Yes	No request
EZE_ADPT_XAPG	OK	Online	Online	Yes	No request
EAP_1/APG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_2/APG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_3/APG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_MOVGRP/APG/TESTMVS	Warning	Offline	Online	Yes	No request
EAP_MOVMEM1/APL/TESTMVS	Fataler Fei	Offline	Offline	Yes	No request
EAP_MOVMEM2/APL/TESTMVS	OK	Offline	Offline	Yes	Offline
EAP_SRVGRP/APG/TESTMVS	OK	Online	Online	Yes	No request
GTM/APG/TESTMVS	OK	Online	Online	Yes	No request

Relationships diagram showing EAP_MOVGRP/APG/TESTMVS (Warning) connected to EAP_MOVMEM1/A... (Crash) and EAP_MOVMEM2/A... (Offline). Both EAP_MOVMEM1/A... and EAP_MOVMEM2/A... are connected to TESTMVS (Online).

1. Identify the Problem

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

Check the properties of the backup resource

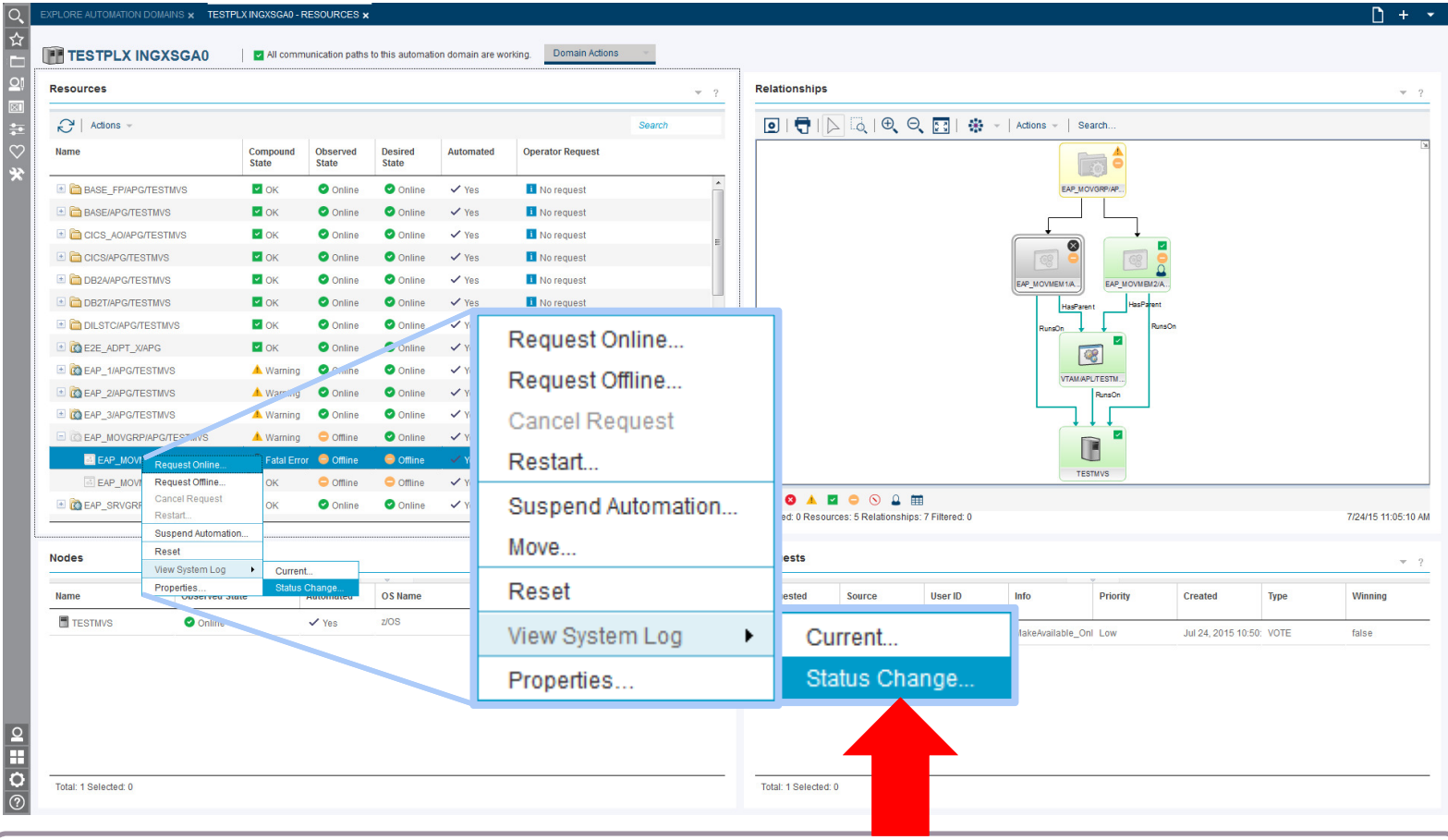


The screenshot shows a 'Properties' dialog box for a resource named 'EAP_MOVMEM1/APL/TESTMVS'. The 'Operational State' is 'The resource has an unrecoverable problem', and the 'Owner' is 'Boeblingen SA z/OS Team'. Other properties include 'Compound State: Fatal Error', 'Observed State: Offline', 'Desired State: Offline', 'SA Agent Status: STOPPED', 'Automated: Yes', 'Operator Request: No request', 'Description: Demo Scenario 4-2: Move Grp Member 1', 'Automation Domain: TESTPLX INGXSGA0', 'Info Link: Demo Scenario 4-2: Member 1 (backup)', 'Node: TESTMVS', and 'Resource Name: EAP_MOVMEM1'. A 'Close' button is visible at the bottom right of the dialog.

2. Isolate the Problem

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

Open the System Log to isolate the problem



The screenshot shows the TESTPLX INGXSGA0 interface. The Resources table lists various automation components. A context menu is open for the 'EAP_MOV...' resource, with 'View System Log' selected. A red arrow points to the 'Status Change...' option in the expanded menu.

Name	Compound State	Observed State	Desired State	Automated	Operator Request
BASE_FIAPG/TESTMVS	OK	Online	Online	Yes	No request
BASE/APG/TESTMVS	OK	Online	Online	Yes	No request
CICS_AO/APG/TESTMVS	OK	Online	Online	Yes	No request
CICS/APG/TESTMVS	OK	Online	Online	Yes	No request
DB2A/APG/TESTMVS	OK	Online	Online	Yes	No request
DB2T/APG/TESTMVS	OK	Online	Online	Yes	No request
DILSTC/APG/TESTMVS	OK	Online	Online	Yes	No request
E2E_ADPT_X/APG	OK	Online	Online	Yes	No request
EAP_1/APG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_2/APG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_3/APG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_MOVGRP/APG/TESTMVS	Warning	Offline	Offline	Yes	No request
EAP_MOV...	Fatal Error	Offline	Offline	Yes	No request
EAP_MOV...	OK	Offline	Offline	Yes	No request
EAP_SRVGRP...	OK	Online	Online	Yes	No request

2. Isolate the Problem

Identify the reason for the crash

EXPLORE AUTOMATION DOMAINS x TESTPLX INOXSGA0 - RESOURCES x VIEW SYSTEM LOG x

System Activity Log

Actions | Previous Next

Time	Message ID	Message
Jul 24, 2015 10:50:25 AM	AOF5711	03:50:25 : EAP_MOVMEM1 SUBSYSTEM STATUS FOR JOB EAPMOV1 IS STOPPED - SHUTDOWN OUTSIDE OF AUTOMATION, RESTARTOPT IS NOT ALWAYS
Jul 24, 2015 10:50:25 AM	AOF5711	03:50:25 : EAP_MOVMEM1 SUBSYSTEM STATUS FOR JOB EAPMOV1 IS STOPPED - SHUTDOWN OUTSIDE OF AUTOMATION, RESTARTOPT IS NOT ALWAYS
Jul 24, 2015 10:50:25 AM	AOFRUPDT:	MVST EAP_MOVMEM1 SUBSYSTEM ,STATUS=STOPPED
Jul 24, 2015 10:50:24 AM	AOF5711	03:50:24 : EAP_MOVMEM1 SUBSYSTEM STATUS FOR JOB EAPMOV1 IS STOPPING - SUBSYSTEM SHUTDOWN OUTSIDE OF AUTOMATION
Jul 24, 2015 10:50:24 AM	AOF5711	03:50:24 : EAP_MOVMEM1 SUBSYSTEM STATUS FOR JOB EAPMOV1 IS STOPPING - SUBSYSTEM SHUTDOWN OUTSIDE OF AUTOMATION
Jul 24, 2015 10:50:24 AM	AOFRUPDT:	MVST EAP_MOVMEM1 SUBSYSTEM ,STATUS=STOPPING
Jul 24, 2015 10:49:55 AM	DW0032E	AUTOMATION ACTION INGRVPSO INTERNAL RS=EAP_MOVMEM2/APL/TESTMVS ST=DELETE_ALL/ COULD NOT BE ROUTED TO TASK(S) CNM191P0 .
Jul 24, 2015 10:49:55 AM	CNM493I	AOFMSGST : 00810001 : INGRVPSO INTERNAL RS=EAP_MOVMEM2/APL/TESTMVS ST=DELETE_ALL/
Jul 24, 2015 10:49:54 AM	AOF570I	03:49:54 : ISSUED "RUN42" FOR SUBSYSTEM EAP_MOVMEM1 - PHASE IS ANYSTART
Jul 24, 2015 10:49:54 AM	AOF570I	03:49:54 : ISSUED "RUN42" FOR SUBSYSTEM EAP_MOVMEM1 - PHASE IS ANYSTART
Jul 24, 2015 10:49:54 AM	AOF570I	03:49:54 : ISSUED "RESET42" FOR SUBSYSTEM EAP_MOVMEM1 - PHASE IS ANYSTART
Jul 24, 2015 10:49:54 AM	AOF570I	03:49:54 : ISSUED "RESET42" FOR SUBSYSTEM EAP_MOVMEM1 - PHASE IS ANYSTART

03:50:25 : EAP_MOVMEM1 SUBSYSTEM STATUS FOR JOB EAPMOV1 IS STOPPED - SHUTDOWN OUTSIDE OF AUTOMATION, RESTARTOPT IS NOT ALWAYS

Jul 24, 2015 10:49:54 AM AOF749I SHUTDOWN COMPLETE FOR EAP_MOVMEM2 (RESTART=NO,TYPE=NORM)

Jul 24, 2015 10:49:54 AM AOF749I SHUTDOWN COMPLETE FOR EAP_MOVMEM2 (RESTART=NO,TYPE=NORM)

Jul 24, 2015 10:49:54 AM AOF5711 03:49:54 : EAP_MOVMEM2 SUBSYSTEM STATUS FOR JOB EAPMOV2 IS AUTODOWN - SET BY SHUTDOWN

Jul 24, 2015 10:49:54 AM AOF5711 03:49:54 : EAP_MOVMEM1 SUBSYSTEM STATUS FOR JOB EAPMOV1 IS ACTIVE - ACTIVE MESSAGE RECEIVED

Jul 24, 2015 10:49:54 AM AOF5711 03:49:54 : EAP_MOVMEM2 SUBSYSTEM STATUS FOR JOB EAPMOV2 IS AUTODOWN - SET BY SHUTDOWN

Jul 24, 2015 10:49:54 AM AOF5711 03:49:54 : EAP_MOVMEM1 SUBSYSTEM STATUS FOR JOB EAPMOV1 IS ACTIVE - ACTIVE MESSAGE RECEIVED

Jul 24, 2015 10:49:54 AM AOFRUPDT: MVST EAP_MOVMEM2 SUBSYSTEM ,STATUS=AUTODOWN

Jul 24, 2015 10:49:54 AM AOFRUPDT: MVST EAP_MOVMEM1 SUBSYSTEM ,STATUS=ACTIVE

Jul 24, 2015 10:49:54 AM AOF570I 03:49:54 : ISSUED "MVS S CXEZSSEM,DELAY=0,JOBNAME=EAPMOV1" FOR SUBSYSTEM EAP_MOVMEM1 - FROM FUNC=ISSUE REQUEST

Jul 24, 2015 10:49:54 AM AOF570I 03:49:54 : ISSUED "MVS S CXEZSSEM,DELAY=0,JOBNAME=EAPMOV1" FOR SUBSYSTEM EAP_MOVMEM1 - FROM FUNC=ISSUE REQUEST

Jul 24, 2015 10:49:54 AM DW0032E AUTOMATION ACTION INGRVPSO INTERNAL RS=EAP_MOVMEM1/APL/TESTMVS ST=DELETE_ALL/ COULD NOT BE ROUTED TO TASK(S) CNM191P0 .

Jul 24, 2015 10:49:54 AM CNM493I AOFMSGST : 00810001 : INGRVPSO INTERNAL RS=EAP_MOVMEM1/APL/TESTMVS ST=DELETE_ALL/

Jul 24, 2015 10:49:54 AM AOF570I 03:49:54 : ISSUED "MVS P EAPMOV2" FOR SUBSYSTEM EAP_MOVMEM2 - PHASE IS SHUTNORM

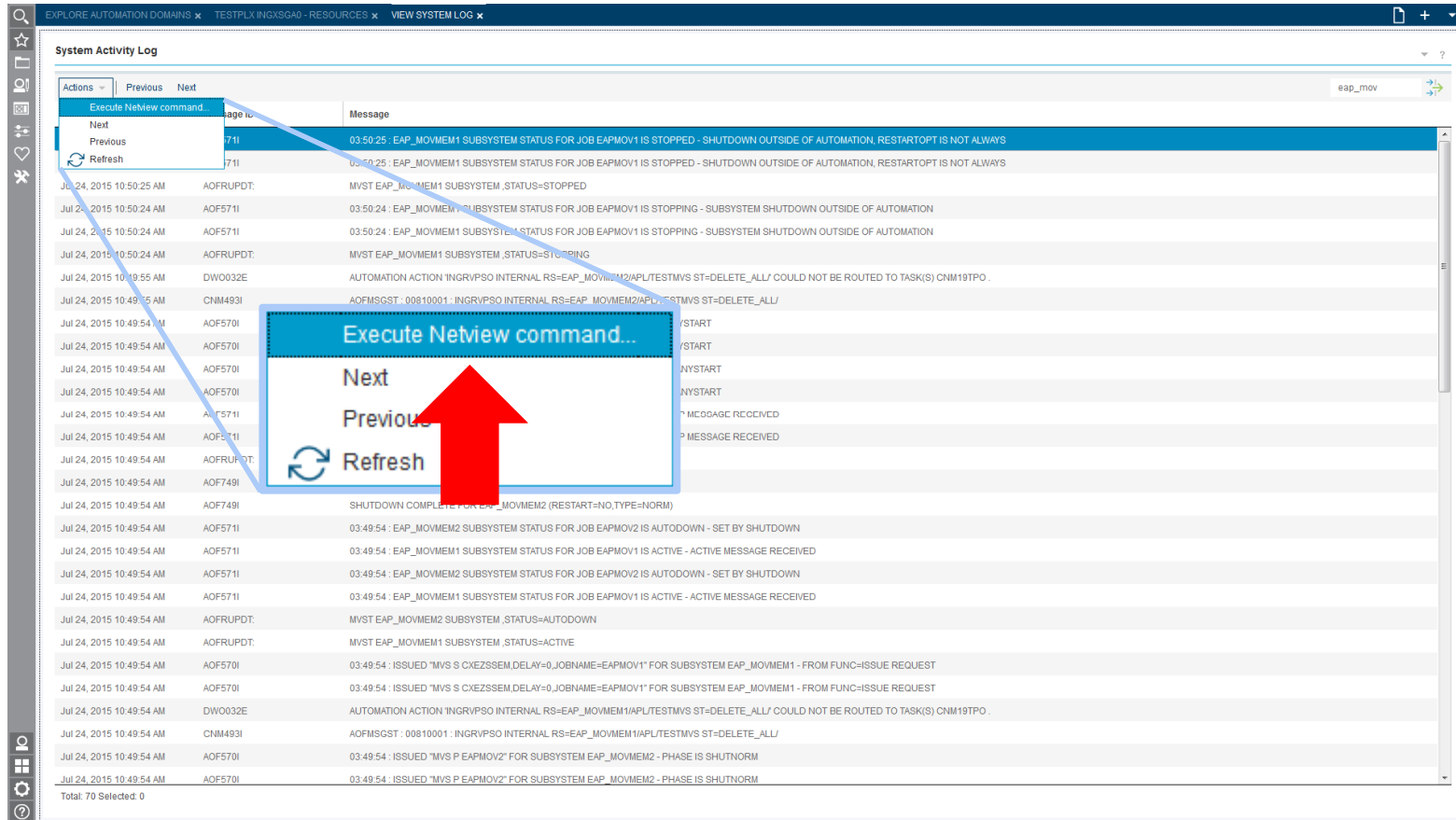
Jul 24, 2015 10:49:54 AM AOF570I 03:49:54 : ISSUED "MVS P EAPMOV2" FOR SUBSYSTEM EAP_MOVMEM2 - PHASE IS SHUTNORM

Total: 70 Selected: 0

2. Isolate the Problem

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

Open a dialog to execute a command

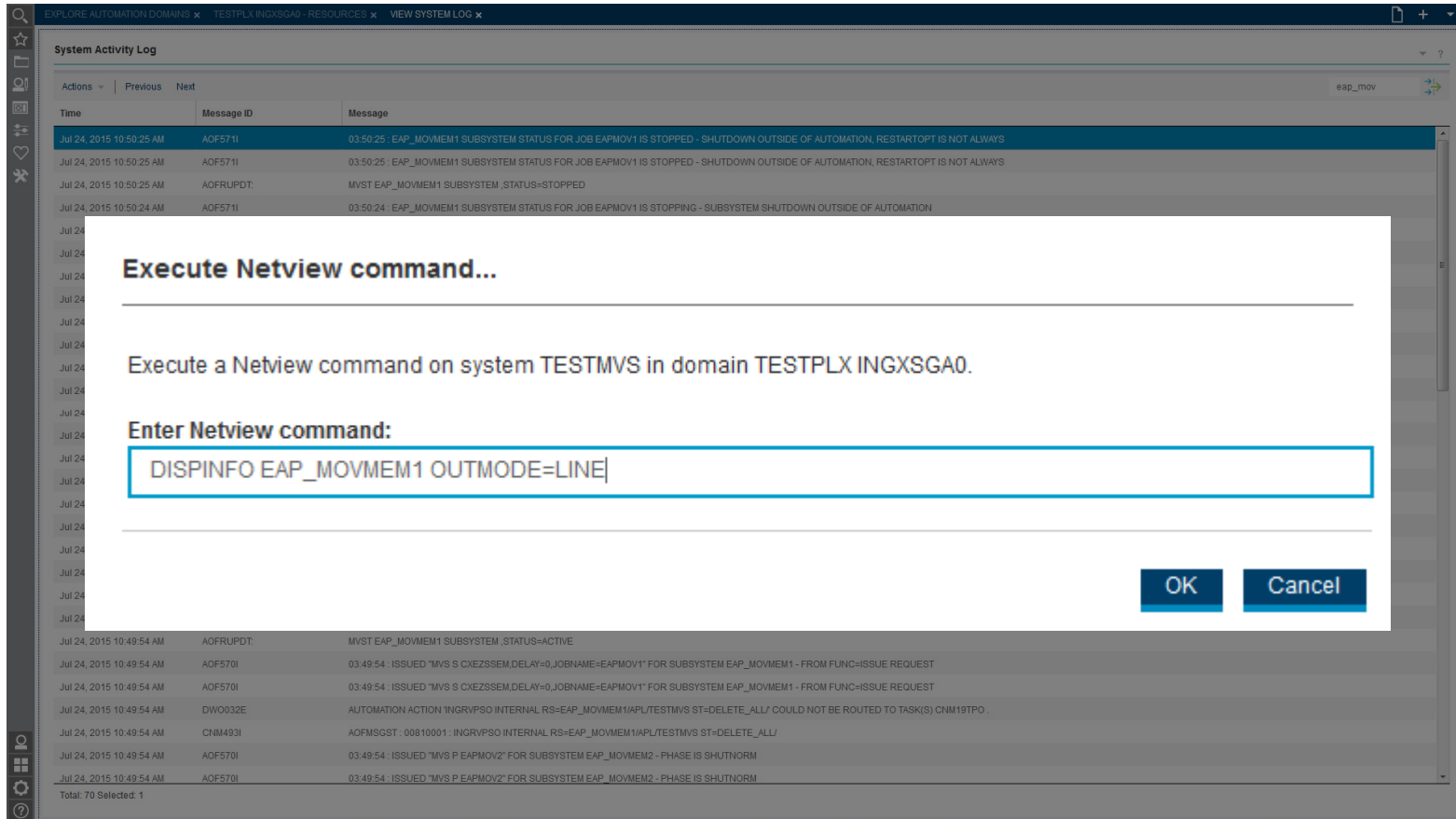


The screenshot shows a 'System Activity Log' window with a table of log entries. A dialog box titled 'Execute Netview command...' is open, showing 'Next', 'Previous', and 'Refresh' buttons. A red arrow points to the 'Execute Netview command...' button in the dialog. The log entries include messages such as 'EAP_MOMEM1 SUBSYSTEM STATUS FOR JOB EAPMOV1 IS STOPPED' and 'EAP_MOMEM2 SUBSYSTEM STATUS FOR JOB EAPMOV2 IS AUTODOWN'.

2. Isolate the Problem

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

Execute a NetView command for more information



The screenshot shows a NetView System Activity Log window. A dialog box titled "Execute Netview command..." is overlaid on the log. The dialog contains the following text:

Execute a Netview command on system TESTMVS in domain TESTPLX INGXSGA0.

Enter Netview command:

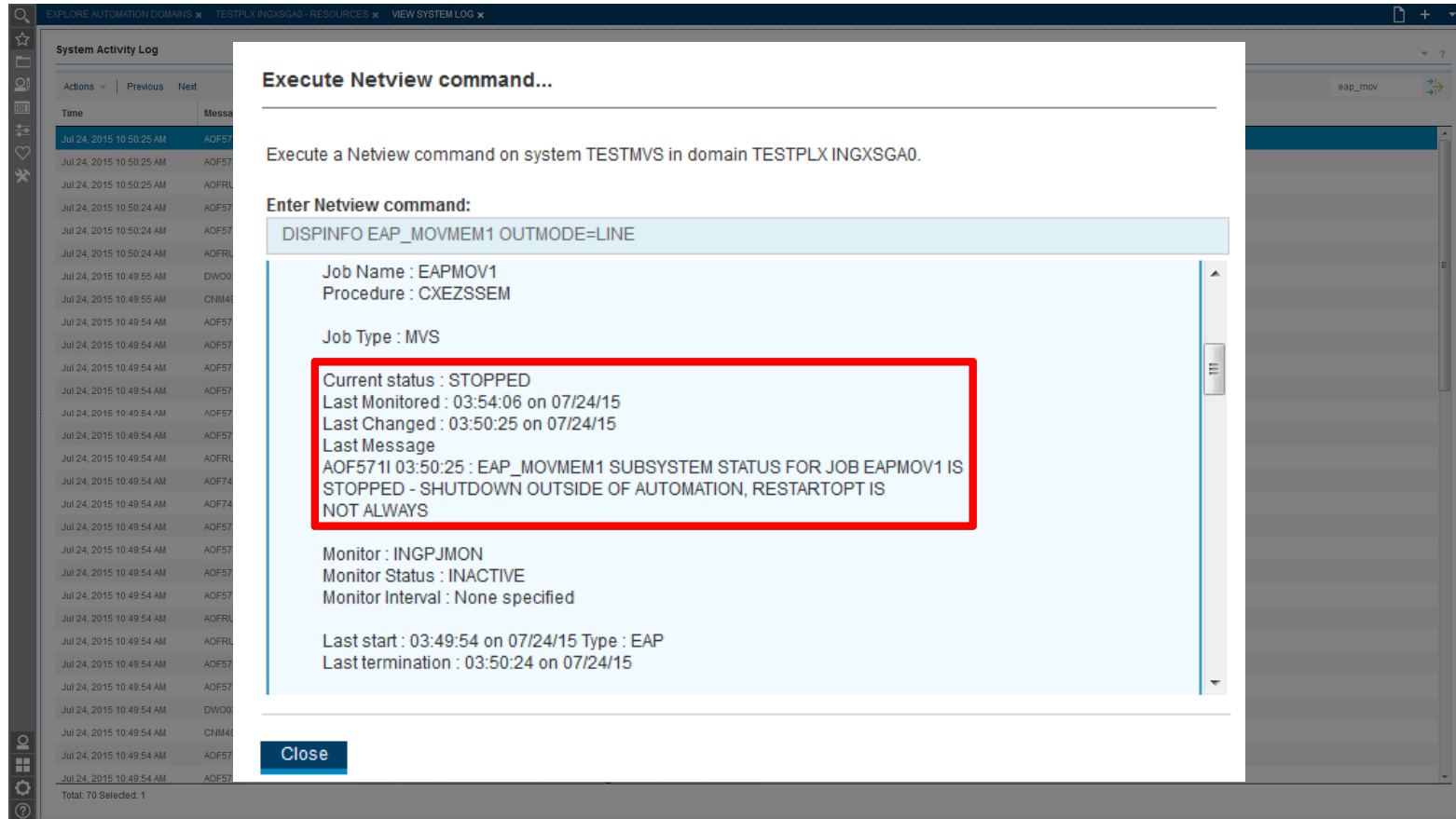
Buttons: OK, Cancel

The background log shows several entries with columns for Time, Message ID, and Message. The messages describe the status of the EAPMOV1 subsystem, including stopping and starting events.

2. Isolate the Problem

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

Study the return of the NetView command

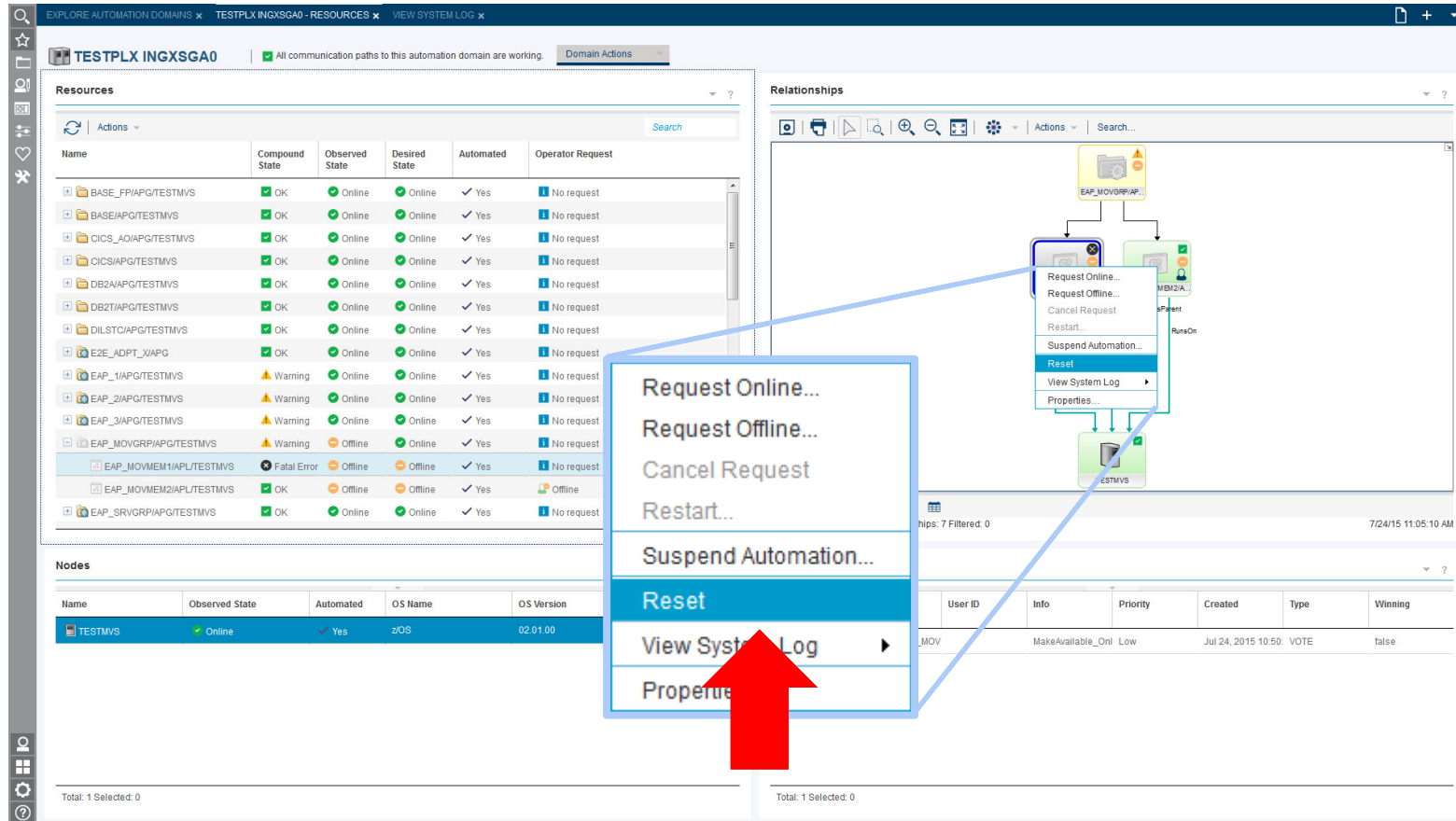


The screenshot shows a NetView console window with a system activity log on the left and a command execution window in the center. The command executed is `DISPINFO EAP_MOVMEM1 OUTMODE=LINE`. The output shows the job name `EAPMOV1`, procedure `CXEZSSEM`, and job type `MVS`. A red box highlights the status information: `Current status : STOPPED`, `Last Monitored : 03:54:06 on 07/24/15`, `Last Changed : 03:50:25 on 07/24/15`, and `Last Message`. The last message text is `AOF571I 03:50:25 : EAP_MOVMEM1 SUBSYSTEM STATUS FOR JOB EAPMOV1 IS STOPPED - SHUTDOWN OUTSIDE OF AUTOMATION, RESTARTOPT IS NOT ALWAYS`. Other output includes `Monitor : INGPJMON`, `Monitor Status : INACTIVE`, `Monitor Interval : None specified`, `Last start : 03:49:54 on 07/24/15 Type : EAP`, and `Last termination : 03:50:24 on 07/24/15`. A `Close` button is visible at the bottom of the command window.

2. Isolate the Problem

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

Reset SA so it automates the backup resource again



The screenshot shows the TESTPLX INGXSGA0 interface. The Resources table lists various components with their states. The Relationships diagram shows a hierarchy of resources. A context menu is open over the Relationships diagram, with the 'Reset' option highlighted. A red arrow points to the 'Reset' option.

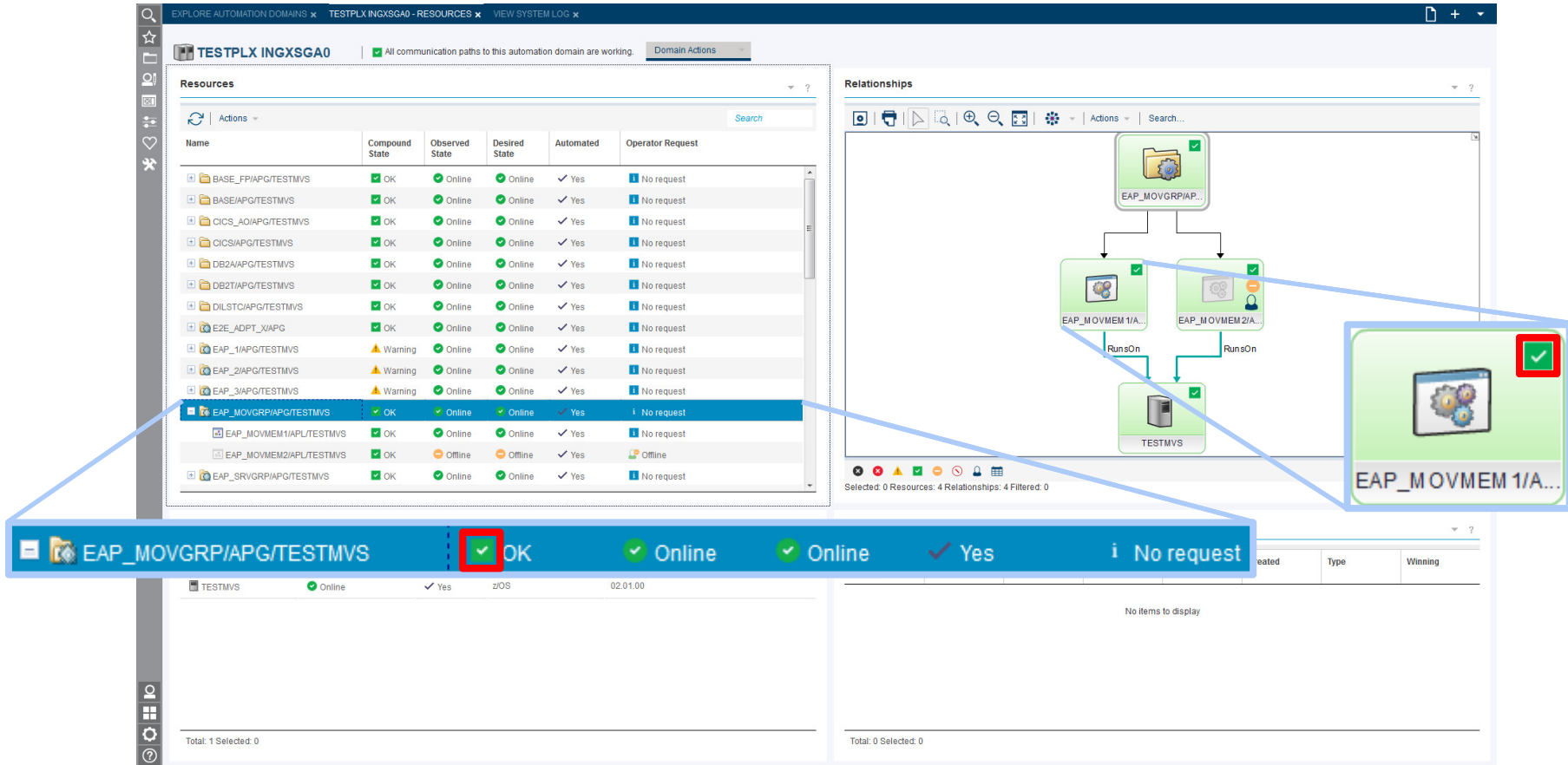
Name	Compound State	Observed State	Desired State	Automated	Operator Request
BASE_FP/APG/TESTMVS	OK	Online	Online	Yes	No request
BASE/APG/TESTMVS	OK	Online	Online	Yes	No request
CICS_AQ/APG/TESTMVS	OK	Online	Online	Yes	No request
CICS/APG/TESTMVS	OK	Online	Online	Yes	No request
DB2/APG/TESTMVS	OK	Online	Online	Yes	No request
DB27/APG/TESTMVS	OK	Online	Online	Yes	No request
DILSTCI/APG/TESTMVS	OK	Online	Online	Yes	No request
E2E_ADPT_X/APG	OK	Online	Online	Yes	No request
EAP_1/APG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_2/APG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_3/APG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_MOVGRP/APG/TESTMVS	Warning	Offline	Online	Yes	No request
EAP_MOVMEM1/APL/TESTMVS	Fatal Error	Offline	Offline	Yes	No request
EAP_MOVMEM2/APL/TESTMVS	OK	Offline	Offline	Yes	Offline
EAP_SVRGRP/APG/TESTMVS	OK	Online	Online	Yes	No request

Name	Observed State	Automated	OS Name	OS Version
TESTMVS	Online	Yes	z/OS	02.01.00

3. Solve the Problem

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

Check if the backup resource is running now

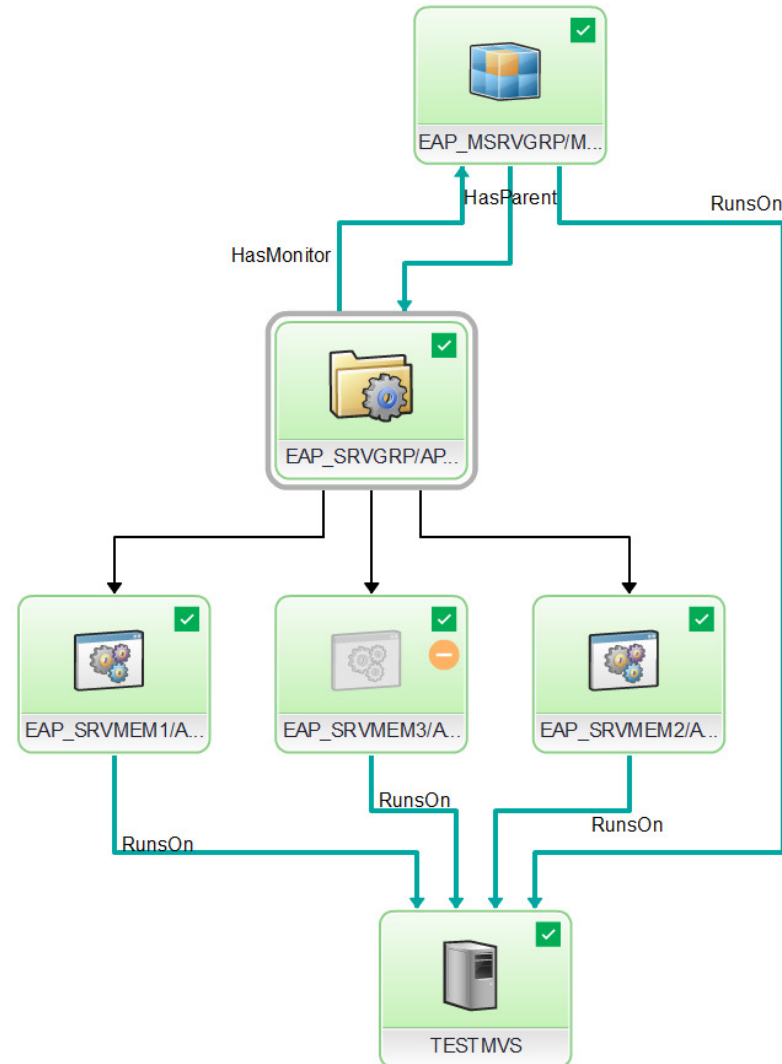


The screenshot displays the 'TESTPLX INGXSGA0' interface. The 'Resources' panel on the left lists various resources with their states. The 'Relationships' panel on the right shows a dependency graph. A callout box highlights the 'EAP_MOVGRP/APG/TESTMVS' resource, which is shown as 'OK' and 'Online'.

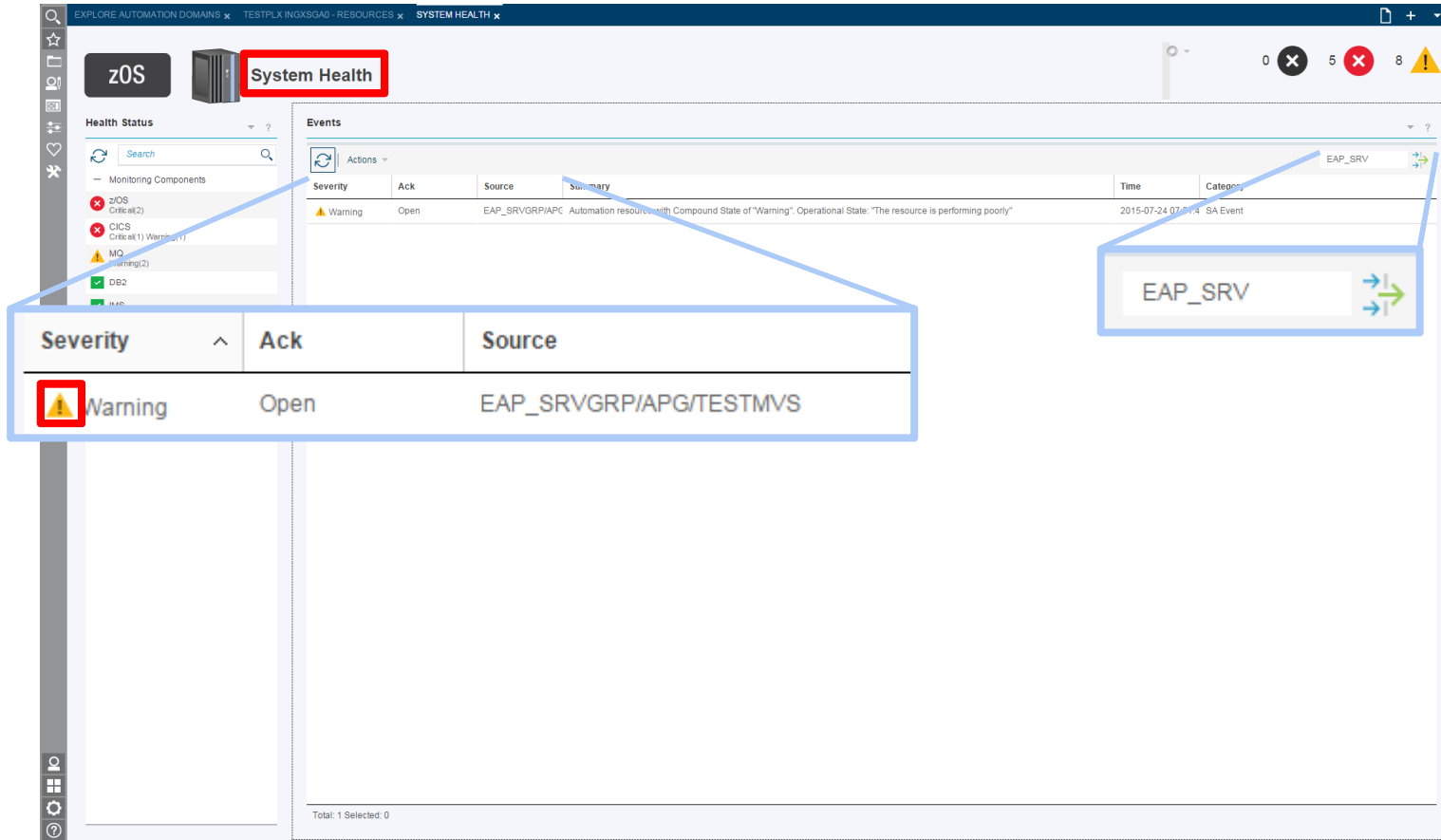
Name	Compound State	Observed State	Desired State	Automated	Operator Request
BASE_FP/APG/TESTMVS	OK	Online	Online	Yes	No request
BASE/APG/TESTMVS	OK	Online	Online	Yes	No request
CICS_AQ/APG/TESTMVS	OK	Online	Online	Yes	No request
CICS/APG/TESTMVS	OK	Online	Online	Yes	No request
DB2/APG/TESTMVS	OK	Online	Online	Yes	No request
DB2/APG/TESTMVS	OK	Online	Online	Yes	No request
DILST/APG/TESTMVS	OK	Online	Online	Yes	No request
E2E_ADPT_X/APG	OK	Online	Online	Yes	No request
EAP_1/APG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_2/APG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_3/APG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_MOVGRP/APG/TESTMVS	OK	Online	Online	Yes	No request
EAP_MOVMEM1/APL/TESTMVS	OK	Online	Online	Yes	No request
EAP_MOVMEM2/APL/TESTMVS	OK	Offline	Offline	Yes	Offline
EAP_SVRGRP/APG/TESTMVS	OK	Online	Online	Yes	No request

System Health restored

User Scenario 3: Restore Service of degraded workload



System Health: Warning appears



The screenshot shows the 'System Health' interface. The 'Events' table contains the following data:

Severity	Ack	Source	Summary	Time	Category
Warning	Open	EAP_SRVGRP/APC	Automation resource with Compound State of "Warning". Operational State: "The resource is performing poorly"	2015-07-24 07:51:4	SA Event

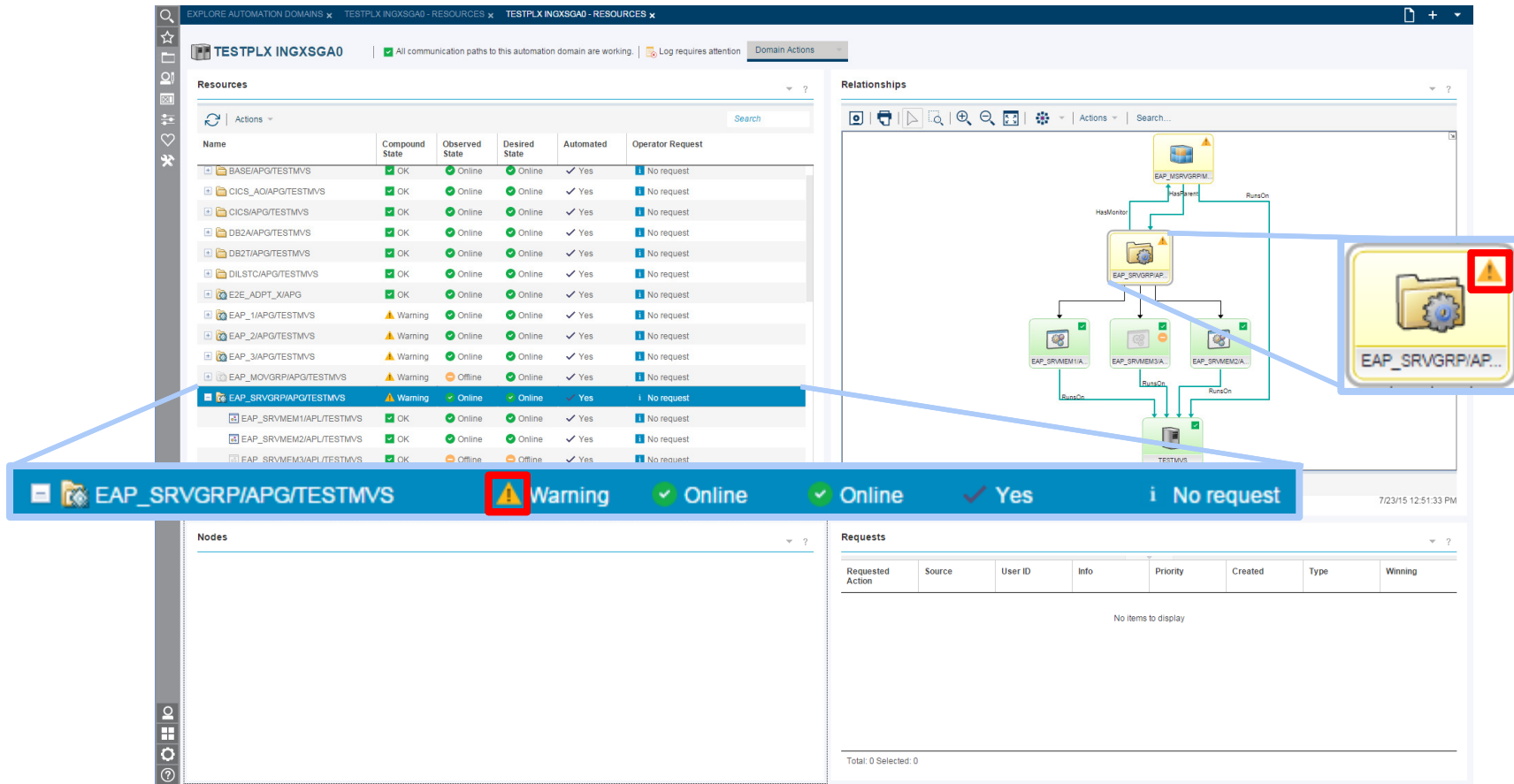
The detailed view of the selected event shows:

Severity	Ack	Source
Warning	Open	EAP_SRVGRP/APG/TESTMVS

1. Identify the Problem

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

Locate the problem in the domain view



Resources

Name	Compound State	Observed State	Desired State	Automated	Operator Request
BASE/APG/TESTMVS	OK	Online	Online	Yes	No request
CICS_AQ/APG/TESTMVS	OK	Online	Online	Yes	No request
CICS/APG/TESTMVS	OK	Online	Online	Yes	No request
DBZA/APG/TESTMVS	OK	Online	Online	Yes	No request
DBZT/APG/TESTMVS	OK	Online	Online	Yes	No request
DILSTC/APG/TESTMVS	OK	Online	Online	Yes	No request
EZE_ADPT_XIAPG	OK	Online	Online	Yes	No request
EAP_1/APG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_2/APG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_3/APG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_MOVGRP/APG/TESTMVS	Warning	Offline	Online	Yes	No request
EAP_SRVGRP/APG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_SRVMEM1/APL/TESTMVS	OK	Online	Online	Yes	No request
EAP_SRVMEM2/APL/TESTMVS	OK	Online	Online	Yes	No request
EAP_SRVMEM3/APL/TESTMVS	OK	Offline	Offline	Yes	No request

Relationships

EAP_SRVGRP/APG/TESTMVS Warning Online Online Yes No request

Nodes

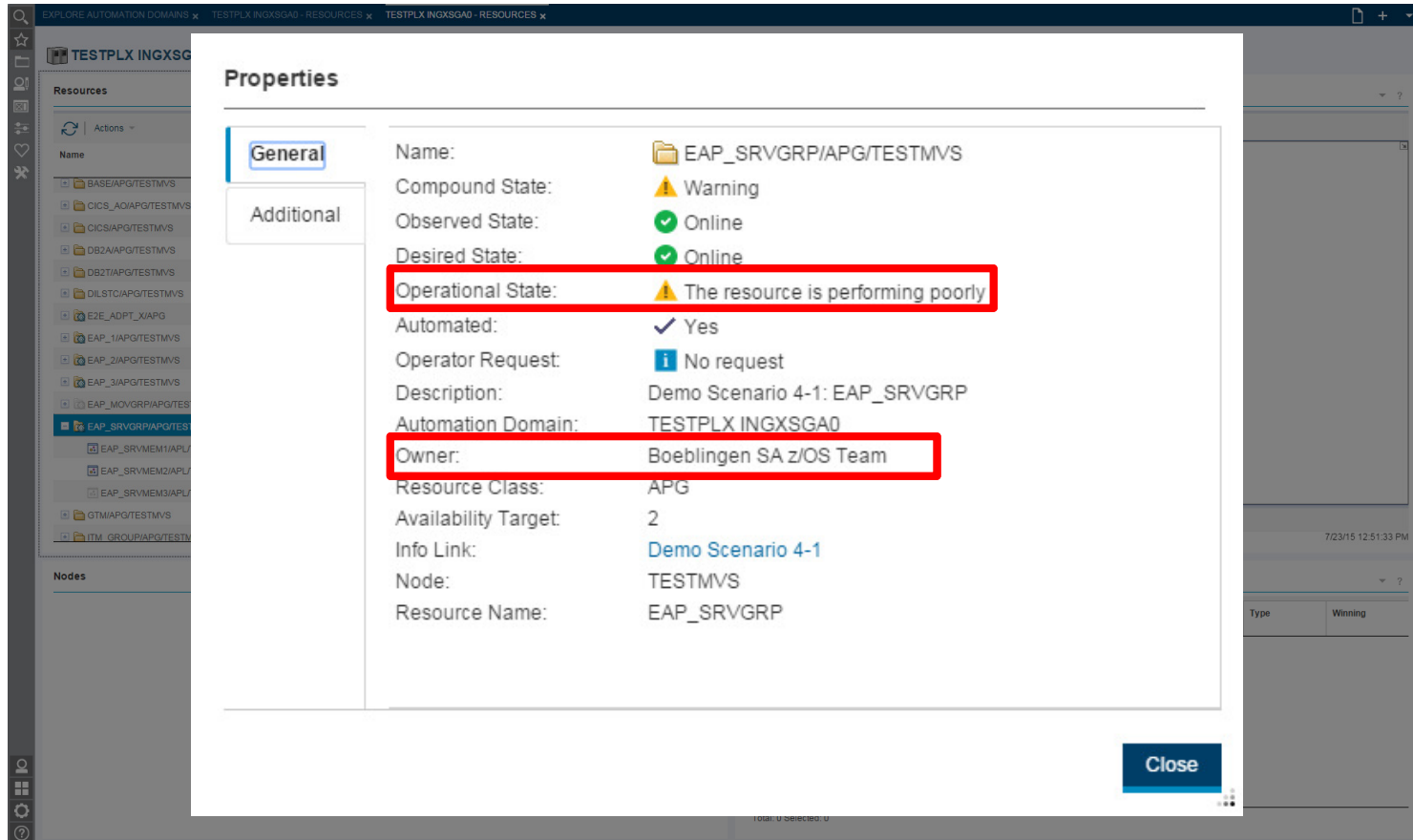
Requests

Requested Action	Source	User ID	Info	Priority	Created	Type	Winning
No items to display							

Total: 0 Selected: 0

1. Identify the Problem

Check the properties of the resource



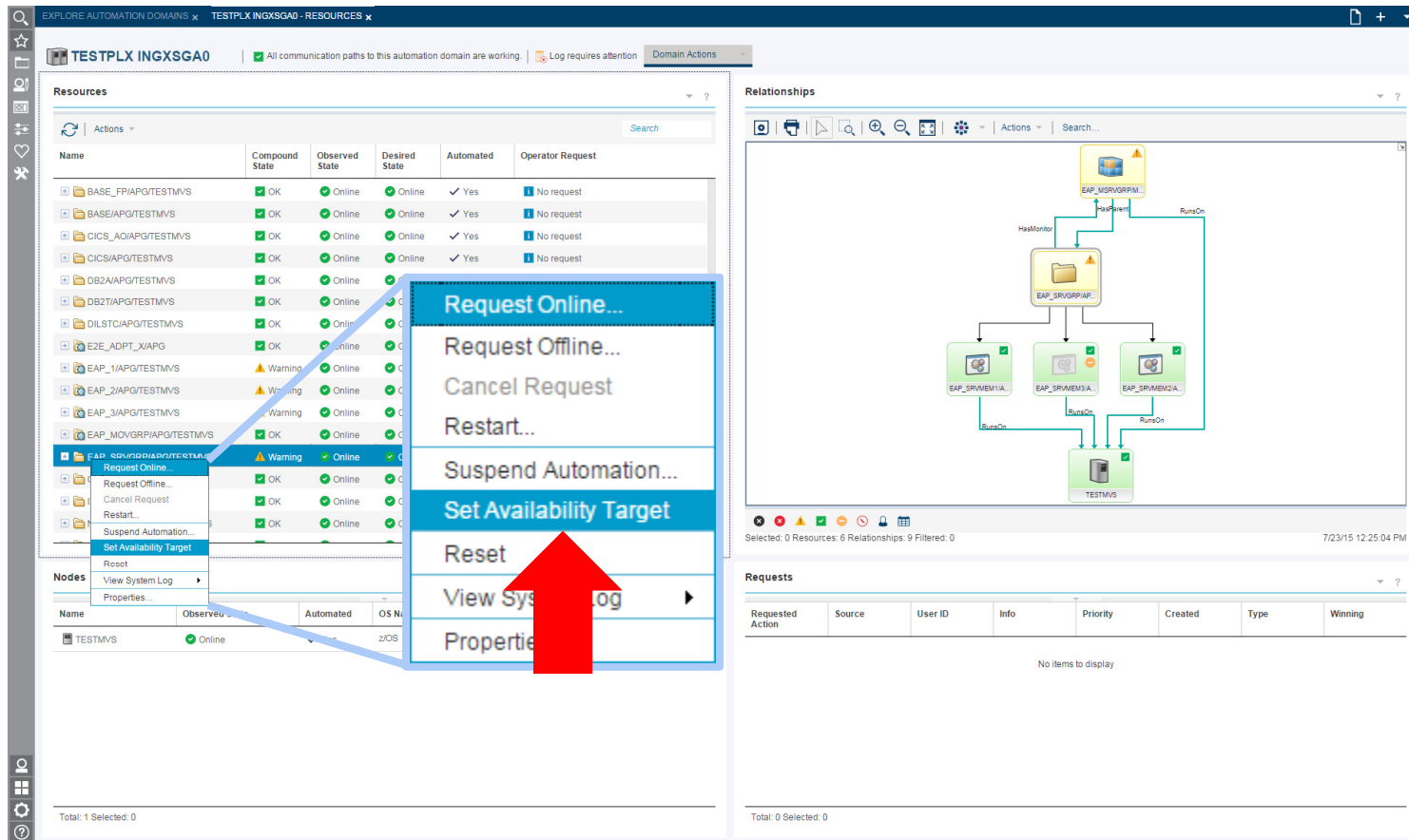
The screenshot shows a 'Properties' dialog box for a resource named 'EAP_SRVGRP/APG/TESTMVS'. The 'Operational State' is 'Warning' with a yellow triangle icon and the text 'The resource is performing poorly'. The 'Owner' is 'Boeblingen SA z/OS Team'. Other fields include Name, Compound State, Observed State, Desired State, Automated, Operator Request, Description, Automation Domain, Resource Class, Availability Target, Info Link, Node, and Resource Name.

Property	Value
Name:	EAP_SRVGRP/APG/TESTMVS
Compound State:	Warning
Observed State:	Online
Desired State:	Online
Operational State:	The resource is performing poorly
Automated:	Yes
Operator Request:	No request
Description:	Demo Scenario 4-1: EAP_SRVGRP
Automation Domain:	TESTPLX INGXSQA0
Owner:	Boeblingen SA z/OS Team
Resource Class:	APG
Availability Target:	2
Info Link:	Demo Scenario 4-1
Node:	TESTMVS
Resource Name:	EAP_SRVGRP

2. Isolate the Problem

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

Adjust the availability target to handle the workload

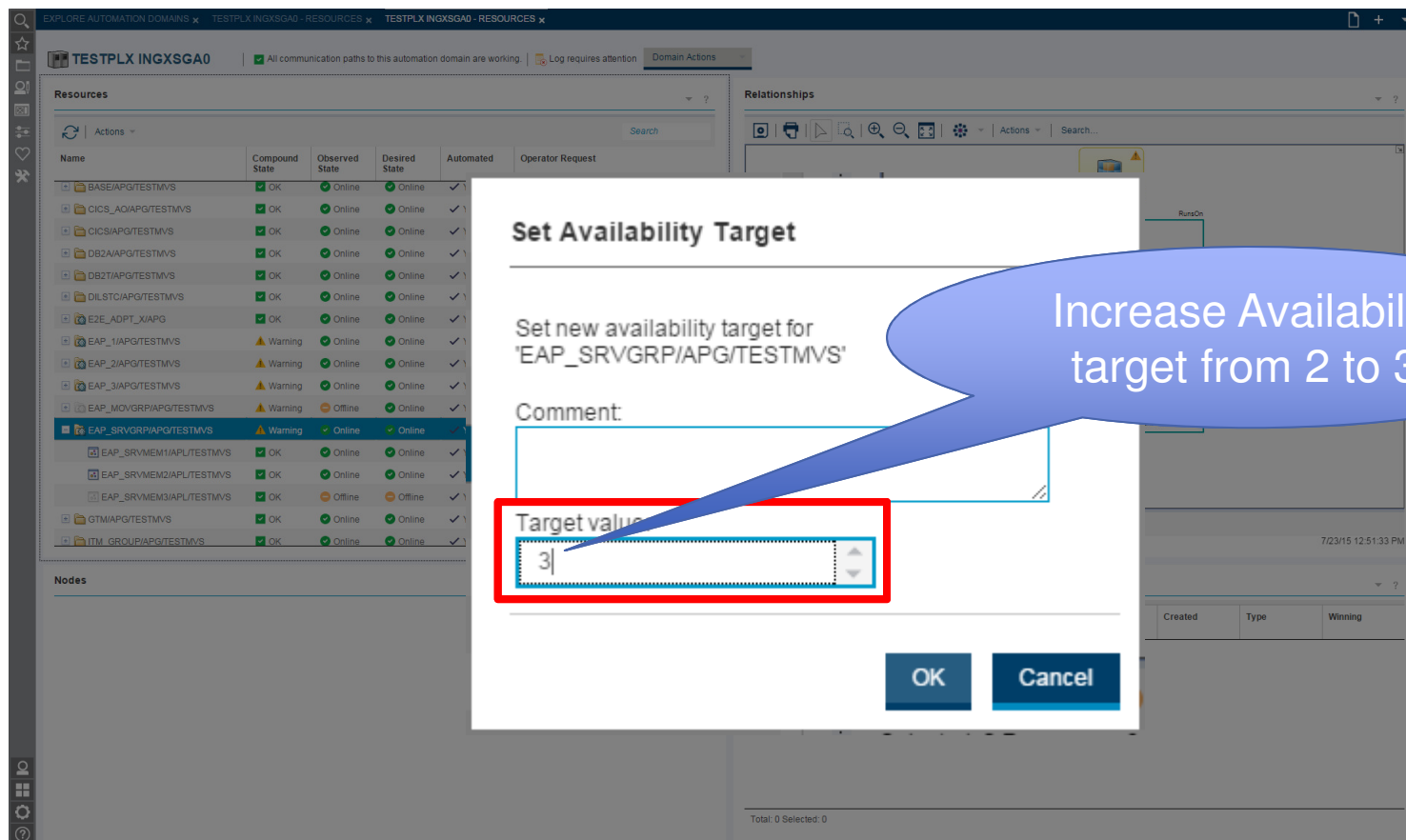


The screenshot shows the TestPLX NGXSGAO interface. On the left, a table lists resources with columns for Name, Compound State, Observed State, Desired State, Automated, and Operator Request. A context menu is open over the 'EAP_SRVGRP1A' resource, with 'Set Availability Target' highlighted. A red arrow points to this option. On the right, a 'Relationships' diagram shows a hierarchy of resources: EAP_SRVGRP1A at the top, connected to EAP_SRVGRP1M, which in turn connects to EAP_SRVMEM1A, EAP_SRVMEM1B, and EAP_SRVMEM1C. Below the diagram is a 'Requests' table with columns for Requested Action, Source, User ID, Info, Priority, Created, Type, and Winning. The table is currently empty.

3. Solve the Problem

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

Increase availability target



Set Availability Target

Set new availability target for 'EAP_SRVGRP/APG/TESTMVS'

Comment:

Target value: 3

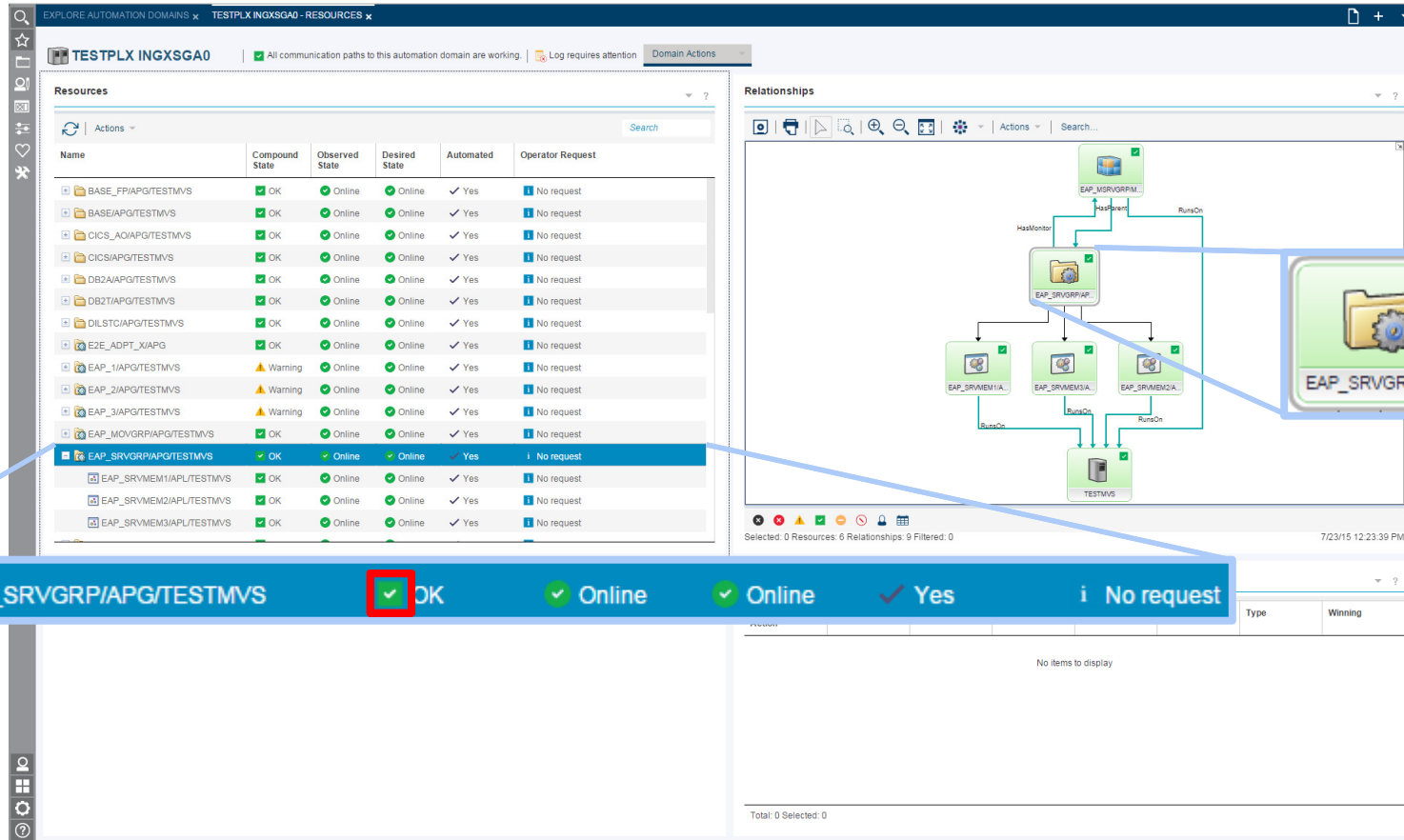
OK Cancel

Name	Compound State	Observed State	Desired State	Automated	Operator Request
BASE/APG/TESTMVS	OK	Online	Online	✓	
CICS_AOI/APG/TESTMVS	OK	Online	Online	✓	
CICS/APG/TESTMVS	OK	Online	Online	✓	
OB2A/APG/TESTMVS	OK	Online	Online	✓	
OB2T/APG/TESTMVS	OK	Online	Online	✓	
DILSTCI/APG/TESTMVS	OK	Online	Online	✓	
E2E_ADPT_XIAPG	OK	Online	Online	✓	
EAP_1IAPG/TESTMVS	Warning	Online	Online	✓	
EAP_2IAPG/TESTMVS	Warning	Online	Online	✓	
EAP_3IAPG/TESTMVS	Warning	Online	Online	✓	
EAP_MOVGRP/APG/TESTMVS	Warning	Offline	Online	✓	
EAP_SRVGRP/APG/TESTMVS	Warning	Online	Online	✓	
EAP_SRVMEM1/APL/TESTMVS	OK	Online	Online	✓	
EAP_SRVMEM2/APL/TESTMVS	OK	Online	Online	✓	
EAP_SRVMEM3/APL/TESTMVS	OK	Offline	Offline	✓	
GTM/APG/TESTMVS	OK	Online	Online	✓	
ITM_GROUP/APG/TESTMVS	OK	Online	Online	✓	

3. Solve the Problem

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

Verify system availability and performance



Resources

Name	Compound State	Observed State	Desired State	Automated	Operator Request
BASE_FPI/APG/TESTMVS	OK	Online	Online	Yes	No request
BASE/APG/TESTMVS	OK	Online	Online	Yes	No request
CICS_AOI/APG/TESTMVS	OK	Online	Online	Yes	No request
CICS/APG/TESTMVS	OK	Online	Online	Yes	No request
DB2A/APG/TESTMVS	OK	Online	Online	Yes	No request
DB2I/APG/TESTMVS	OK	Online	Online	Yes	No request
DILSTCI/APG/TESTMVS	OK	Online	Online	Yes	No request
EZE_ADPT_XIAPG	OK	Online	Online	Yes	No request
EAP_1IAPG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_2IAPG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_3IAPG/TESTMVS	Warning	Online	Online	Yes	No request
EAP_MOVGRP/APG/TESTMVS	OK	Online	Online	Yes	No request
EAP_SRVGRP/APG/TESTMVS	OK	Online	Online	Yes	No request
EAP_SRVMEM1/APL/TESTMVS	OK	Online	Online	Yes	No request
EAP_SRVMEM2/APL/TESTMVS	OK	Online	Online	Yes	No request
EAP_SRVMEM3/APL/TESTMVS	OK	Online	Online	Yes	No request

Relationships

Selected: 0 Resources; 6 Relationships; 9 Filtered: 0

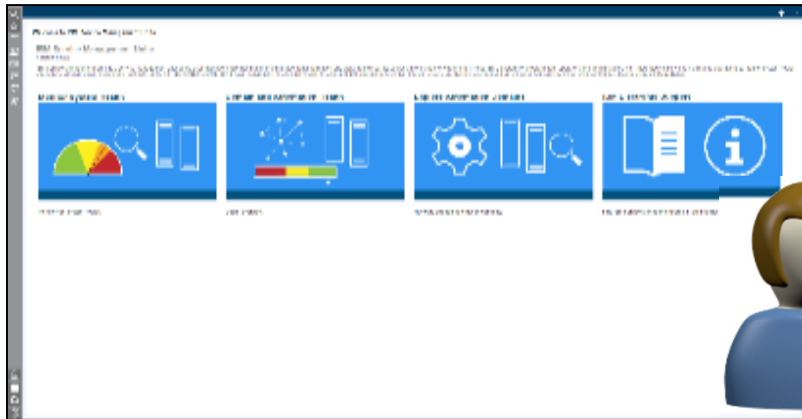
7/23/15 12:23:39 PM

EAP_SRVGRP/APG/TESTMVS OK Online Online Yes No request

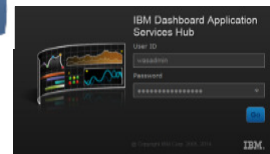
System Health restored

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

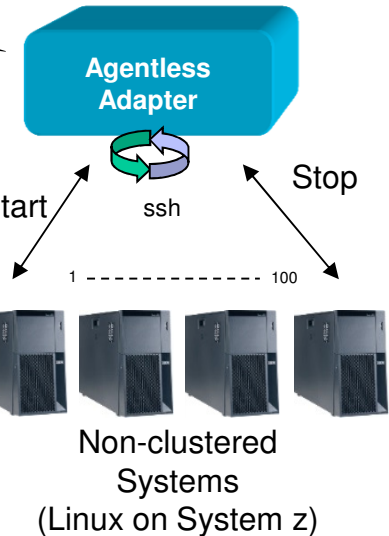
Extend Automation Scope of SMSz: End-to-End Operations



Any Operator can control z/OS and even distributed workload on Linux on System z from one Console.



z/OS-To-Linux



Automated Operations for

- System of Records and
- System of Engagements

from one console.

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

Service Management Unite - Highlights

- Offers a single point of control using **modern, customizable dashboards** to monitor and operate your applications.
- See **at a glance** the health state of your environment
- Allows you to drill down** with only a few clicks from an alert to the underlying problem and determine the impact of failures.
- Provides access to automation functions to **start, stop or recycle business applications** running on z and beyond.
- Supports **mobile access**
- Access to **system logs**

Agenda

- Introduction
- IBM Service Management Suite for z/OS
- **Updates**
 - IBM Service Management Suite
 - **OMEGAMON Perf Mgmt Suite for z/OS 5.3.1**
 - Operations Analytics
- Integration Value
- Summary

Integration the key to collaboration and efficiency



IBM Tivoli OMEGAMON Performance Management Suite for z/OS v5.3.1



Working as a team is vital to getting the job done and the same can be said about your systems management information

- **Greater Visualization, Control and Automation** - Integrate management Information from multiple IBM management products on a single workspace for of your enterprise views of IT resources

- **Reduce problem isolation time and correction** - Create consolidated alerts that represent all computing resources servicing your critical workloads to quickly isolate and aiod or correct problems

- **Reduce response times to problems and costs** - Utilize the policy feature to create sophisticated responses to the world class alerting/situations coming from the OMEGAMONs

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

SHARE
in Orlando **2015**

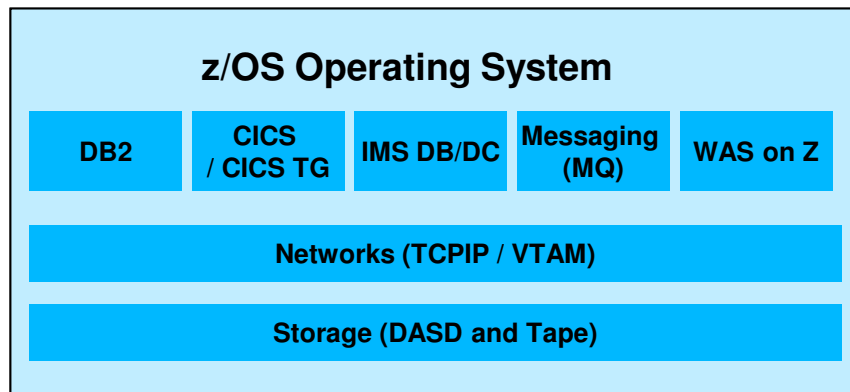
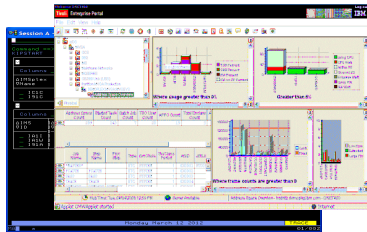


OM Performance Management Suite for z/OS v5.3.1



Integrated management solution

Extensive capabilities to monitor & manage z/OS platform. Delivers increased problem identification and resolution, reduced costs, flexibility, and decreased TCO.



Updates to PM Suite:


- OM XE for IMS on z/OS V5.3.0
- OM XE for DB2 PE V5.3.0
- OM XE for Mainframe Networks V5.3.0
- OM DE on z/OS V5.3.0 (IF)
- Inclusion of IOAz (OM internal log analysis)
- Feature Codes for easy individual product downloads (in PM Suite, OMzMS, & SMSz)

Complete your session evaluations online at www.SHARE.org/Orlando-Eval



Comprehensive z Systems Monitoring Solution

OMEGAMON Performance Management Suite for z/OS 5.3.1

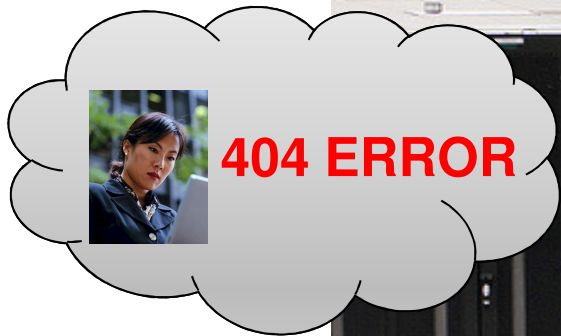
- ✓ OMEGAMON XE for DB2 PE V5.3.0
 - ✓ OMEGAMON XE for Messaging on z/OS V7.3.0
 - ✓ OMEGAMON XE for CICS V5.3.0
 - ✓ OMEGAMON XE for IMS V5.3.0
 - ✓ OMEGAMON Dashboard Edition on z/OS 5.3.0
 - ✓ OMEGAMON XE for z/OS V5.3.0
 - ✓ OMEGAMON XE for Mainframe Networks V5.3.0
 - ✓ OMEGAMON XE for Storage V5.3.0
- 
- ✓ ITCAM AD V7.1 (only ITCAM for WR component)
Composite Application Manager for Web Resources on z/OS 7.1.0
 - ✓ Operations Analytics Log Analysis
- OMEGAMON z/OS Insight Pack

Agenda

- Introduction
- IBM Service Management Suite for z/OS
- **Updates**
 - IBM Service Management Suite
 - OMEGAMON Perf Mgmt Suite for z/OS 5.3.1
 - **Operations Analytics**
- Integration Value
- Summary

Operations Analytics: The Challenge

Find the right needle in one of many haystacks – QUICKLY!

404 ERROR



It's SLOW!!



Where do I start??

Centralized,
Distributed, Cloud,
Resilient Architectures
Increase Data Volume



Everything is "green"

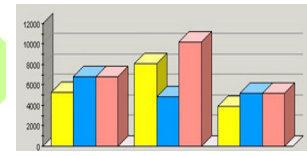
**Logs,
Traces,..**

```
[10/9/12 5:51:38:295
GMT+ 05:30]
0000006a servlet E
com.ibm.ws.webcont
ainer.servlet.Servlet
Wrapper service
SRVE0068E:
010001100011100
001110011000111
110000110001
111111000110011
100011
```

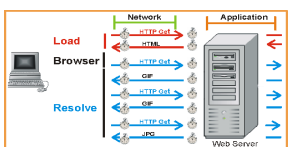
Events

Node	Alert Group
omega	Unix Event List
snmp:/10.20.5.99:1	EventAction(network)
snmp:/10.20.5.99:1	EventAction(network)
snmp:/10.20.5.99:1	EventAction(network)
snmp:/10.20.5.99:1	EventAction(network)
snmp:/10.20.5.99:1	EventAction(network)
snmp:/10.20.5.99:1	EventAction(network)
snmp:/10.20.5.99:1	EventAction(network)

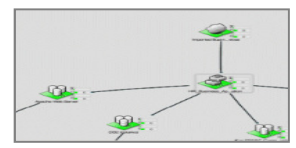
Metrics



Transactions



Config



Complete your session evaluations online at www.SHARE.org/Orlando-Eval

End-to-End Analytics for improved performance and workload management



Proactive Outage Avoidance

OMEGAMON &
NetView
w/ IBM zAware

Faster Problem Resolution

IBM Operations Analytics for z Systems

Optimized Performance

IBM Capacity Management Analytics (CMA)

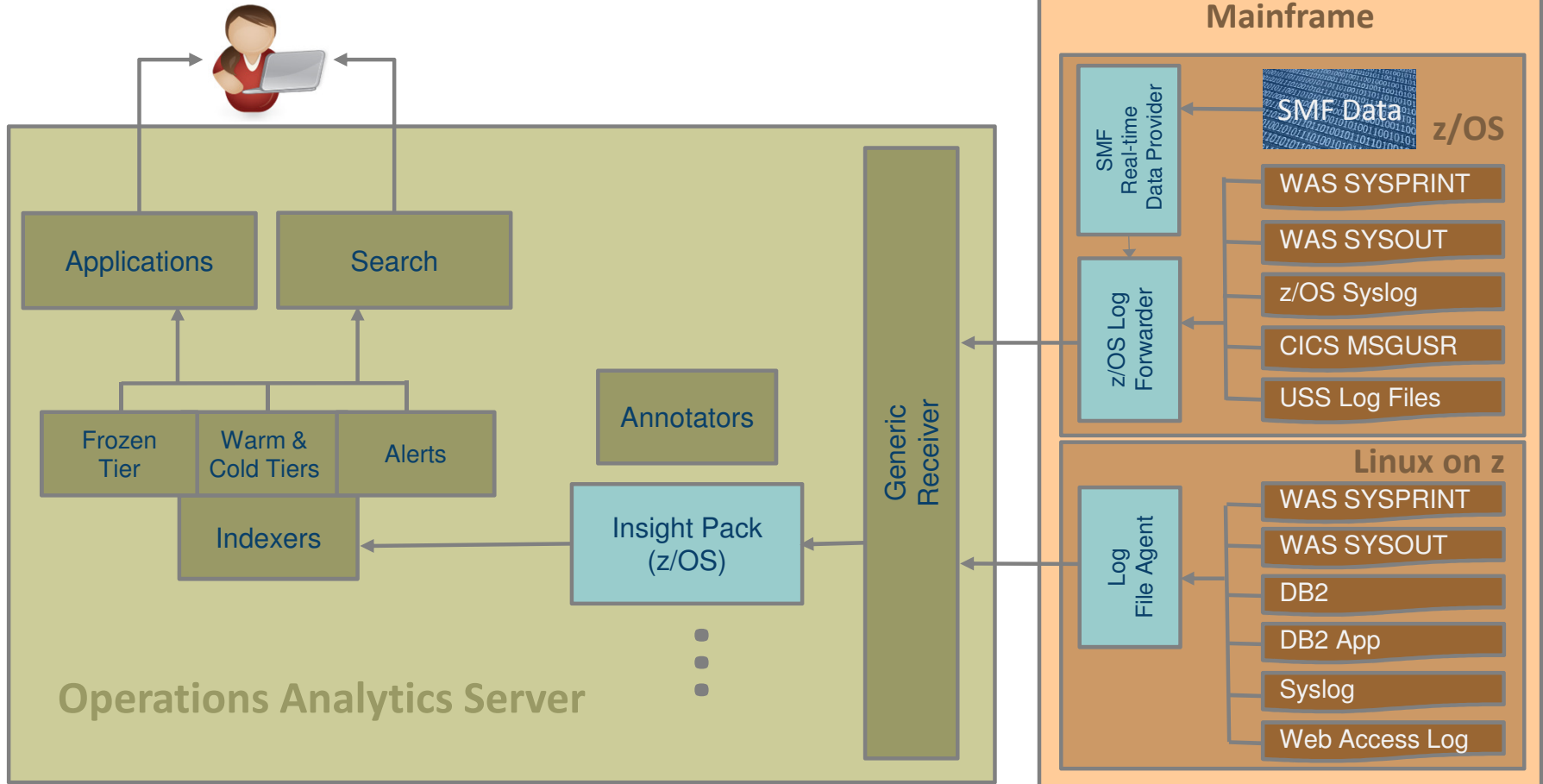
IBM Analytics solutions for z Systems

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

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IBM Operations Analytics for z Systems



- z/OS Log Forwarder / SMF Data Provider installed on each z/OS LPAR where you want to provide Search and Analysis
 - The IBM Operations Analytics server is installed on z System (or x System) running Linux (64 bit)
 - z/OS Insight Packs are installed on the IBM Operations Analytics server
- Complete your session evaluations online at www.SHARE.org/Orlando-Eval

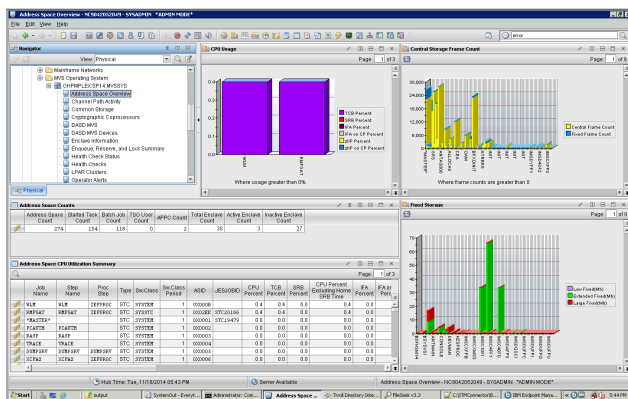
IBM Operations Analytics integration into TEP

OMEGAMON + IBM Operations Analytics – Launch in Context from TEP

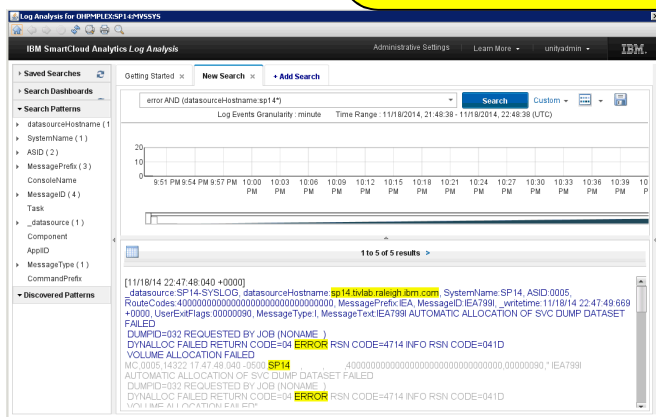


The **One Two – Punch**: Combine two very powerful tools to ensure performance and high availability of your enterprise.

- **Perform log analysis in context of OMEGAMON workspaces** – This approach enables OMEGAMON users to perform in-context log analysis while doing problem determination
 - From your OMEGAMON workspace, use the IOA search bar to search logs (using LPAR or Sysplex as the default context)
 - Easy to implement - Configure TEP to display the IOA search bar



Launch IOA from OMEGAMON performance monitoring workspaces to search logs in context



Complete your session evaluations online at www.SHARE.org/Orlando-Eval

NetView for z/OS 6.2.1 Updates



2 NetView Sessions at Share:

- 17786: NetView for z/OS – New Directions
Tuesday, August 11th, 3:15 pm (Room: Asia 2)
- 17739: NetView for z/OS – IP Management Topics and Solutions
Thursday, August 13th, 8:30 am (Room: Asia 2)

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

Agenda

- Introduction
- IBM Service Management Suite for z/OS
- Updates
 - IBM Service Management Unite
 - OMEGAMON Perf Mgmt Suite for z/OS 5.3.1
 - Operations Analytics
- **Integration Value**
- Summary

Service Management Suite scenarios



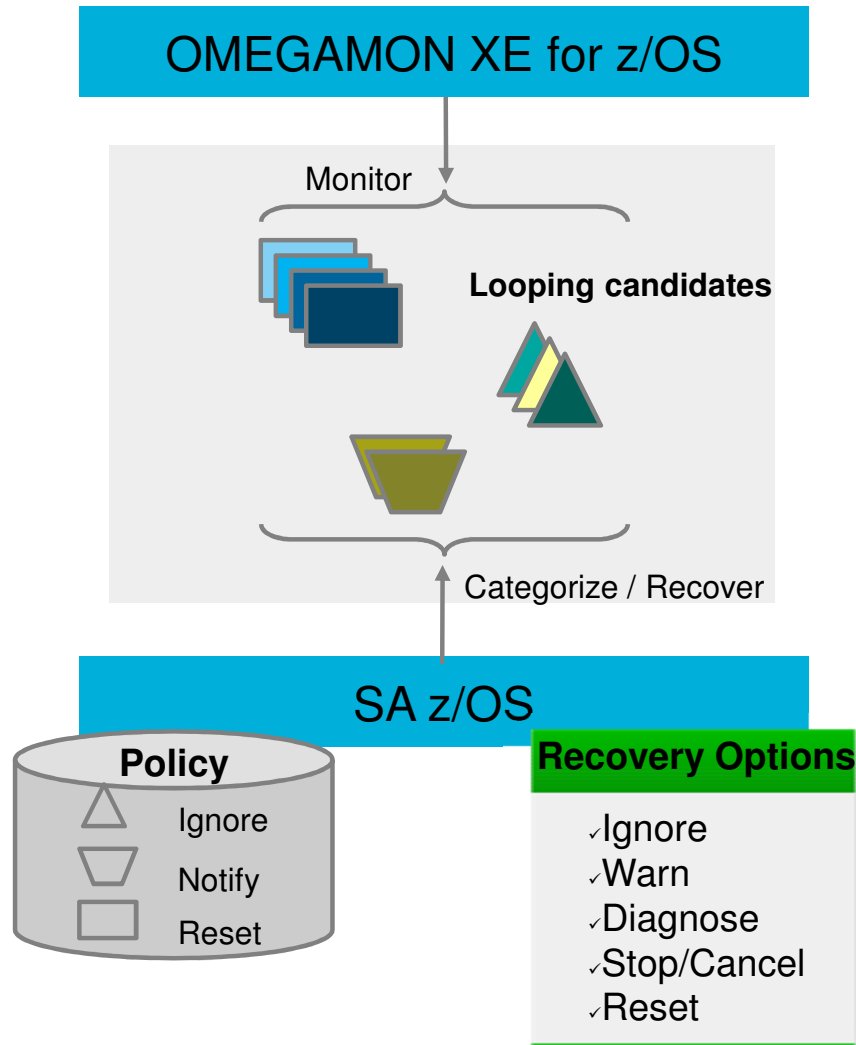
Scenario	OMEGAMON® Performance Management Suite	System Automation for z/OS	NetView® for z/OS	Tivoli® Asset Discovery for z/OS
Automating scan and import jobs		✓		✓
Detecting IMS performance problems	✓	✓	✓	
Managing looping address spaces	✓	✓		
Detecting network problems	✓	✓	✓	
Displaying recent z/OS performance data	✓	✓	✓	
Monitoring common storage usage	✓	✓	✓	

http://www-01.ibm.com/support/knowledgecenter/SSANTA_1.2.0/com.ibm.smsz.doc_1.2.0/smsz120_landing_scenarios.html?lang=en

Complete your session evaluations online at www.SHARE.org/Orlando-Eval



OMEGAMON looping address space suppression



Situation

- The overall z/OS system utilization and also the utilization of individual started tasks / jobs is understood for normal and peak hours

Problem

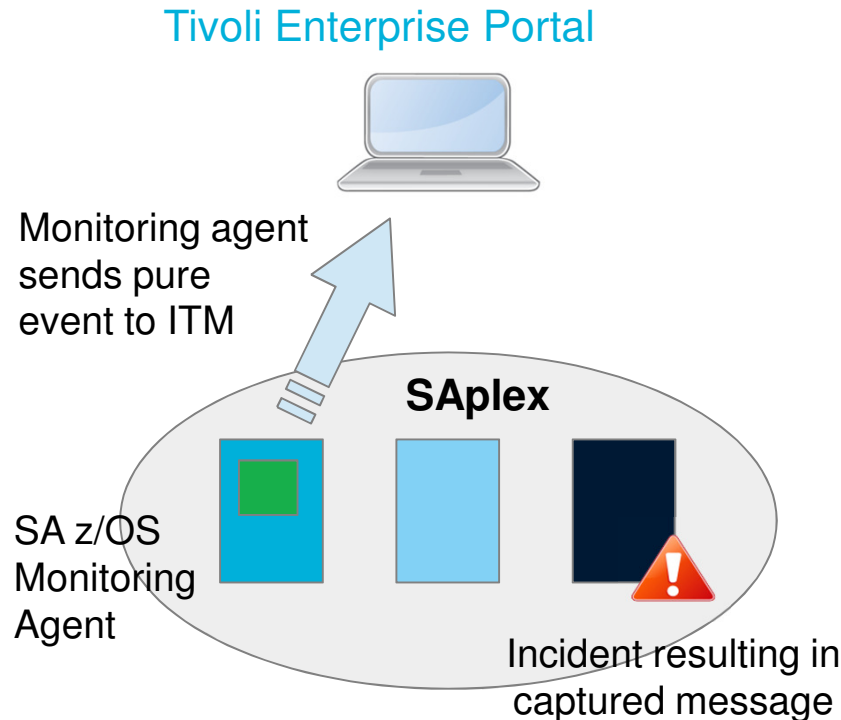
- Detect when started tasks / jobs show abnormally high CPU utilization
- Some jobs causing CPU to loop and are hard to detect
- Prevent that these types of work can dominate the system

Solution

- OMEGAMON XE for z/OS data is analyzed by System Automation for high CPU utilization
- System Automation can categorize different types of work and allows to define various recovery actions through policy – not programming!

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

Immediate message reporting on Tivoli Enterprise Portal



Situation

- Incidents happen all the time but luckily, with SA z/OS, they can also be recovered very quickly

Problem

- Customers using TEP as primary console for operations rely on **every** incident being reported as a situation
- However, short-lived incidents may remain undetected by situation sampling routines and hence are invisible to the operations team

Solution

- SA z/OS exploits ITM pure event situations
- So, in combination with its monitoring agent, SA z/OS allows to send selected exceptional messages immediately to TEP by means of **policy**

Agenda

- Introduction
- IBM Service Management Suite for z/OS
- Updates
 - IBM Service Management Suite
 - OMEGAMON Perf Mgmt Suite for z/OS 5.3.1
 - NetView 6.2.1 Updates
- Integration Value
- **Summary**

Maximizing time and personnel

Why the Suites really work for companies

VISIBILITY



CONTROL



AUTOMATION



- **Increase ability to meet SLAs** by managing environment with intelligent alerting
- **Increase staff productivity** through managing by exception
- **Maximize efficiency of staff** with Common Tools and Processes
- **Create collaboration** through tool integration and information
- **Efficiency in doing the day to day management** - Link actions to situations
 - Automate problem responses
 - Capture expert knowledge
 - Common data and KPIs

Breaking down the Silos



- Is your environment managed by different teams that do not regularly work together – Integrate information
- When there is a problem, quickly identify the root cause.

Summary – Service Management Unite



- **End-to-End Operations**
 - A modernized, state-of-the-art service management dashboard for visibility and operations of z and non-z Systems environments
- **Customizable & Modern look and feel**
 - Customize your dashboards based on your preferences
- **Enterprise Health**
 - See at a glance the health state of your environment
- **Integrated console**
 - Operators can issue commands and restore service
- Available on your **Smartphone**
 - Mobile access for flexible and intuitive control
- It's a real **WOW**
 - Isolate, analyze and diagnose problems twice as fast

Complete your session evaluations online at www.SHARE.org/Orlando-Eval

