

Service Management Unite

Your Domenico D'Alterio
Your IBM

November 2019
Session [OH, NH](#)



Agenda

- What's the problem
- Service Management Unite
 - SMU Performance Management
 - SMU Automation: System Automation
 - SMU Automation: NetView
 - SMU Scheduling: Workload Scheduler
 - SMU: Zowe integration
 - SMU Deployment and configuration

What's the problem

Legacy Mainframe Management Challenges

Legacy Mainframe Management Challenges

- Lack of **integration** with the broader enterprise
- Deep z/OS **skills** required
- Many full time employees (FTE's) needed to resolve issues

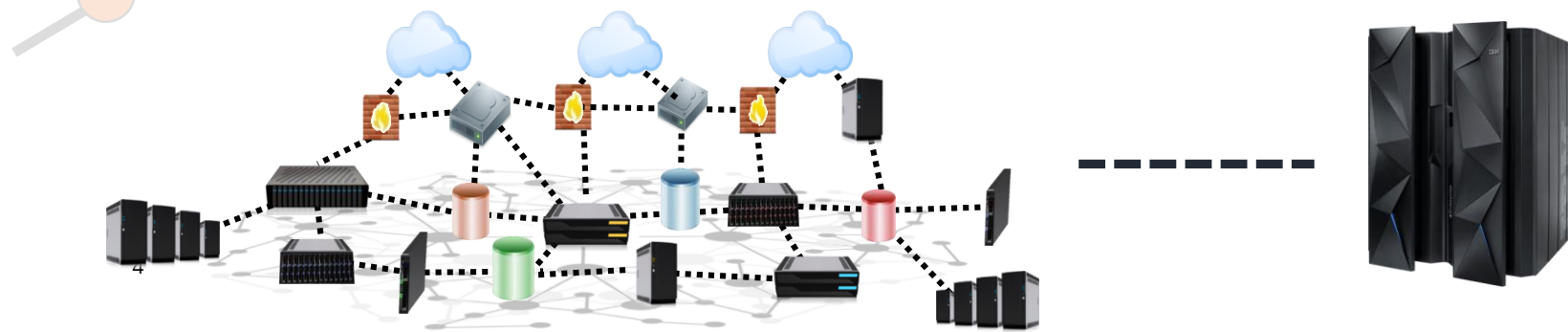
```

----- ZIIPAR1  VPM  OM-DB2  V460 / C HV31 06/06/11  9:47:59
-----
Help PF1          Back PF3          Up PF7          Down
-----
          LOGICAL PARTITION USE FOR PP/SH PROCESSORS
)
) To view detailed statistics on MSU consumption and WLM capping place the
) cursor under the "MSUs" literal and press PF11:
-----
+-----+
+ Model = 2097-732  Serial = 09CF45  CEC MSUs capacity = 2200
+ Number of Physical processors = 38  Dispatch interval = DYNAMIC
+ Number of CPs = 32 Special CPs = 0  Elapsed interval = 00.00.01.002
+-----+
+ Model Parameter Capacity ID = 2097-732  Rating = 2200 MSUs
+ Model Temporary Capacity ID = 2097-732  Rating = 2200 MSUs
+ QDQGD and/or CPM Adjusted? = No  CSM Adjusted? = No
+-----+
+Name  Number  Stat  Mgr  Wait  Cap  #PF  LCPD%  FCPD%  OVRD%  Dispatch time
+-----+
+LP1201  *01  A  319  NO  NO  9-0  60.91  17.13  17  00.00.05.545
+LP1208  D
+LP120C  12  A  320  NO  NO  8-0  59.99  7.49  07  00.00.02.428
+LP120D  13  A  415  NO  NO  2-0  7.43  16  01  00.00.00.353
+LP120E  14  A  415  NO  NO  2-0  5.69  36  02  00.00.00.319
+LP120F  D
+LP120G  02  A  070  NO  NO  3-0  39.28  2.75  04  00.00.00.895
+LP120H  02  A  080  NO  NO  11-0  00  00  00  00.00.00.000
+LP120I  04  A  060  NO  NO  2-0  55.27  3.45  06  00.00.01.125
+LP120J  D
  
```

Operating in Siloed teams

Yesterday

Mainframe is a black box

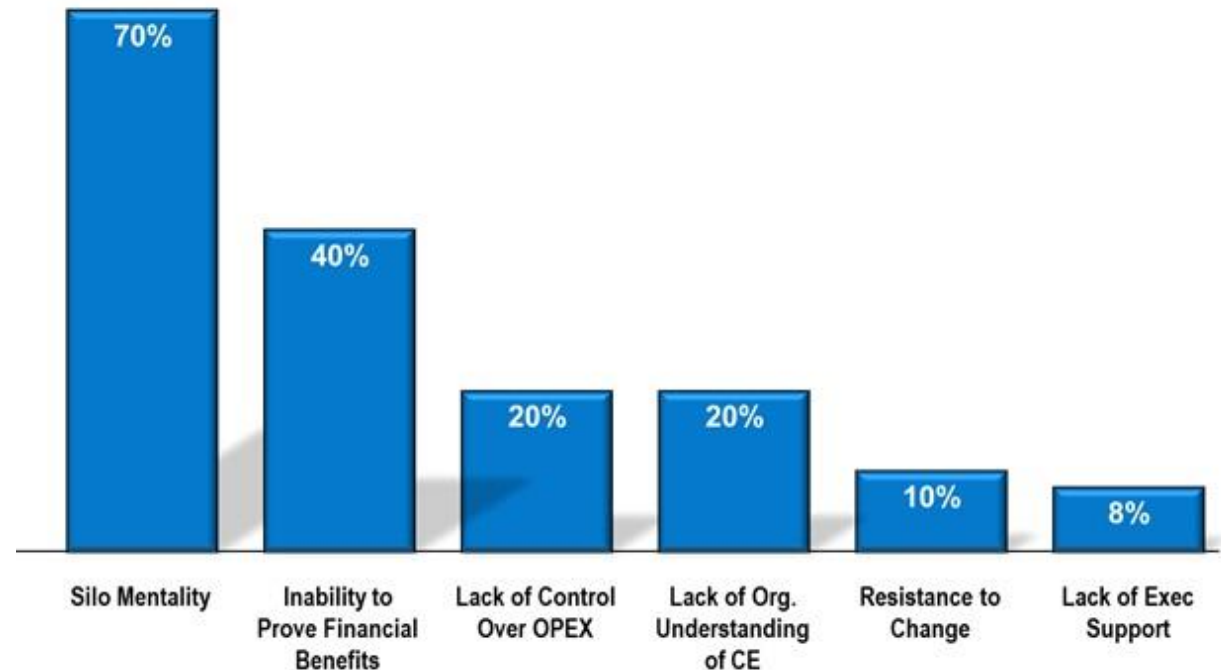


Silos inhibit SLA attainment and increase time to resolution



Tools to enable collaboration and cross-discipline interaction are needed to avoid silos

What are the biggest organizational hurdles to improving the Customer Experience?



Source: Beyond Philosophy: <https://beyondphilosophy.com/how-to-overcome-organizational-silos/>

Z skilled people are leaving!

Skilled people are retiring

'Tribal knowledge' is disappearing



IBM Z Operations Transformation With IBM z Service Management Unite!

Optimization through Integration



APPDYNAMICS

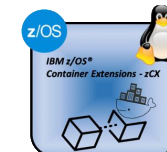
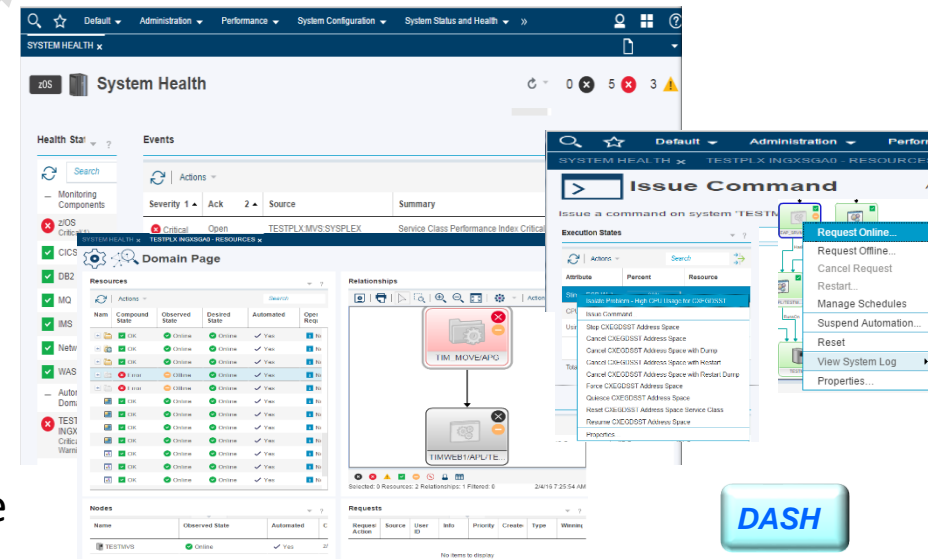


- Integration of the mainframe with commonly used enterprise wide tooling

- Combine Monitoring and Automation and Scheduling tooling in modern, easy to use UI's

Today

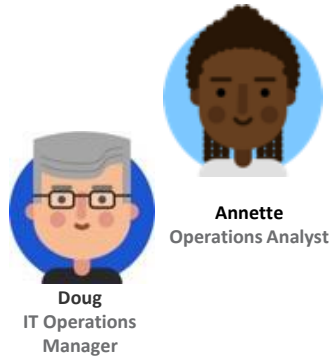
Service Management Unite UI



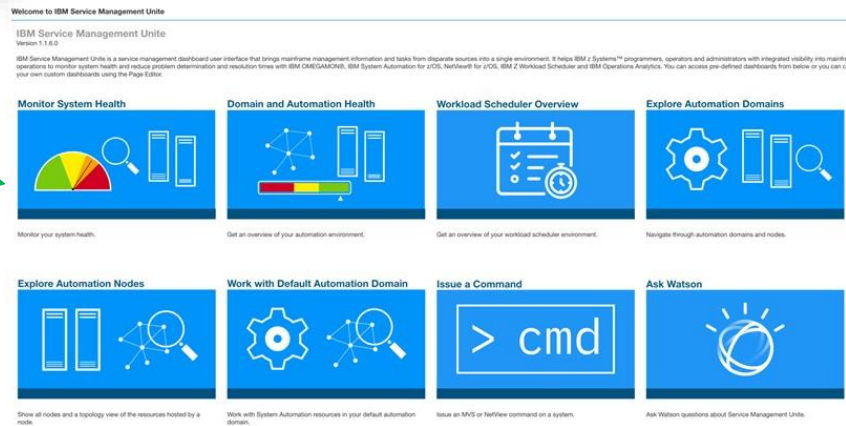
Service Management Unite

Integrated Dashboards support Mainframe Operations

Service Management Unite



SMU Integrated Dashboards support Mainframe Operations. Customizable dashboards for a cross-domain consolidated view, less data, requires less skill and experience



Automation (System Automation and NetView)

Analytics (IZOI)



Performance (OMEGAMON)



Zowe APIs, Apps



Scheduling (Dynamic Workload Console)

Time saving Integrated Web Dashboards built for mainframe Operations!



SMU: Functional overview

SMU Performance Management

Consolidated System Health Dashboard

Problem Identification Dashboards

Overview pages with drill-down to details pages showing key metrics

z/OS	MQ	CICS
Networks	DB2	IMS
WAS	Java VM	Storage

Problem Isolation Dashboards

Guided analysis for key problem areas and suggested actions to restore service.

MQ	
z/OS	Java VM

SMU Workload Scheduler

ZWS Overview Dashboard

- Job Streams
- Workstations
- Job Status
- Related SA resources
- Drill-down to DWC or SA Views

Execute **ZWS operational tasks** (set status, run a job, ...)

SMU Automation

NV Domain Overview

View/Control **NV tasks** and their metrics

View **DVIPA metrics**

Administer **Automation Statements**

View **Canzlog**

Issue **MVS/NV commands**

NetView

Domain and Automation Health Dashboard

Overview of automation domain and system topology showing status summaries and events.

Graphical view of SA relationships

Manage schedules using a calendar widget

Control automated applications

- Start/Stop/Restart
- View/Cancel votes and requests
- Reset
- Suspend/Resume automation

Control appl. groups

- View/Modify group details and automation behavior
- Move to other systems
- Set availability/satisfactory target
- Trigger Rolling Recycle
- Exclude/Avoid systems

Captured messages

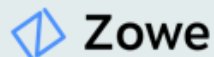
Exceptional messages

WTOs

Problem Isolation

End-to-End Automation (Cross-Sysplex, Cross-Platform)

System Automation



Zowe JES Explorer

Zowe MVS Explorer

New in SMU 1.1.7

SMU Performance Management

OMEGAMONs views for monitoring systems and subsystems

SMU Performance Management

SMU Performance Management

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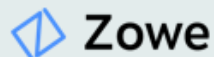
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SMU: System Health dashboard

The screenshot shows the SMU System Health dashboard. The top navigation bar includes 'Administration', 'Performance', 'System Configuration', 'System Status and Health', and 'Troubleshooting and Support'. The main header displays 'SYSTEM HEALTH x' and 'zOS System Health'. On the right, there are notification icons for 0 errors, 6 warnings, and 4 critical alerts.

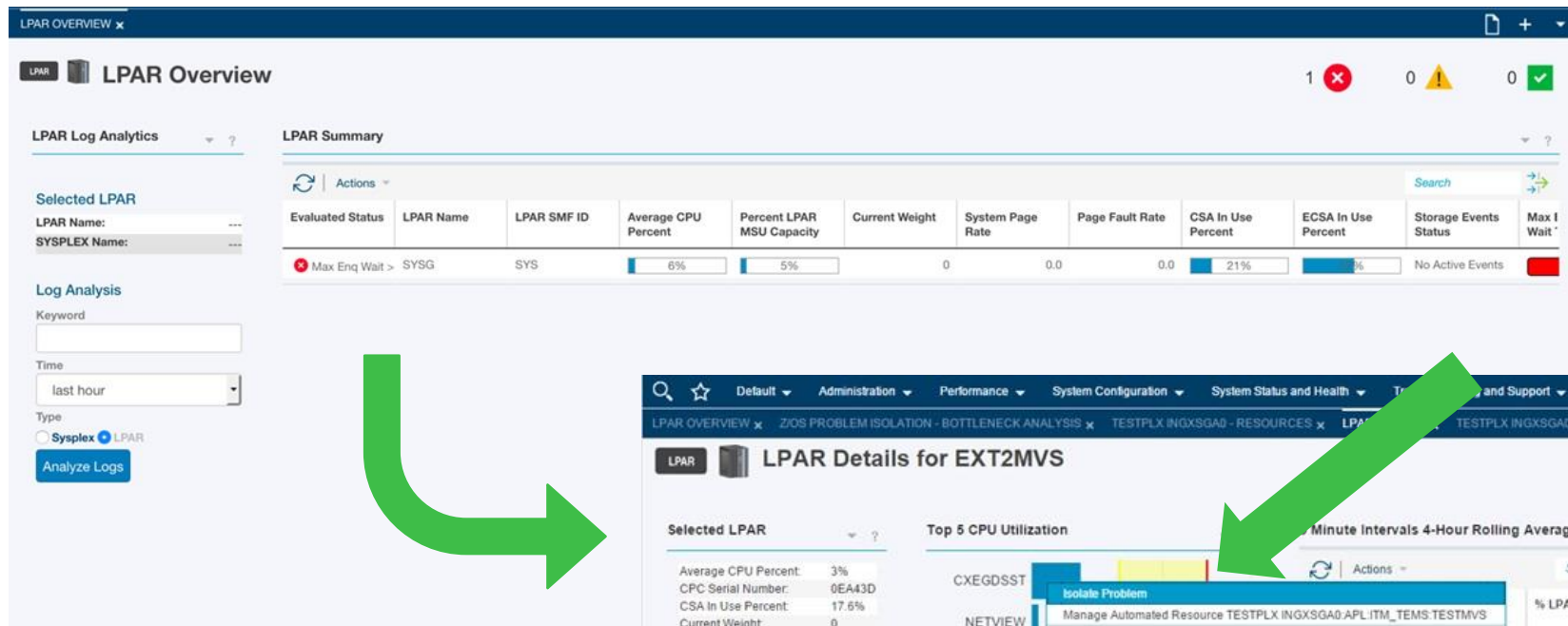
The 'Health Status' sidebar on the left shows monitoring components: z/OS (Critical: 2), CICS (OK), DB2 (OK), MQ (OK), IMS (OK), Networks (OK), WAS (OK), and Automation Domains (TESTPLX INGSGA0 Critical: 4, Warning: 4). A callout 'OMEGAMON monitoring health' points to the z/OS component.

The 'Events' table lists various system events with columns for Severity, Ack, Source, Summary, Time, and Category. A callout 'Event summary by severity' points to the top of the table. A callout 'Event view' points to the 'View Event Details' button in the first row.

Severity	Ack	Source	Summary	Time	Category
Open		TESTPLX.MVST.MVSSYS	Enqueue Wait Condition Exists	2016-02-18 07:43:57	Situation OM zOS
Open		TESTPLX.MVST.MVSSYS	Address Space CPU Utilization Critical	2016-02-18 07:43:47	Situation OM zOS
Open		OM_DB2/APG/TESTMVS	Automation resource with Compound State of "Error". Operational State: "The resource could not be started successfully"	2016-02-17 19:24:42	SA Event
Critical	Open	OM_CICS/APG/TESTMVS	Automation resource with Compound State of "Error". Operational State: "The resource could not be started successfully"	2016-02-17 19:24:42	SA Event
Critical	Open	TIM_MOVE/APG	Automation resource with Compound State of "Error". Operational State: "Error"	2016-02-16 14:34:04	SA Event
Critical	Open	TWS/APG/TESTMVS	Automation resource with Compound State of "Error". Operational State: "Error"	2016-02-16 14:34:02	SA Event
Warning	Open	ITM_GROUP/APG/TESTMVS	Automation resource with Compound State of "Warning". Operational State: "Operation in progress"	2016-02-17 19:26:45	SA Event
Warning	Open	EAP_2/APG/TESTMVS	Automation resource with Compound State of "Warning". Operational State: "The resource is performing poorly"	2016-02-16 14:34:01	SA Event
Warning	Open	EAP_1/APG/TESTMVS	Automation resource with Compound State of "Warning". Operational State: "The resource is performing poorly"	2016-02-16 14:34:01	SA Event
Warning	Open	EAP_3/APG/TESTMVS	Automation resource with Compound State of "Warning". Operational State: "The resource is performing poorly"	2016-02-16 14:34:01	SA Event

A callout 'System Automation health' points to the Automation Domains section in the sidebar.

SMU: LPAR Overview and details



LPAR OVERVIEW x

LPAR Overview 1 x 0 ! 0 ✓

LPAR Log Analytics

Selected LPAR

LPAR Name: ---
SYSPLEX Name: ---

Log Analysis

Keyword:

Time: last hour

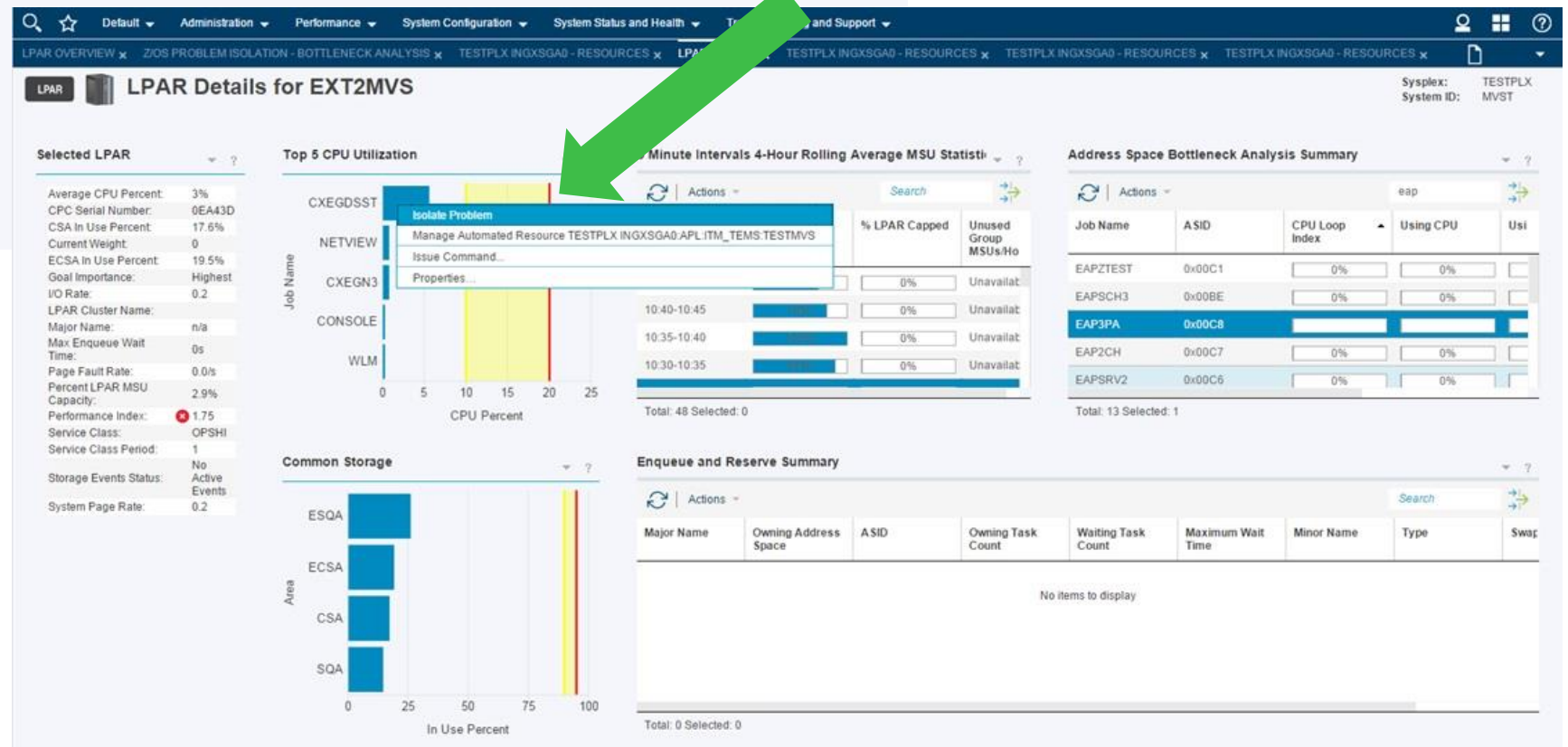
Type: Sysplex LPAR

Analyze Logs

LPAR Summary

Evaluated Status	LPAR Name	LPAR SMF ID	Average CPU Percent	Percent LPAR MSU Capacity	Current Weight	System Page Rate	Page Fault Rate	CSA In Use Percent	ECSA In Use Percent	Storage Events Status	Max I Wait
Max Enq Wait	SYSG	SYS	6%	5%	0	0.0	0.0	21%	0%	No Active Events	Red

Isolate problem



LPAR Details for EXT2MVS

Sysplex: TESTPLX
System ID: MVST

Selected LPAR

- Average CPU Percent: 3%
- CPC Serial Number: 0EA43D
- CSA In Use Percent: 17.6%
- Current Weight: 0
- ECSA In Use Percent: 19.5%
- Goal Importance: Highest
- I/O Rate: 0.2
- LPAR Cluster Name:
- Major Name: n/a
- Max Enqueue Wait Time: 0s
- Page Fault Rate: 0.0/s
- Percent LPAR MSU Capacity: 2.9%
- Performance Index: 1.75
- Service Class: OPSHI
- Service Class Period: 1
- Storage Events Status: No Active Events
- System Page Rate: 0.2

Top 5 CPU Utilization

Job Name	CPU Percent
CXEGDSST	~20%
NETVIEW	~15%
CXEGN3	~10%
CONSOLE	~5%
WLM	~5%

Minute Intervals 4-Hour Rolling Average MSU Statistics

Time Interval	% LPAR Capped	Unused Group MSUs/Ho
10:40-10:45	0%	Unavailat
10:35-10:40	0%	Unavailat
10:30-10:35	0%	Unavailat

Address Space Bottleneck Analysis Summary

Job Name	ASID	CPU Loop Index	Using CPU	Usi
EAPZTEST	0x00C1	0%	0%	
EAPSCH3	0x00BE	0%	0%	
EAP3PA	0x00C8			
EAP2CH	0x00C7	0%	0%	
EAPSRV2	0x00C6	0%	0%	

Common Storage

Area	In Use Percent
ESQA	~25%
ECSA	~15%
CSA	~10%
SQA	~5%

Enqueue and Reserve Summary

Major Name	Owning Address Space	ASID	Owning Task Count	Waiting Task Count	Maximum Wait Time	Minor Name	Type	Swap
No items to display								

High CPU problem: Analysis and Suggested Actions

zOS Problem Isolation - CPU Usage for CXEGDSST

Sysplex: TESTPLX System ID: MVST

Address Space Details

Address Space	
Job Name:	CXEGDSST
ASID:	0x00B2
Type:	STC
Step Name:	CXEGDSST
CPU Utilization	
CPU Percent	0.4%
TCB Percent	0.4%
SRB Percent	0.0%
CPU Percent Excluding Home	0.4%
SRB Time	
IFA Percent	0.0%
IFA on CP Percent	0.0%
zIP Percent	

CPU Usage over 1 hour

Legend: CPU Percent (blue), IFA Percent (orange), zIP Percent (green)

Recording Time: 8:00 AM, 8:03 AM, 8:06 AM, 8:09 AM, 8:12 AM, 8:15 AM, 8:18 AM, 8:21 AM, 8:24 AM, 8:27 AM, 8:30 AM, 8:33 AM, 8:36 AM, 8:39 AM, 8:42 AM, 8:45 AM, 8:48 AM, 8:51 AM, 8:54 AM

Last hour CPU trend

Analysis and Suggested Actions

Suggested Action

High CPU Usage

Problem Description:
An address space and its owned enclaves has been identified as possibly using excessive CPU resource.

Suggested Actions:
Evaluate CPU, zIP and zAAP utilization over the last hour and establish whether the utilization is a spike, constant or has been trending higher before taking further action. Enclaves owned by the address space may be responsible for excessive CPU consumption.

The displayed individual enclaves' current and total CPU, zIP and zAAP utilization should also be evaluated.

Problem	Solution
The address space is consuming more CPU resources than expected	If the address space and/or its owned enclaves are considered to be using excessive CPU resource it may be

Address Space CPU Usage Enclaves

Token	Type	Status	CPU Percent	zIP Percent	zIP on CP Percent	IFA Percent	IFA on CP Percent	Total CPU	Total zIP
0000000000000002	Dep	Active	0%	0%	0%	0%	0%	0.27	0.27
0000004C00000001	Dep	Inactive	0%	0%	0%	0%	0%	0.01	0.01

Total: 2 Selected: 1

Address Space CPU enclaves

Integration cross domains

Navigation: Default Administration Performance System Configuration System Status and Health Troubleshooting and Support

LPAR OVERVIEW x Z/OS PROBLEM ISOLATION - BOTTLENECK ANALYSIS x TESTPLX INGXSGA0 - RESOURCES x **LPAR DETAILS x** TESTMVS - SYSTEM LOG x TESTMVS - ISSUE COMMAND x Z/OS PROBLEM ISOLATION - HIGH CPU USAGE x

LPAR LPAR Details for EXT2MVS Sysplex: TESTPLX System ID: MVST

Selected LPAR

- Average CPU Percent: 3%
- CPC Serial Number: 0EA43D
- CSA In Use Percent: 17.6%
- Current Weight: 0
- ECSA In Use Percent: 19.5%
- Goal Importance: Highest
- I/O Rate: 0.2
- LPAR Cluster Name:
- Major Name: n/a
- Max Enqueue Wait Time: 0s
- Page Fault Rate: 0.0/s
- Percent LPAR MSU Capacity: 2.9%
- Performance Index: ✖ 1.75
- Service Class: OPSHI
- Service Class Period: 1
- Storage Events Status: No Active Events
- System Page Rate: 0.2

Top 5 CPU Utilization

5 Minute Intervals 4-Hour MSU Statistics

Time Period	% LPAR Uncapped	% LPAR Capped	Status
12:20-12:25	64%		Unavailab
11:50-11:55	63%	0%	Unavailab
12:05-12:10	68%	0%	Unava

Address Space Bottleneck Analysis Summary

Job Name	ASID	CPU Loop Index	Using CPU	Usi
ST	0x00C1	0%	0%	
	0x00C8	0%	0%	
EAP2CH	0x00C7	0%	0%	
EAPSP2	0x00C6	0%	0%	
EAPM				

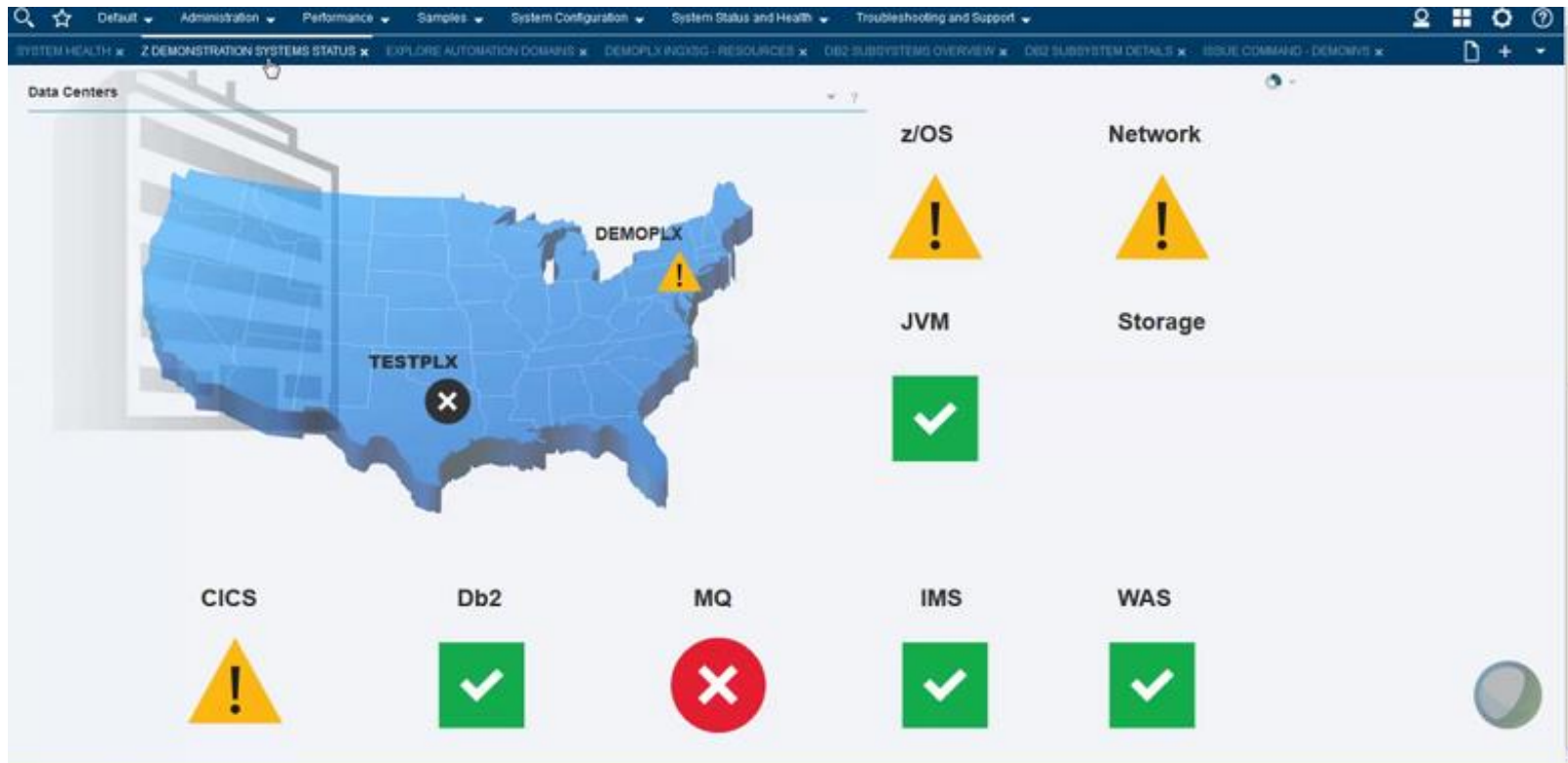
Common Storage

Enqueue and Reserve Summary

Major Name	Owning Address Space	ASID	Owning Task Count	Waiting Task Count	Maximum Wait Time	Minor Name	Type	Sw
No items to display								

Multiple OMEGAMON monitoring environments in one SMU

New in SMU
1.1.7

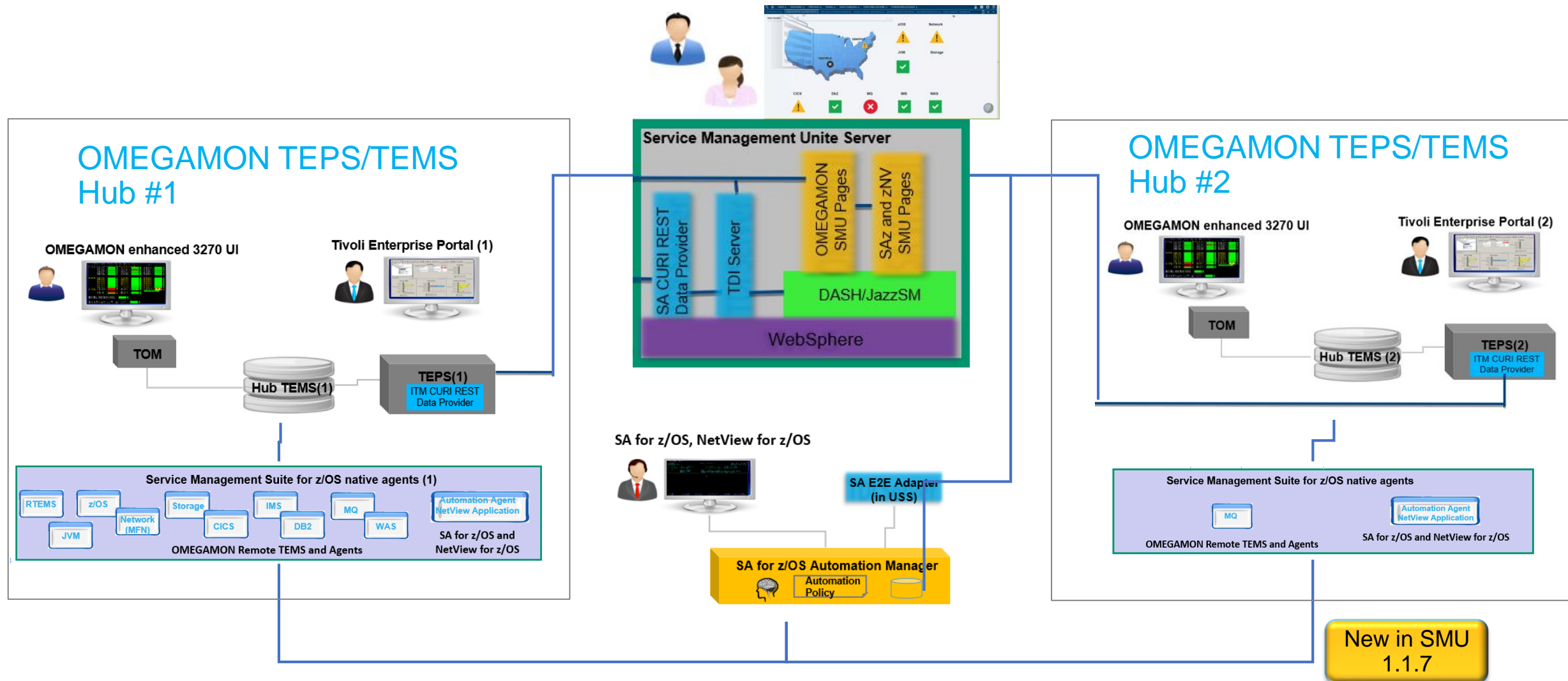


Multiple monitoring environments are used for different reasons, e.g.:

- Data centers in different locations
- Production vs. Test
- Workload Distribution (e.g. Different sub-systems monitored by separate monitoring servers)

Multiple OMEGAMON: architectural view

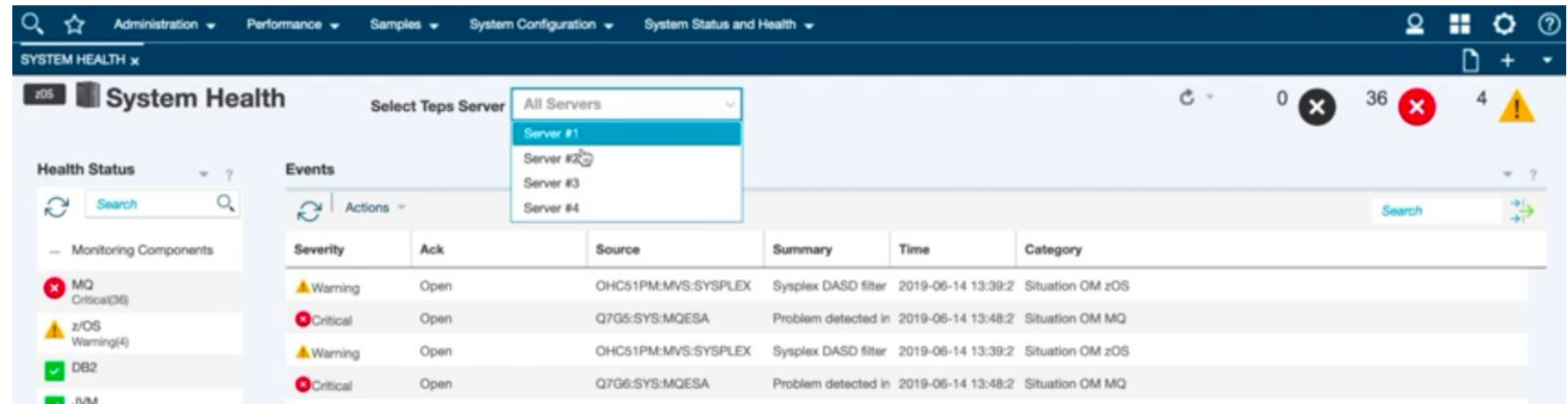
Service Management Unite



“All Servers” or Single Server on OMEGAMON Overview Pages

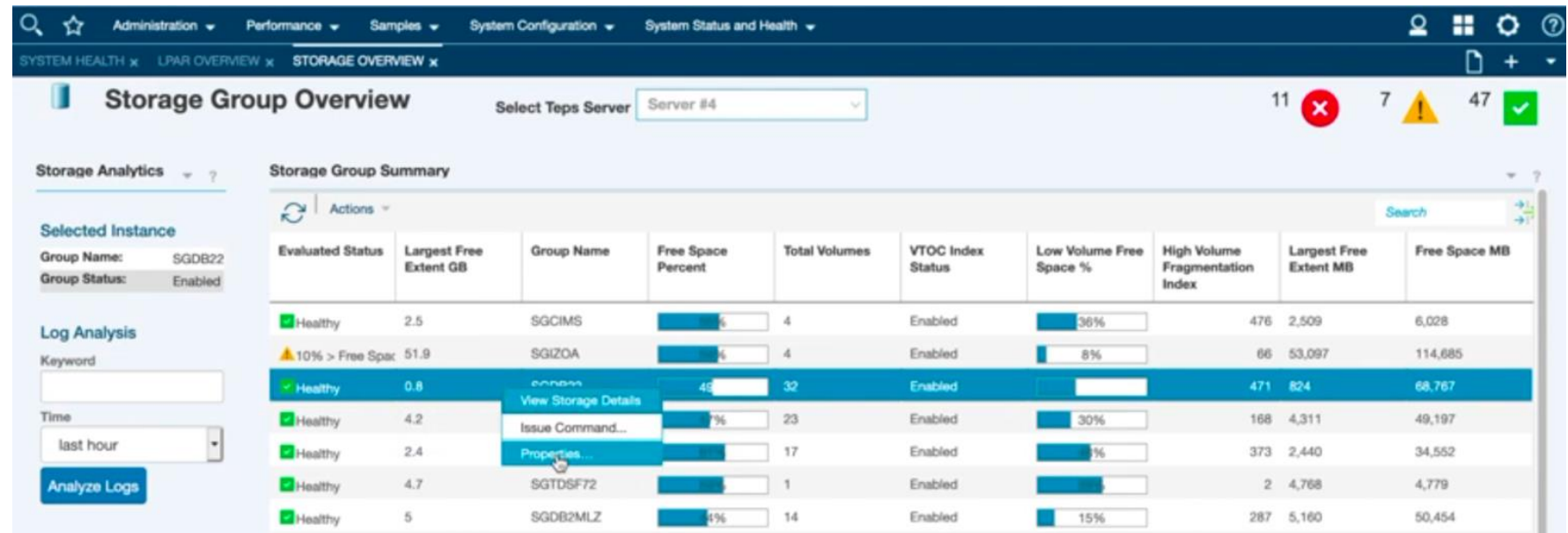
New in SMU
1.1.7

SMU health event view contains data from multiple TEMS/TEPS servers or specific server



SMU OM overview dashboards with ability to choose TEMS/TEPS

Will be opened using the configured default server



Performance Monitoring SMU Dashboards

CICS Region Details

Selected CICS Region: CICSAB51

System Health: OK

Top 5 User Tasks - High Elapsed Time (sec)

Top 5 User Tasks - High CPU Time (sec)

Storage Summary

Area	Percent Used
EDSA	25%
Read Only Key EDS	7%
Read Only Key EDS	5%
Read Only Key DSA	4%
CICS Key DSA	3%
User Key DSA	1%
CICS Key EDSA	1%

Bottleneck Summary

Resource Type	Resource Name	Summary Short Term Percentage	Detailed Short Term Percentage	Summary Long Term Percentage	Detailed Long Term Percentage	Short Term Interval	Long Term Interval
ICWANT	TOTAL	11%	11%	11%	11%	10m 0s	30m 0s
ECDGFEMW	ECSUSPHD	11%	11%	11%	11%	10m 0s	30m 0s
FCFCFR	(none)	11%	11%	11%	11%	10m 0s	30m 0s
FCFCFS	(none)	11%	11%	11%	11%	10m 0s	30m 0s
IS_SCHDQ	IS_SCHDQ	11%	11%	11%	11%	10m 0s	30m 0s
USERWAT	COB2TIME	11%	11%	11%	11%	10m 0s	30m 0s

MQ Queue Manager Details

Selected QMgr: WMQT

System Health: Warning

Top 5 Queues with High Depth

Top 5 Queues Not Being Read

Top 5 Queues Oldest Message Age (sec)

Problem Isolation - Queue Has High Depth

Queue Name: EAP.S2APP.IN.Q2

Applications with Queue Open

Application Name	Application Type	User Identifier	Open for Input	Open for Output	Open for Browse
EMPOD01	SAPICV	WZG001	Yes	Yes	Yes

Recent Pub/Sub Message Rates

JVM Overview

JVM Summary

Evaluated Status	Job Name	Subsystem Type	Application
Healthy	BAQSTRTB	Liberty	z/OS Connect
Healthy	CICSAOR1	CICS	z/OS Connect
Healthy	CTGATE	CTG	null

JVM Details for BAQSTRTB

General CPU %: 0.17%

System GC CPU %: 0.00%

Heap Occupancy Over Time

Garbage Collection Pause Times Over Time

Storage Overview

Storage Analytics

Storage Group Summary

Group Name	Group Status	Evaluated Status	Largest Free Extent GB
PRIMARY	Enabled	Healthy	1.3
OSG0	Enabled	Healthy	1.3
DUPR	Enabled	Healthy	4.4
PTPR	Enabled	Warning	35.7
PRIM	Enabled	Warning	0.1
DASG	Enabled	Warning	2

Volume Details for PRI228

Volume: PRI228

Device: 383F

Address: 3390

Total Capacity: 8120

Free Space: 1235

Percent Free Space: 15.2%

Volume Space Trend

Space Allocation

Data Sets on the Volume

Dataset Name	Dataset Type	Number of Extents	Tracks Allocated	Track
TD0MPT.D5830FP	Partitioned	3	3	3
FFAKO.USER.CLUS	PODS Extended	1	15	1
TDZOST.LIN530 SF	Physical Sequential	1	5,205	4,815
CRMBMC1.C2POLU	PODS Extended	1	15	3

Volume Status

System ID	MVS Status	SMS Status
SY90	Online	Enable
SY91	Online	Enable
SP12	Online	Enable
SP13	Online	Enable
SP11	Online	Enable

APIS-IT: Fiscalisation (DataPower Appliances)



APIS-IT: Custom Dashboard – RMF DDS

Default Administration Performance Samples System Configuration System Status and Health Troubleshooting and Support APIS IT
User Profile Settings Help

F73 DATA POWERS x APIS_WAS WPS x RMF DDS x

4-Rolling Hours MSU

TIMESTAMP	Lpar	VALUE	Group	Proc
Feb 1, 2017 3:59:20 PM	SYT2	4	VUE	P1
Feb 1, 2017 3:59:20 PM	SYT4	23	zNalc	P1
Feb 1, 2017 3:59:20 PM	SYE1	4	VUE	P2
Feb 1, 2017 3:59:20 PM	SYT3	25	zNalc	P2
Feb 1, 2017 3:59:20 PM	SYP2	42	Legacy	P2
Feb 1, 2017 3:59:20 PM	SYP1	68	Legacy	P1
Feb 1, 2017 3:59:20 PM	SYR4	18	zNalc	P1
Feb 1, 2017 3:59:20 PM	SYR3	20	zNalcVUE	P2
Feb 1, 2017 3:59:20 PM	SYI4	9	zNalcVUE	P1
Feb 1, 2017 3:59:20 PM	SYI3	9	zNalc	P2
Feb 1, 2017 3:59:20 PM	SYI2	7	Legacy	P1
Feb 1, 2017 3:59:20 PM	SYE3	17	zNalc	P2
Feb 1, 2017 3:59:20 PM	SYR4	118	zNalc	P2

Total: 18 Selected: 0

4-Rolling Hours MSU/Capacity Groups

Updated: 1. 2. 2017. 15:59:42

4-Rolling Hours MSU Active Events

Situation ID	Source	Local Timestamp	Node	Type	Severity	Dis
APIS_RMF_check	WWT062:02	Feb 1, 2017 1:58:31	HUB_WWT062	Sampled	Minor	

Total: 1 Selected: 0

4-Rolling Hours MSU/LPARs Usage

4-Rolling Hours/Category

SMU Automation: System Automation

Monitor and Control Automated resources

SMU Automation (System Automation)

SMU Performance Management

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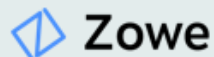
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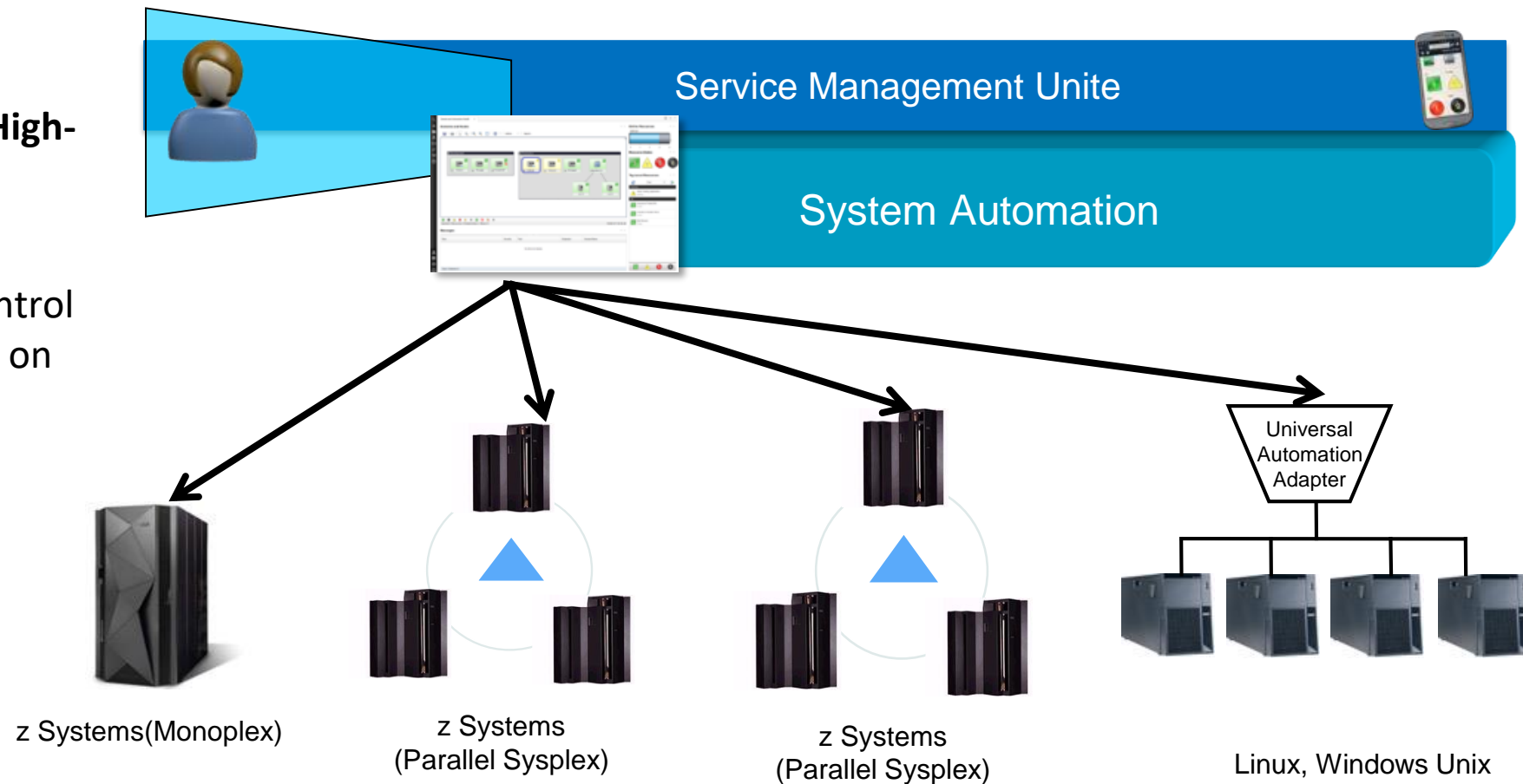
New in SMU 1.1.7

SMU for End-to-End automation

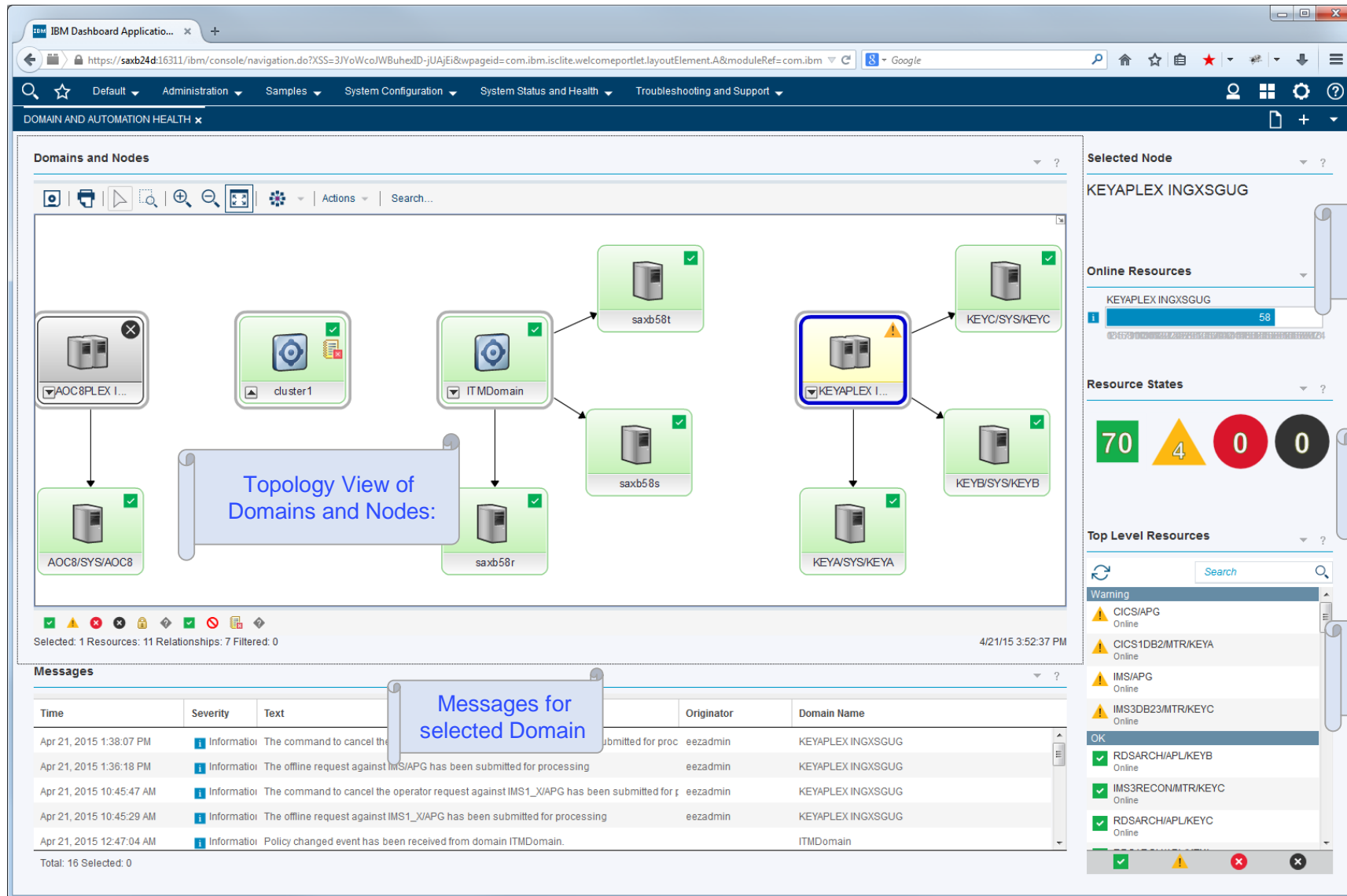
Automate applications across multiple Z Sysplex and distributed platforms from a single console with a modernized Dashboard UI

Enterprise-wide Automation and High-Availability with a modern Dashboard UI.

Single console to automate and control multi-tiered applications running on *multiple z/OS sysplexes*



Overview of connected automation domains



The screenshot displays the IBM Dashboard Application interface, specifically the 'DOMAIN AND AUTOMATION HEALTH' section. The main area shows a 'Topology View of Domains and Nodes' with a hierarchical structure of domains and nodes. The 'KEYAPLEX I...' domain is selected, and its details are shown in the right-hand pane. The 'Messages' pane at the bottom left shows a list of system messages.

Topology View of Domains and Nodes:

- Domains: AOC8PLEX 1..., cluster1, ITMDomain, KEYAPLEX I...
- Nodes: AOC8/SYS/AOC8, saxb58t, saxb58s, saxb58r, KEYC/SYS/KEYC, KEYB/SYS/KEYB, KEYSYS/KEYA

Selected Node: KEYAPLEX INGXSUG

Online Resources:

- KEYAPLEX INGXSUG (58)

Resource States:

- 70 (Green)
- 4 (Yellow)
- 0 (Red)
- 0 (Black)

Top Level Resources:

- Warning: CICS/APG Online, CICS1DB2/MTR/KEYA Online, IMS/APG Online, IMS3DB23/MTR/KEYC Online
- OK: RDSARCH/APL/KEYB Online, IMS3RECON/MTR/KEYC Online, RDSARCH/APL/KEYC Online

Messages for selected Domain:

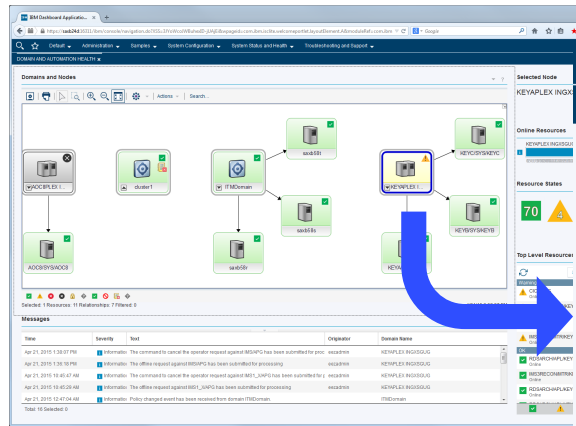
Time	Severity	Text	Originator	Domain Name
Apr 21, 2015 1:38:07 PM	Information	The command to cancel the...	eezadmin	KEYAPLEX INGXSUG
Apr 21, 2015 1:36:18 PM	Information	The offline request against IMS/APG has been submitted for processing	eezadmin	KEYAPLEX INGXSUG
Apr 21, 2015 10:45:47 AM	Information	The command to cancel the operator request against IMS1_X/APG has been submitted for p...	eezadmin	KEYAPLEX INGXSUG
Apr 21, 2015 10:45:29 AM	Information	The offline request against IMS1_X/APG has been submitted for processing	eezadmin	KEYAPLEX INGXSUG
Apr 21, 2015 12:47:04 AM	Information	Policy changed event has been received from domain ITMDomain.		ITMDomain

Online resources for selected Domain

Summary status of Automated resources

Top level resources for selected domain

Automation Domain Dashboard



Domain Page

Automation Domain: TESTPLX INGXSGA0

✓ All communication paths to this automation domain are working. Domain Actions ?

Resources

Actions Search

Name	Compound State	Observed State	Desired State	Automated	Operator 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/TESTM	OK	Online	Online	Yes	No request
E2E_ADPT_X/APG	OK	Online	Online	Yes	No request
EAP_1/APG/TESTMV	Warning	Online	Online	Yes	No request
EAP_2/APG/TESTMV	Warning	Online	Online	Yes	No request
EAP_3/APG/TESTMV	Warning	Online	Online	Yes	No request
EAP_3CH/APL/TE	OK	Online	Online	Yes	No request
EAP_3ERR/APL/	Fatal Error	Offline	Offline	Yes	No request
EAP_3PA/APL/TE	OK	Online	Online	Yes	No request

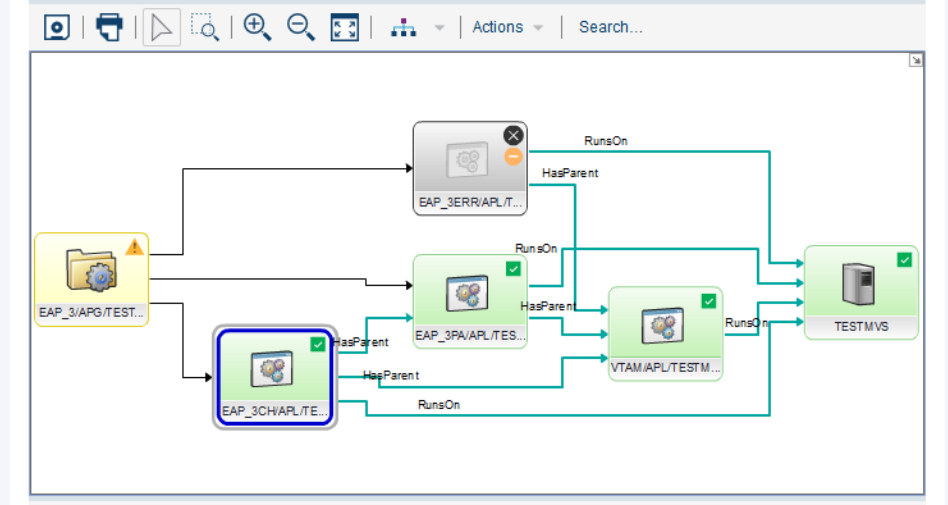
Nodes

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

Total: 1 Selected: 0

Relationships

Actions Search...



Selected: 1 Resources: 6 Relationships: 11 Filtered: 0 9/20/16 11:22:45 AM

Requests

Requested Action	Source	User ID	Info	Priority	Created	Type	Winning
Online	GROUP EAP_		MakeAvailable	Low	Sep 18, 2016!	VOTE	false

Total: 1 Selected: 0

SMU Automation Problem Isolation (INGWHY)

Isolate Problem with INGWHY

- Request Start...
- Request Stop...
- Cancel Request
- Restart...
- Manage Schedules
- Suspend Automation...
- Reset
- View System Log
- View Captured Messages
- View Job Information
- Issue Command
- Properties...

DOMAIN AND AUTOMATION HEALTH x LPAR400J INGXSUSA - RESOURCES x SYSG - SYSTEM LOG x EAPJREXX - PROBLEM ISOLATION x EAPJREXX - JOB INFORMATION x

Problem Isolation with INGWHY

Automation Domain: LPAR400J INGXSUSA Resource: EAPJREXX/APL/SYSG

Analyzed Resource

Name	Compound State	Observed State	Desired State	Automated	Oper. Requ
EAPJREXX/APL/SYSG	OK	Available	Available	Yes	No

Causing Resources

No items to display

Total: 0 Selected: 0

Suggested Actions

Analysis from INGWHY

Situation:
EAPJREXX/APL/SYSG is available.

Selected Resource:
EAPJREXX/APL/SYSG

Reason	Action
The 'Desired Availability' of EAPJREXX/APL/SYSG is set to 'Always'. EAPJREXX/APL/SYSG is started by default once its dependencies are satisfied.	INGWHYSA(A0106900) Refer to your company's rules in order to take the appropriate action. No action required.

Relationships

Selected: 1 Resources: 2 Relationships: 1 Filtered: 0 5/22/19 2:19:28 PM

Requests

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

Total: 0 Selected: 0

Manage automation schedules from SMU

Manage schedules for SMUSVPAPL/APL/SAMC ?

Choose date:

February

S	M	T	W	T	F	S
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	1	2	3	4	5
6	7	8	9	10	11	12
2015		2016	2017			

◀ ▶ | Today | Day | 4 Days | Week | Month

	Sun, 7. Feb	Mon, 8. Feb	Tue, 9. Feb	Wed, 10. Feb	Thu, 11. Feb	Fri, 12. Feb	Sat, 13. Feb
			Inactive base schedules		Inactive base schedules		
10:00 AM							
11:00 AM	11:00 AM Offline - Low						11:00 AM Offline - Low
12:00 PM							
1:00 PM					1:00 PM Offline - Low		
2:00 PM			2:30 PM Online - Low				
3:00 PM							
4:00 PM							
5:00 PM							
6:00 PM		6:00 PM Offline - Low	6:00 PM Offline - Low	6:00 PM Offline - Low	6:00 PM Offline - Low	6:00 PM Offline - Low	6:00 PM Offline - Low
7:00 PM							
8:00 PM							

Filter schedules:

Online Offline
 Base schedules Overrides

Schedule types:

Online Offline Past

Base schedules Overrides

Timezone:

Browser time: 1:53 PM UTC+0
 System time: 2:53 PM UTC+1
 Browser time System time

Schedule information:

Start: 2/9/2016 2:30 PM
End: 2/9/2016 4:00 PM
Action: Online Offline
Priority: High Low

Save

Cancel
Save

Currently available: 3270 SDF

SA Z/OS TEST-SYSTEMS

```

CONFIGURATION  > REFRESH STATUS
KEYAPLEX      KEY1PLEX      SATPLEX      TSAPLEX      AOCPLEX
>KEYA IPXFG   >KEY1 IPSFM   >SAT1 IPZNA   >TSA1 IPZEL   >AOC1 IPXFG
>KEYB IPXFH   >KEY2 IPSFN   >SAT2 IPZNB   >TSA2 IPZEL   >AOC2 IPXFH
>KEYC IPXF1   >KEY3 IPSFO   >SAT3 IPZNC   >TSA3 IPZEL   >AOC3 IPXF1
>KEY4 IPSFP   >KEY4 IPSFP   >SAT4 IPZND   >TSA4 IPZEL   >AOC4 IPXF1

STANDALONE SYSTEM
>AOC1 IPUFG   >AOC4 IPUFJ   >AOC7 IPUFJ
>AOC2 IPUFH   >AOC5 IPUFK   >AOC8 IPUFK
>AOC3 IPUFI   >AOC6 IPUFL   >AOC9 IPUFL

HARDWARE
> PROCESSORS  > ENSEMBLES
  
```

SUMMARY-STATUS SAT1 05/10/19 14:05:55

```

----- RESOURCES -----
>APPLS      >DB2_WSIM
>GROUPS     >USERDATA
>MONITORS   >IMS_WSIM

----- MESSAGES -----
>WTOR      >MESSAGES

----- SPECIAL ITEMS -----
>TWS      >TAPE DEVICES
>GATEWAY
  
```

Drill-Down to System

Display WTORs

Display Exceptional Messages (INGMSGs)

SAT2 SAT1: WTOR-STATUS 05/10/19 13:25:33

```

Jobname  Reply ID / Message text
OPERTASK 08 OTSK009A ENTER RESET/DISPLAY/STOP 1/18(18)
IMSF11CR 79 DFS972A *IMS AWAITING MORE INPUT* MF11
IMSF11CR 80 DFS972A *IMS AWAITING MORE INPUT* MF11
IMSE11IC 53 HWSC0000I *IMS CONNECT READY* IMSE11IC
IMSD11IC 56 HWSC0000I *IMS CONNECT READY* IMSD11IC
IMSE11CR 66 DFS996I *IMS READY* ME11
IMSD11CR 73 DFS996I *IMS READY* MD11
IMSF11IC 39 HWSC0000I *IMS CONNECT READY* IMSF11IC
NETBTST1 46 DSI802A IPZNA REPLY WITH VALID NCCF S
IMSF11CR 78 DFS996I *IMS READY* MF11
IMSF11CR 84 DFS996I *IMS READY* MF11
IMSF11CR 85 DFS996I *IMS READY* MF11
IMSF11CR 88 DFS996I *IMS READY* MF11
IMSF11CR 89 DFS996I *IMS READY* MF11
IMSF11CR 90 DFS996I *IMS READY* MF11
IMSF11CR 91 DFS996I *IMS READY* MF11
IMSF11CR 92 DFS996I *IMS READY* MF11
IMSF11CR 97 DFS996I *IMS READY* MF11
  
```

INGKYMMSG SA z/OS - Command Dialogs Line 1 of 110
 Domain Id : IPXFG Date : 09/20/19
 Operator Id : WSCH System = KEYA Time : 13:27:56

```

CMD: D Delete F INGINFO/DISPSYS
CMD Timestamp S Message
-----
2019-09-09 12:42:18 C SYSTEM=KEYA
AOF293I 12:42:18 : THERE IS NO OUTSTANDING REPLY STORED BY SA z/OS FO..
R SUBSYSTEM MVSESA
2019-09-09 12:42:19 C SYSTEM=KEYA
AOF293I 12:42:19 : THERE IS NO OUTSTANDING REPLY STORED BY SA z/OS FO..
R SUBSYSTEM MVSESA
2019-09-09 12:42:19 C SYSTEM=KEYA
AOF293I 12:42:19 : THERE IS NO OUTSTANDING REPLY STORED BY SA z/OS FO..
R SUBSYSTEM MVSESA
2019-09-09 12:42:19 C SYSTEM=KEYA
AOF293I 12:42:19 : THERE IS NO OUTSTANDING REPLY STORED BY SA z/OS FO..
R SUBSYSTEM MVSESA
2019-09-09 12:42:19 C SYSTEM=KEYA
AOF293I 12:42:19 : THERE IS NO OUTSTANDING REPLY STORED BY SA z/OS FO..
R SUBSYSTEM MVSESA
  
```

SMU: Exceptional Messages and WTORs

Default Administration Performance System Configuration System Status and Health

DOMAIN AND AUTOMATION HEALTH x MANAGE AUTOMATION POLICIES x EXCEPTIONAL MESSAGES AND WTORS x

Exceptional Messages and Outstanding Operator Replies

Domains

Actions Search

Name	Communicatio State	Log Status
E2E Domain (KE)	All communic	Log requires attent
AOC1PLEX IN	All communic	Log requires attent
KEYAPLEX IN	All communic	Log requires attent
KEYA		
KEYB		
KEYC		
E2E Domain (AO)	All communic	Log requires attent

Exceptional Messages

System	Timestamp	Severity	Resource	Message
KEYC	2019-09-11 14:05:30 +0200	Unusual		AOF589I 14:05:30 : RECOVERY FOR MINRES MVSESA.SMFDUMP CONTINUING - INFREQUENT THRESHOLD COMMAND IS
KEYA	2019-09-11 13:26:29 +0200	Unusual		AOF589I 13:26:29 : RECOVERY FOR MINRES MVSESA.SMFDUMP CONTINUING - INFREQUENT THRESHOLD COMMAND IS
KEYC	2019-09-09 13:57:26 +0200	Important	IMS1FDBR/APL/KEYC	IEF450I IMSFA1FD IMSFA1FD - ABEND=S000 U4095 REASON=00000000
KEYC	2019-09-09 13:57:26 +0200	Critical	IMS1FDBR/APL/KEYC	AOF577E 13:57:26 : RECOVERY FOR SUBSYSTEM IMS1FDBR (JOB IMSFA1FD) HALTED - CRITICAL THRESHOLD EXCEED
KEYA	2019-09-09 13:55:42 +0200	Critical	IMS1FDBR/APL/KEYA	AOF577E 13:55:42 : RECOVERY FOR SUBSYSTEM IMS1FDBR (JOB IMSFA1FD) HALTED - CRITICAL THRESHOLD EXCEED
KEYA	2019-09-09 13:55:41 +0200	Important	IMS1FDBR/APL/KEYA	IEF450I IMSFA1FD IMSFA1FD - ABEND=S000 U4095 REASON=00000000
KEYC	2019-09-09 12:42:30 +0200	Critical		AOF293I 12:42:30 : THERE IS NO OUTSTANDING REPLY STORED BY SA z/OS FOR SUBSYSTEM MVSESA
KEYC	2019-09-09 12:42:29 +0200	Critical		AOF293I 12:42:29 : THERE IS NO OUTSTANDING REPLY STORED BY SA z/OS FOR SUBSYSTEM MVSESA
KEYC	2019-09-09 12:42:29 +0200	Critical		AOF293I 12:42:29 : THERE IS NO OUTSTANDING REPLY STORED BY SA z/OS FOR SUBSYSTEM MVSESA
KEYC	2019-09-09 12:42:29 +0200	Critical		AOF293I 12:42:29 : THERE IS NO OUTSTANDING REPLY STORED BY SA z/OS FOR SUBSYSTEM MVSESA

Total: 26 Selected: 1

Write to Operator with Reply (WTOR) Messages

Reply ID	Status	Time	System Name	Job ID	Message ID	Message Text
163	Decision	11:32:20	KEYB	STC08846	AOF606D	AUTOMATION PAUSED, ENTER OPTIONS OR 'R' (RE-DISPLAY) - DOMAIN IPXFH
159	Action	10:35:27				SYSTEM OPERATOR COMMAND
108	Action	12:41:04				SYSTEM OPERATOR COMMAND
070	Action	12:41:04	KEYC		DSI802A	IPXFI REPLY WITH VALID NCCF SYSTEM OPERATOR COMMAND
069	Information	11:32:40	KEYC	STC06812	DFS996I	"IMS READY" MFC1
060	Information	11:32:30	KEYB	STC06797	DFS996I	"IMS READY" MFB1
055	Information	11:32:35	KEYA	STC06809	DFS996I	"IMS READY" MFA1

Total: 10 Selected: 0

Select either an SA Plex or an individual system → Messages and WTORs will be updated accordingly

New in SMU 1.1.7

Delete Message

Delete... View in Domain Page Properties...

If message is related to an SA resource, open the resource in the SA Domain Page

SMU: Reply to WTOR messages

New in SMU
1.1.7

Write to Operator with Reply (WTOR) Messages

Reply ID	Status	Time	System Name	Job ID	Message ID	Message Text
163	Decision	11:32:20	KEYB	STC06812	AOF606D	AUTOMATION PAUSED, ENTER OPTIONS OR 'R' (RE-DISPLAY) - DOMAIN IPXFH
159	Action	10:35:27	KEYB	STC06812	DSI802A	IPXFH REPLY WITH VALID NCCF SYSTEM OPERATOR COMMAND
108	Action	12:41:04	KEYA	STC06812	DSI802A	IPXFG REPLY WITH VALID NCCF SYSTEM OPERATOR COMMAND
070	Action	12:41:04	KEYC	STC06812	DSI802A	IPXFI REPLY WITH VALID NCCF SYSTEM OPERATOR COMMAND
069	Information	11:32:40	KEYC	STC06812	DFS996I	*IMS READY* MFC1
060	Information	11:32:30	KEYB	STC06797	DFS996I	*IMS READY* MFB1
055	Information	11:32:35	KEYA	STC06809	DFS996I	*IMS READY* MFA1

- Reply...
- View Canzlog
- Properties...

Reply to Message

Reply Id: 163

Message Id: AOF606D

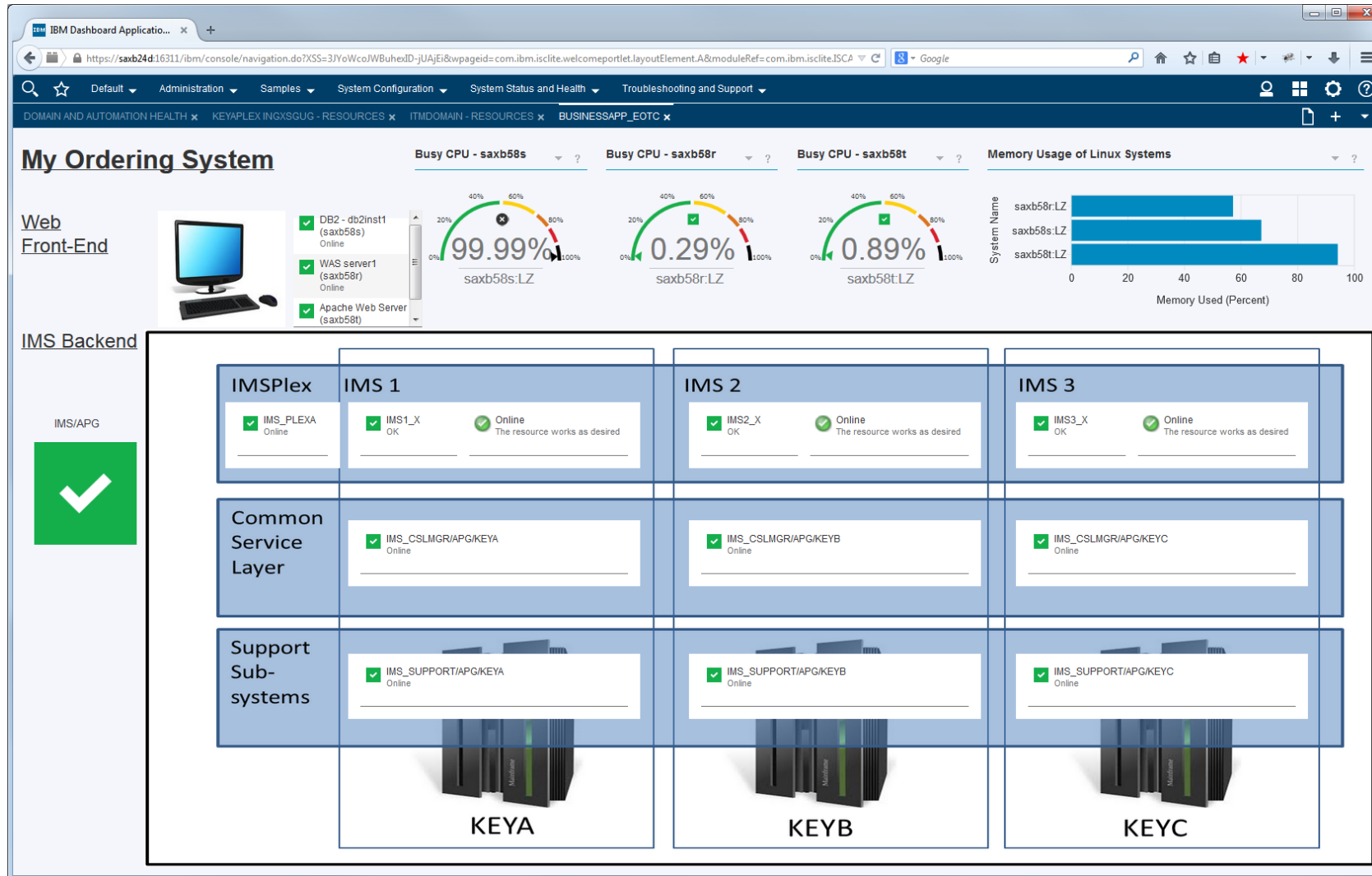
Message Text: AUTOMATION PAUSED, ENTER OPTIONS OR 'R' (RE-DISPLAY) - DOMAIN IPXFH

Reply:

Cancel OK

Total: 10 Selected: 1

Customized SMU E2E Dashboards for Automation



SMU Automation: NetView

NetView modernization

SMU Automation (NetView)

SMU Performance Management

Consolidated System Health Dashboard

Problem Identification Dashboards

Overview pages with drill-down to details pages showing key metrics

z/OS	MQ	CICS
Networks	DB2	IMS
WAS	Java VM	Storage

Problem Isolation Dashboards

Guided analysis for key problem areas and suggested actions to restore service.

MQ	
z/OS	Java VM

SMU Workload Scheduler

ZWS Overview Dashboard

- Job Streams
- Workstations
- Job Status
- Related SA resources
- Drill-down to DWC or SA Views

Execute **ZWS operational tasks** (set status, run a job, ...)

SMU Automation

NV Domain Overview

View/Control **NV tasks** and their metrics

View **DVIPA metrics**

Administer **Automation Statements**

View **Canzlog**

Issue **MVS/NV commands**

NetView

Domain and Automation Health Dashboard
Overview of automation domain and system topology showing status summaries and events.

Graphical view of SA relationships

Manage schedules using a calendar widget

Control automated applications

- Start/Stop/Restart
- View/Cancel votes and requests
- Reset
- Suspend/Resume automation

Control appl. groups

- View/Modify group details and automation behavior
- Move to other systems
- Set availability/satisfactory target
- Trigger Rolling Recycle
- Exclude/Avoid systems

Captured messages

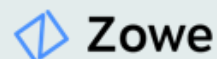
Exceptional messages

WTOs

Problem Isolation

End-to-End Automation (Cross-Sysplex, Cross-Platform)

System Automation



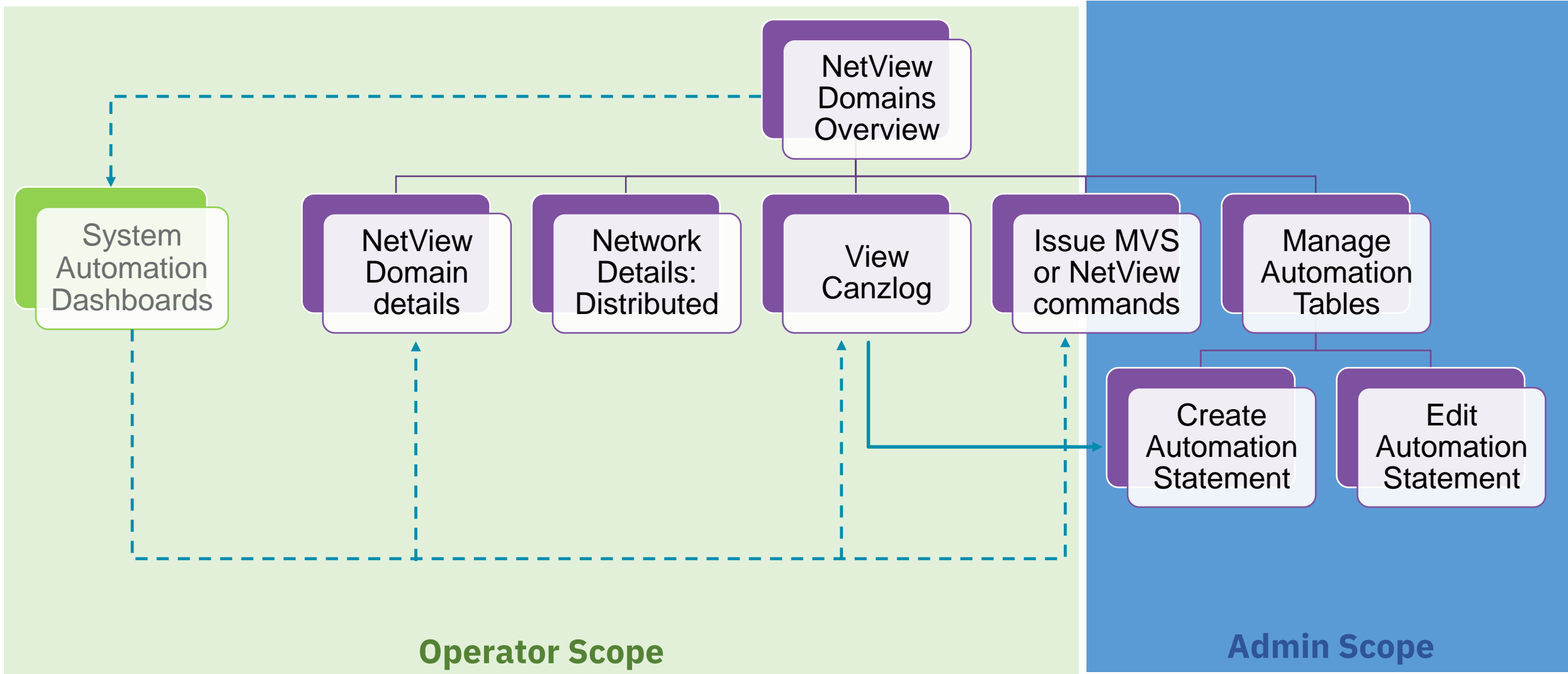
Zowe JES Explorer

Zowe MVS Explorer

New in SMU 1.1.7

New in SMU
1.1.7

SMU: NetView dashboards



SMU: NetView Overview Dashboard

Navigation: Default Administration Samples System Configuration System Status and Health

EXPLORE NETVIEW DOMAINS x

Explore NetView Domains

All domains in a single table

NetView Domains

Actions Search

NetView Domain Name	System Name	Sysplex Name	XCF Group	Role	NetView Release	Total CPU %	Total Storage (KB)
C01NV	TVT2003	NETVIEW	DSIPLX01	RMASTER	630	3%	22841
C02NV	TVT2004	NETVIEW	DSIPLX01	RMCAP	630	3%	22878
B63NV	TVT2015	NETVIEW	DSIPLX01	RMCAP	630	2%	23978
D16	TVT2017	NETVIEW	DSIPLX01	RBASIC	630	2%	21625
NTV68	NMPIPL94	PLEX1	DSIPLX01	EMASTER	630		10000

- View Task Utilization
- View Network Details
- View Canzlog
- Issue Command
- Manage Automation Tables
- Properties...

Total: 5 Selected: 1

New in SMU 1.1.7

SMU NetView Domain Details

New in SMU 1.1.7

NetView Task Utilization

NetView Tasks

Task Name	Type	DPR	CPU Time	NetView CPU %	System CPU %	Message Queue count	Storage (KB)	Command
DSIUDST	DST	250	1.34			0	212	N/A
NETVIEW	SRB	N/A	1.77	2%	0%	0	0	N/A
DSIIPCHK	AUTO	250	0.00	0%	0%	0	196	**NONE**
NETVIEW	TOTL	244	67.63	100%	2%	1	18,937	N/A
DSI#0002	VOST	251	0.00	0%	0%	0	28	DSITAMCD
AUTOTCPS	AUTO	250	0.01	0%	0%	0	272	**NONE**
AUTOPSAV	AUTO	250	0.00	0%	0%	0	196	**NONE**
AAUTSKLP	DST	247	0.06	0%	0%	0	1,765	N/A
SYSTEM	TOTL	N/A	N/A	0%	5%	0	0	N/A
AUTOXCF	AUTO	250	7.99	0%	0%	0	594	**NONE**

- Stop
- Recycle
- Reset
- Properties...

- View Network Details
- View Automation Domain
- View Canzlog
- Issue Command
- Manage Automation Tables
- Properties

Total: 65 Selected: 0

Total System CPU %



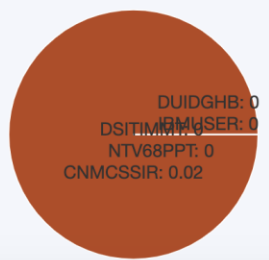
Total Storage in KB



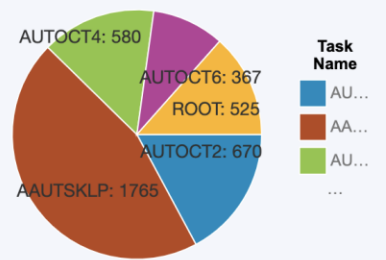
Total Message Queue Count



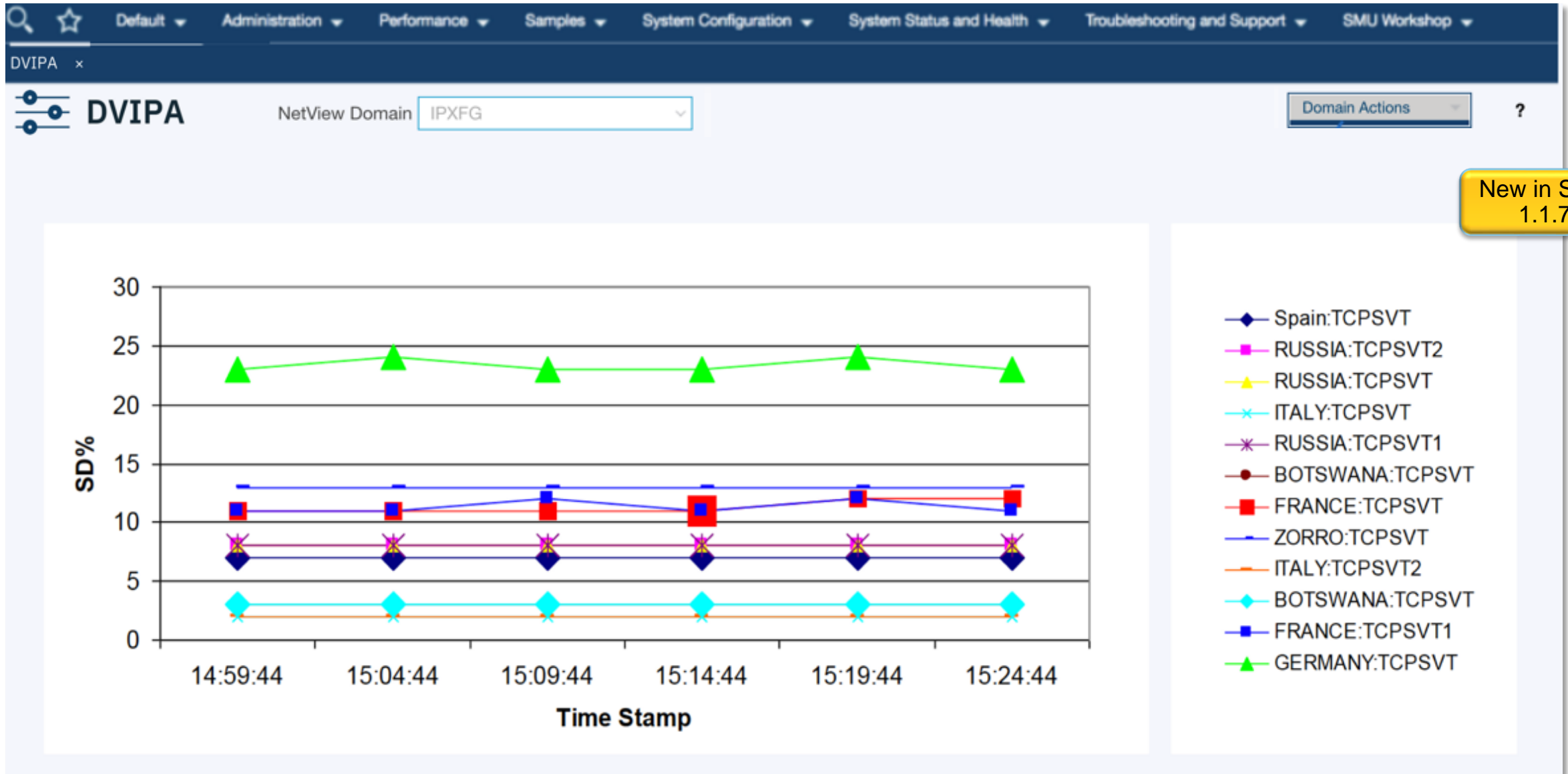
Top 5 CPU Consumers



Top 5 Storage Consumers



Network Details: Distributed DVIPA Statistics



New in SMU 1.1.7

Issue MVS or NetView Command

Administration ▾ Samples ▾ System Configuration ▾ System Status and Health ▾ Troubleshooting and Support ▾

EXPLORE AUTOMATION DOMAINS x SAMCPLEX INGXSGXC - RESOURCES x SAMC - SYSTEM LOG x SAMC - ISSUE COMMAND x

Issue Command Automation Domain: **SAMCPLEX INGXSGXC** Node Name: **SAMC**

Issue a command on system 'SAMC' in domain 'SAMCPLEX INGXSGXC'. MVS prefix can be used to execute MVS commands within NetView.

Command: Go

```

mvs d t
IEE136I LOCAL: TIME=18.00.52 DATE=2016.048 UTC: TIME=17.00.52 DATE=2016.048

inglist
Sysplex = SAMCPLEX 17 Feb 2016 18:00:31
Name Type System Compound Desired Observed Nature Automation Startable Health Auto Hold Description Starttype Stoptype Trigger Sched
-----
AM APL SAMC SATISFACTORY AVAILABLE AVAILABLE IDLE YES N/A YES NO SA Automation Manager
AM APL SAMD SATISFACTORY AVAILABLE AVAILABLE IDLE YES N/A YES NO SA Automation Manager
AM_X APG APG SATISFACTORY AVAILABLE AVAILABLE SERVER INTERNAL YES N/A YES NO Automation Manager Group for the sysplex
AM2 APL SAMC SATISFACTORY UNAVAILABLE SOFTDOWN IDLE YES N/A YES NO Spare SA Automation Manager
AM2 APL SAMD SATISFACTORY UNAVAILABLE SOFTDOWN IDLE YES N/A YES NO Spare SA Automation Manager
APG1 APG SAMC SATISFACTORY AVAILABLE AVAILABLE BASIC INTERNAL YES N/A YES NO
APG1 APG SAMD SATISFACTORY AVAILABLE AVAILABLE BASIC INTERNAL YES N/A YES NO
BAS#APL1 APL SAMC SATISFACTORY AVAILABLE AVAILABLE IDLE YES N/A YES NO ### Test application in a Basic APG
BAS#APL1 APL SAMD SATISFACTORY AVAILABLE AVAILABLE IDLE YES N/A YES NO ### Test application in a Basic APG
BAS#APL2 APL SAMC SATISFACTORY AVAILABLE AVAILABLE IDLE YES N/A YES NO ### Test application in a Basic APG
BAS#APL2 APL SAMD SATISFACTORY AVAILABLE AVAILABLE IDLE YES N/A YES NO ### Test application in a Basic APG
BASICAPG APG SAMC SATISFACTORY AVAILABLE AVAILABLE BASIC INTERNAL YES N/A YES NO ### Basic Group for Test
BASICAPG APG SAMD SATISFACTORY AVAILABLE AVAILABLE BASIC INTERNAL YES N/A YES NO ### Basic Group for Test
EJES APL SAMC SATISFACTORY AVAILABLE AVAILABLE IDLE YES N/A YES NO Class for emulation appls
EJES APL SAMD SATISFACTORY AVAILABLE AVAILABLE IDLE YES N/A YES NO Class for emulation appls
EMULSYS APG SAMC SATISFACTORY AVAILABLE AVAILABLE BASIC INTERNAL YES N/A YES NO emulated system resources
EMULSYS APG SAMD SATISFACTORY AVAILABLE AVAILABLE BASIC INTERNAL YES N/A YES NO emulated system resources
ETCPIP APL SAMC SATISFACTORY AVAILABLE AVAILABLE IDLE YES N/A YES NO Class for emulation appls
ETCPIP APL SAMD SATISFACTORY AVAILABLE AVAILABLE IDLE YES N/A YES NO Class for emulation appls
E2E_ADPT APL SAMC SATISFACTORY AVAILABLE AVAILABLE IDLE YES N/A YES NO E2E Automation Adapter
E2E_ADPT APL SAMD SATISFACTORY UNAVAILABLE SOFTDOWN IDLE YES N/A YES NO E2E Automation Adapter
E2E_ADPT_X APG APG SATISFACTORY AVAILABLE AVAILABLE MOVE INTERNAL YES N/A YES NO E2E Automation Adapter Sysplex Move Grp.
E2E_EAS APL SAMC SATISFACTORY AVAILABLE AVAILABLE IDLE YES N/A YES NO Event Automation Service
E2E_EAS APL SAMD SATISFACTORY AVAILABLE AVAILABLE IDLE YES N/A YES NO Event Automation Service
JES2MON MTR SAMC SATISFACTORY AVAILABLE AVAILABLE IDLE YES N/A YES NO Monitor for JES2
JES2MON MTR SAMD SATISFACTORY AVAILABLE AVAILABLE IDLE YES N/A YES NO Monitor for JES2
MOVE#APL APL SAMC SATISFACTORY AVAILABLE AVAILABLE IDLE YES N/A YES NO ### Test application in a Move APG
MOVE#APL APL SAMD SATISFACTORY UNAVAILABLE SOFTDOWN IDLE YES N/A YES NO ### Test application in a Move APG
MOVEAPG APG APG SATISFACTORY AVAILABLE AVAILABLE MOVE INTERNAL YES N/A YES NO ### Move Group for Test
MOVEHAPG APG APG SATISFACTORY AVAILABLE AVAILABLE MOVE INTERNAL YES N/A YES NO ### Move Group for Test with HOME SYS
MOVH#APL APL SAMC SATISFACTORY AVAILABLE AVAILABLE IDLE YES N/A YES NO ### Test application in a Move HOME APG

```

Clear

NetView Canzlog dashboard

Default Administration Samples System Configuration System Status and Health

EXPLORE AUTOMATION DOMAINS x KEYA - CANZLOG x EXCEPTIONAL MESSAGES AND WTORS x KEYA - CANZLOG x AOC1 - CANZLOG x KEYA - CANZLOG x

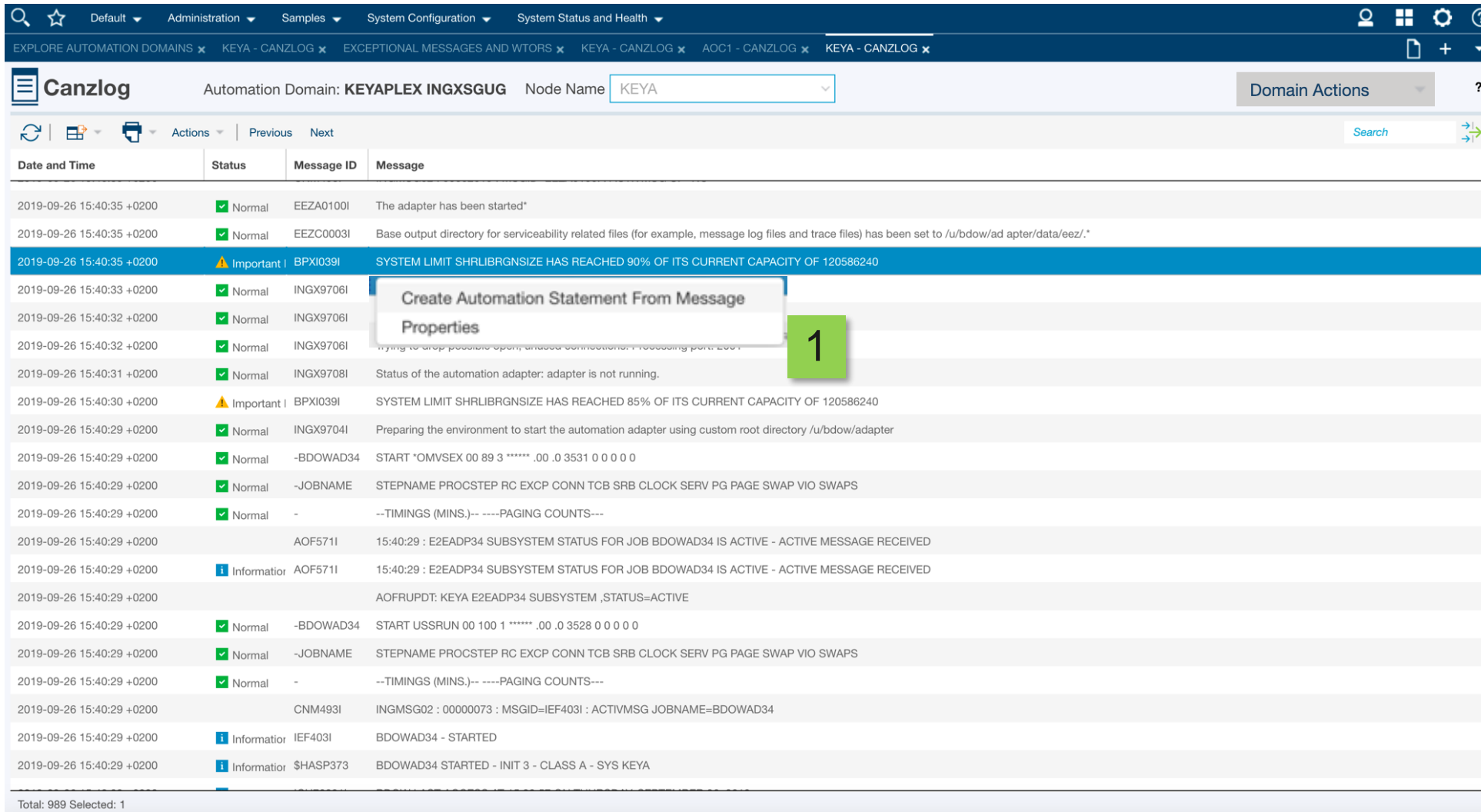
Canzlog Automation Domain: **KEYAPLEX INGXSGUG** Node Name: **KEYA**

Actions | Previous Next Search

Date and Time	Status	Message ID	Message
2019-09-26 15:40:35 +0200	Normal	EEZA0100I	The adapter has been started*
2019-09-26 15:40:35 +0200	Normal	EEZC0003I	Base output directory for serviceability related files (for example, message log files and trace files) has been set to /u/bdow/ad apter/data/eez/.*
2019-09-26 15:40:35 +0200	Important	BPXI039I	SYSTEM LIMIT SHRLIBRGNSIZE HAS REACHED 90% OF ITS CURRENT CAPACITY OF 120586240
2019-09-26 15:40:33 +0200	Normal	INGX9706I	Trying to drop possible open, unused connections. Processing port: 9992
2019-09-26 15:40:32 +0200	Normal	INGX9706I	Trying to drop possible open, unused connections. Processing port: 5529
2019-09-26 15:40:32 +0200	Normal	INGX9706I	Trying to drop possible open, unused connections. Processing port: 2001
2019-09-26 15:40:31 +0200	Normal	INGX9708I	Status of the automation adapter: adapter is not running.
2019-09-26 15:40:30 +0200	Important	BPXI039I	SYSTEM LIMIT SHRLIBRGNSIZE HAS REACHED 85% OF ITS CURRENT CAPACITY OF 120586240
2019-09-26 15:40:29 +0200	Normal	INGX9704I	Preparing the environment to start the automation adapter using custom root directory /u/bdow/adapter
2019-09-26 15:40:29 +0200	Normal	-BDOWAD34	START *OMVSEX 00 89 3 ***** .00 .0 3531 0 0 0 0 0
2019-09-26 15:40:29 +0200	Normal	-JOBNAME	STEPNAME PROCSTEP RC EXCP CONN TCB SRB CLOCK SERV PG PAGE SWAP VIO SWAPS
2019-09-26 15:40:29 +0200	Normal	-	--TIMINGS (MINS.)-- ----PAGING COUNTS---
2019-09-26 15:40:29 +0200		AOF571I	15:40:29 : E2EADP34 SUBSYSTEM STATUS FOR JOB BDOWAD34 IS ACTIVE - ACTIVE MESSAGE RECEIVED
2019-09-26 15:40:29 +0200	Information	AOF571I	15:40:29 : E2EADP34 SUBSYSTEM STATUS FOR JOB BDOWAD34 IS ACTIVE - ACTIVE MESSAGE RECEIVED
2019-09-26 15:40:29 +0200			AOFRUPDT: KEYA E2EADP34 SUBSYSTEM ,STATUS=ACTIVE
2019-09-26 15:40:29 +0200	Normal	-BDOWAD34	START USSRUN 00 100 1 ***** .00 .0 3528 0 0 0 0 0
2019-09-26 15:40:29 +0200	Normal	-JOBNAME	STEPNAME PROCSTEP RC EXCP CONN TCB SRB CLOCK SERV PG PAGE SWAP VIO SWAPS
2019-09-26 15:40:29 +0200	Normal	-	--TIMINGS (MINS.)-- ----PAGING COUNTS---
2019-09-26 15:40:29 +0200		CNM493I	INGMSG02 : 00000073 : MSGID=IEF403I : ACTIVMSG JOBNAME=BDOWAD34
2019-09-26 15:40:29 +0200	Information	IEF403I	BDOWAD34 - STARTED
2019-09-26 15:40:29 +0200	Information	\$HASP373	BDOWAD34 STARTED - INIT 3 - CLASS A - SYS KEYA

Total: 989 Selected: 1

Create Automation Statement From Canzlog



Canzlog Automation Domain: KEYAPLEX INGXSUG Node Name: KEYA

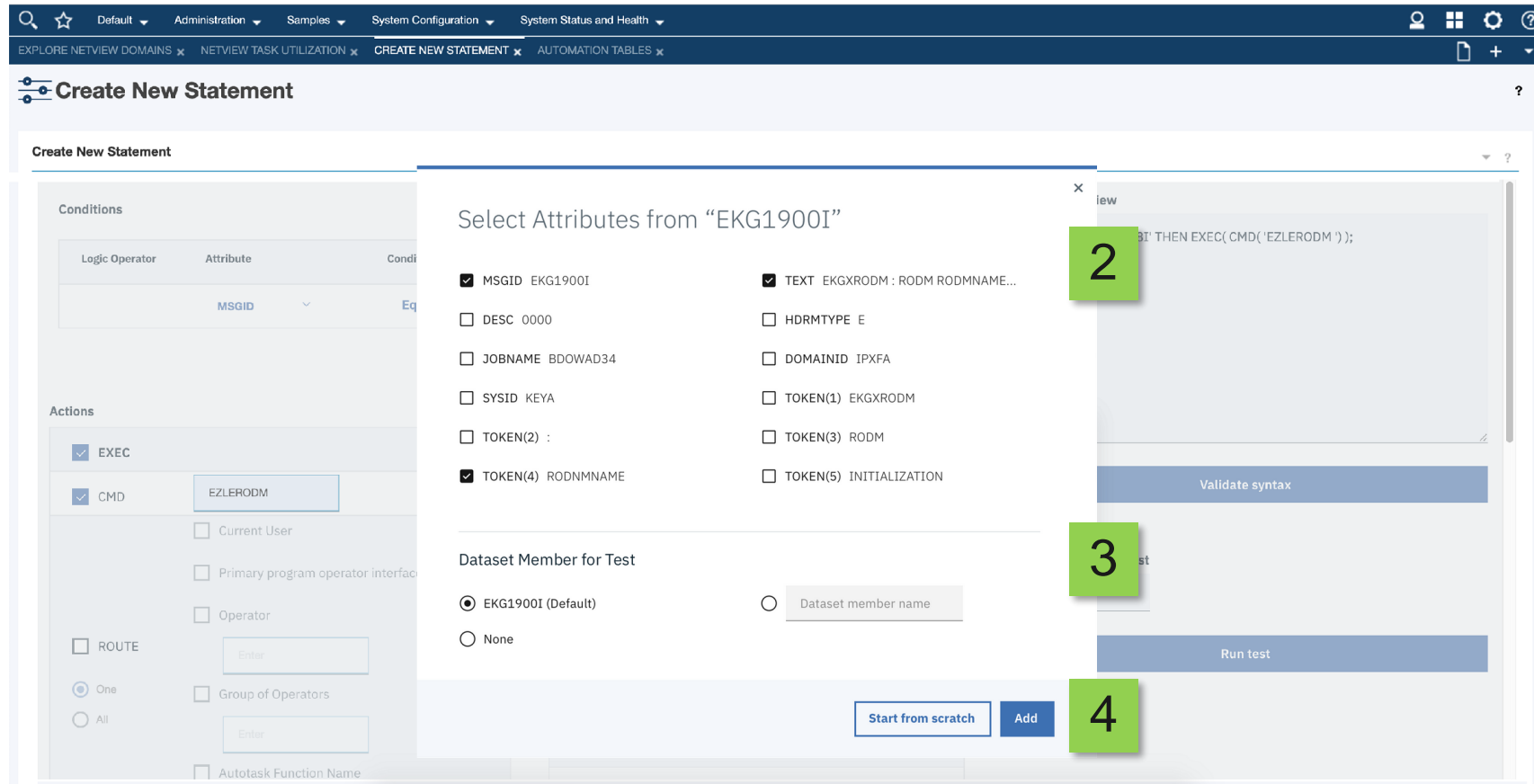
Date and Time	Status	Message ID	Message
2019-09-26 15:40:35 +0200	Normal	EEZA0100I	The adapter has been started*
2019-09-26 15:40:35 +0200	Normal	EEZC0003I	Base output directory for serviceability related files (for example, message log files and trace files) has been set to /u/bdow/ad apter/data/eez/.*
2019-09-26 15:40:35 +0200	Important	BPXI039I	SYSTEM LIMIT SHRLIBRGNSIZE HAS REACHED 90% OF ITS CURRENT CAPACITY OF 120586240
2019-09-26 15:40:33 +0200	Normal	INGX9706I	
2019-09-26 15:40:32 +0200	Normal	INGX9706I	
2019-09-26 15:40:32 +0200	Normal	INGX9706I	
2019-09-26 15:40:31 +0200	Normal	INGX9708I	Status of the automation adapter: adapter is not running.
2019-09-26 15:40:30 +0200	Important	BPXI039I	SYSTEM LIMIT SHRLIBRGNSIZE HAS REACHED 85% OF ITS CURRENT CAPACITY OF 120586240
2019-09-26 15:40:29 +0200	Normal	INGX9704I	Preparing the environment to start the automation adapter using custom root directory /u/bdow/adapter
2019-09-26 15:40:29 +0200	Normal	-BDOWAD34	START *OMVSEX 00 89 3 ***** .00 .0 3531 0 0 0 0
2019-09-26 15:40:29 +0200	Normal	-JOBNAME	STEPNAME PROCSTEP RC EXCP CONN TCB SRB CLOCK SERV PG PAGE SWAP VIO SWAPS
2019-09-26 15:40:29 +0200	Normal	-	--TIMINGS (MINS.)-- ----PAGING COUNTS---
2019-09-26 15:40:29 +0200	Normal	AOF571I	15:40:29 : E2EADP34 SUBSYSTEM STATUS FOR JOB BDOWAD34 IS ACTIVE - ACTIVE MESSAGE RECEIVED
2019-09-26 15:40:29 +0200	Information	AOF571I	15:40:29 : E2EADP34 SUBSYSTEM STATUS FOR JOB BDOWAD34 IS ACTIVE - ACTIVE MESSAGE RECEIVED
2019-09-26 15:40:29 +0200	Normal	-	AOFRUPDT: KEYA E2EADP34 SUBSYSTEM ,STATUS=ACTIVE
2019-09-26 15:40:29 +0200	Normal	-BDOWAD34	START USSRUN 00 100 1 ***** .00 .0 3528 0 0 0 0
2019-09-26 15:40:29 +0200	Normal	-JOBNAME	STEPNAME PROCSTEP RC EXCP CONN TCB SRB CLOCK SERV PG PAGE SWAP VIO SWAPS
2019-09-26 15:40:29 +0200	Normal	-	--TIMINGS (MINS.)-- ----PAGING COUNTS---
2019-09-26 15:40:29 +0200	Normal	CNM493I	INGMSG02 : 00000073 : MSGID=IEF403I : ACTIVMSG JOBNAME=BDOWAD34
2019-09-26 15:40:29 +0200	Information	IEF403I	BDOWAD34 - STARTED
2019-09-26 15:40:29 +0200	Information	\$HASP373	BDOWAD34 STARTED - INIT 3 - CLASS A - SYS KEYA

Total: 989 Selected: 1

New in SMU
1.1.7

New in SMU
1.1.7

Create automation statement (2)



(2) Select which **message attributes** should be used to build the condition

(3) Specify a **dataset member** to record the **message** to be able to replay the message later for testing purposes

(4) Click „**Add**“ to create preliminary automation statement and populate Conditions table

Create Automation Statement (3)

New in SMU
1.1.7

5

Logic Operator	Attribute	Condition	Value	Operations
	MSGID	Equals to	BNH908I	

6

7

```
IF MSGID = 'BNH908I' THEN EXEC(CMD('EZLERODM') ROUTE(ONE ?(PRIMARY)));
```

8

9

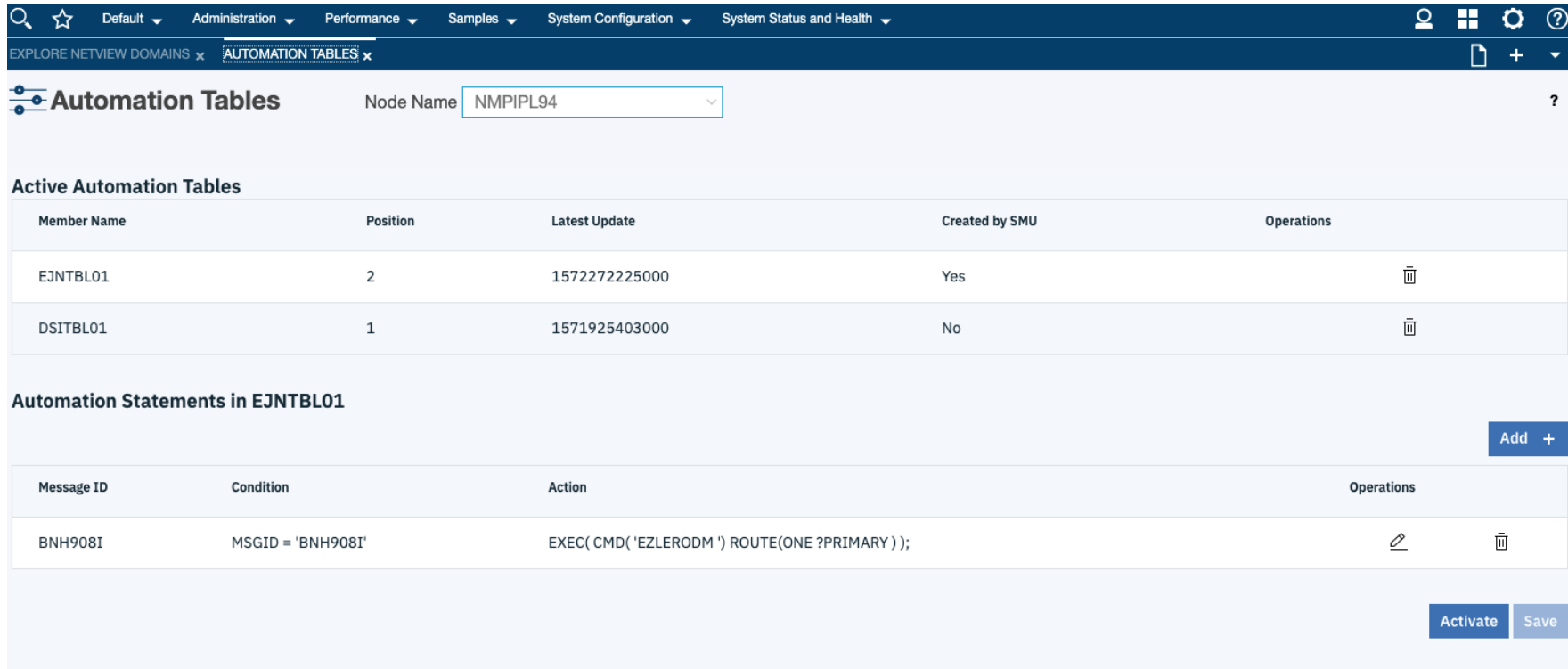
10

Cancel Save

- **(5)** Modify the **condition** as needed
- **(6)** Specify **actions**
- **(7)** **Preview** and **edit** generated **automation statement**
- **(8)** **Validate syntax**
- **(9)** **Run a test** against the statement using the recorded message
- **(10)** **Save** created statement

Manage Automation Tables Dashboard

New in SMU
1.1.7



Automation Tables Node Name:

Active Automation Tables

Member Name	Position	Latest Update	Created by SMU	Operations
EJNTBL01	2	1572272225000	Yes	
DSITBL01	1	1571925403000	No	

Automation Statements in EJNTBL01 Add +

Message ID	Condition	Action	Operations
BNH908I	MSGID = 'BNH908I'	EXEC(CMD('EZLERODM ') ROUTE(ONE ?PRIMARY));	

Activate Save

Manage Automation Tables dashboard displays:

- Active Automation Tables including one configured automation table for use by SMU
- Automation Statements created by SMU (including new statement just created)

From this dashboard is possible to **Activate the automation statement created**

SMU Scheduling: Workload Scheduler

Seamless navigation into Dynamic Workload Console

SMU Workload Scheduler

SMU Performance Management

Consolidated System Health Dashboard

Problem Identification Dashboards

Overview pages with drill-down to details pages showing key metrics

z/OS	MQ	CICS
Networks	DB2	IMS
WAS	Java VM	Storage

Problem Isolation Dashboards

Guided analysis for key problem areas and suggested actions to restore service.

MQ	
z/OS	Java VM

SMU Workload Scheduler

ZWS Overview Dashboard

- Job Streams
- Workstations
- Job Status
- Related SA resources
- Drill-down to DWC or SA Views

Execute **ZWS operational tasks** (set status, run a job, ...)

SMU Automation

NV Domain Overview

View/Control NV tasks and their metrics

View DVIPA metrics

Administer Automation Statements

View Canzlog

Issue MVS/NV commands

NetView

Domain and Automation Health Dashboard

Overview of automation domain and system topology showing status summaries and events.

Graphical view of SA relationships

Manage schedules using a calendar widget

Control automated applications

- Start/Stop/Restart
- View/Cancel votes and requests
- Reset
- Suspend/Resume automation

Control appl. groups

- View/Modify group details and automation behavior
- Move to other systems
- Set availability/satisfactory target
- Trigger Rolling Recycle
- Exclude/Avoid systems

Captured messages

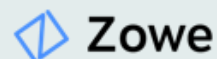
Exceptional messages

WTOs

Problem Isolation

End-to-End Automation (Cross-Sysplex, Cross-Platform)

System Automation



Zowe JES Explorer

Zowe MVS Explorer

New in SMU 1.1.7

SMU: Overview scheduling dashboard

Default Administration Samples System Configuration System Status and Health
EXPLORE AUTOMATION DOMAINS WORKLOAD SCHEDULER OVERVIEW

Workload Scheduler Overview

Engine: SAT1IWS

Workload Scheduler Actions

Workstations

Name	Status	Type	Reporting Attribute	Started Task Support	WTO Support	Running Jobs	Completed Jobs	Remaining Jobs	Aut
SX02	Active	COMPUTER	AUTOMATIC	false	false	0	0	0	false
SX03	Active	COMPUTER	AUTOMATIC	false	false	0	0	0	false
S66C	Unknown	FTA	AUTOMATIC	false	false	0	0	0	false
SAU1	Unknown	GENERAL	AUTOMATIC	false					false
SAC4	Unknown	GENERAL	AUTOMATIC	false					true

Total: 17 Selected: 0

Job Status

Job Status Legend:

- Comp...
- Suppr...
- Started
- Ready
- Waiting
- Held

Critical Jobs Summary Info

Alert Level	Count
High Risk	75
Potential Risk	100
No Risk	

Job Streams / Jobs

Name	Status	Internal Status	Scheduled Time	Priority	Job Stream	Workstation
RGT#TWS7IACZ	Undecided	UNDECIDED	2019-03-20 00:01:00	5		
RGT#TWS8	Undecided	UNDECIDED				
RGT#TWS9	Error	ZOSEP				
SMU#A001	Successful	COMPLETE				
SMU#A002	Running	STARTED				
20	Successful	COMPLETE	2019-03-20 02:22:00	5	SMU#A002	DMY1
30 (STOP#RSC)	Held	NOREPORTING	2019-03-20 02:22:00	5	SMU#A002	SAC7
40 (CNCL#RSC)	Waiting	WAITING	2019-03-20 02:22:00	5	SMU#A002	SAC7
SMU#A003	Successful	COMPLETE	2019-03-20 11:11:00	5		
20	Successful	COMPLETE	2019-03-20 11:11:00	5	SMU#A003	DMY1

Workload Scheduler Environment controlled by System Automation

Name	Compound State	Observed State	Desired State	Automated	Operator Request
TWS/APG	OK	Available	Available	Yes	No request
TWS_CTRL_X/APG	OK	Available	Available	Yes	No request
TWS_CONTROL/APG/S	OK	Available	Available	Yes	No request
OPAC/APL/SAT1	OK	Available	Available	Yes	No request
OPAS/APL/SAT1	OK	Available	Available	Yes	No request
TWS_CONTROL/APG/S	OK	Available	Available	Yes	No request
TWS_DATA_X/APG	OK	Available	Available	Yes	No request
TWS_TRACKER/APG/SAT1	OK	Available	Available	Yes	No request
TWS_TRACKER/APG/SAT2	OK	Available	Available	Yes	No request
TWS_TRACKER/APG/SAT3	OK	Available	Available	Yes	No request

WS workstation status Context Menu Actions:

- Set Status of Workstations
- View workstation properties
- Link/Unlink Workstations

Job and Job Streams status and hierarchy view Context Menu Actions:

- Launch In Context of DWC for Drill Down
- Actions on Job (complete, wait)
- Job properties

WS automated resources overview Context Menu Actions:

- Drill-down capabilities to SA deep-dive dashboards
- Start/Stop ZWS services through SA

Job Status Charts and Filtering capabilities

Filter job by status, workstation or name
... reset filtering through „Action“ menu

Workstations

Name	Status	Type	Reporting Attribute	Started Task Support	WTO Support	Running Jobs	Comple Jobs	Remainr Jobs	Automation
SAC7	Active	GENERAL	AUTOMATIC	false	false	0	418	188	true
SAC6	Unknown	GENERAL	AUTOMATIC	false	false	0	0	0	true
SAC5	Unknown	GENERAL	AUTOMATIC	false	false	0	0	0	true
SAC4	Unknown	GENERAL	AUTOMATIC	false	false	0	0	0	true

Total: 17 Selected: 0

Job Status

Job Streams / Jobs

Name	Status	Internal Status	Scheduled Time	Priority	Job Stream	Workstation
100 (R#TWSSC)	Error	ZOSERROR	2019-03-20 00:01:00	5	RGT#TWS9	NV01
20 (R#TWS1C)	Error	ZOSERROR	2019-03-20 00:01:00	5	RGT#SDF	NV01
5	Error	ZOSERROR	2019-03-20 00:01:00	5	RGT#TWS00	SAC7
5	Error	ZOSERROR	2019-03-20 00:01:00	5	RGT#TWS00	SAC7
80 (R#TWS5B)	Error	ZOSERROR	2019-03-20 00:01:00	5	RGT#TWS9	NV01
100 (R#TWSSC)	Error	ZOSERROR	2019-03-21 00:01:00	5	RGT#TWS9	NV01
30 (R#TWS1C)	Error	ZOSERROR	2019-03-21 00:01:00	5	RGT#TWS3	NV01
40 (INGCN)						
40 (INGCN)						
5						

Job Streams / Jobs

Name	Status	Internal Status	Scheduled Time	Priority	Job Stream	Workstation
40 (CNCL#RSC)	Error	ZOSERROR	2019-03-21 11:11:00	5	SMU#A003	SAC7
40 (CNCL#RSC)	Error	ZOSERROR	2019-03-22 02:22:00	5	SMU#A002	SAC7
30 (STOP#RSC)	Error	ZOSERROR	2019-03-22 06:00:00	5	SMU#A003	SAC7
40 (CNCL#RSC)	Error	ZOSERROR	2019-03-23 00:01:00	5	SMU#A001	SAC7
40 (CNCL#RSC)	Error	ZOSERROR	2019-03-23 02:22:00	5	SMU#A002	SAC7
30 (STOP#RSC)	Error	ZOSERROR	2019-03-23 06:00:00	5	SMU#A003	SAC7
40 (CNCL#RSC)	Error	ZOSERROR	2019-03-24 00:01:00	5	SMU#A001	SAC7
40 (CNCL#RSC)	Error	ZOSERROR	2019-03-24 02:22:00	5	SMU#A002	SAC7
40 (CNCL#RSC)	Error	ZOSERROR	2019-03-25 02:22:00	5	SMU#A002	SAC7
30 (STOP#RSC)	Error	ZOSERROR	2019-03-25 06:00:00	5	SMU#A003	SAC7

Workstations

Name	Status	Type	Reporting Attribute	Started Task Support	WTO Support	Running Jobs	Comple Jobs	Remainr Jobs	Automation
SAC7	Active	GENERAL	AUTOMATIC	false	false	0	419	187	true
SAC5	Unknown	GENERAL	AUTOMATIC	false	false	0	0	0	true
SAC4	Unknown	GENERAL	AUTOMATIC	false	false	0	0	0	true

Total: 17 Selected: 1

Job Streams / Jobs

Name	Status	Internal Status	Scheduled Time	Priority	Job Stream	Workstation
10	Successful	COMPLETE	2019-03-20 00:01:00	5	RGT#TWS00	SAC7
10	Successful	COMPLETE	2019-03-20 00:01:00	5	RGT#TWS00	SAC7
10	Successful	COMPLETE	2019-03-20 00:01:00	5	RGT#TWS00	SAC7
10	Successful	COMPLETE	2019-03-20 00:01:00	5	RGT#TWS00	SAC7
10	Successful	COMPLETE	2019-03-20 00:01:00	5	RGT#TWS00	SAC7
10	Waiting	WAITING	2019-03-20 00:01:00	5	RGT#TWS00	SAC7
10	Waiting	WAITING	2019-03-20 00:01:00	5	RGT#TWS00	SAC7
10	Waiting	WAITING	2019-03-20 00:01:00	5	RGT#TWS00	SAC7
10 (INGREQ#1)	Successful	COMPLETE	2019-03-20 00:01:00	5	RGT#TWS1AC	SAC7
10 (INGREQ#1)	Waiting	WAITING	2019-03-20 00:01:00	5	RGT#TWS7	SAC7
10 (INGREQ#1)	Waiting	WAITING	2019-03-20 00:01:00	5	RGT#TWS7AC	SAC7

Seamless Navigation to System Automation

Workstations

Name	Status	Type	Reporting Attribute	Started Task Support	WTO Support	Running Jobs	Comple Jobs	Remainir Jobs	Automation
SAC7	Active	GENERAL	AUTOMATIC	false	false	0	419	187	true
SAC6	Unknown	GENERAL	AUT		false	0	0	0	true
SAC5	Unknown	GENERAL	AUT			0			

From Workstations or Jobs that are using System Automation to perform actions launch the SA dashboard to see the corresponding SA resources

Job Streams / Jobs

Name	Status	Internal Status	Scheduled Time	Priority
SMU#A002	Error	ZOSERROR	2019-03-22 02:22:00	5
20	Successful	COMPLETE	2019-03-22 02:22:00	5
30 (STOP#RSC)	Successful		02:22:00	5
40 (CNCL#RSC)	Error		02:22:00	5
SMU#A003	Error		11:11:00	5
OPACAPPL1	Waiting		00:01:00	5
RGT#SDF	Waiting		00:01:00	5
RGT#TWSC001	Successful		00:01:00	5

Domain Page

Automation Domain: SATPLEX INGXSGX0

Resources

Name	Compound State	Observed State	Desired State	Automated	Operator Request
R/WLW/APL/SAT1	OK	Available	Available	Yes	No request
SMU001/APL/SAT1	OK	Available	Available	Yes	No request
SMU002/APL/SAT1	OK	Unavailable	Unavailable	Yes	Stop
SMU003/APL/SAT1	OK	Available	Available	Yes	No request
TEST_REF/REF/TEST_DOM	Error	Unavailable	Available	Yes	No request
TWSCMDR/APL/SAT1	OK	Available	Available	Yes	No request
TWSCMDR/APL/SAT2	OK	Available	Available	Yes	No request
TWSCMDR/APL/SAT3	OK	Available	Available	Yes	No request
ZCEEANGL/APL/SAT3	OK	Unavailable	Unavailable	Yes	No request
ZCEEWLP/APL/SAT3	OK	Unavailable	Unavailable	Yes	No request
ZCV1ANGL/APL/SAT1	OK	Unavailable	Unavailable	Yes	No request

Nodes

Name	Observed State	Worst Resource State	Automated	OS Name	OS Version
SAT1	Available	Fatal Error	Yes	z/OS	02.02.00
SAT2	Available	Fatal Error	Yes	z/OS	02.02.00
SAT3	Available	Fatal Error	Yes	z/OS	02.02.00

Relationships

Requests

Requested Action	Source	Request User ID	Info	Priority	Created	Type	Winning
Stop	EXTERNAL	AUTTWS01		Low	Mar 25, 2019 5:	REQUEST	true

Stop Request issued by ZWS (EXTERNAL)

Seamless Navigation to Dynamic Workload Console Views

Workload Scheduler Overview

Engine: SAT1IWS

Workstations

Name	Status	Type	Reporting Attribute	Started Task Support	WTO Support	Running Jobs	Completed Jobs	Remaining Jobs	Automation

Job Status: Waiting: 592, Held: 8, Undecided: 15, Comp...

Critical Jobs Summary: High Risk

Workload Scheduler Actions

- Configuration
- Set as Default Engine
- Reset Job Streams View
- View Dynamic Workload Console
- Properties...



Job Stream View

79%

RG T#TWS9 (3/20/2019 00:01)

```

    graph TD
      A[DMY1#RG T#TWS9 -10] --> B[NV01#RG T#TWS9 R#TWSSA-20]
      B --> C[NV01#RG T#TWS9 R#TWSSA-40]
      C --> D[NV01#RG T#TWS9 R#TWSSA-60]
      D --> E[NV01#RG T#TWS9 R#TWSSB-80]
      D --> F[NV01#RG T#TWS9 R#TWSSC-100]
  
```

Job Stream View details:

- DMY1#RG T#TWS9 -10 (Successful)
- NV01#RG T#TWS9 R#TWSSA-20 (Successful)
- NV01#RG T#TWS9 R#TWSSA-40 (Successful)
- NV01#RG T#TWS9 R#TWSSA-60 (Successful)
- NV01#RG T#TWS9 R#TWSSB-80 (Error)
- NV01#RG T#TWS9 R#TWSSC-100 (Error)

RG T#TWS9

10			
100 (R#TWS5C)			
20 (R#TWS5A)			
40 (R#TWS5A)	Successful	COMPLETE	
60 (R#TWS5A)	Successful	COMPLETE	
80 (R#TWS5B)	Error	ZOSERROR	

Context Menu:

- Set to complete
- Set to waiting
- Open Job Streams View
- Properties...

IBM Workload Scheduler

Welcome page

Welcome to the Dynamic Workload Console wauser

Manage Workload

- Dynamic Workload Console
- Self-Service Uti
- Application Lab

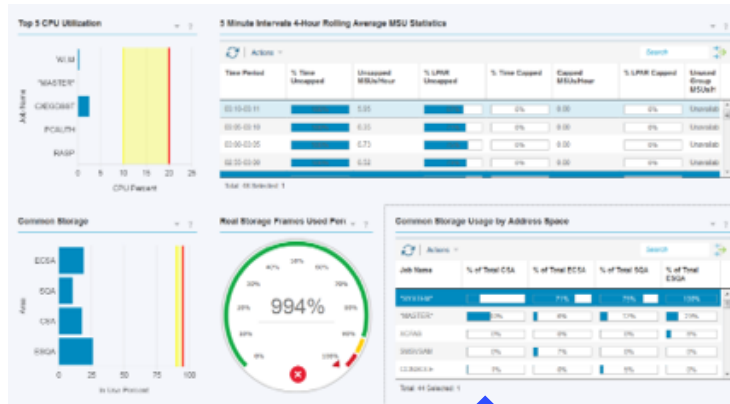
SMU cross domain navigation

Service Management Unite EE

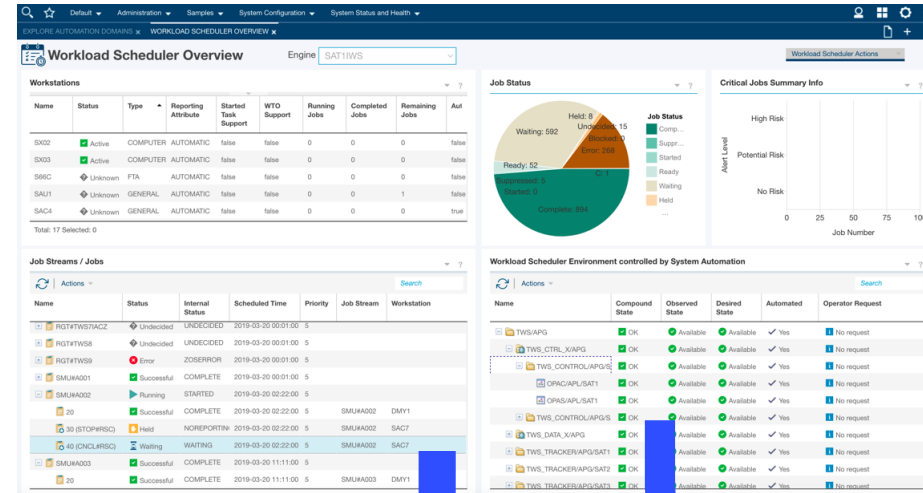
SMU for Scheduling

SMU for Automation

SMU for Performance Management

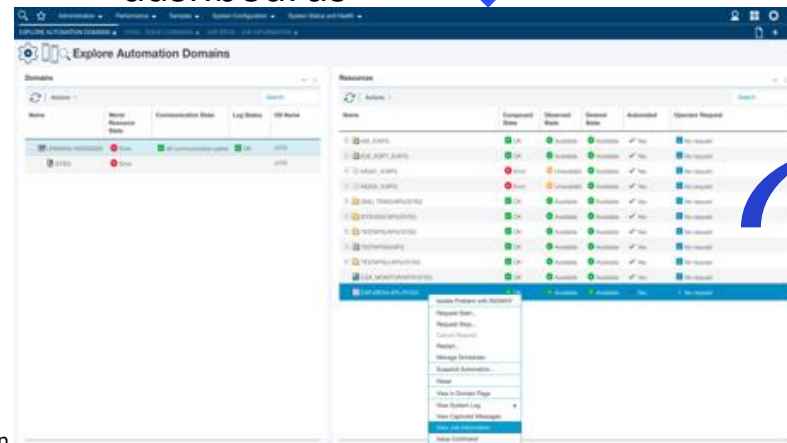


Monitor resource utilization

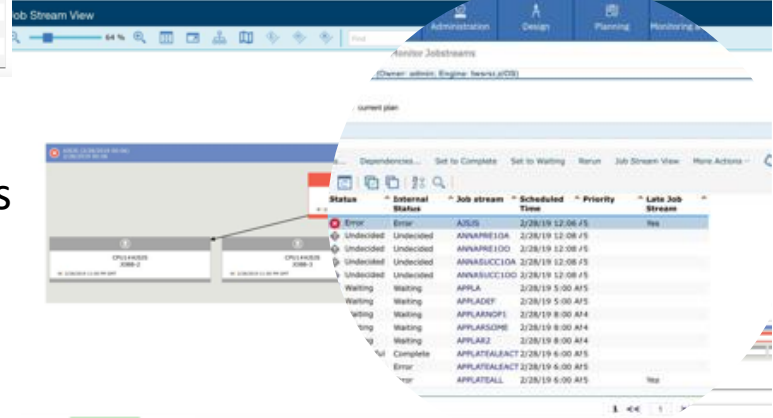


Drill-down capabilities to SA deep-dive dashboards

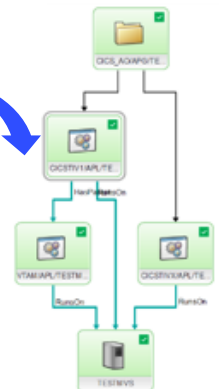
Drill-down capabilities to DWC deep-dive dashboards



At a glance overview on IZWS resources and their status (Applications, Operations, Workstations) with **seamless navigation in Dynamic Workload Console**



Start/Stop IZWS services through SA from overview dashboard



SMU: Zowe integration

Integrated access to Zowe explorers

SMU Zowe integration

SMU Performance Management

Consolidated System Health Dashboard

Problem Identification Dashboards

Overview pages with drill-down to details pages showing key metrics

z/OS	MQ	CICS
Networks	DB2	IMS
WAS	Java VM	Storage

Problem Isolation Dashboards

Guided analysis for key problem areas and suggested actions to restore service.

MQ	
z/OS	Java VM

SMU Workload Scheduler

ZWS Overview Dashboard

- Job Streams
- Workstations
- Job Status
- Related SA resources
- Drill-down to DWC or SA Views

Execute **ZWS operational tasks** (set status, run a job, ...)

SMU Automation

NV Domain Overview

View/Control **NV tasks** and their metrics

View **DVIPA metrics**

Administer **Automation Statements**

View **Canzlog**

Issue **MVS/NV commands**

NetView

Domain and Automation Health Dashboard

Overview of automation domain and system topology showing status summaries and events.

Graphical view of SA relationships

Manage schedules using a calendar widget

Control automated applications

- Start/Stop/Restart
- View/Cancel votes and requests
- Reset
- Suspend/Resume automation

Control appl. groups

- View/Modify group details and automation behavior
- Move to other systems
- Set availability/satisfactory target
- Trigger Rolling Recycle
- Exclude/Avoid systems

Captured messages

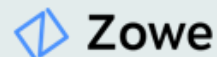
Exceptional messages

WTOs

Problem Isolation

End-to-End Automation (Cross-Sysplex, Cross-Platform)

System Automation



Zowe JES Explorer

Zowe MVS Explorer

New in SMU 1.1.7

SMU provides a Zowe application plug-in



APP FRAMEWORK - 2019

Service Management Unite is an “app” on Zowe Desktop

Leveraging this as a portal for operations for monitoring and automation

Deeper analysis through new Zowe-based domain specific applications, dashboards and workflows

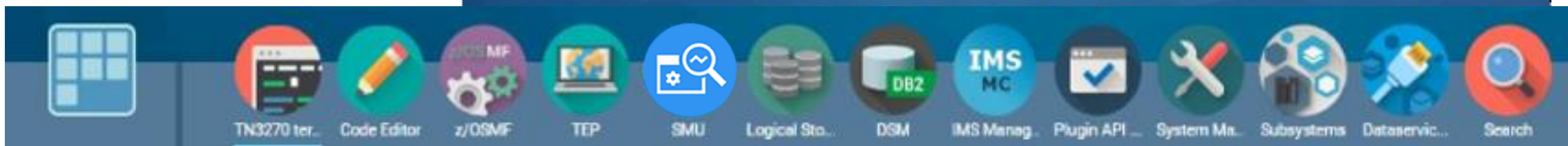
Can use SMU as today

The screenshot shows the Service Management Unite web interface. The main content area is titled "Domain Page" for the automation domain "TESTPLX INGXSGA0". It features a "Resources" table, a "Relationships" diagram, and a "Requests" table.

Name	Compound State	Observed State	Desired State	Automated	Operator Request
CICSAPGTESTMVS	OK	Online	Online	Yes	No request
DB2AAPGTESTMVS	OK	Online	Online	Yes	No request
DB2IAPGTESTMVS	OK	Online	Online	Yes	No request
DILSTOAPGTESTM	OK	Online	Online	Yes	No request
EZE_ADPT_XAPG	OK	Online	Online	Yes	No request
EAP_1APGTESTMV	Warning	Online	Online	Yes	No request
EAP_2APGTESTMV	Warning	Online	Online	Yes	No request
EAP_3APGTESTMV	Warning	Online	Online	Yes	No request
EAP_3CHAPLITE	OK	Online	Online	Yes	No request
EAP_3ERRAPLIT	Fatal Error	Offline	Offline	Yes	No request
EAP_3PANPLITE	OK	Online	Online	Yes	No request

Name	Observed State	Automated	OS Name
TESTMVS	Online	Yes	JOS

Requested Action	Source	User ID	Info	Priority	Created	Type	Warning
Online	GRUPEAP_...		MakeAvailable	Low	Sep 18, 2015	VOTE	false



SMU integration with Zowe JES Explorer

LPAR Details for SYSG

System: OH051PM
System: cvg

Selected LPAR

- Average CPU Percent: 5%
- CPC Serial Number: 03AA
- CSA In Use Percent: 23.6%
- Current Weight: 0
- ECSA In Use Percent: 58.5%
- Goal Importance: High
- I/O Plane: 7.0
- LPAR Cluster Name:
- Major Name: SYSD
- Max Enqueue Wait Time: 1055
- Page Fault Rate: 0.0%
- Percent LPAR MSU Capacity: 5.0%
- Performance Index: 1.11
- Service Class: IMSA
- Service Class Period: 1

Top 5 CPU Utilization

Job Name	In Use Percent
ZOW...	~100
OHP...	~100
L2S1...	~100
WLM	~100
OHP...	~100

Address Space Bottleneck Analysis Summary

Job Name	ASID	CPU Loop Index
MSQBCNDL	0x0027	0%
SAKSCNDL	0x0028	0%
SZUSVR1	0x0029	0%
SZUANG1	0x0024	0%

Common Storage

Area	In Use Percent
ESQA	~100
ECSA	~100
SQA	~100
CSA	~100

Resources

Name	Compound State	Observed State	Desired State	Automated	Operator Request
AM_X/APG	OK	Available	Available	Yes	No request
EDC_ADP_T/APG	OK	Available	Available	Yes	No request
MOG1_X/APG	Error	Unavailable	Available	Yes	No request
MOG4_X/APG	Error	Unavailable	Available	Yes	No request
SMU_TEM5/APG/SYSG	OK	Available	Available	Yes	No request
SYDVIEW/APG/SYSG	OK	Available	Available	Yes	No request
TESTAPG/APG/SYSG	OK	Available	Available	Yes	No request
TESTAPGMAPG	OK	Available	Available	Yes	No request
TESTAPGQ/APG/SYSG	OK	Available	Available	Yes	No request
CSA_MONITOR/MTR/SYSG	OK	Available	Available	Yes	No request
EAPJREXX/APL/SYSG	OK	Available	Available	Yes	No request

✓ SMU enables the mainframe operators to isolate environmental issues by offering **seamless navigation into Zowe's JES Explorer** to view any job content without the need to switch the application or even use another terminal

JES Explorer Sysplex Name: LPAR400J SMFID: SYS

Job Information

Name	Status
EAPJREXX	CC 0000
STC17909	CC 0000
STC18766	CC 0000

Content Viewer

EAPJREXX - STC18766 - JESMSG LG

```

1  JES2 JOB LOG -- SYSTEM SYSG -- NODE N25
2
3  19.14.12 STC18766 ----- WEDNESDAY, 05 DEC 2018 -----
4  19.14.12 STC18766 IEF6951 START INGJREXX WITH JOBNAM EAPJREXX IS ASSIGNED TO USER DCUSER8 , GROUP #DCSTC
5  19.14.12 STC18766 SHASP373 EAPJREXX STARTED
6  19.14.12 STC18766 IEF4831 EAPJREXX - STARTED
7  19.14.12 STC18766 ----- THURSDAY, 06 DEC 2018 -----
8  19.14.12 STC18766 IEF4841 EAPJREXX - ENDED
9  19.14.12 STC18766 SHASP395 EAPJREXX ENDED - RC=0000
10 ----- JES2 JOB STATISTICS -----
11 - 05 DEC 2018 JOB EXECUTION DATE
12 - 3 CARDS READ
13 - 51 SYSOUT PRINT RECORDS
14 - 0 SYSOUT PUNCH RECORDS
15 - 13 SYSOUT SPOOL KBYTES
16 - 1,440.00 MINUTES EXECUTION TIME
17
  
```

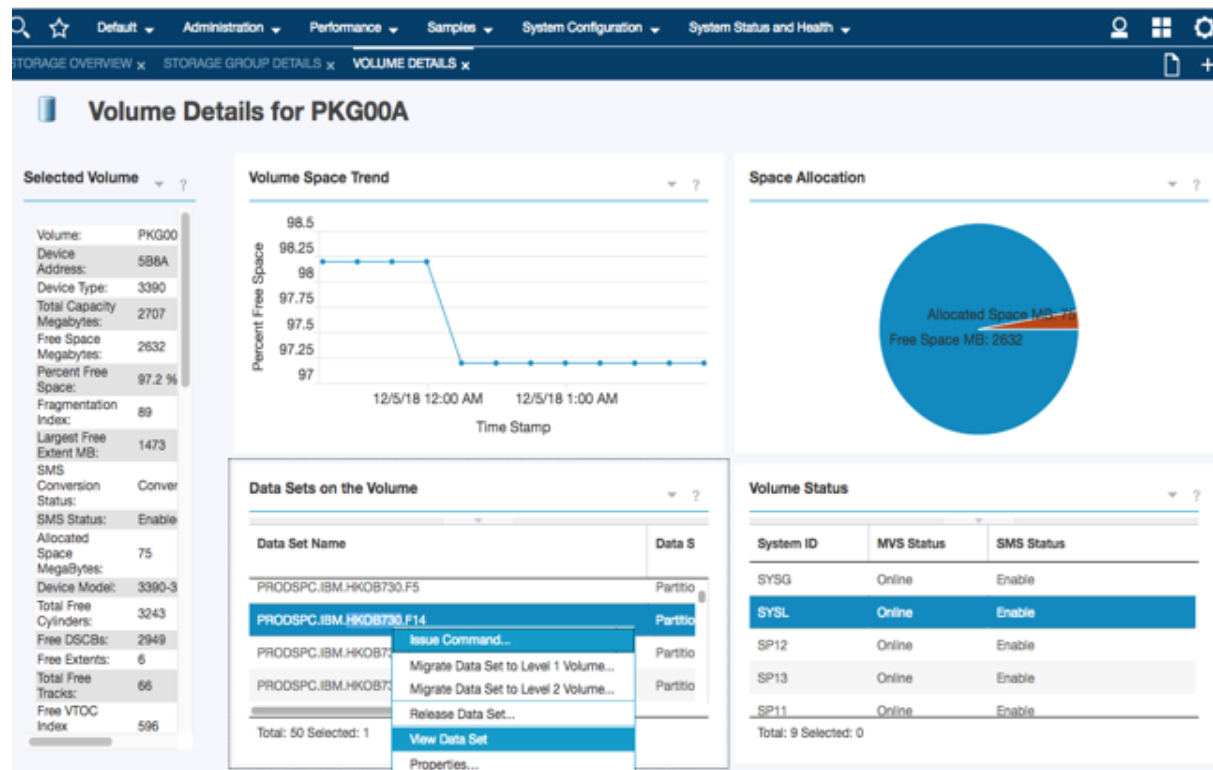
Job Details:

- Name: SYSTSPRT
- JOB_ID: STC18766
- JOB_NAME: EAPJREXX
- STEP_DDS_CONTENT: SYSOUT**

SMU integration with Zowe MVS Explorer

View and/or edit Data Set from OMEGAMON Storage Volume Details dashboard

Enable the mainframe administrator to fix environmental issues by offering seamless navigation into Zowe's MVS Explorer to view and/or edit dataset content without the need to switch the application or even use another terminal



Volume Details for PKG00A

Selected Volume

- Volume: PKG00
- Device: 588A
- Address:
- Device Type: 3390
- Total Capacity Megabytes: 2707
- Free Space Megabytes: 2632
- Percent Free Space: 97.2 %
- Fragmentation Index: 89
- Largest Free Extent MB: 1473
- SMS Conversion Status: Converter
- SMS Status: Enable
- Allocated Space Megabytes: 75
- Device Model: 3390-3
- Total Free Cylinders: 3243
- Free DSCBs: 2949
- Free Extents: 6
- Total Free Tracks: 66
- Free VTOC Index: 596

Volume Space Trend

Line graph showing Percent Free Space (97 to 98.5) over Time Stamp (12/5/18 12:00 AM to 12/5/18 1:00 AM).

Space Allocation

Pie chart showing Allocated Space MB and Free Space MB: 2632.

Data Sets on the Volume

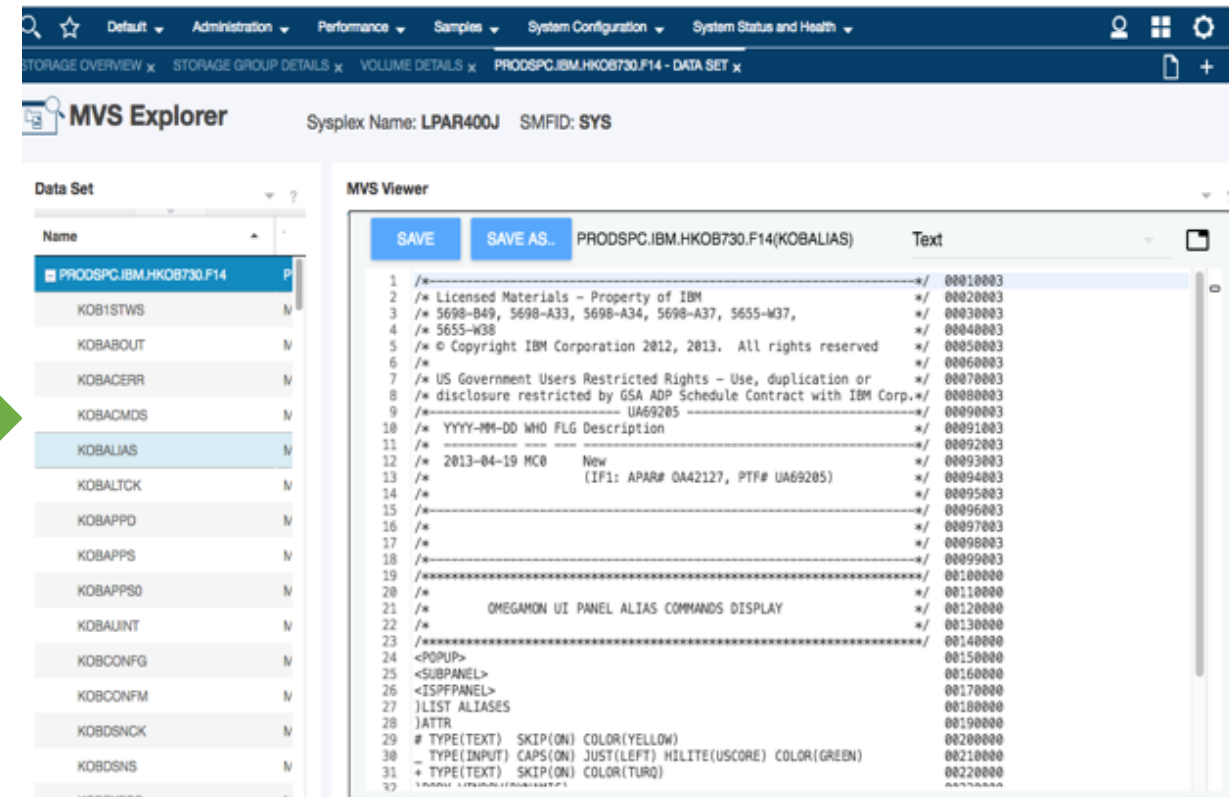
Data Set Name	Data S
PRODSPC.IBM.HKOB730.F5	Partio
PRODSPC.IBM.HKOB730.F14	Partio
PRODSPC.IBM.HKOB730.F15	Partio
PRODSPC.IBM.HKOB730.F16	Partio
PRODSPC.IBM.HKOB730.F17	Partio

Total: 50 Selected: 1

Volume Status

System ID	MVS Status	SMS Status
SYSG	Online	Enable
SYSL	Online	Enable
SP12	Online	Enable
SP13	Online	Enable
SP11	Online	Enable

Total: 9 Selected: 0

MVS Explorer

Sysplex Name: LPAR400J SMFID: SYS

Data Set

Name	...
PRODSPC.IBM.HKOB730.F14	P
KOB1STWS	M
KOBABOUT	M
KOBACERR	M
KOBACMDS	M
KOBALIAS	M
KOBALTCK	M
KOBAPPD	M
KOBAPPS	M
KOBAPPS0	M
KOBALUINT	M
KOBBCONFG	M
KOBBCONFM	M
KOBDSNCK	M
KOBDSNS	M
KOBDFECS	M

MVS Viewer

SAVE SAVE AS... PRODSPC.IBM.HKOB730.F14(KOBALIAS) Text

```

1 /*-----*/ 00010003
2 /* Licensed Materials - Property of IBM */ 00020003
3 /* 5698-B49, 5698-A33, 5698-A34, 5698-A37, 5655-M37, */ 00030003
4 /* 5655-M38 */ 00040003
5 /* © Copyright IBM Corporation 2012, 2013. All rights reserved */ 00050003
6 /* */ 00060003
7 /* US Government Users Restricted Rights - Use, duplication or */ 00070003
8 /* disclosure restricted by GSA ADP Schedule Contract with IBM Corp.*/ 00080003
9 /*----- UA69205 */ 00090003
10 /* YYYY-MM-DD WHO FLG Description */ 00091003
11 /* */ 00092003
12 /* 2013-04-19 MCO New */ 00093003
13 /* (IF1: APAR# OA42127, PTF# UA69205) */ 00094003
14 /* */ 00095003
15 /*-----*/ 00096003
16 /* */ 00097003
17 /* */ 00098003
18 /*-----*/ 00099003
19 /*-----*/ 00100000
20 /* */ 00110000
21 /* OMEGAMON UI PANEL ALIAS COMMANDS DISPLAY */ 00120000
22 /*-----*/ 00130000
23 /*-----*/ 00140000
24 <POPU> 00150000
25 <SUBPANEL> 00160000
26 <ISPFANEL> 00170000
27 )LIST ALIASES 00180000
28 )ATTR 00190000
29 # TYPE(TEXT) SKIP(ON) COLOR(YELLOW) 00200000
30 _ TYPE(INPUT) CAPS(ON) JUST(LEFT) HILITE(USCORE) COLOR(GREEN) 00210000
31 + TYPE(TEXT) SKIP(ON) COLOR(TURQ) 00220000
  
```

SMU Deployment and configuration

Multiple options – easy to use

How can I get Service Management Unit ?

Z Service Management Suite V1.6

Service Management Unit Enterprise Edition v 1.1.7

- SMU Performance Management (OM Dashboards)
- SMU Automation (SA/NV Dashboards)
- SMU Workload Scheduler (ZWS Dashboards)

NetView 6.3 | System Automation 4.2 | Tivoli Asset Discovery for zSystems

- OMEGAMON for CICS
- OMEGAMON for IMS
- OMEGAMON for Messaging
- OMEGAMON for DB2 PE
- ITCAM for AD
- OMEGAMON on z/OS
- OMEGAMON for Networks
- OMEGAMON for Storage
- OMEGAMON for JVM
- OMEGAMON DE

NEW

Z Service Automation Suite V1.2

Service Management Unit Enterprise Edition v 1.1.7

- SMU Performance Management (OM Dashboards)
- SMU Automation (SA/NV Dashboards)
- SMU Workload Scheduler (ZWS Dashboards)

NetView 6.3 | System Automation 4.2 | Workload Scheduler 9.5

NEW

Z Monitoring Suite V1.1

Service Management Unit Enterprise Edition v 1.1.6

- SMU Performance Management (OM Dashboards)
- SMU Automation (SA/NV Dashboards)
- SMU Workload Scheduler (ZWS Dashboards)

- OMEGAMON for CICS
- OMEGAMON for IMS
- OMEGAMON for Messaging
- OMEGAMON for DB2 PE
- ITCAM for AD
- OMEGAMON for JVM
- OMEGAMON Mon for Networks
- OMEGAMON for Storage
- Z OMEGAMON Integr Mon
- Z OMEGAMON Monitor for z/OS
- RMF

NEW

Z NetView 6.3

SMU for Automation v 1.1.7

- SMU Automation (SA/NV Dashboards)

NetView

Z System Automation 4.2

SMU for Automation v 1.1.7

- SMU Automation (SA/NV Dashboards)

System Automation

SMU available as Docker Image

SMU Automation Docker Image

SMU Automation and
Universal Automation Adapter

WAS and JazzSM (DASH)

Base OS: Ubuntu

Z System Automation 4.2 / SA 4.1
Z NetView V.6.3

SMU Enterprise Edition Docker Image

SMU Workload Scheduler

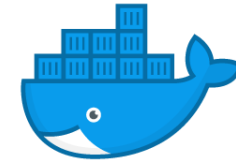
SMU Performance
Management

SMU Automation and
Universal Automation Adapter

WAS, JazzSM (DASH)
and TDI

Base OS: Ubuntu

Z Service Management Suite
Z Service Automation Suite
Z Monitoring Suite

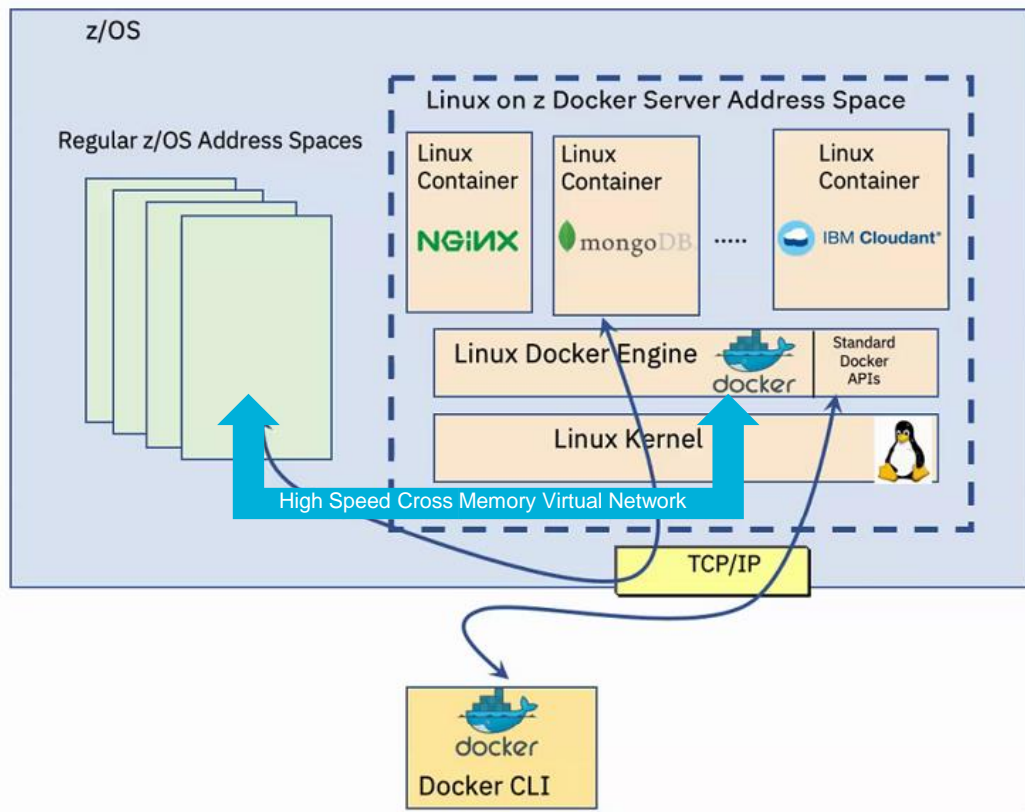
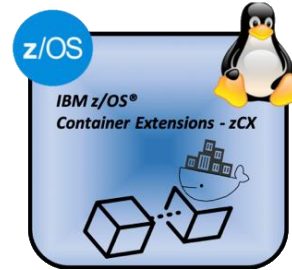


docker

- each image is available for x and z platform
- Docker EE or Docker CE has to be installed
- Includes all pre-requisites at the recommended version levels
- No special configuration needed
- Works with all major Linux distributions

IBM z/OS Container Extensions (zCX)

New function in z/OS 2.4 that enables Deployment of **Linux on Z software** components as Docker Containers in a **z/OS system**



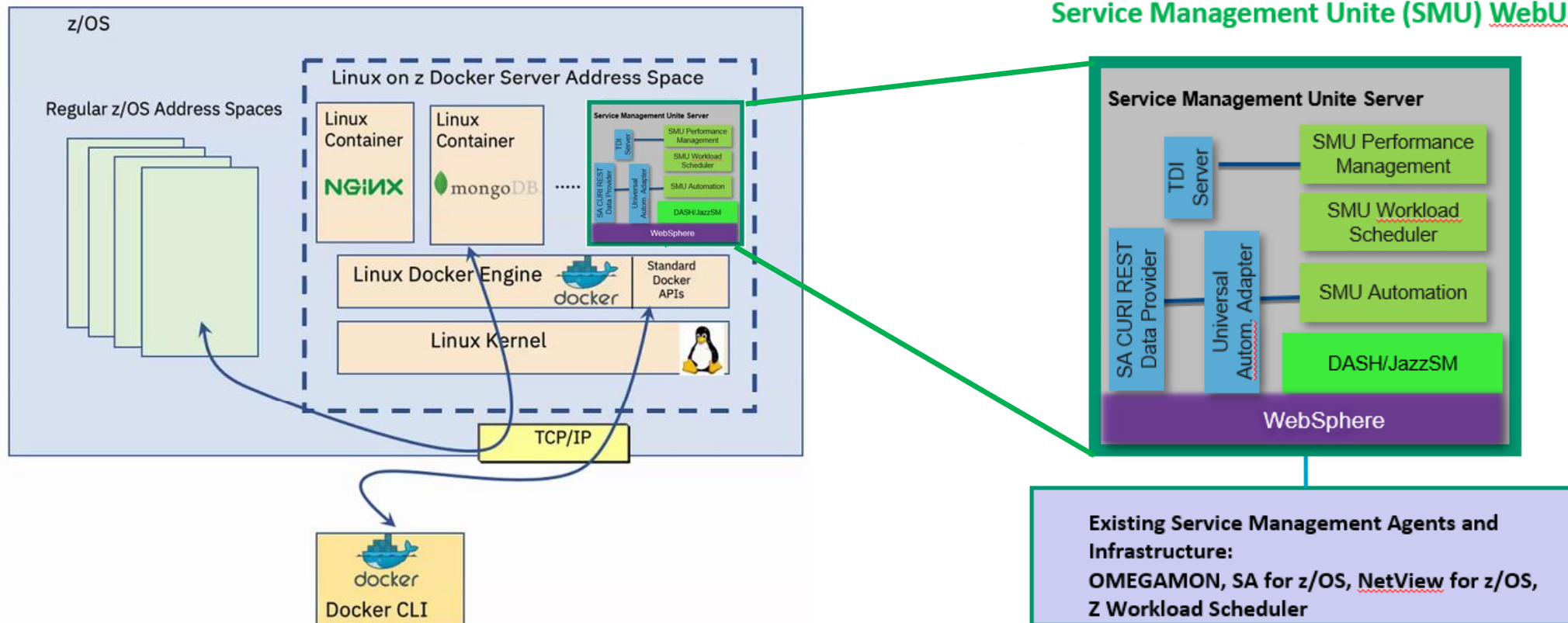
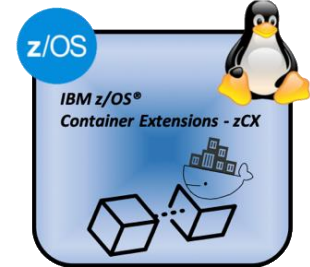
- Pre-packaged **Linux Docker appliance**
 - Provided and maintained by IBM
 - Provisioned using z/OSMF workflows

- Provides **standard Docker interfaces**
 - Supports deployment of any software available as a Docker image for Linux on Z
 - Communications with native z/OS applications over high speed virtual IP network
 - No z/OS skills required to develop and deploy Docker Containers

- **No Linux** system administration **skills required**
 - Interfaces limited to Docker CLI
 - No direct access to underlying Linux kernel

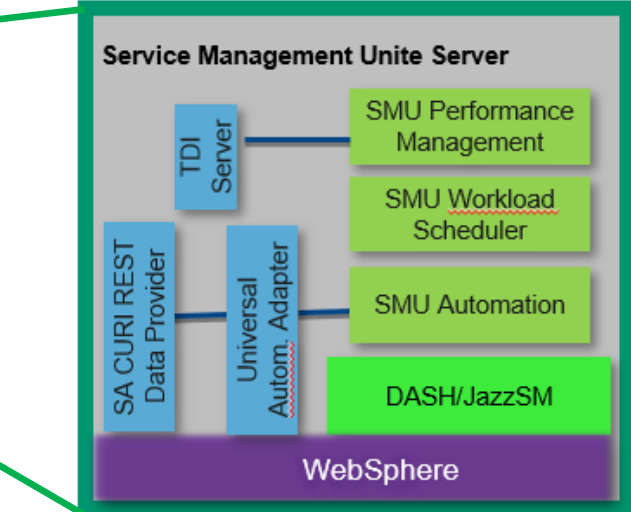
- **Managed as a z/OS process**
 - Multiple instances can be deployed in a z/OS system
 - Managed using z/OS Operational Procedures
 - zCX workloads are zIIP eligible

SMU in z/OS Container Extensions (zCX)



Service Management Unite (SMU) WebUI

New in SMU 1.1.7



Existing Service Management Agents and Infrastructure:
OMEGAMON, SA for z/OS, NetView for z/OS, Z Workload Scheduler

It's really running on z/OS!

The running zCX appliance job...

```

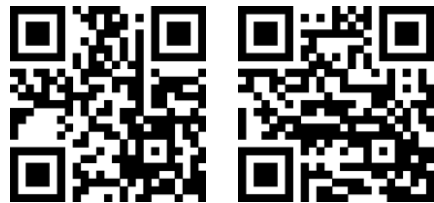
SDSF STATUS DISPLAY ALL CLASSES          DATA SET DISPLAYED
NP   JOBNAME  JobID   Owner   Prty Queue      C   Pos SAff  ASys Status
    ZCXSMU   S0590843 GLZUSER   15 EXECUTION  NP8  NP8
    ZCXRLK   S0573633 GLZUSER    1 PRINT      1163
    ZCXSMU   S0549908 GLZUSER    1 PRINT      3013
    ZCXCC27  S0535496 GLZUSER    1 PRINT      3016
    ZCXDM7   S0560736 GLZUSER    1 PRINT      3017
    ZCXSS3   S0539530 GLZUSER    1 PRINT      3027
    ARPID01  S0555188 GLZUSER    1 PRINT      3030
    ZCXRLK   S0573899 GLZUSER    1 PRINT      3048
    ZCXECO   S0539599 GLZUSER    1 PRINT      3053
    ZCXSS2   S0539526 GLZUSER    1 PRINT      3056
  
```

New in SMU
1.1.7



Please submit your session feedback!

- Do it online at <http://conferences.gse.org.uk/2019/feedback/oh>
- <http://conferences.gse.org.uk/2019/feedback/nh>
- This session is NH, OH



1. What is your conference registration number?

This is the three digit number on the bottom of your delegate badge

2. Was the length of this presentation correct?

1 to 4 = "Too Short" 5 = "OK" 6-9 = "Too Long"

1 2 3 4 5 6 7 8 9

3. Did this presentation meet your requirements?

1 to 4 = "No" 5 = "OK" 6-9 = "Yes"

1 2 3 4 5 6 7 8 9

4. Was the session content what you expected?

1 to 4 = "No" 5 = "OK" 6-9 = "Yes"

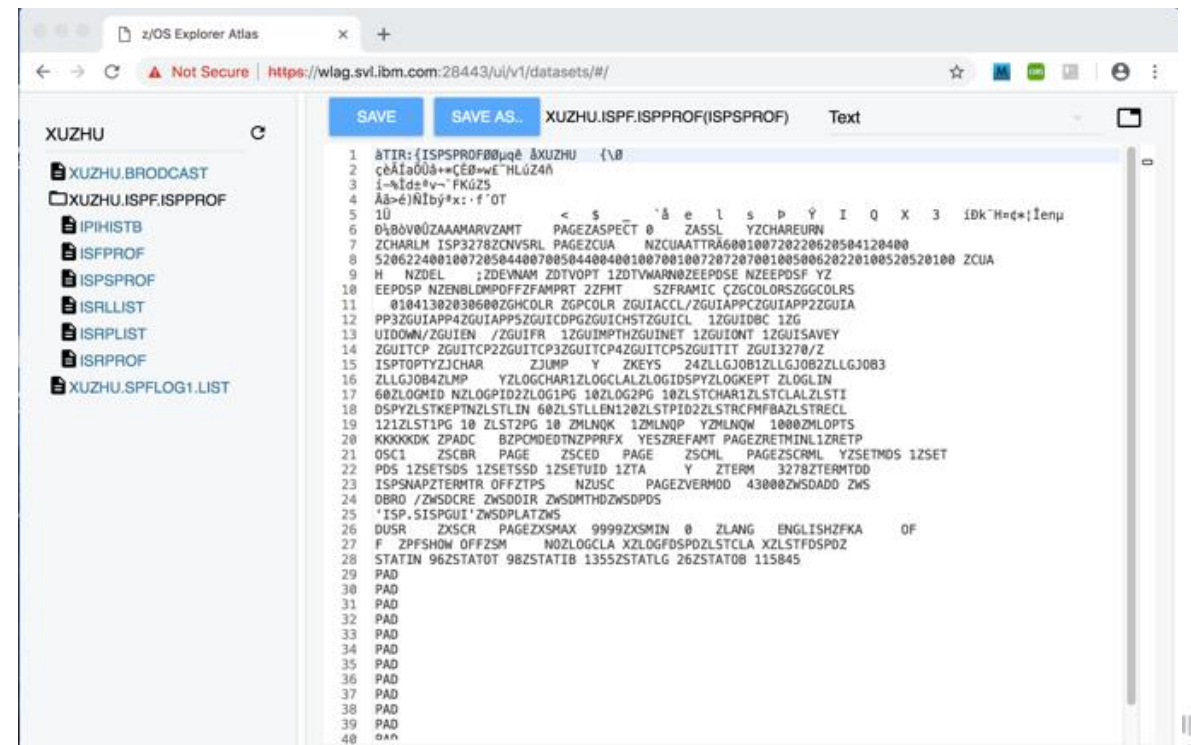
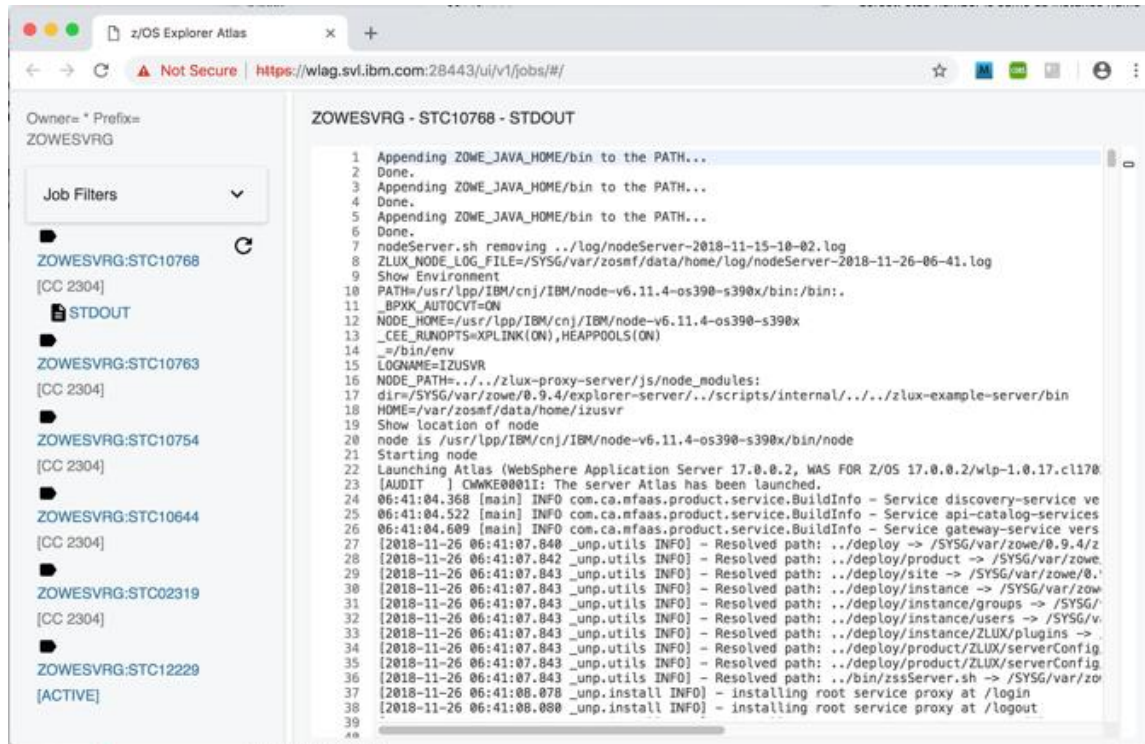
1 2 3 4 5 6 7 8 9



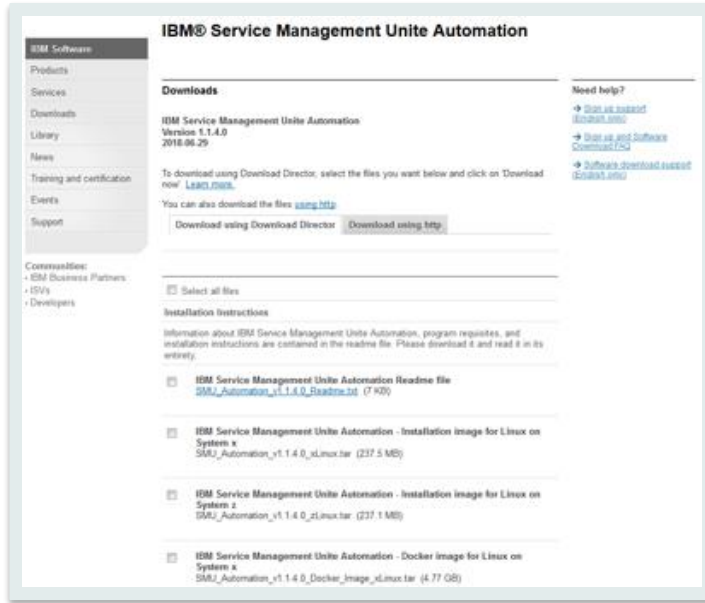
Back-up

Zowe Explorer Server

- **JES Explorer:** Use this view to query JES jobs with filters, and view the related steps, files, and status. You can also purge jobs from this view
- **Dataset Explorer:** Use this view to browse the MVS file system by using a high-level qualifier filter. With the Dataset Explorer, you can list dataset members, create new dataset, etc



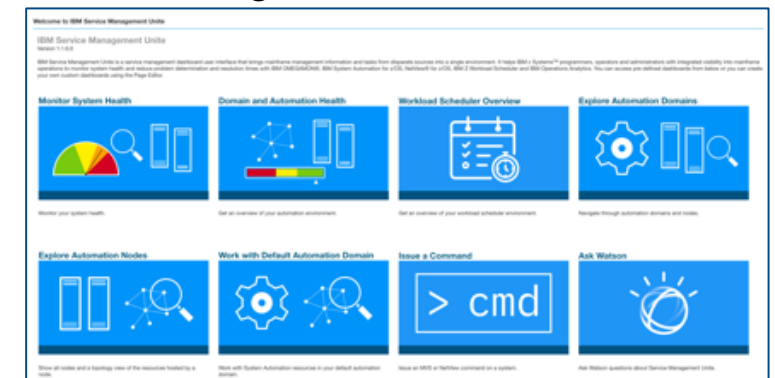
Service Management Unite Download Page



Service Management Unite available with

Z System Automation 4.2 / SA 4.1
Z NetView V.6.3

Z Service Management Suite
Z Service Automation Suite
Z Monitoring Suite



contains

- Readme
- SMU traditional installation file
- Docker images for SMU
- WebSphere Application Server
- Jazz for Service Management

SMU Automation

<http://ibm.biz/smu-auto-download>

SMU Enterprise Edition

<http://ibm.biz/smu-ee-download>

You need to specify:

- IBM customer ID and password
- Access key - Supplied on a CD titled:
 - **SMSz / Z Auto Suite: Accessing IBM Service Management Unite.**
 - **SA: Accessing IBM System Automation for z/OS Service Management Unite**

More information

- 5 Things to Know About IBM Service Management Suite for z/OS:
http://ibm.biz/SMSz_top5
- Save Time and Lower Costs with IBM Service Management Suite for z/OS. An IBM Redbooks Point-of-View publication:
<https://ibm.biz/smszpv>
- IBM Service Management Suite for z/OS with Service Management Unite. An IBM Redbooks Solution Guide:
<http://ibm.biz/smszguide>
- SMU Wiki:
<https://ibm.biz/smuwiki>
- SMSz Video:
<https://youtu.be/Dk8-dt-ZBzE>
- SMU Product Page:
<http://www.ibm.com/software/products/en/ibm-service-management-unite>
- SMU Knowledge Center:
<https://ibm.biz/ZSMUDoc>
- SMU Automation Download Page:
<http://ibm.biz/smu-sa-download>
- SMU Enterprise Edition Download Page:
<http://ibm.biz/smu-ee-download>



IBM Service Management Suite for z/OS with Service Management Unite

Lorin Ullmann
Carol Davis
Michael Gouveia
Arthur McDonald
Wolfgang Schaeberle



Infrastructure Solutions



Save Time and Lower Costs with IBM Service Management Suite for z/OS

Lorin Ullmann
Michael Gouveia
Arthur McDonald
Wolfgang Schaeberle

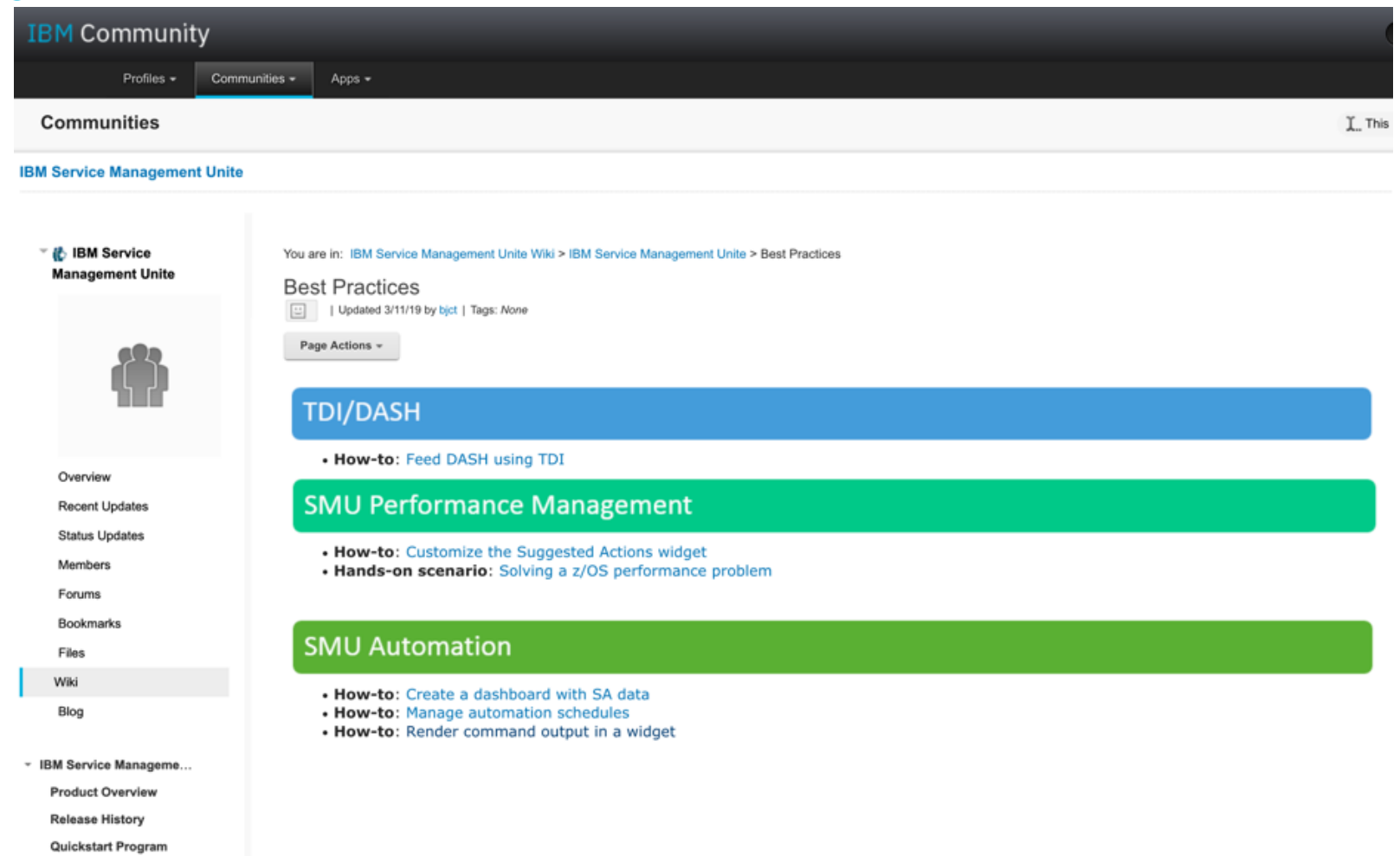


Infrastructure Solutions



SMU Best Practices Community

- Where: [Service Management Unite Community](http://ibm.biz/smuwiki)
 - <http://ibm.biz/smuwiki>
- What: [Community for sharing SMU-related content](#)
 - How-to topics
 - Scenarios
 - Hints and Tips
 - Dashboards
 - Forum
 - Blog
- Who: [Contributors](#)
 - SMU Customers
 - Development



The screenshot shows the IBM Service Management Unite Wiki page for Best Practices. The page is titled "Best Practices" and is updated 3/11/19 by bjct. It features three main sections: TDI/DASH, SMU Performance Management, and SMU Automation. Each section includes a "How-to" or "Hands-on scenario" link. The left sidebar shows the navigation menu for the IBM Service Management Unite community, including Overview, Recent Updates, Status Updates, Members, Forums, Bookmarks, Files, Wiki, and Blog. The top navigation bar includes Profiles, Communities, and Apps.

IBM Community


Profiles ▾ Communities ▾ Apps ▾

Communities ⋮ This

IBM Service Management Unite

You are in: [IBM Service Management Unite Wiki](#) > [IBM Service Management Unite](#) > [Best Practices](#)

Best Practices

 | Updated 3/11/19 by bjct | Tags: None

Page Actions ▾

TDI/DASH

- **How-to:** [Feed DASH using TDI](#)

SMU Performance Management

- **How-to:** [Customize the Suggested Actions widget](#)
- **Hands-on scenario:** [Solving a z/OS performance problem](#)

SMU Automation

- **How-to:** [Create a dashboard with SA data](#)
- **How-to:** [Manage automation schedules](#)
- **How-to:** [Render command output in a widget](#)

IBM Service Management Unite

Overview

Recent Updates

Status Updates

Members

Forums

Bookmarks

Files

Wiki

Blog

IBM Service Manageme...

Product Overview

Release History

Quickstart Program



SMU Z Trial - Try SMU for JVM Monitoring for Free Today!

IBM Service Management Unite

Welcome to your IBM Z Trial environment. Get started by exploring the scenarios below.

**Discover
performance
problems in the
Service
Management
Unite console**

[Explore scenario](#)

**Identify the JVM
with Java heap
and garbage
collection issues**

[Explore scenario](#)

**Identify the cause
of throughput
degradation
within a JVM**

[Explore scenario](#)

No charge, on-demand environment with tutorials for monitoring Java Virtual Machines with SMU and OMEGAMON for JVM

<http://ibm.biz/ibmztrial>

SMU Quickstart Program

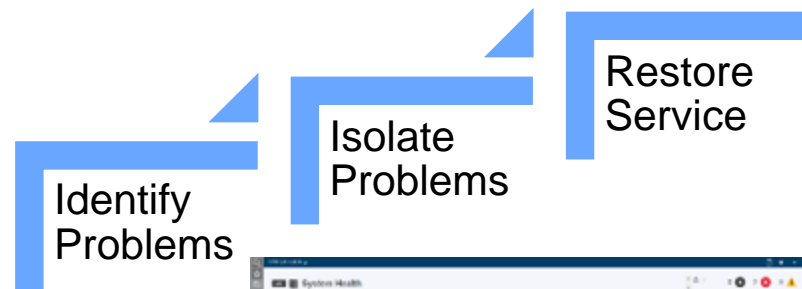
- Subject Matter Experts (SMEs) will be available to assist customers with their work towards getting SMU installed into production.
- Support can be remote or on site – depending on customer demand.
- Assistance will be provided with the installation, implementation, and training.
 - 1 - 2 days of install and implementation
 - 2 days of enablement

SMU Quickstart Contact

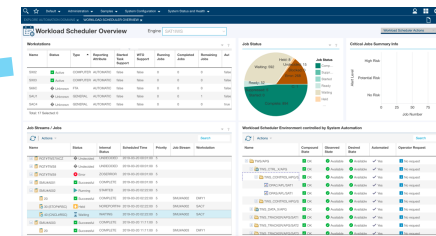
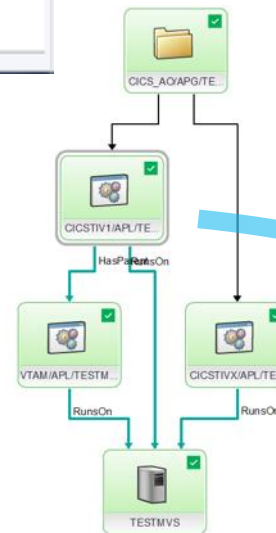
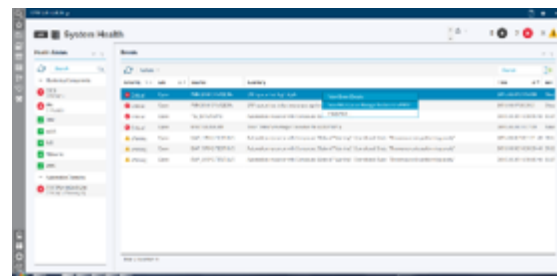
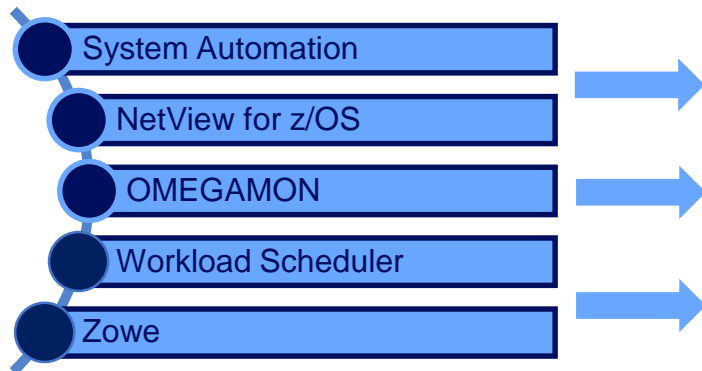
- Carol Davis (dcarol@us.ibm.com)



Resolve Problems with modern Dashboards



- See at a glance the health state of your environment
- Manage growing workload with the same operations team
- Customize your dashboards to maximize efficiency
- Improve productivity through intuitive systems control
- Enable faster on-boarding of young talent



Relationship between SMU and deep analysis tools

Operators: SMU Primary Users

- Assisted problem identification, isolation and triage
- Use alarms or alerts from monitoring, automation and job scheduling operational tooling
- Work across many domains; limited access
- Streamline their workflows with focused data before handoff to others for deeper analysis. Able to fix simple issues; limited access
- Operate automated applications and ensure scheduled workload runs as defined

Service Management Unite

Doug
IT Operations Manager

Annette
Operations Analyst

Seamless integration: UI, data, APIs, same context

Subject Matter Experts (SMEs): SMU Secondary Users:

- SMEs use SMU as well as deep dive tools
- Use maximum amount of performance data and tooling capabilities for critical, deep-dive
- Create and administer resource automation and scheduler batch workload for large environments
- Increase the degree of automation and administer using automation tasks to avoid manual tasks.
- System Programmers with deep skills and experience in a particular domain; Full access to issue commands
- Application developers familiar with COBOL, Java, C/C++, SQL and uses Eclipse and other IDEs with focused data

SMU Complements Deep Dive Service Management Tools

Marnie
Scheduler Admin

Michael
System Automation Administrator

Jim
Subject Matter Expert

Zach
System Programmer

Future: SME/WebTEP