

Improve Service Levels with Enhanced Data Analysis

Paul Smith (Smitty)
Service Management Architect
Cloud and Smarter Infrastructure
IBM

Joe Winterton
OMEGAMON Development Manager
Cloud and Smarter Infrastructure
IBM

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14077

Agenda



- Customer Pain Points and Challenges – Problem Determination
- IBM zAware – What is it and why do I need it?
- Integration with existing Service Management tools – Save time, effort and reduce mean time to recovery

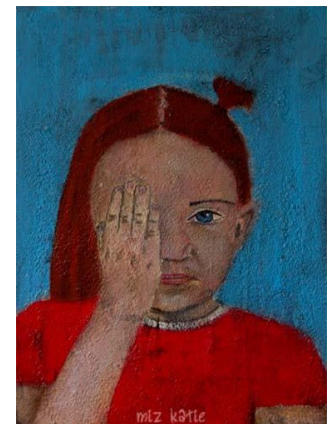


Client pain points and challenges

- **Takes too long to isolate, diagnose problems in applications and infrastructure.**
 - Customer environments have become very complex. Application workloads span multiple platforms and include several different diagnostic capabilities.
 - Datacenters generate a large amount of data. (performance metrics, events, infrastructure logs, application logs, configuration files, traces). **Current management systems only use a subset of this information (metrics & events).**
 - Systematic '**soft failures**' are much harder to detect – several anomalies can build up over time
- **Existing management tools becoming inappropriate for Systems of Engagement and mobile applications.**
 - 100x to 1000x explosion in users and data flooding existing tools. (terabytes)
 - New runtimes, programming languages needing complex instrumentation to use traditional tools.
- **Critical missed information leads to outages and/or poor customer experience. Most management of problems reactive.**
 - Analyzing all information is a better indicator for predicting problems.



Is managing your environment like sipping from a fire hose?



Application and Infrastructure Problem Diagnosis



Operators and subject matter experts are overwhelmed with volumes of data that they manually process to determine the cause, location and scope of a problem.



- Only 3% of the data generated is operations-oriented metric data
- 97% is unstructured/semi-structured data
- An enterprise with 5000 servers generates over 1.3 TB of data per day



Analytics Opportunities in IT



Performance and Capacity

Track, Optimize, and Predict Capacity and Performance needs over time

Knowledge

- Track Capacity and Performance of Applications and Services in Classic and Cloud Environments
- Optimize Resource Deployment with what-if and best fit planning tools
- Escalate Capacity and Performance problems before they cause critical failures

Outage Avoidance

Ensure Availability of Applications and Services

Better Insight

- Use Learning tools to augment custom Best Practices
- Improve Problem detection across IT Silos
- Leverage Statistical methods to maximize predictive warning

Faster Problem Isolation

Find the Critical Data Faster with systems designed for no-touch escalation and highlighting

Find Critical Data

- **Identify** problems quicker with insight to large unstructured repositories
- **Isolate** problems quicker by bringing relevant unstructured data into problem investigations
- **Repair** problems quicker with the right details quickly to hand.

Customer Insight & Care

Reduce Customer Frustration by spotting their frustrations before they call (or leave)

Pain Points

- Gain insight into what is important to your customer
- Decrease customer churn and acquisition costs
- Increase customer retention and satisfaction

IBM zAware uses Log Analytics to lower mainframe IT Administration Costs and ensure 24/7 uptime:

- *Log Analysis surfaces anomalies automatically, removing the need to manually scour through millions of z/OS messages*
- *Service Management tools enable fast-path to failure, reducing Mean Time to Recovery (MTTR)*

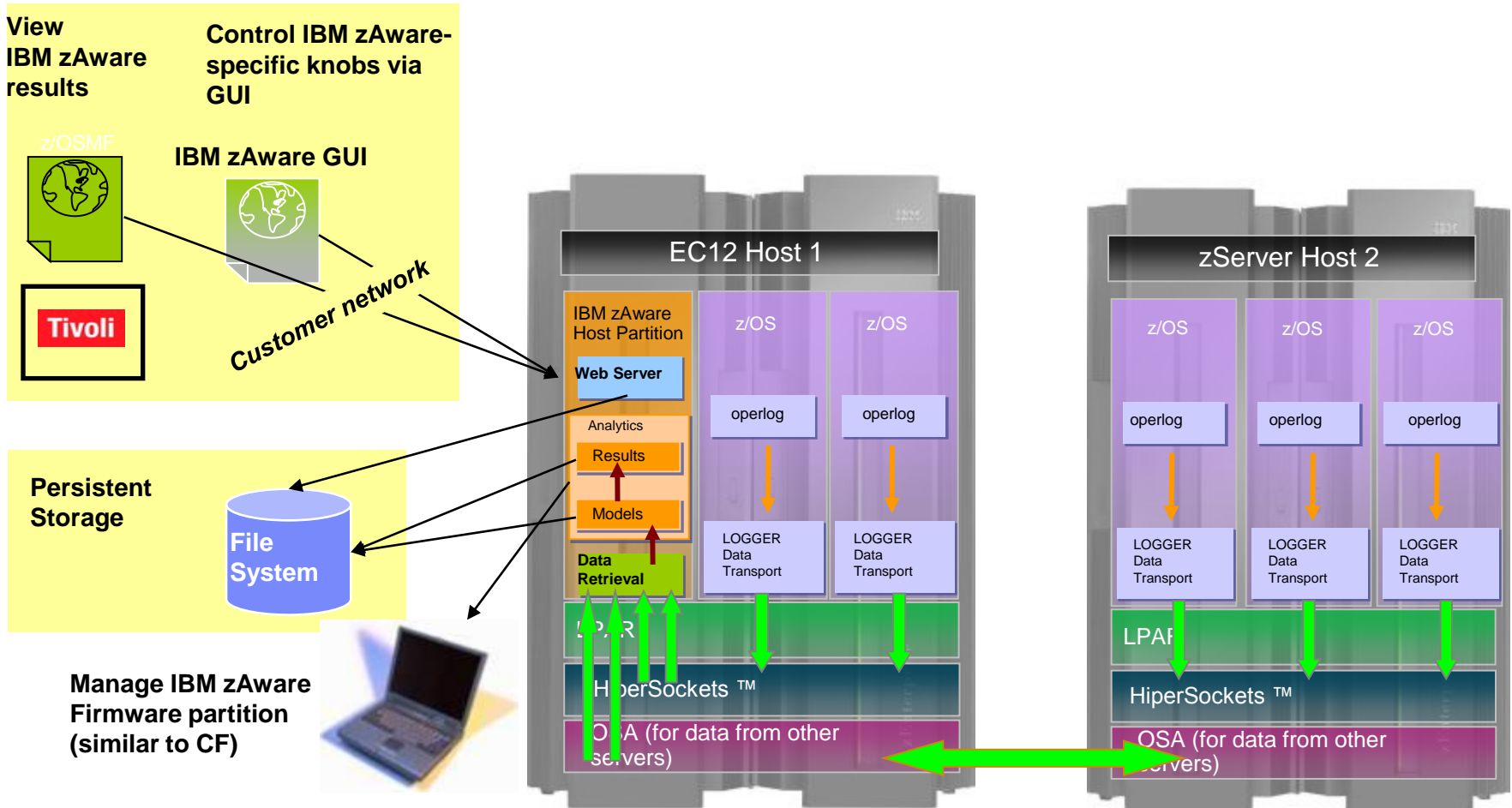


What is IBM zAware?



IBM zAware is a priced feature offered with *IBM zEnterprise EC12 /BC12*. *IBM zAware*:

- Provides z/OS Log Analytics - Analysis of z/OS operlog
- Surfaces anomalies that indicate abnormal occurrence of messages in z/OS environments
- Packaged as a 'firmware appliance' that runs 'out of band' (not on z/OS)



How can IBM zAware Improve Problem Determination?

- Identify messages indicating a possible z/OS incident is happening
 - Which image is behaving abnormally?
 - Examines unique messages
 - High score generated by
 - unusual messages or message patterns
 - When did this unusual behavior start?
 - For a selected 10 minute interval either the current 10 minute interval or past intervals
 - Which message ids are unusual?
 - How often did the message occur?
 - When did the message start to occur?
 - Were similar messages issued in the past?
 - Similar characteristics, Same pattern?
- After a change has been made
 - Are unusual messages being issued following changes ?
 - New software levels (operating system, middleware, applications)
 - Updated system settings / system configurations
- When diagnosing the cause of an intermittent problem
 - Are new unusual messages being issued in advance of the problem?
 - Are more messages issued then expected?
 - Are messages issued out of normal pattern or context?

Finds Anomalies that would be Hard to Detect

Vertical bar shows the number of unique messages in a 10 minute interval
 Scoring of messages color coded from common (blue) to rare (orange)

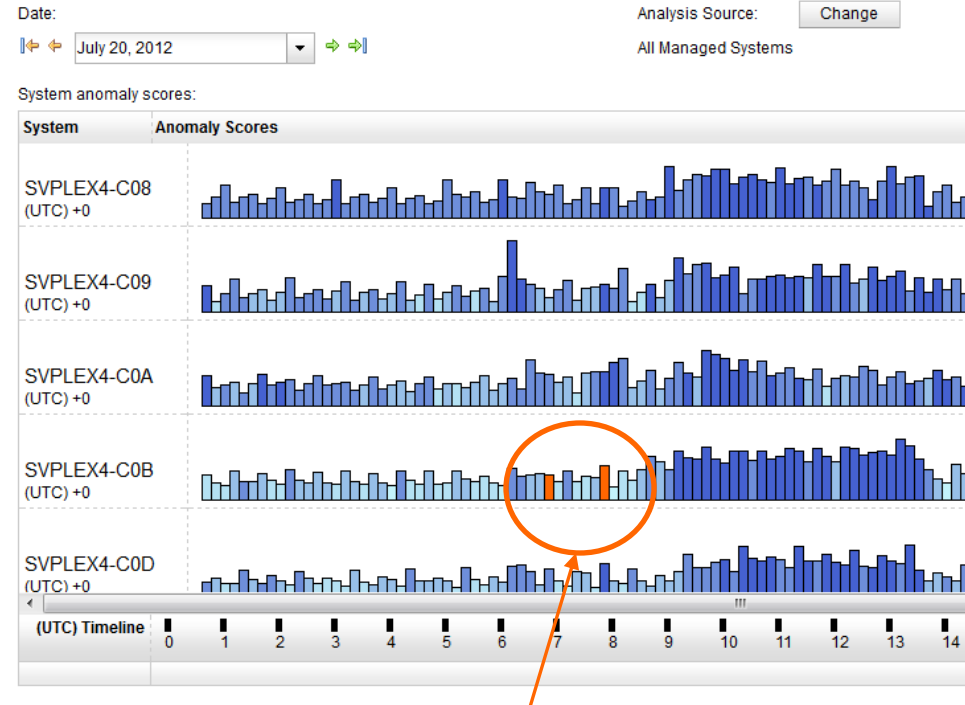


IBM System z Advanced Workload Analysis Reporter



- Monitors z/OS OPERLOG including all messages written to z/OS console, including ISV and application generated messages
- Detects things typical monitoring systems miss due to:
 - Message suppression (message may be too common)
 - Useful for long-term health issues
 - Uniqueness (message not common enough)
 - Useful for real-time event diagnostics
- Color-coded, easy-to-use web browser GUI
- XML Output can feed other products

Analysis



Ability to drill down for details on anomalies



IBM zAware - Interval View

Drill down to see JES2 resource shortage

Interval View for System CB88

Date: ↔ ↔

Time interval (local time): ↔ ↔

Analysis Source:
All Managed Systems

Interval anomaly score:
99.7

Actions ▾										
▼1 Anomaly Score	▼2 Interval Contribution Score	Message Context	Rules Status	Appearance Count	Time Line	Message ID	Message Example	Rarity Score	Component	Cluster ID
1	0.226	new	None	1		EYUXS1004W	M88CM88 Interval Timing queue element shortage detected	101	EYUXS	-1
1	0.226	new	None	1		EYUXS1005I	M88CM88 Interval Timing queue element shortage relieved	101	EYUXS	-1
1	0	in_context	IMPORTANT	16		HASP050	JES2 RESOURCE SHORTAGE OF TGS - 100% UTILIZATION REACHED	50	HASP	102
0.999	10.974	unclustered	None	57		IEE043I	A SYSTEM LOG DATA SET HAS BEEN QUEUED TO SYSOUT CLASS M	2	IEE	-1
0.998	6.706	unclustered	None	7		EYUCL0016I	M88CM88 Send Link Task terminated for MRO Network connection with CMAS M8AC.M8A.	74	EYUCL	-1
0.998	6.519	unclustered	None	4989		ITP136I	ADSWCB G2APA001 G2LUA001-1 LU IS NOW INACTIVE 00.02.50.86	27	ITP	-1
0.987	4.427	unclustered	None	40		IEC070I	209-220,NETVIEW,NETVIEW,DSILOGS,683C,NE	12	IEC	-1



Get the more from the IBM zAware feature by **integrating** with **Tivoli Service Management**. Tivoli will utilize the IBM zAware API to integrate log analysis with existing service management capabilities.

- Provide visibility into IBM zAware anomalies via Event Management
- Improve MTTR through integration with existing problem determination and performance monitoring tools
- Identify system errors and eliminate subsequent occurrences thru automation and more sophisticated analysis

IBM zAware is NOT a replacement for traditional performance and availability monitoring tools. It's just the opposite. When used in conjunction with existing service management tools, it can provide a VERY powerful combination to help achieve 24/7 uptime, improve MTTR when problems occur and help avoid subsequent problems.



IBM zAware Complements Your Existing Environment



Service Management Software
Tivoli

IBM zAware provides an **API** to retrieve XML data to support alternative views generated by higher level managers



Operator, SME

z/OSMF



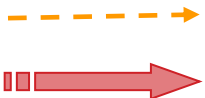
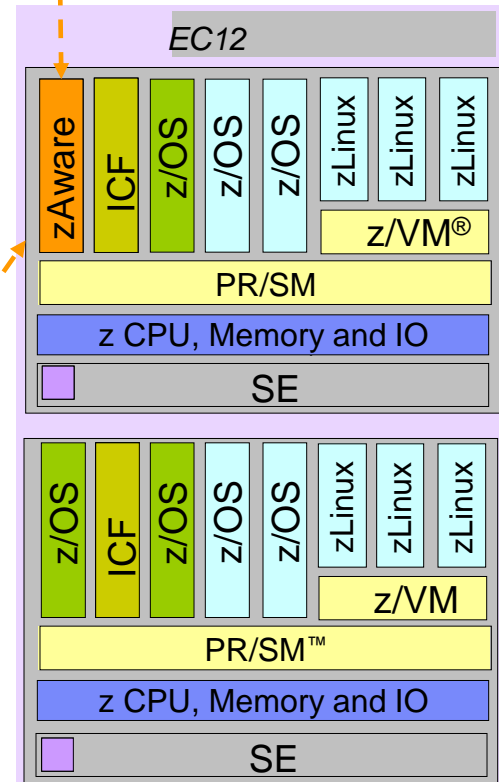
Management of z/OS and Sysplex

zAware



Customer controlled scope

Sysplex views
z/OS Image view
Closed appliance



Programmatic calls


Launch (UI)



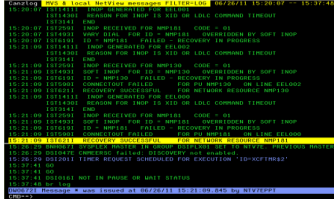
IBM zAware – Log Analytics with Anomaly Detection




- Available TODAY as ‘firmware appliance’ with mainframe (EC12)
- Requires z/OS operlog (‘simple’ implementation)
- Focus – Log Analytics – Anomaly detection
- Customer - z/OS Enterprise customers
- Customer Value – Save money by ensuring z/OS availability (decrease time to perform problem determination and lower MTTR)
- Leverage IBM zAware through existing Service Management solutions (NetView and OMEGAMON) to generate events and enable problem isolation.



Event Management
OMNibus

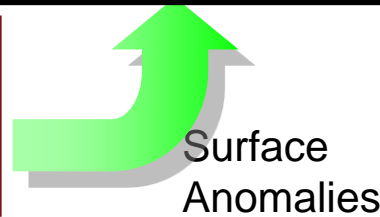


Problem Determination
NetView
CANZLOG

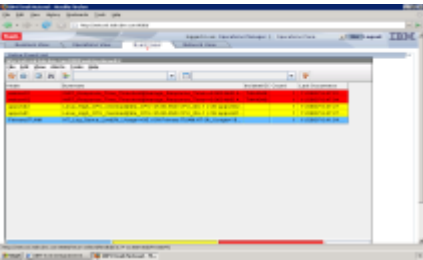


Performance Monitoring
OMEGAMON

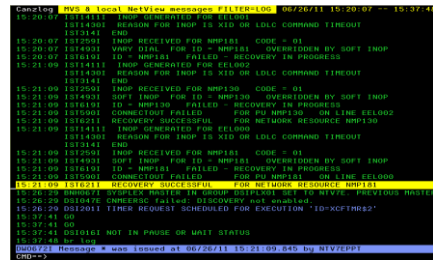
IBM zAware



IBM zAware, Automation, Event Management and PD Tools



View event in Active Event List
Generate trouble ticket

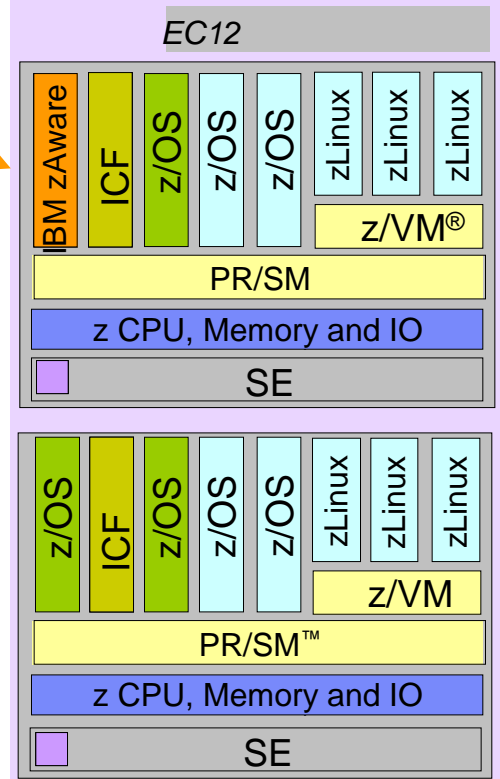


Browse NetView CANZLOG
Perform PD for anomaly



- NetView processing ...**
- Query IBM zAware (10 minute interval)
 - If anomaly detected
 - Generate 'anomaly' message
 - Generate Event
 - SME - Browse NetView CANZLOG to perform problem determination

- NetView samples provided to generate anomaly message and event(s)
 - Available for download from Service Management Connect
- NetView integration referenced from IBM zAware Redbook
- IBM Services (optional) available to install and configure zAware and NetView



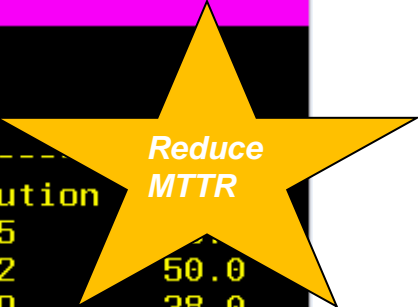
NetView CANZLOG – Browse in zAware context

- Browse NetView CANZLOG in context of zAware anomaly
- Set filter and timeframe to view related messages in CANZLOG (consolidated log)
- Perform problem determination in context of timeframe of the anomaly

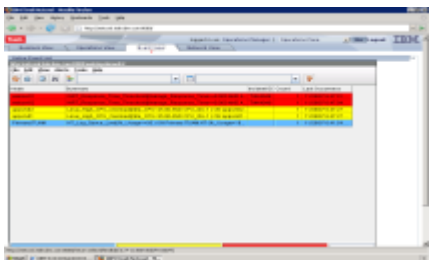
Set appropriate filters?

Launch to proper Timeframe

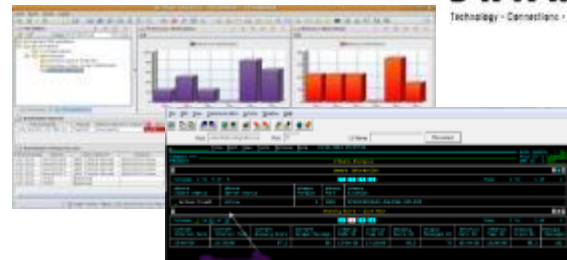
```
Canzlog MVS & local NetView messages FILTER=LOG 11/06/12 16:50:04 -- 16:50:04
16:50:04 ZAI0001I Interval Results.
System : UTCPLXSB-SP0
Interval: 2012-09-25T09:30:00.000Z
Anomaly : 72.0
-----
Anomaly Message Count Cluster Contribution
0.997000 CSQE008I 6 UNCLUSTERED 6.425
0.987000 CSQX209E 2 UNCLUSTERED 4.452
0.987000 CSQX501I 6 UNCLUSTERED 4.419
0.959000 CSQX191I 1 UNCLUSTERED 3.217
0.939000 FPEV0511I 1 UNCLUSTERED 2.809
0.939000 IEC070I 52 UNCLUSTERED 2.808
0.929000 CSQX202E 2 UNCLUSTERED 2.664
0.888000 DFS2864I 28 UNCLUSTERED 2.199
0.878000 CSQX004I 1 UNCLUSTERED 2.107
0.807000 IGD104I 1 UNCLUSTERED 1.648
0.795000 CNZ4100I 1 UNCLUSTERED 1.588
0.770000 IEF237I 1 UNCLUSTERED 1.473
0.767000 ADF313I 5 UNCLUSTERED 1.458
----- END OF DATA -----
16:50:04 ZAIGET - Starting
TO SEE YOUR KEY SETTINGS, ENTER 'DISPFK'
CMD==>
```



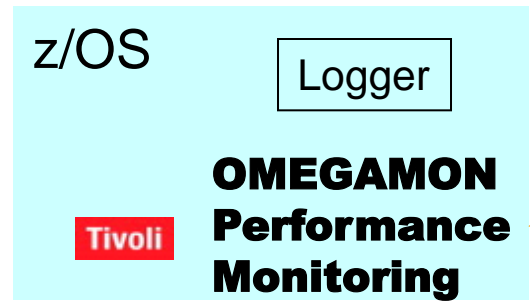
IBM zAware, Event Management & Traditional Performance Monitoring



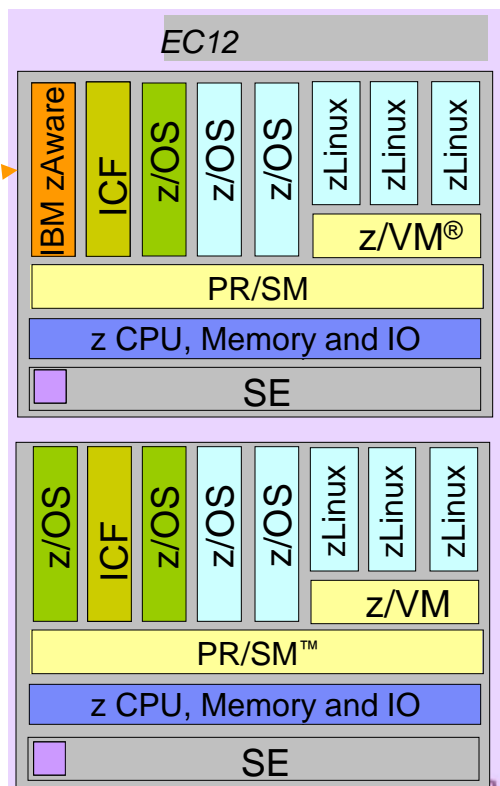
View event in Active Event List
Generate trouble ticket



Perform PD for anomaly using association with traditional monitoring KPIs



- Processing ...**
- Query IBM zAware (10 minute interval)
 - If anomaly detected
 - Trigger situation to Generate Event when anomaly is surfaced
 - Include IBM zAware insights in performance monitoring views

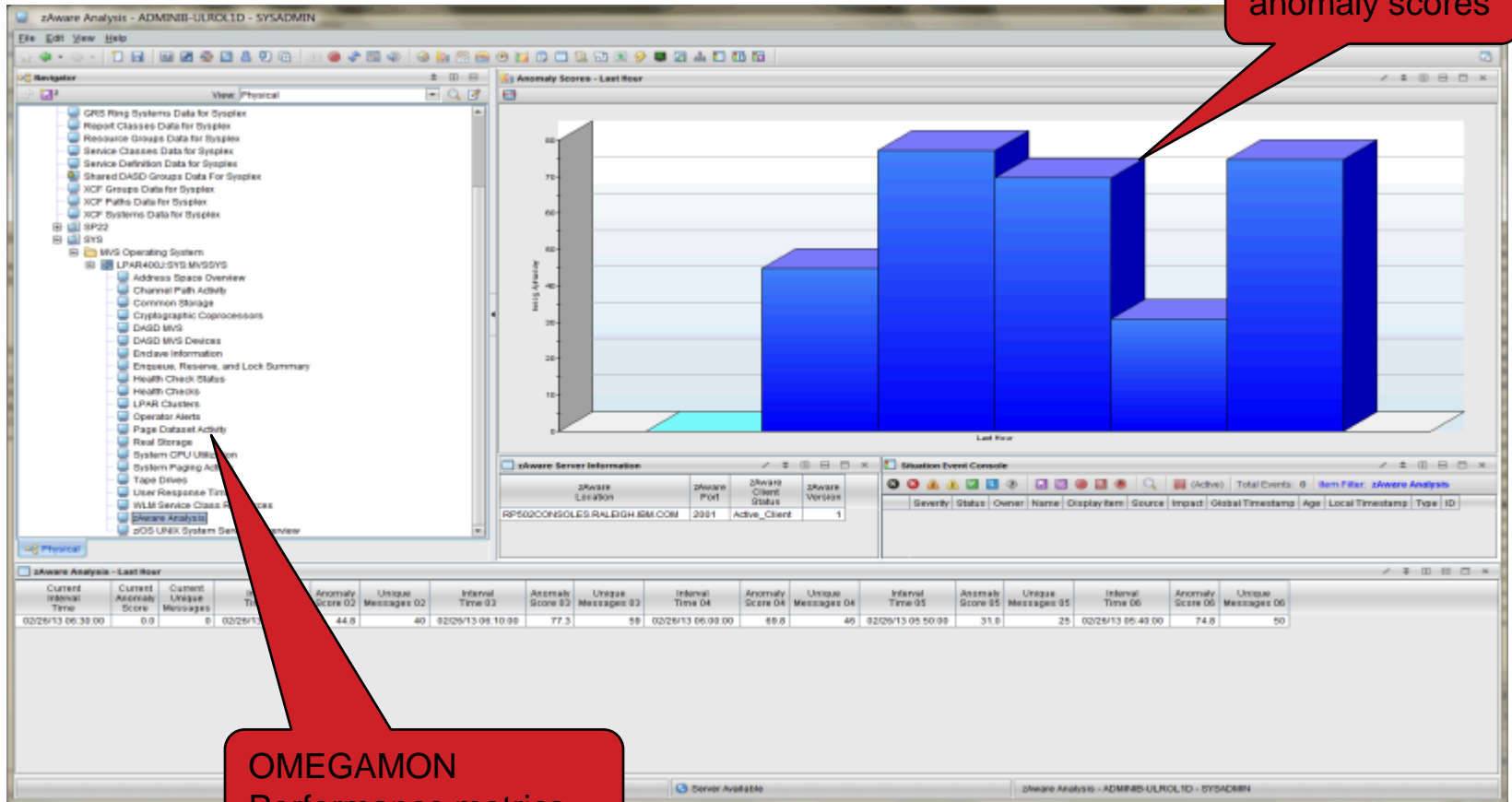


IBM zAware Hot Issue Alerting feature Overview

Benefits IBM zAware (zAware built on analytics) customers by enhancing the power of IBM zAware problem isolation with the alerting and reporting capabilities of OMEGAMON XE on z/OS

Scenario: Situation Detecting IMS Log Failure

- The new OMEGAMON warning situation for zAware, based on anomaly scores, has triggered indicating something highly unusual is happening on my LPAR.
- Launch from TEP to the zAware UI next

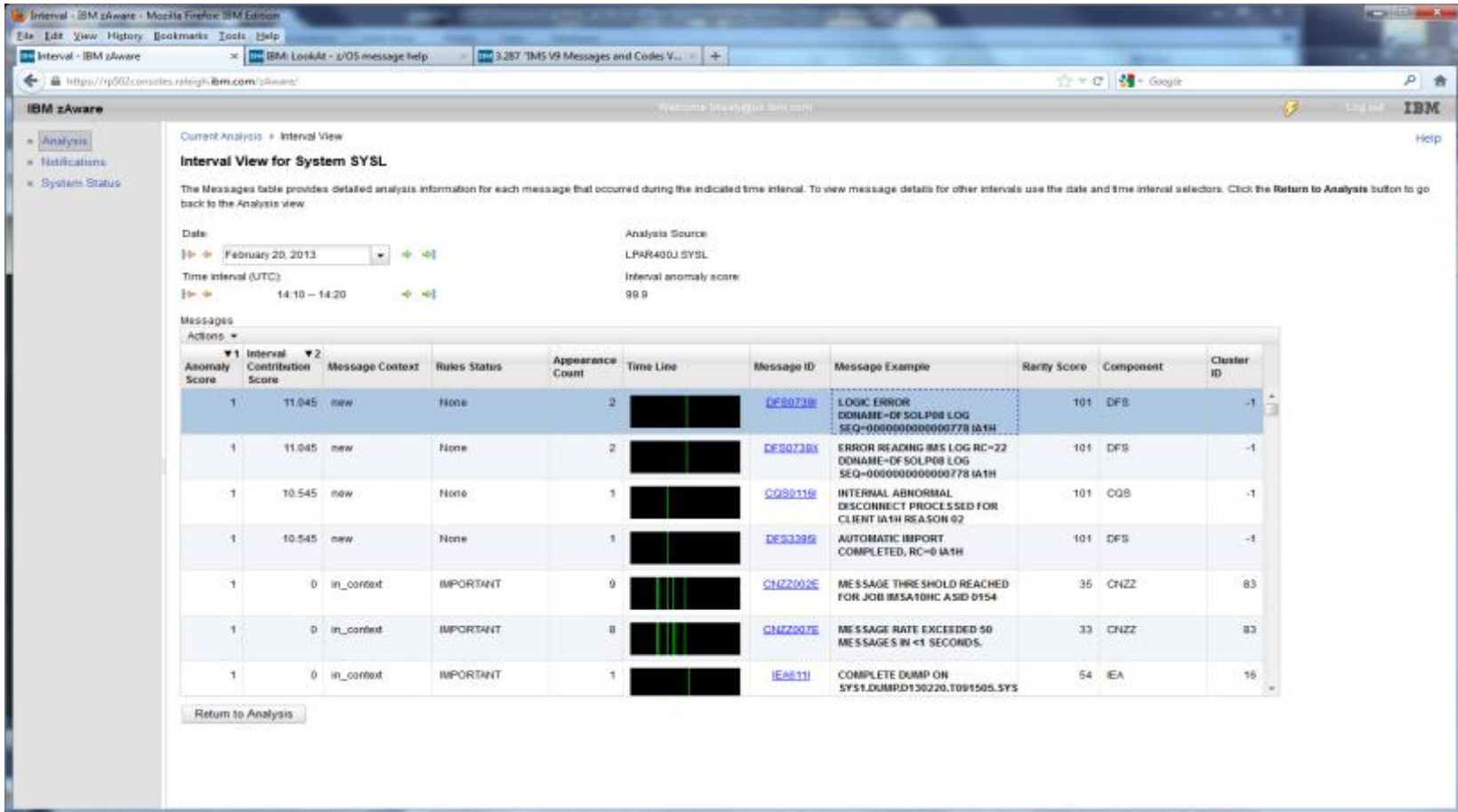


zAware anomaly scores

OMEGAMON Performance metrics

Scenario: Situation Detecting IMS Log Failure ...

- Launching to zAware browser I drill down to the message IDs for the interval and see two messages for IMS **DFS0739I** and **DFS0739X** contribute heavily to the scoring of this interval



Current Analysis > Interval View

Interval View for System SYSL

The Messages table provides detailed analysis information for each message that occurred during the indicated time interval. To view message details for other intervals use the date and time interval selectors. Click the Return to Analysis button to go back to the Analysis view.

Date: February 20, 2013
 Time interval (UTC): 14:10 - 14:20
 Analysis Source: LPAR400 SYSL
 Interval anomaly score: 99.9

Anomaly Score	Contribution Score	Message Context	Rules Status	Appearance Count	Time Line	Message ID	Message Example	Rarity Score	Component	Cluster ID
1	11.045	new	None	2	[Timeline]	DFS0739I	LOGIC ERROR DDNAME=DF SLP08 LOG SEQ=00000000000778 IA1H	101	DFS	-1
1	11.045	new	None	2	[Timeline]	DFS0739X	ERROR READING BAS LOG RC=22 DDNAME=DF SLP08 LOG SEQ=00000000000778 IA1H	101	DFS	-1
1	10.545	new	None	1	[Timeline]	CQ8011E	INTERNAL ABNORMAL DISCONNECT PROCESSED FOR CLIENT IA1H REASON 02	101	CQB	-1
1	10.545	new	None	1	[Timeline]	DFS3289E	AUTOMATIC IMPORT COMPLETED, RC=0 IA1H	101	DFS	-1
1	0	in_context	IMPORTANT	0	[Timeline]	CNZ2002E	MESSAGE THRESHOLD REACHED FOR JOB IMSA10HC ASID 0154	35	CNZZ	83
1	0	in_context	IMPORTANT	0	[Timeline]	CNZ2003E	MESSAGE RATE EXCEEDED 50 MESSAGE S IN <1 SECONDS.	33	CNZZ	83
1	0	in_context	IMPORTANT	1	[Timeline]	IE6811I	COMPLETE DUMP ON SYSL.DUMPD130220.T091505.SYS	54	IEA	16

Return to Analysis

Scenario: Situation Detecting IMS Log Failure ...



- Reviewing the SYSLOG for the LPAR I see
 - DFS0739I LOGIC ERROR DDNAME=DFSOLP08 LOG SEQ=0000000000000778 IA1H
 - DFS0739X ERROR READING IMS LOG **RC=22** DDNAME=DFSOLP08 LOG SEQ=0000000000000778 IA1H
- IMS Messages and Code manual tells me
 - **DFS0739I** An error occurred while accessing a log data set during IMS restart. *ddddddd* is the ddname of the data set last processed when the error was encountered. *ddddddd* can be blank.
 - **DFS0739X** Restart cannot proceed because of errors encountered. *ddddddd* is the ddname of the data set being processed when the error was encountered. *ddddddd* can be blank. *nnnnnnn* is the log sequence number last processed. *nnnnnnn* can be blank. *xx* is the hexadecimal error code. Register 14 contains the address of the routine that detected the error. Register 15 contains an error code.
 - **RC =22** - A logic error was detected.
- Armed with this information I am able to alert the IMS systems programmer to recover the IMS Log



IBM zAware
in
OMEGAMON e3270ui

Demo

Session C - [62 x 160]

File Edit View Communication Actions Window Help

Host: wlaa.tivlab.raleigh.ibm.com Port: 23 LU Name: Disconnect

File Edit View Tools Options Help 04/26/2013 15:33:25

Command ==> KNSLPR09+ LPAR Overview for Sysplex LPAR400J

Auto Update : Off
Plex ID : LPAR400J
SAP ID :

Summary

Columns 3 to 12 of 15 Rows 1 to 1 of 1

<LPAR Name	ΔAverage PCPU Percent	Percent LPAR MSU Capacity	System Page Rate	Page Fault Rate	CSA In Use Percent	ECSA In Use Percent	Storage Events Status	Major Name	Max Enqueue Wait Time	Performance Index	+Gos Imp
< CANSVSG	10	12.2	12.4	0.5	34.0	49.4	No Active Events	KLVGLOCK	000000	7.50	H1

Place slash at LPAR to be investigate

Friday April 26 2013 01:00:02

Connected to remote server/host wlaa.tivlab.raleigh.ibm.com using lu/pool TCPA0348 and port 23 \\BRIAN-PC,Canon MP830 Series Printer on U

Session C - [62 x 160]

File Edit View Communication Actions Window Help

Host: wlaa.tivlab.raleigh.ibm.com Port: 23 LU Name: Disconnect

File Edit View Tools Options Help 04/26/2013 15:34:16

Command ==> KMSLPR03*

Auto Update : Off
Plex ID : LPAR400J
SMF ID : SYS

r Sysplex LPAR400J

Summary

In Use cent	ECSA In Use Percent	Storage Events Status	Major Name	Max Enqueue Wait Time	Performance Index	+Goa Imp
34.8	49.4	No Active Events	KLVGLOCK	381054	7.50	Hi

Options Menu

Select an option and then press ENTER

1. A Operator Alerts
2. B System CPU Utilization
3. C CPC Details and LPAR Clusters
4. D zAware Analysis
5. E Global Enqueue Data For Sysplex
6. H Health Checker
7. M 4-Hour Rolling Average MSU Statistics
8. N Enclave Information
9. O Storage Resources
10. P System Paging & Dataset Activity
11. R Enqueue, Reserve, and Lock Summary
12. S Address Space Overview
13. Y Active DASD Devices
14. U WLM Service Class Resources
15. Z z/OS UNIX System Services Overview

Columns

LPAR Name

CANSYSG

Friday April 26 2013

08/015

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Select zAware workspace

Session C - [62 x 160]

File Edit View Communication Actions Window Help

Host: wlaa.tivlab.raleigh.ibm.com Port: 23 LU Name: Disconnect

04/26/2013 09:27:31

Command ==> zAware Analysis
KMS2AAS+

Auto Update : Off
Plex ID : LPAR400J
SMF ID : SYS

zAware Information

zAware Client Status	zAware Server Status	zAware Version	zAware Port	zAware Location
Active Client	Active	1	2001	RP502CONSOLE.RALEIGH.IBM.COM

Anomaly Score - Last Hour

Current Interval Date	Current Interval Time	Current Anomaly Score	Current Unique Message	Interval Date 02	Interval Time 02	Anomaly Score 02	Unique Messages 02	Interval Date 03	Interval Time 03	Anomaly Score 03	+Unique Messages
13/04/26	13:20:00	87.2	88	13/04/26	13:10:00	93.3	76	13/04/26	13:00:00	95.2	161

Friday April 26 2013

04/002

Connected to remote server/host wlaa.tivlab.raleigh.ibm.com using lu/pool TCPA0348 and port 23

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Here is zAware workspace
 Top subpanel presents configuration
 and status for zAware appliance
 Second subpanel present current
 hour zAware observations

Session B - [62 x 160]

File Edit View Communication Actions Window Help

Host: wlaa.tivlab.raleigh.ibm.com Port: 23 LU Name: Disconnect

File Edit View Tools Options Help 05/06/2013 20:37:29

Command ==> ITM Situation Status & Message Log

Auto Update : Off
Plex ID : LPAR400J
Region : SYS

Current Situation Status

ΔStatus	ΔSituation Name	ΔMSM Event Source	ΔHUB Event Time	ΔAgent Event Time	ΔDisplay Item
Open	KMS_zAware_Server_Status	LPAR400J:SYS:MVSSYS	13/05/06 20:34:31	13/05/06 20:34:31	
Open	KMS_zAware_Analysis_Warn	LPAR400J:SYS:MVSSYS	13/05/06 20:20:12	13/05/06 20:20:12	
Open	KMS_No_Sysplex_DASD_Filter_War	LPAR400J:MVS:SYSPLEX	13/05/06 19:53:44	13/05/06 19:53:44	

Situation Event Message Log

ΔStatus	ΔSituation Name	ΔMSM Event Source	ΔHUB Event Time	ΔAgent Event Time	ΔMonitoring Server
Open	KMS_zAware_Server_Status	LPAR400J:SYS:MVSSYS	13/05/06 20:34:31	13/05/06 20:34:31	MSG8:CMS
Stopped	KMS_zAware_Server_Status		13/05/06 20:34:27	13/05/06 20:34:27	MSG8:CMS
Stopped	KMS_zAware_Server_Status		13/05/06 20:31:57	13/05/06 20:31:57	MSG8:CMS
Open	KMS_zAware_Analysis_Warn	LPAR400J:SYS:MVSSYS	13/05/06 20:20:12	13/05/06 20:20:12	MSG8:CMS
Open	KMS_No_Sysplex_DASD_Filter_Warn	LPAR400J:MVS:SYSPLEX	13/05/06 19:53:44	13/05/06 19:53:44	MSG8:CMS
Stopped	KMS_Weak_Plex_DASD_Filter_Warn		13/05/06 19:28:08	13/05/06 19:28:08	MSG8:CMS
Stopped	KMS_No_Sysplex_DASD_Filter_Warn		13/05/06 19:28:08	13/05/06 19:28:08	MSG8:CMS
Closed	MS_Offline	IBM-884NF48B10R:TEPS	13/05/06 19:12:38	13/05/06 19:12:37	MSG8:CMS
Open	MS_Offline	NC9037038034:TEPS	13/05/06 12:54:37	13/05/06 12:54:37	MSG8:CMS
Open	MS_Offline	LPAR400J:SP22:MVSSYS	13/05/06 12:54:37	13/05/06 12:54:37	MSG8:CMS
Open	MS_Offline	LPAR400J:SP13:MVSSYS	13/05/06 12:54:37	13/05/06 12:54:37	MSG8:CMS
Open	MS_Offline	JACKSTAT ION:TEPS	13/05/06 12:54:37	13/05/06 12:54:37	MSG8:CMS
Open	MS_Offline	IBM-2JMI28H1095:TEPS	13/05/06 12:54:37	13/05/06 12:54:37	MSG8:CMS
Open	MS_Offline	IBM-1CC9746EA0D:TEPS	13/05/06 12:54:37	13/05/06 12:54:37	MSG8:CMS
Open	MS_Offline	GOLDSMID:TEPS	13/05/06 12:54:37	13/05/06 12:54:37	MSG8:CMS
Open	MS_Offline	CVTSPX:SP13:MVSSYS	13/05/06 12:54:37	13/05/06 12:54:37	MSG8:CMS
Open	MS_Offline	CVTSPX:MVS:SYSPLEX	13/05/06 12:54:37	13/05/06 12:54:37	MSG8:CMS
Open	MS_Offline	CVT25113:CMS	13/05/06 12:54:37	13/05/06 12:54:37	MSG8:CMS
Open	MS_Offline	ADMINIB-ULROL1D:TEPS	13/05/06 12:54:37	13/05/06 12:54:37	MSG8:CMS

Monday May 06 2013 01:002

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Active situations appear here



SHARE
Technology · Consulting · Results

The screenshot shows the zAware Analysis interface. On the left is a tree view of system components. The main area displays a 3D bar chart titled 'Anomaly Scores - Last Hour'. Below the chart are several panels: 'zAware Information' with a table showing client status, 'Situation Event Console' with a table of active warnings, and a 'Warnings' pop-up box. A text box at the bottom explains that active situations appear in the console.

zAware Information Table:

zAware Client Status	zAware Server Status	zAware Version	zAware Part	zAware Location
Active Client	Credentials Invalid	1	2001	RP502CONSOLE5.RALEIGH.BM.COM

Situation Event Console Table:

Severity	Status	Owner	Name
Warning	Open		KMS_zAware_Server_Status
Warning	Open		KMS_zAware_Analysis_Warn

Warnings Pop-up:

- Warning: KMS_zAware_Server_Status LPAR400J:SYS:MY3SYS 05/06/13 20:34:31
- Warning: KMS_zAware_Analysis_Warn LPAR400J:SYS:MY3SYS 05/06/13 20:20:12

Active situations appear here



Product provided situations

LPAR alerts

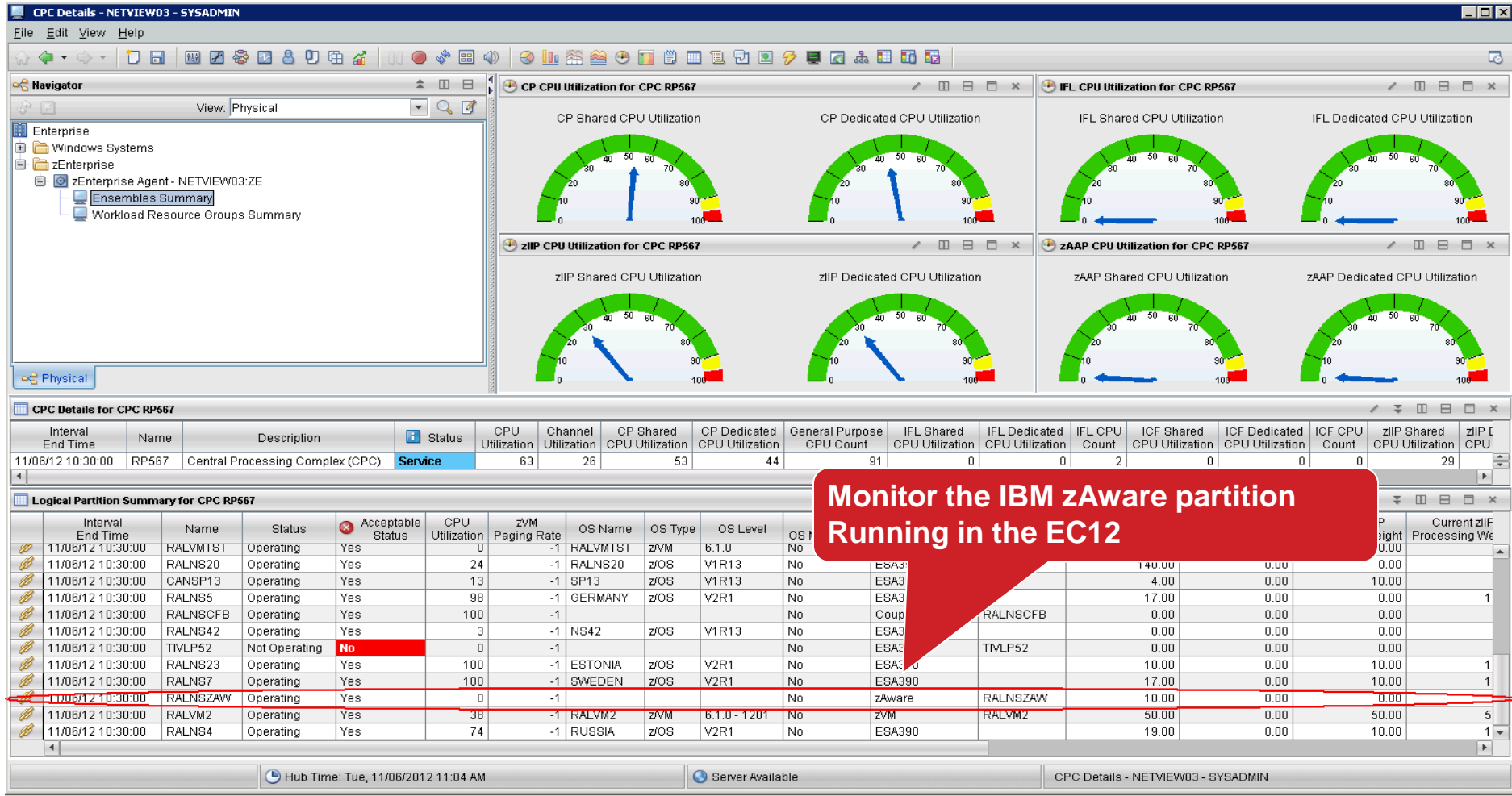
- KM5_zAware_Analysis_Warn when
 - Anomaly Score 02 \geq 99.6 AND Anomaly Score 02 $<$ 101.0
- KM5_zAware_Analysis_Crit when
 - Anomaly Score 02 \geq 101.0

Agent self monitoring alerts

- KM5_zAware_Client_Status when
 - zAware Client Status \neq 'Active Client'
- KM5_zAware_Server_Status when
 - zAware Server Status \neq Active

Monitoring the zAware Server

The Tivoli zEnterprise Monitoring Agent already monitors the logical partitions in the CEC as shown in the 'Logical Partitions Summary' table in the zEnterprise Ensemble Summary workspace.



CPC Details for CPC RP567

Interval End Time	Name	Description	Status	CPU Utilization	Channel Utilization	CP Shared CPU Utilization	CP Dedicated CPU Utilization	General Purpose CPU Count	IFL Shared CPU Utilization	IFL Dedicated CPU Utilization	IFL CPU Count	ICF Shared CPU Utilization	ICF Dedicated CPU Utilization	ICF CPU Count	zIIP Shared CPU Utilization	zIIP I CPU
11/06/12 10:30:00	RP567	Central Processing Complex (CPC)	Service	63	26	53	44	91	0	0	2	0	0	0	29	

Logical Partition Summary for CPC RP567

Interval End Time	Name	Status	Acceptable Status	CPU Utilization	zVM Paging Rate	OS Name	OS Type	OS Level	OS M...	ESA3...	140.00	0.00	0.00	0.00	Current zIIP Processing Wf
11/06/12 10:30:00	RALVMTS1	Operating	Yes	U	-1	RALVMTS1	zVM	6.1.0	No					0.00	
11/06/12 10:30:00	RALNS20	Operating	Yes	24	-1	RALNS20	z/OS	V1R13	No	ESA3...	140.00	0.00	0.00	0.00	
11/06/12 10:30:00	CANSF13	Operating	Yes	13	-1	SP13	z/OS	V1R13	No	ESA3...	4.00	0.00	0.00	10.00	
11/06/12 10:30:00	RALNS5	Operating	Yes	98	-1	GERMANY	z/OS	V2R1	No	ESA3...	17.00	0.00	0.00	0.00	1
11/06/12 10:30:00	RALNSCFB	Operating	Yes	100	-1				No	Coup...	0.00	0.00	0.00	0.00	
11/06/12 10:30:00	RALNS42	Operating	Yes	3	-1	NS42	z/OS	V1R13	No	ESA3...	0.00	0.00	0.00	0.00	
11/06/12 10:30:00	TIVLP52	Not Operating	No	0	-1				No	ESA3...	0.00	0.00	0.00	0.00	
11/06/12 10:30:00	RALNS23	Operating	Yes	100	-1	ESTONIA	z/OS	V2R1	No	ESA3...	10.00	0.00	0.00	10.00	1
11/06/12 10:30:00	RALNS7	Operating	Yes	100	-1	SWEDEN	z/OS	V2R1	No	ESA390	17.00	0.00	0.00	10.00	1
11/06/12 10:30:00	RALNSZAW	Operating	Yes	0	-1		zAware		No		10.00	0.00	0.00	0.00	
11/06/12 10:30:00	RALVM2	Operating	Yes	38	-1	RALVM2	zVM	6.1.0 -1201	No	zVM	50.00	0.00	0.00	50.00	5
11/06/12 10:30:00	RALNS4	Operating	Yes	74	-1	RUSSIA	z/OS	V2R1	No	ESA390	19.00	0.00	0.00	10.00	1

Monitor the IBM zAware partition Running in the EC12

IBM zAware and Tivoli – more Information

IBM zAware Publications:

System z Advanced Workload Analysis Reporter (IBM zAware) Guide - SC27-2623-00

[https://www-](https://www-304.ibm.com/support/docview.wss?uid=isg24f9114255d7d1f3285257a6a0077c2ca&aid=1)

[304.ibm.com/support/docview.wss?uid=isg24f9114255d7d1f3285257a6a0077c2ca&aid=1](https://www-304.ibm.com/support/docview.wss?uid=isg24f9114255d7d1f3285257a6a0077c2ca&aid=1)

IBM zAware Demo:

https://www-304.ibm.com/connections/blogs/systemz/entry/zawaredemo?lang=en_us

IBM zAware Redbook:

Extending z/OS System Management Functions with IBM zAware

<http://www.redbooks.ibm.com/abstracts/sg248070.html?Open>

Service Management Connect:

NetView wiki page to download zAware integration samples and documentation

<https://www.ibm.com/developerworks/mydeveloperworks/wikis/home?lang=en#/wiki/Tivoli%20System%20z%20Monitoring%20and%20Application%20Management/page/Integration%20Scenarios%20for%20Tivoli%20NetView%20for%20zOS>

IBM zAware and Tivoli – Service Management Myth Buster #199

https://www.ibm.com/developerworks/mydeveloperworks/blogs/5e65990a-9690-42e2-93b1-c2267be7620c/entry/service_management_myth_busters1?lang=en

Learn more about IBM zAware ...



Wednesday

- 13569: IBM zAware - Using Analytics to Improve System z Availability (3:00)
- 13580: Setting up IBM zAware - Step by Step (4:30)



Learn about all recent Tivoli announcement and how to exploit them in sessions this week.

Monday

- 14073 – What's New in OMEGAMON (11:00)
- 14121 – OMEGAMON for Storage (4:30)

Tuesday

- 13903 – OMEGAMON Lab (9:30)
- 14074 – Automation Control (11:00)
- 14163 – OMEGAMON for Storage (4:30)

Wednesday

- 13295 – OMEGAMON for MfN (8:00)
- 13771 – Advanced Catalog Mgmt (9:30)
- 14076 – System Automation (11:00)
- 14089 – Storage Management (11:00)
- 14080 – Workload Automation (3:00)

System z Facebook page:

<https://www.facebook.com/IBMsystemz>

Twitter hashtag: #systemzsw



Thursday

- 13546 – NetView Canzlog (12:15)
- 14345 – Lunch and Learn – Mike Baskey
- 14077 – OMEGAMON zAware support (1:30)
- 13545 – NetView Management (3:00)

Friday

- 14056 - OMEGAMON power user (8:00)
- 13824 - OMEGAMON for DB2 (9:30)
- 14082 – Capacity Management with TDSz

IBM System z Service Management critical for moving to Mobile, Big Data and Cloud

IBM continues to improve z/OS environment to support new technologies

- OMEGAMON family enhancements
 - OMEGAMON XE for z/OS V5.1.1
 - OMEGAMON XE for Mainframe Networks V5.1.1
 - OMEGAMON XE for Storage V5.2
 - OMEGAMON for z/VM and Linux V4.3
- IBM Automation Control for z/OS
- Workload Scheduler for z/OS v9.1
- Storage Management for z/OS portfolio enhancements



Learn More: <http://www-01.ibm.com/software/os/systemz/itsm/>

Follow us on Service Management Connect:

<http://www.ibm.com/developerworks/servicemanagement/z/index.html>

And, Mainframe Insights:

https://www-304.ibm.com/connections/blogs/systemz/?lang=en_us

Thank
You