

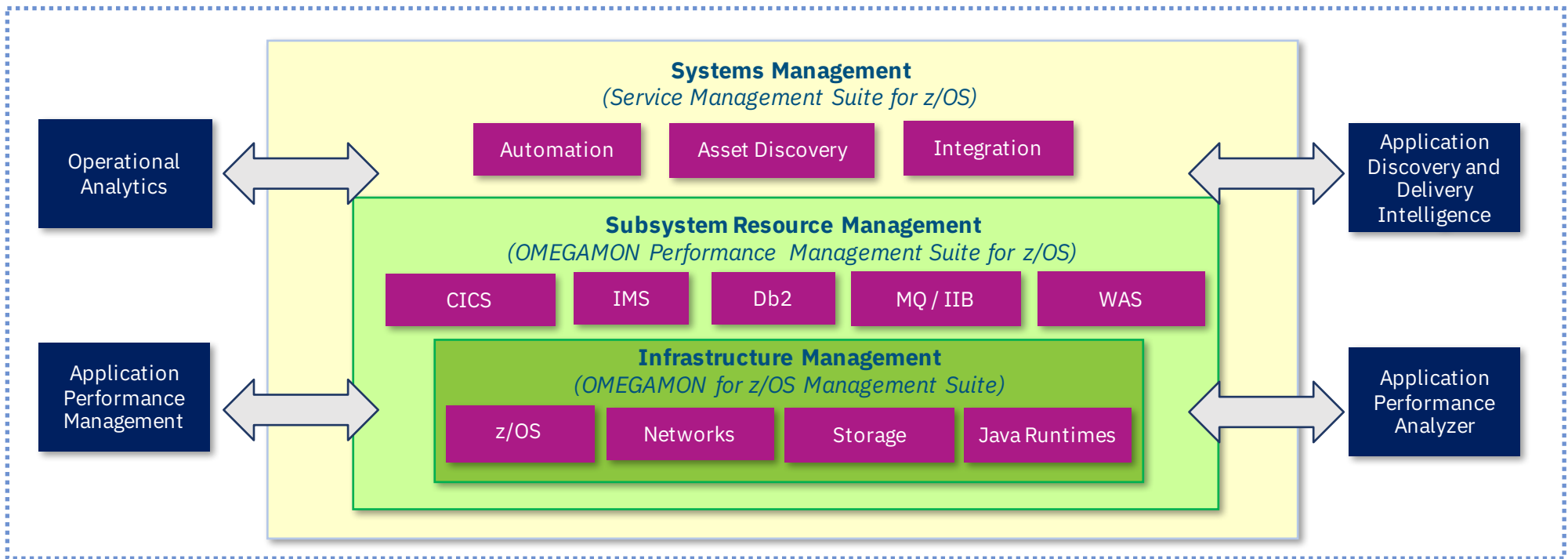
OMEGAMON News

Richard Strong
IBM

November 2018
Session **OE**

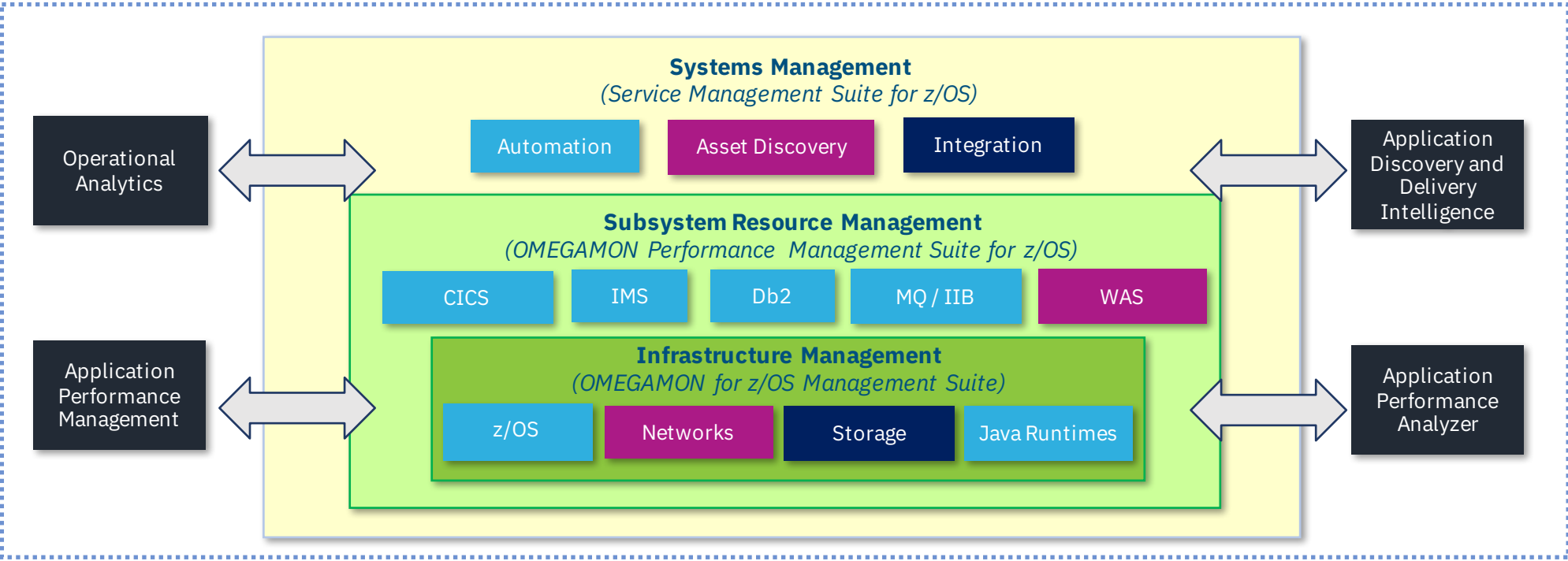


IBM Z IT Service Management Family | GUIDE SHARE EUROPE UK REGION



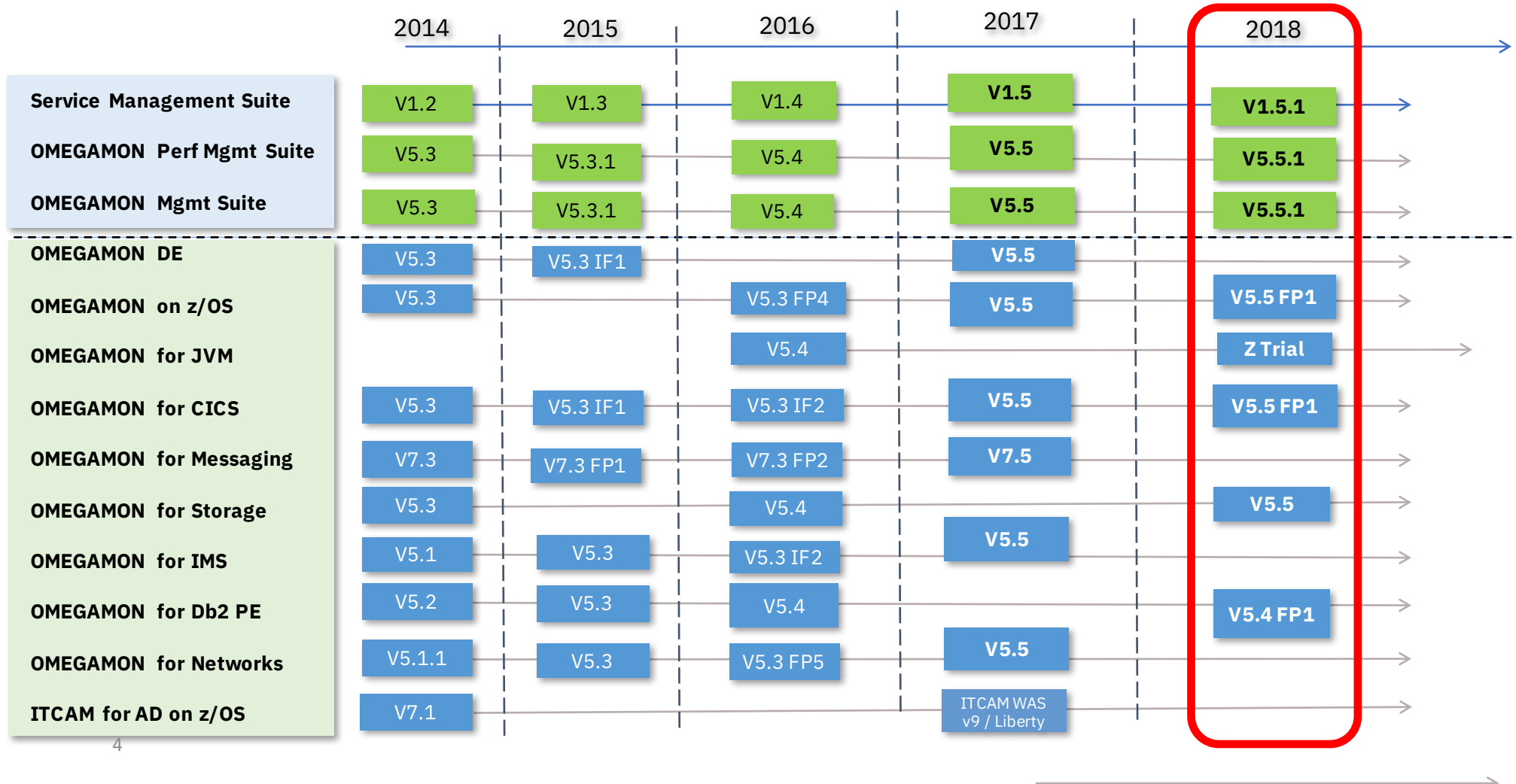
“Faster for experts, simpler for beginners”

2018 Announcements and Updates



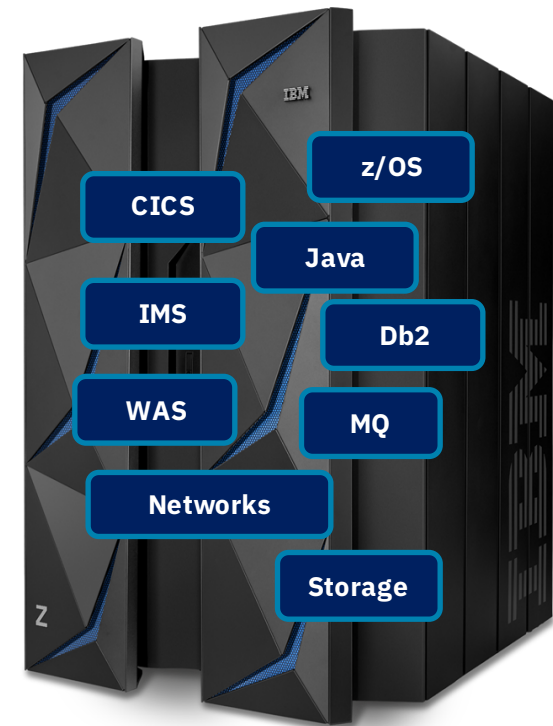
New Release / Major Update
 Feature Updates

IBM Z Monitoring Family Update Timeline



What's New in OMEGAMON V5.5.0?

- *Monitoring support for z14 and latest subsystem levels*
- *Lower cost of business-critical IT operation management*
- *Reduce risk of undetected blind spots within monitoring environment*
- *Increased agility through delivering the right data to the right user*



Simplified, Faster Deployment

```

KCIP@PG6 ----- CUSTOMIZE PARMGEN CONFIGURATION PROFILE MEMBERS -----
Command ==> DLAJOB_                               Scroll ==> CSR

(Required) Customize the RTE profile and the $GBL$USR user profiles:
(Tip) Review KCIJPDLA autodiscovery job in Utility menu or type DLAJOB cmd.
  1. SP22 RTE LPAR-specific CONFIG profile in WCONFIG (User copy)
  2. $GBL$USR Global parameters CONFIG profile in WCONFIG (User copy)

(Required) Customize the RTE Variables profile if RTE_SYSV_SYSVAR_FLAG=Y:
  3. SP22 Variables (system, user) CONFIG profile in GBL_USER_JCL PARMGEN
        global library (TDITNT.COMMON.PARMGEN.JCL).
        Add or override system or user-defined symbols and their
        resolution values for symbols used in the user profiles.

(Tip) Review/Customize WCONFIG Kpp$C*/Kpp$P*/Kpp$S* user imbeds:
(Cloning Tip) Review KCIJPCCF job in Utility menu prior to customization.
  4. WCONFIG CCAPI.DLA310.SP22.WCONFIG

(Tip) Review if you want to compare with IBM-supplied default profile values:
  5. $CFG$IBM RTE LPAR-specific CONFIG profile in WCONFIG (IBM copy)
  6. $GBL$IBM Global parameters CONFIG profile in WCONFIG (IBM copy)

(Optional) Override SYSIN member to supply additional (User) profiles:
  7. $SYSIN $PARSE/$PARSESV SYSIN controls (CONFIG/SELECT MEMBER)

Press F1=Help for more information. Type U or UTIL to access utility menu.
  
```

Faster configuration using PARMGEN Auto-discovery tools

New utilities within PARMGEN helps **discover online subsystems and resources and automatically include these in the configuration user profiles**

Reduces complexity, time-to-value. More accurate configuration decks.

TCP/IP, z/OS information, Z hardware, CICS, DB2, IMS, WAS, general address space information, DASD volume information

Quantifiable Results

Example customer environment might have 50 CICS regions, 12 DB2 subsystems, 3 Integration Bus brokers, 2 TCP/IP stacks etc per LPAR

Before: Need to check with each SME (CICS, DB2 etc) for what to configure, what systems to manage. Potentially 300 parameters to determine.

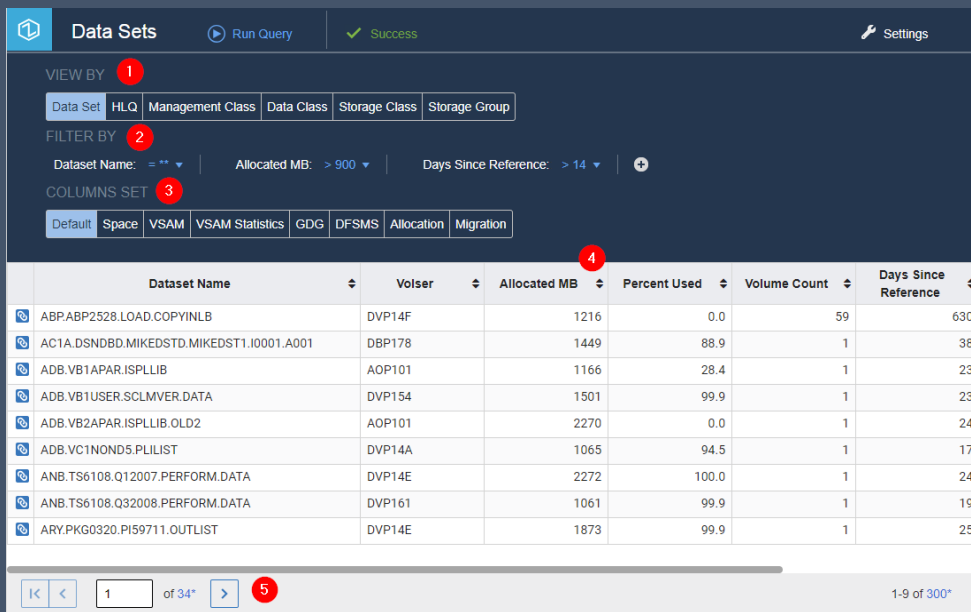
After: Leverage the PARMGEN utilities to auto-discover online systems, their attributes and determine parameter settings automatically

Reduced Time, Reduced Errors

Internal testing found time savings from of over 35% in deploying OMEGAMON V5.5.0 releases over V5.3.0 by using updated PARMGEN utilities

Errors in deployment reduced though auto-discovery versus manual completion of values

OMEGAMON for Storage V5.5.0



VIEW BY 1

Data Set | HLQ | Management Class | Data Class | Storage Class | Storage Group

FILTER BY 2

Dataset Name: = ** | Allocated MB: > 900 | Days Since Reference: > 14

COLUMNS SET 3

Default | Space | VSAM | VSAM Statistics | GDG | DFSMS | Allocation | Migration

	Dataset Name	Volser	Allocated MB	Percent Used	Volume Count	Days Since Reference
🔍	ABP.ABP2528.LOAD.COPYINLB	DVP14F	1216	0.0	59	630
🔍	AC1A.DSNDBD.MIKEDSTD.MIKEDST1.I0001.A001	DBP178	1449	88.9	1	38
🔍	ADB.VB1APAR.ISPLLIB	AOP101	1166	28.4	1	23
🔍	ADB.VB1USER.SCLMVER.DATA	DVP154	1501	99.9	1	23
🔍	ADB.VB2APAR.ISPLLIB.OLD2	AOP101	2270	0.0	1	24
🔍	ADB.VC1NONDS.PLILIST	DVP14A	1065	94.5	1	17
🔍	ANB.TS6108.Q12007.PERFORM.DATA	DVP14E	2272	100.0	1	24
🔍	ANB.TS6108.Q32008.PERFORM.DATA	DVP161	1061	99.9	1	19
🔍	ARY.PKG0320.PI59711.OUTLIST	DVP14E	1873	99.9	1	25

1-9 of 300* 5

What's New in V5.5.0?

- Realtime Dataset Metrics
 - Enhanced visibility into key space and utilization metrics
 - Reduced CPU overhead to collect these KPIs
 - Fresh data available when you need it
- Realtime Dataset Management
 - A brand new, easy to learn browser based viewer that enables storage administrators to quickly view, sort, filter, group and summarize dataset metrics in near real-time.
 - Overcomes limitations in previous implementations of dataset management

OMEGAMON for Storage V5.5.0

- Improved Performance for the Dataset Attributes Database *
- Improved performance of base collection and addition of partial sweep
- New incremental collection provides the ability to keep most of attributes current
- Dataset Attribute Group performance improvements
- Fully compatible with existing group definitions, workspaces and dataset group extract (DAGX)

Performance Measurements

Processing 1.5M datasets

(may vary according to dataset size / other factors)

Collection Type	DADB V1 (CPU secs)	DADB V2 (CPU secs)
Base Collection	850	200
Group Collection	1,000	10

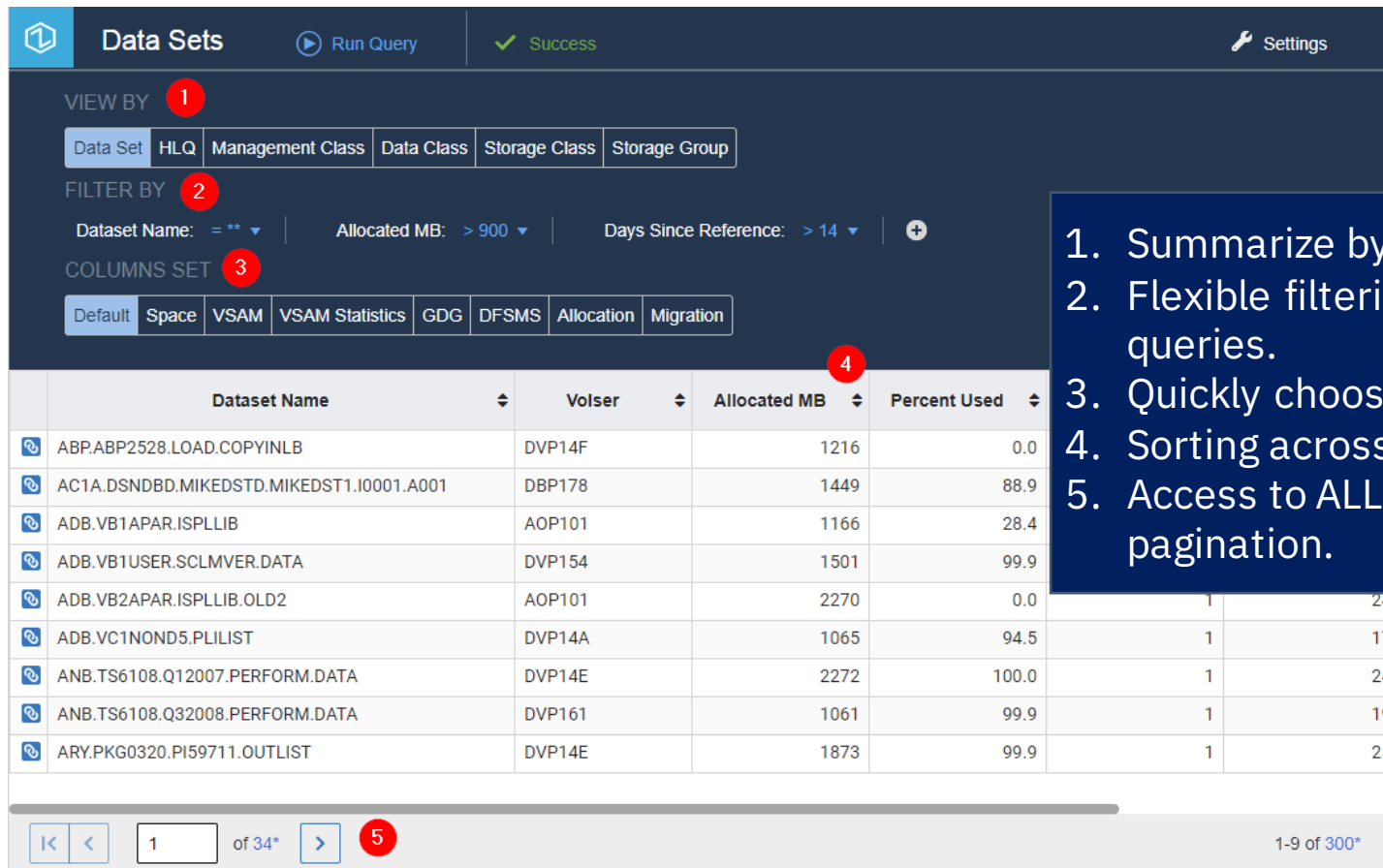
* Also available on V5.4.0 via APARs OA53347 and OA53348

OMEGAMON for Storage – New Dataset Management UI



- Part of OMEGAMON for Storage V5.5.0 (new generally!)
- New UI tooling for the purpose of browsing and analyzing dataset information, overcoming technical limitations experienced with TEP
 - Allows for full access to all data set data.
 - Definition of dataset attribute groups not necessary.
- Users can select, filter and slice and dice their data in the way that makes sense for their scenario.
- Ad-hoc viewing is most powerful when you are not quite sure of what you need to see.
- Built using Zowe technology (more of this later...)

Dataset Management UI – Key Features



The screenshot displays the Zowe Dataset Management UI. At the top, there is a header with 'Data Sets', 'Run Query', 'Success', and 'Settings'. Below this, there are sections for 'VIEW BY', 'FILTER BY', and 'COLUMNS SET'. The 'VIEW BY' section has a dropdown menu with 'Data Set' selected. The 'FILTER BY' section has three filters: 'Dataset Name: =**', 'Allocated MB: > 900', and 'Days Since Reference: > 14'. The 'COLUMNS SET' section has a dropdown menu with 'Default' selected. Below these sections is a table with columns: Dataset Name, Volser, Allocated MB, Percent Used, and two additional columns. The table contains 10 rows of dataset information. At the bottom, there is a pagination bar with '1 of 34*' and '1-9 of 300*'. Red circles with numbers 1 through 5 highlight specific features: 1. VIEW BY dropdown, 2. FILTER BY filters, 3. COLUMNS SET dropdown, 4. Sorting arrows on the table headers, and 5. Pagination controls.

	Dataset Name	Volser	Allocated MB	Percent Used		
	ABP.ABP2528.LOAD.COPYINLB	DVP14F	1216	0.0		
	AC1A.DSNDBD.MIKEDSTD.MIKEDST1.I0001.A001	DBP178	1449	88.9		
	ADB.VB1APAR.ISPLLIB	AOP101	1166	28.4		
	ADB.VB1USER.SCLMVER.DATA	DVP154	1501	99.9		
	ADB.VB2APAR.ISPLLIB.OLD2	AOP101	2270	0.0	1	24
	ADB.VC1NOND5.PLILIST	DVP14A	1065	94.5	1	17
	ANB.TS6108.Q12007.PERFORM.DATA	DVP14E	2272	100.0	1	24
	ANB.TS6108.Q32008.PERFORM.DATA	DVP161	1061	99.9	1	19
	ARY.PKG0320.PI59711.OUTLIST	DVP14E	1873	99.9	1	25

1. Summarize by key attributes.
2. Flexible filtering to quickly build adhoc queries.
3. Quickly choose the columns needed.
4. Sorting across the entire result set.
5. Access to ALL data through on-demand pagination.



Dataset Management UI - Summarization

VIEW BY

Data Set | HLQ | **Management Class** | Data Class | Storage Class | Storage Gr

FILTER BY

Number of Datasets: > 10000 ▾ | +

COLUMNS SET

Default

Managed System	SMS Class	Type	Number of Datasets
S3TMS16H:RS28:STORAGE	STANDARD	Management Class	388764
S3TMS16H:RS28:STORAGE	n/a	Management Class	384564
S3TMS16H:RS28:STORAGE	DB2	Management Class	131115
S3TMS16H:RS28:STORAGE	MCNOMIG	Management Class	113315

- View By Data Set provides access to all data set attributes.
- View By [HLQ, Class, Group] provides summarization across all datasets for the selected attribute.
- Drill down into data set list for summarized row.

Dataset Management UI – Sorting and Filtering

The screenshot shows the 'FILTER BY' section with 'Dataset Name: =**' and 'Days Since Reference: > 31'. Below it is the 'COLUMNS SET' section with tabs for 'Default', 'Space', 'VSAM', 'VSAM Statistics', 'GDG', 'DFSMS', and 'Allocation'. A search box contains 'allocated' and a dropdown menu lists options: 'Allocated GB', 'Allocated MB', 'Allocated Tracks', 'Allocated Volumes', 'High Allocated RBA', and 'High Allocated RBA'. Another dropdown menu for 'Device Type: =' shows a list of values: 'Unknown', '3390', '3380', '3330-11', '3375', '3350', '3340', '3330', '2314', and '2305'. The background shows a table with columns 'Dataset Name' and 'Percent Used'.

- Filtering is flexible for quickly add/remove/modify criteria setting
- Conditions form “AND” clause
- Enumerations supported

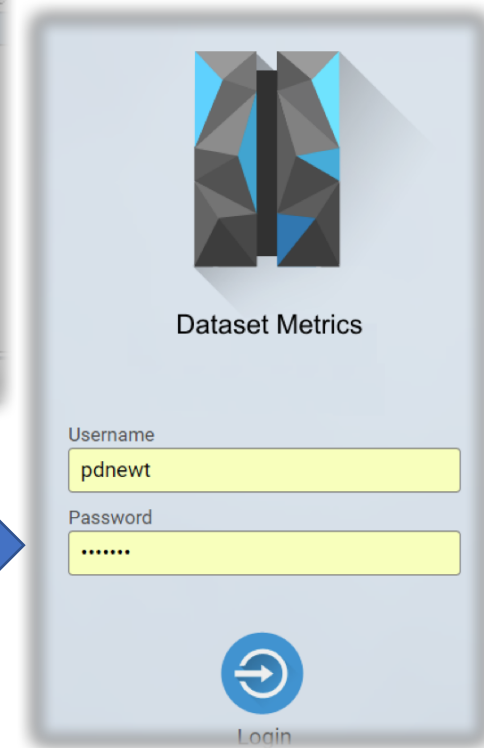
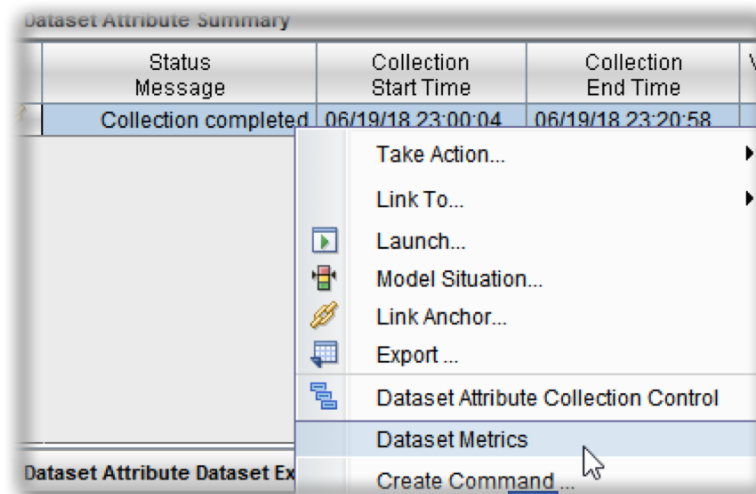
- Sorting is performed server-side for performance improvements
- Performed against entire results-set (not per page as in TEP)
- Sorting is maintained across queries

The screenshot shows a table with a dropdown menu set to 'Allocated MB'. The table contains the following values:

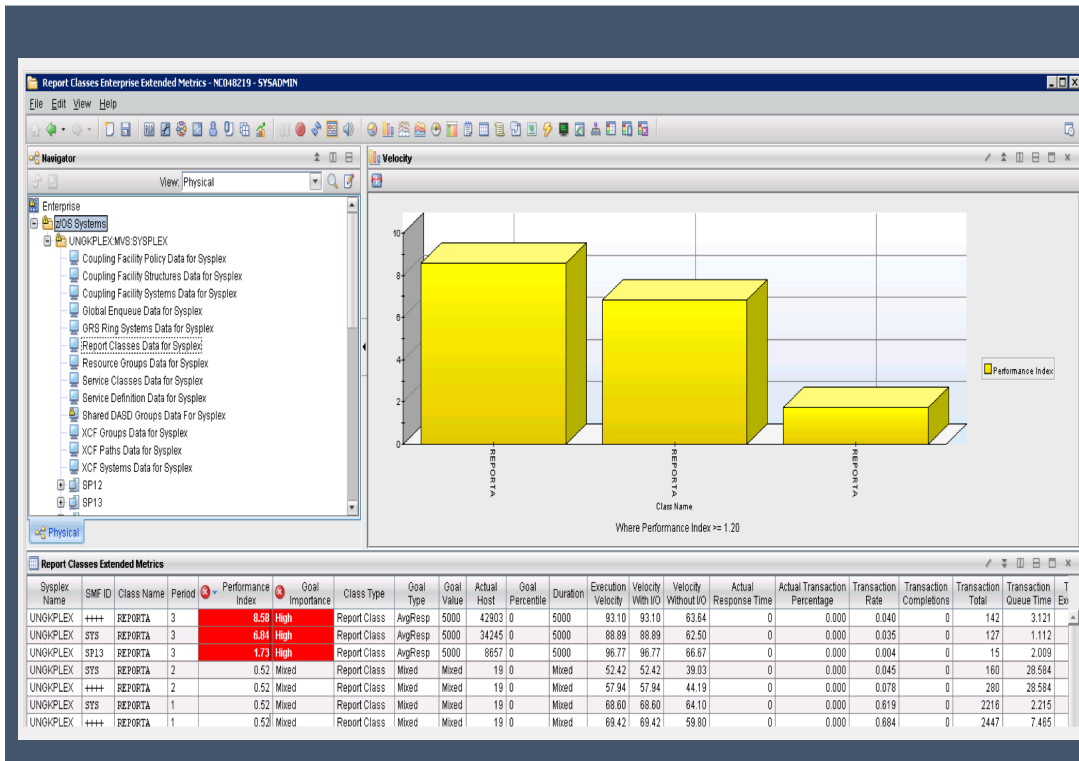
1133230
377663
94417
94417
94417
94417
94417
94417
94417
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94417
94417

Dataset Management UI – Easy Launch from TEP

- New context menu on Dataset Attributes System Summary
- Sign in with SAF credentials for agent system



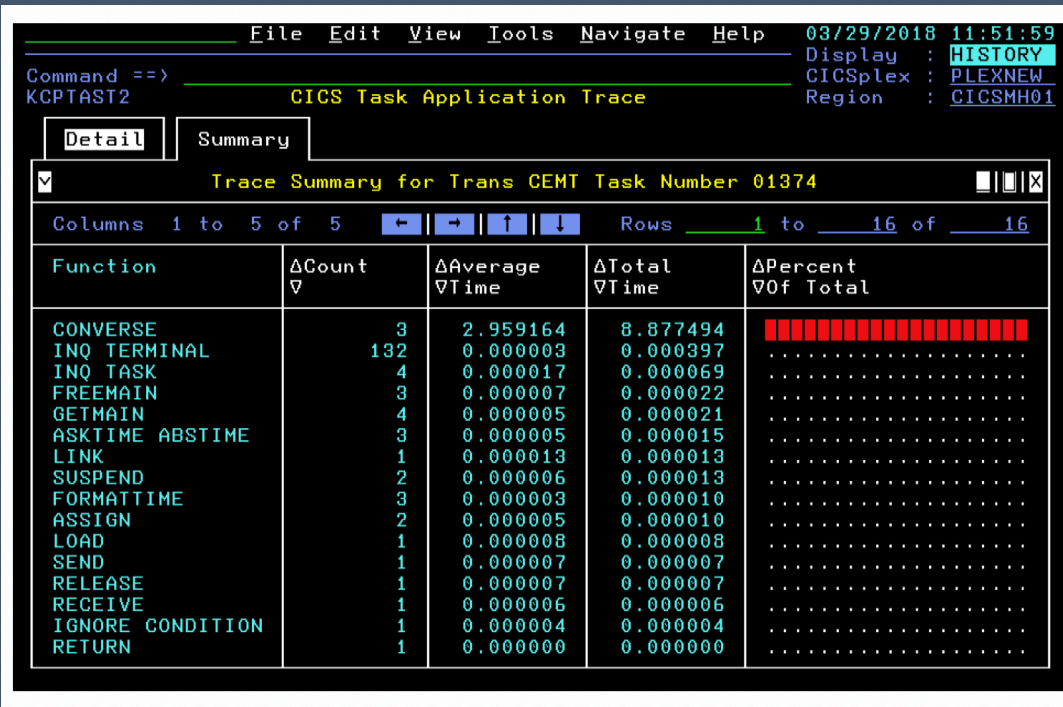
OMEGAMON for z/OS V5.5.0



What's Updated in 2018?

- Enhancements for WLM details at system and sysplex level
 - 64 new attributes added from WLM performance to I/O and transaction rates
 - Source for both e3270UI and TEP workspaces
 - Aggregation and filtering based on WLM class type and scope
- New workspace (“JES Spool Utilization”) on e3270UI
 - Both JES2 and JES3 supported

OMEGAMON for CICS on z/OS V5.5.0



File Edit View Tools Navigate Help 03/29/2018 11:51:59
 Command ==> KCPTAST2 CICS Task Application Trace Display : HISTORY
 CICSplex : PLEXNEW
 Region : CICSMH01

Trace Summary for Trans CEMT Task Number 01374

Columns 1 to 5 of 5 Rows 1 to 16 of 16

Function	ΔCount ▽	ΔAverage ▽Time	ΔTotal ▽Time	ΔPercent ▽Of Total
CONVERSE	3	2.959164	8.877494	████████████████████
INQ TERMINAL	132	0.000003	0.000397	.....
INQ TASK	4	0.000017	0.000069	.....
FREEMAIN	3	0.000007	0.000022	.....
GETMAIN	4	0.000005	0.000021	.....
ASKTIME ABSTIME	3	0.000005	0.000015	.....
LINK	1	0.000013	0.000013	.....
SUSPEND	2	0.000006	0.000013	.....
FORMATIME	3	0.000003	0.000010	.....
ASSIGN	2	0.000005	0.000010	.....
LOAD	1	0.000008	0.000008	.....
SEND	1	0.000007	0.000007	.....
RELEASE	1	0.000007	0.000007	.....
RECEIVE	1	0.000006	0.000006	.....
IGNORE CONDITION	1	0.000004	0.000004	.....
RETURN	1	0.000000	0.000000	.....

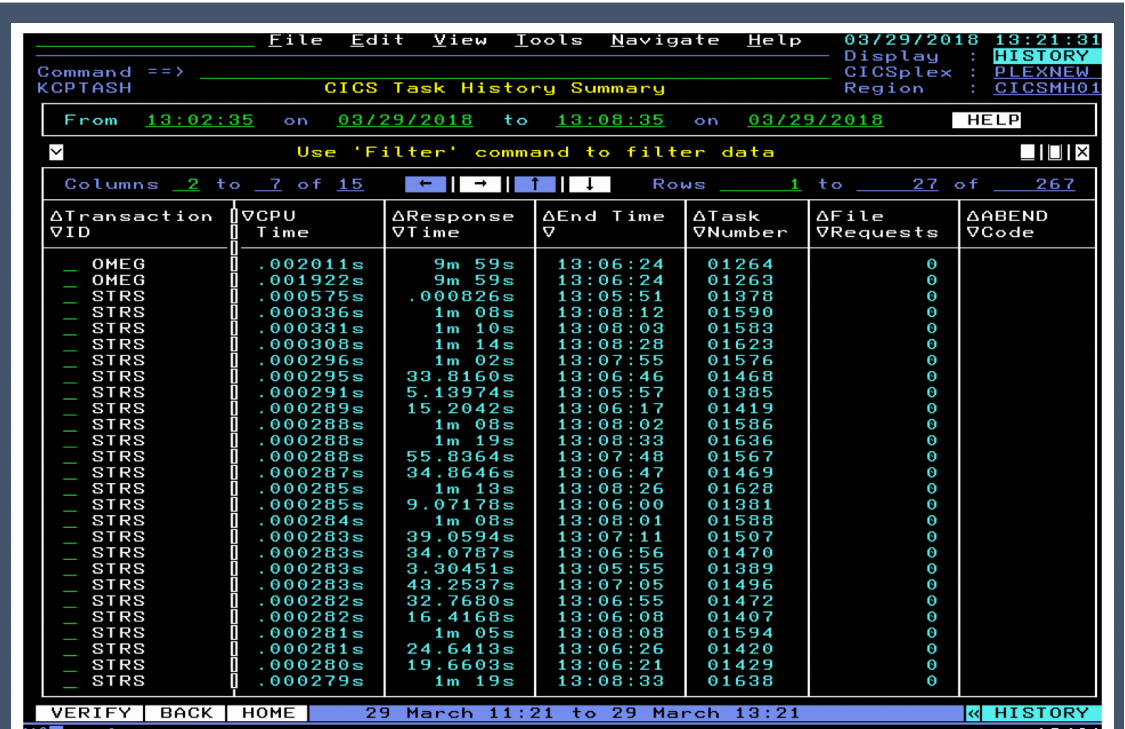
What's Updated in 2018?

- Application Trace Summary
 - Gives breakdown of times spent within EXCI commands in CICS
 - Summary allows better understanding of where a task is spending it's time
- New workspace ("CICS Terminal Summary") showing acquired terminals and those in other sates
 - Enables users to quickly review and terminate, if needed, problematic terminals

OMEGAMON for CICS on z/OS V5.5.0

What's Updated in 2018?

- Updated “Task History” workspace
 - Improved filtering and added sorting functions
 - Makes searching for a specific or rogue task easier
- Updated workspace (“Storage Summary”) to show OSCOR details
 - Shows both below *and* above the line storage
 - Displays available and ‘Largest Contiguous Available’ amount of storage



The screenshot displays the 'CICS Task History Summary' workspace. At the top, it shows the date and time as 03/29/2018 13:21:31. The command entered is 'KCPTASH'. The workspace shows data from 13:02:35 on 03/29/2018 to 13:08:35 on 03/29/2018. The table below lists transaction details with columns for Transaction ID, CPU Time, Response Time, End Time, Task Number, File Requests, and ABEND Code.

ΔTransaction VID	∇CPU Time	ΔResponse ∇Time	ΔEnd Time ∇	ΔTask ∇Number	ΔFile ∇Requests	ΔABEND ∇Code
OMEG	.002011s	9m 59s	13:06:24	01264	0	
OMEG	.001922s	9m 59s	13:06:24	01263	0	
STRS	.000575s	.000826s	13:05:51	01378	0	
STRS	.000336s	1m 08s	13:08:12	01590	0	
STRS	.000331s	1m 10s	13:08:03	01583	0	
STRS	.000308s	1m 14s	13:08:28	01623	0	
STRS	.000296s	1m 02s	13:07:55	01576	0	
STRS	.000295s	33.8160s	13:06:46	01468	0	
STRS	.000291s	5.13974s	13:05:57	01385	0	
STRS	.000289s	15.2042s	13:06:17	01419	0	
STRS	.000288s	1m 08s	13:08:02	01586	0	
STRS	.000288s	1m 19s	13:08:33	01636	0	
STRS	.000288s	55.8364s	13:07:48	01567	0	
STRS	.000287s	34.8646s	13:06:47	01469	0	
STRS	.000285s	1m 13s	13:08:26	01628	0	
STRS	.000285s	9.07178s	13:06:00	01381	0	
STRS	.000284s	1m 08s	13:08:01	01588	0	
STRS	.000283s	39.0594s	13:07:11	01507	0	
STRS	.000283s	34.0787s	13:06:56	01470	0	
STRS	.000283s	3.30451s	13:05:55	01389	0	
STRS	.000283s	43.2537s	13:07:05	01496	0	
STRS	.000282s	32.7680s	13:06:55	01472	0	
STRS	.000282s	16.4168s	13:06:08	01407	0	
STRS	.000281s	1m 05s	13:08:08	01594	0	
STRS	.000281s	24.6413s	13:06:26	01420	0	
STRS	.000280s	19.6603s	13:06:21	01429	0	
STRS	.000279s	1m 19s	13:08:33	01638	0	

OMEGAMON for IMS on z/OS V5.5.0

What's Updated in 2018?

- Added functions to IMS Commander within Enhanced 3270UI to include archiving functions
- New command shortcuts to simplify command actions
- New workspace (“Unavailable Resources”) to display on a single screen the various transaction, PSB, database and terminal resources that are uninitialized or not found



```
File Edit View Tools Navigate Help 07/13/2017 10:20:12
Auto Update : Off
Command ==>
KIPILOG Issue IMS Commands
IMSplex : IC1C
IMSid : IC1C

Command [Date/Time] [Messages] [Filters] [Stats]
Enter IMS Command:
==>

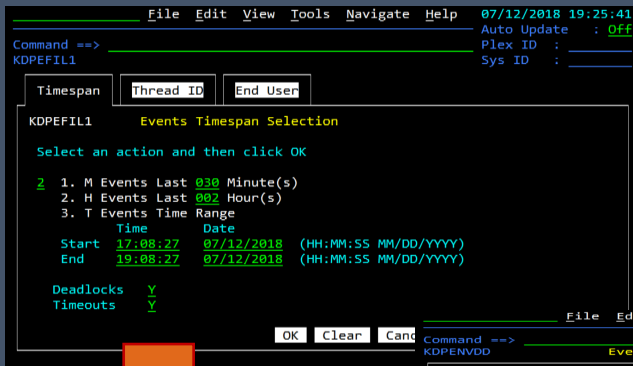
Console Output
Columns 2 to 3 of 10 Rows 1 to 21 of 60
+IMS ID | +Date and Time | +Message Text
- IC1C | 07/13/17 09:28:06 | DFS994I WARM START COMPLETED. .
- IC1C | 07/13/17 09:28:06 | DFS0653I PROTECTED CONVERSATION PROCESSING WI
- IC1C | 07/13/17 09:28:06 | DFS2088I APPC/OTMA SMQ Enablement inactive. R
- IC1C | 07/13/17 09:28:06 | K0112000I OMEGAMON IMS ICMD ITASK ACTIVE.
- IC1C | 07/13/17 09:28:06 | /DISPLAY QUEUE.
- IC1C | 07/13/17 09:28:06 | . CLS CT PTY CT MSG CT TRAN CT .
- IC1C | 07/13/17 09:28:06 | *NO QUEUES*.
- IC1C | 07/13/17 09:28:06 | *17194/092806*.
- IC1C | 07/13/17 09:28:06 | DSNM001I IMS/VS IC1C CONNECTED TO SUBSYSTEM
- IC1C | 07/13/17 09:28:06 | K0112600I OMEGAMON IMS ILOG ITASK ACTIVE.
- IC1C | 07/13/17 09:28:06 | DFS0801I SUBSYSTEM CONNECTION FOR DA1D CO
- IC1C | 07/13/17 09:28:12 | ----- IMS Collector Started on 2017/07/13 at
- IC1C | 07/13/17 09:28:34 | /STA DC
- IC1C | 07/13/17 09:28:34 | .DFS058I 09:28:34 START COMMAND COMPLETED.
- IC1C | 07/13/17 09:28:34 | /OPN NODE USER1
- IC1C | 07/13/17 09:28:34 | .DFS058I 09:28:34 OPNDST COMMAND COMPLETED.
- IC1C | 07/13/17 09:28:34 | /OPN NODE USER2
- IC1C | 07/13/17 09:28:34 | .DFS058I 09:28:34 OPNDST COMMAND COMPLETED.
- IC1C | 07/13/17 09:28:34 | /STA DATABASE DBFSAMD2
- IC1C | 07/13/17 09:28:34 | .DFS058I 09:28:34 START COMMAND IN PROGRESS.
- IC1C | 07/13/17 09:28:34 | DFS0488I STA COMMAND COMPLETED. DBN= DBFSAMD

BACK HOME Hub JIMSYSG:CMS on platform SYS(z/OS) 10/009
```


OMEGAMON for Db2 PE on z/OS V5.4.0

What's Updated in 2018?

- Improved workspaces in e3270UI for evaluating deadlock and timeout events
- Identify sub-optimal application throughput and locate threads involved in contention



File Edit View Tools Navigate Help 07/12/2018 19:25:41
 Auto Update : Off
 Command ==> Plex ID :
 KDPEFIL1 Sys ID :

Timespan Thread ID End User

KDPEFIL1 Events Timespan Selection

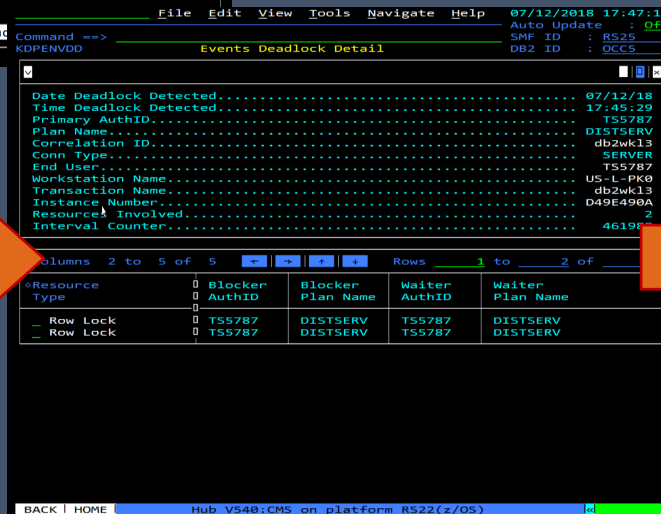
Select an action and then click OK

1. M Events Last 030 Minute(s)
2. H Events Last 002 Hour(s)
3. T Events Time Range

Time	Date	(HH:MM:SS MM/DD/YYYY)
Start	17:08:27	07/12/2018
End	19:08:27	07/12/2018

Deadlocks Y
 Timeouts Y

OK Clear Cancel



File Edit View Tools Navigate Help 07/12/2018 17:47:56
 Auto Update : Off
 Command ==> SMF ID : RS25
 KDPEVDD DB2 ID : OCC5

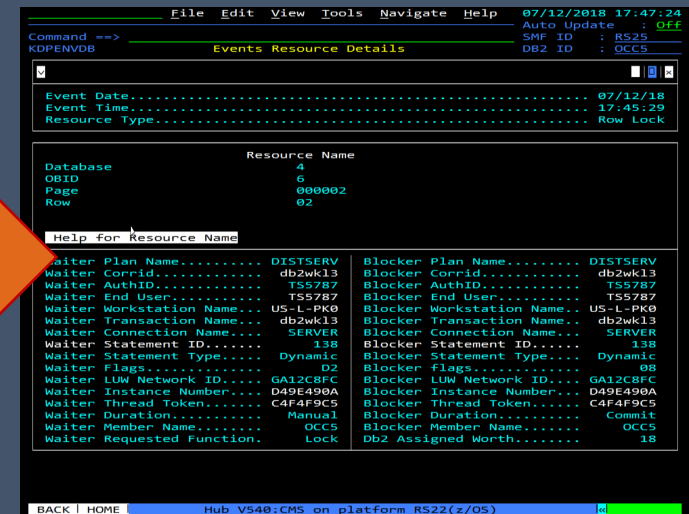
Events Deadlock Detail

Date Deadlock Detected..... 07/12/18
 Time Deadlock Detected..... 17:45:29
 Primary AuthID..... TS5787
 Plan Name..... DISTSERV
 Correlation ID..... db2wk13
 Conn Type..... SERVER
 End User..... TS5787
 Workstation Name..... US-L-PK0
 Transaction Name..... db2wk13
 Instance Number..... D49E490A
 Resource Involved..... 2
 Interval Counter..... 46198

Resource Type	Blocker AuthID	Blocker Plan Name	Waiter AuthID	Waiter Plan Name
Row Lock	TS5787	DISTSERV	TS5787	DISTSERV
Row Lock	TS5787	DISTSERV	TS5787	DISTSERV

Columns 2 to 5 of 5 Rows 1 to 2 of 2

BACK | HOME Hub V540:CMS on platform RS22(z/OS)



File Edit View Tools Navigate Help 07/12/2018 17:47:24
 Auto Update : Off
 Command ==> SMF ID : RS25
 KDPEVDD DB2 ID : OCC5

Events Resource Details

Event Date..... 07/12/18
 Event Time..... 17:45:29
 Resource Type..... Row Lock

Database	Resource Name
OBID	4
Page	6
Row	000002
	02

Help for Resource Name

Waiter	Plan Name	Blocker	Plan Name
Waiter	Corrid..... DISTSERV	Blocker	Corrid..... DISTSERV
Waiter	Corrid..... db2wk13	Blocker	Corrid..... db2wk13
Waiter	AuthID..... TS5787	Blocker	AuthID..... TS5787
Waiter	End User..... TS5787	Blocker	End User..... TS5787
Waiter	Workstation Name..... US-L-PK0	Blocker	Workstation Name..... US-L-PK0
Waiter	Transaction Name..... db2wk13	Blocker	Transaction Name..... db2wk13
Waiter	Connection Name..... SERVER	Blocker	Connection Name..... SERVER
Waiter	Statement ID..... 138	Blocker	Statement ID..... 138
Waiter	Statement Type..... Dynamic	Blocker	Statement Type..... Dynamic
Waiter	Flags..... D2	Blocker	Flags..... 08
Waiter	LW Network ID..... 0A12C8FC	Blocker	LW Network ID..... 0A12C8FC
Waiter	Instance Number..... D49E490A	Blocker	Instance Number..... D49E490A
Waiter	Thread Token..... C4F4F9C5	Blocker	Thread Token..... C4F4F9C5
Waiter	Duration..... Manual	Blocker	Duration..... Commit
Waiter	Member Name..... OCC5	Blocker	Member Name..... OCC5
Waiter	Requested Function..... Lock	Blocker	Requested Function..... DB2 Assigned Worth..... 18

BACK | HOME Hub V540:CMS on platform RS22(z/OS)

OMEGAMON for Networks on z/OS V5.5.0



What's New in V5.5.0?

- Exploit z/OS 2.3 and z14 enhancements:
 - Enhancements to TCP Connections, TCP Listeners, and Applications
 - Monitor Shared Memory Communications
 - Monitor 10GbE RoCE Express® and Internal Shared Memory features of z13, z13s, z14

Note:

RoCE = RDMA over Converged Ethernet
 RDMA = Remote Direct Memory Access
 ISM = Internal Shared Memory

Command: *? ?
 KN01002 Enterprise Connections SMC Health TCP STC : *
 SMC ID : *

Shared Memory Communications over RDMA Inactive

System VPD	Job Name	Local VPort	Remote VPort	ASMC VStatus	Reason VNo SMC-R	Reason VNo SMC-D	Peer Set VSMC Reason
SP12	OMD10M	1093	9.30.238.61	Inactive	Route not SMC eligible		No
SP12	OMD10M	1043	127.0.0.1	Inactive	Peer did not accept SMC-R request		No
SP12	UNCD02	5742	127.0.0.1	Inactive	Peer did not accept SMC-R request		No
SP12	UNCD02	45220	9.30.238.57	Inactive	Peer did not accept SMC-R request		No
SP12	ISDDCD01	52637	127.0.0.1	Inactive	Route not SMC eligible		No
SP12	ISDDCD02	52679	127.0.0.1	Inactive	Route not SMC eligible		No
SP12	OMD10S	1054	127.0.0.1	Inactive	Route not SMC eligible		No
SP12	UNC1M2	67500	127.0.0.1	Inactive	Peer did not accept SMC-R request		No

Shared Memory Communications - Direct Inactive

System VPD	Job Name	Local VPort	Remote VPort	ASMC VStatus	SMC-R Configured	SMC-D Configured	Local SMC VBuffer Size	Remote SMC VBuffer Size	Local SMC Link ID	Remote SMC Link ID	Reason VNo SMC-D
SVS	J300J300	17493	9.30.238.69	SMC-R active	No	Yes	64K	64K	14010001	06010001	
SVS	CS1010M	17389	9.30.238.69	SMC-D active	No	Yes	64K	64K	14010001	06010001	
SVS	ISDDW00	30891	9.30.238.69	SMC-D active	No	Yes	64K	64K	14010001	06010001	
SVS	PL01IP65	34903	9.30.238.69	SMC-D active	No	Yes	64K	64K	14010001	06010001	
SVS	UNGR10M	18296	9.30.238.69	SMC-D active	No	Yes	64K	64K	14010001	06010001	
SVS	QID110M	18349	9.30.238.69	SMC-D active	No	Yes	64K	64K	14010001	06010001	
SVS	UNGR10M	31295	9.30.238.69	SMC-D active	No	Yes	64K	64K	14010001	06010001	
SVS	J300J300	31510	9.30.238.69	SMC-D active	No	Yes	64K	64K	14010001	06010001	

Enterprise TCP/IP Stack Memory and CSM Overview SMC ID : *

System ID	TCP/IP STC Name	% Private In Use	% Common In Use	Private Allocated	Common Allocated	Private In Use	Common In Use	Private Free	Common Free	Max Private Allocated	Private Storage Trace	Common Storage Tra
SVSL	TCP1PLB	100	79	1.0M	1.0M	4.0M	898.7K	0	215.2K	1.0M	0	2.56
SVS	TCP1PB	100	39	29.0M	19.0M	29.0M	18.6M	0	337.1K	29.0M	0	2.56
SP12	TCP1P2B	100	95	5.0M	4.0M	5.0M	3.7M	0	215.3K	4.0M	0	2.56
SP13	TCP1P3B	100	95	6.0M	4.0M	6.0M	3.7M	0	212.3K	4.0M	0	2.56
SVSL	TCP1PB	100	96	4.0M	4.0M	4.0M	3.9M	0	159.3K	4.0M	0	2.56
SVS	TCP1PL	100	76	1.0M	1.0M	4.0M	750.7K	0	273.2K	1.0M	0	2.56
SP13	TCP1P3	100	97	15.0M	6.0M	15.0M	5.8M	0	158.1K	6.0M	0	2.56
SP12	TCP1P2	100	95	15.0M	7.0M	15.0M	6.6M	0	336.7K	7.0M	0	2.56

SMC-R and SMC-D

System ID	TCP/IP STC Name	SMC-R Configured	SMC-D Configured	SMC-R Fixed Allocated	Max SMC-R Fixed Allocated	Max SMC-R Fixed Allowed	SMC-R Send Allocated	Max SMC-R Send Allocated	SMC-R Receive Allocated	Max SMC-R Receive Allocated
SVSL	TCP1PLB	No	No	0	0	0	0	0	0	0
SVS	TCP1PB	No	No	0	0	0	0	0	0	0
SP12	TCP1P2B	No	No	0	0	0	0	0	0	0
SP13	TCP1P3B	No	No	0	0	0	0	0	0	0
SVSL	TCP1PB	No	No	0	0	0	0	0	0	0
SVS	TCP1PL	No	No	0	0	0	0	0	0	0
SP13	TCP1P3	No	Yes	0	0	0	0	0	0	0
SP12	TCP1P2	Yes	No	34.0M	35.0M	256.0M	4.0M	4.0M	21.0M	22.0M

Some Key Dates

TEP Java Certificates expire November 2018

- Can raise a PMR today for JARs to be re-signed by IBM and sent back
- OMEGAMON re-signed updates delivered in new application support DVD

See Technote: <http://www.ibm.com/support/docview.wss?uid=swg22015083>

OMEGAMON V5.1/V5.2 EOS Announced

- Announced February 2018 for effective date 31 October 2019

See Announcement Letter:

<https://www-01.ibm.com/common/ssi/cgi-bin/ssialias?subtype=ca&infotype=an&appname=iSource&supplier=897&letternum=ENUS918-004>

**NOTE: There are NO plans to EOS OMEGAMON V5.3 releases
(containing CUA / OMEGAVIEW, if still needed)**

Monitoring for the API Economy

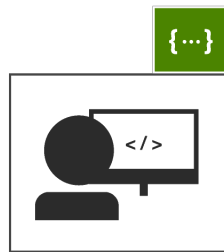
Is your development team exposing key mainframe assets as APIs?

Is your operations team prepared to manage?

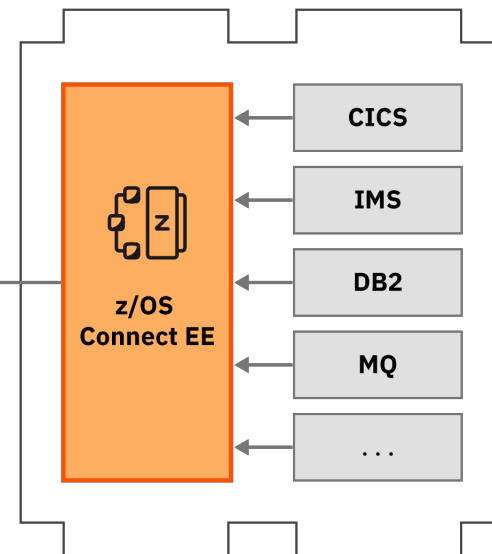
The API Economy and Z?

We are living through an API Revolution!

Your mainframe system of record doesn't need to be a cost center
Developers are the new customers of mainframe assets



RESTful APIs available from one endpoint

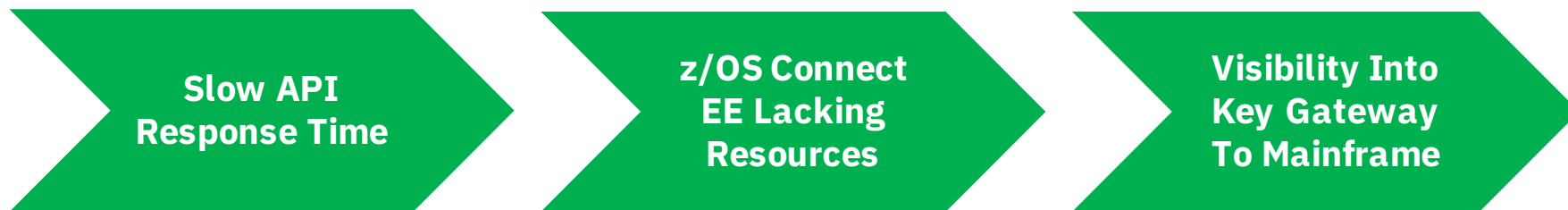


Results of adopting a Connected Mainframe strategy

“After several years of relentless hardware and software innovation, the **mainframe is at an inflection point** from being a supporting platform of transaction revenue to becoming a source of **revenue growth** and **innovation**”

i [IDC – The Business Value of the Connected Mainframe for Digital Transformation](#)

Key Challenges for Operations to Monitor APIs



To achieve this visualization, management and monitoring will require a set of tools that:

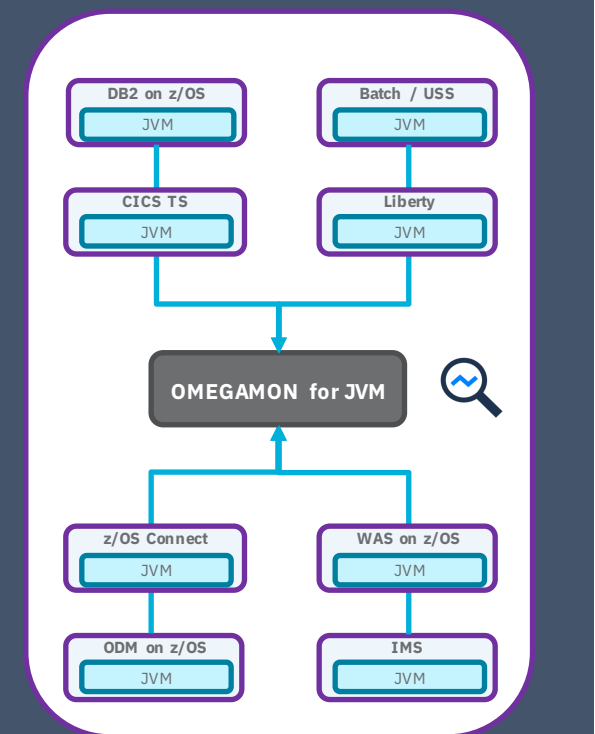
- Identify changes in workload performance
- Proactively monitor response time and throughput
- Understand if the infrastructure is able to handle current workloads
- Know the topology of the enterprise environment

OMEGAMON for JVM on z/OS

Reduce Blind Spots by Monitoring Java Runtimes on z/OS

IBM OMEGAMON for JVM on z/OS V5.4.0 provides resource level monitoring of *all* Java Virtual Machines (JVMs) on z/OS

- **Auto-discover** all online JVMs within seconds, including subsystem type
- **Lightweight overhead** in collection of data on **any online JVM on z/OS**
- Identify **problematic thread and locking issues**, sub-optimal JVM **garbage collection performance**, looping thread and **CPU performance issues** plus drill-downs into detailed JVM environment information, including z/OS-specific resources such as **zIIP offload and native memory allocation**.
- Enable users to be **view all JVMs side-by-side**, be **alerted to problems** within JVM performance, **isolate the issue**, and **identify the root cause** quickly
- **Resource level monitoring of z/OS Connect Enterprise Edition to monitor defined APIs** allowing alerting to poor service response time faster

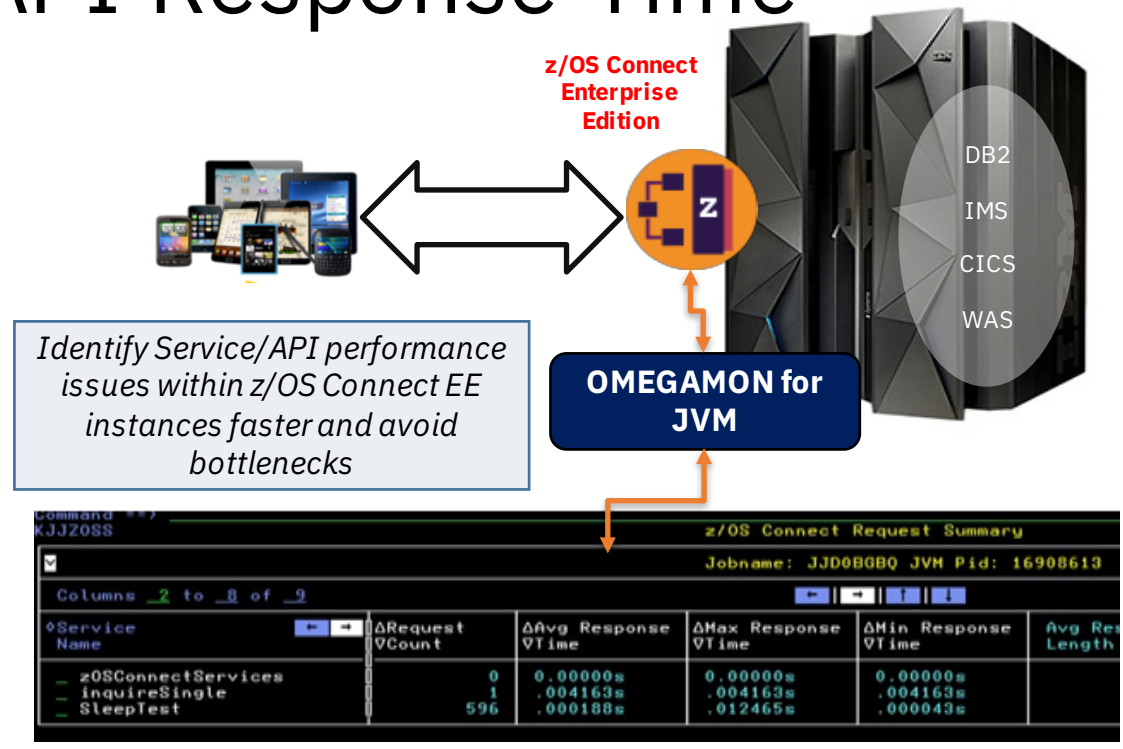


Want to learn more?

Session z103695 – Monitoring Java and z/OS Connect EE:
Discover, Alert and Optimize
Wednesday 4:30pm – Diplomat 2

Scenario: Slow API Response Time

Reports are coming back that application request response time into z/OS is poor. Can we identify affected APIs?



Scenario: Slow API Response Time

JVMs Monitored by this Collector							
Columns 2 to 13 of 16							
ΔJob ▽Name	Subsystem Type	Application	ΔGCs per ▽Minute	Δ% Time in ▽GC Pauses	ΔHeap ▽Occupancy	ΔSystem ▽GC Count	ΔLocks ▽Missed %
_ JJD0BGBQ	Liberty	z/OS Connect	0.00	0.00%	0.00%	0	1.00%

Identify the z/OS Connect Job by looking at the Application field. Select the Job using option 'Z'

```
Command --?
KJJZ0SS
```

z/OS Connect Request Summary								
Jobname: JJD0BGBQ JVM Pid: 16908613								
Columns 2 to 8 of 9								
Service Name	ΔRequest ▽Count	ΔAvg Response ▽Time	ΔMax Response ▽Time	ΔMin Response ▽Time	Avg Response Length	Avg Request Length	+Host	
_ zOSConnectServices	0	0.00000s	0.00000s	0.00000s	0	0	http	
_ inquireSingle	1	.004163s	.004163s	.004163s	539	0	http	
_ SleepTest	59%	.000188s	.012465s	.000043s	58	33	http	

Sort the rows by 'Avg Response Time' - Identify and select the service name with highest Avg Response Time. Selecting option 'S' will display more detailed information about a particular request

Scenario: Slow API Response Time

Identify the desired API Name you want more details for and select it with option 'S'

```
Command ==>
KJJZOSS
```

z/OS Connect Request Summary

Jobname: JJD0BGBQ JVM Pid: 16908613

Columns 2 to 8 of 9

Service Name	ΔRequest Count	ΔAvg Response Time	ΔMax Response Time	ΔMin Response Time	Avg Response Length	Avg Request Length	+Host
zOSConnectServices	0	0.00000s	0.00000s	0.00000s	0	0	http
inquireSingle	1	.004163s	.004163s	.004163s	539	0	http
SleepTest	596	.000188s	.012465s	.000043s	58	33	http

```
Command ==>
JJZOSD
```

z/OS Connect Slowest Requests

Jobname: JJT0616 Service Name: catalog JVM Pid: 33686085

Columns 1 to 2 of 2

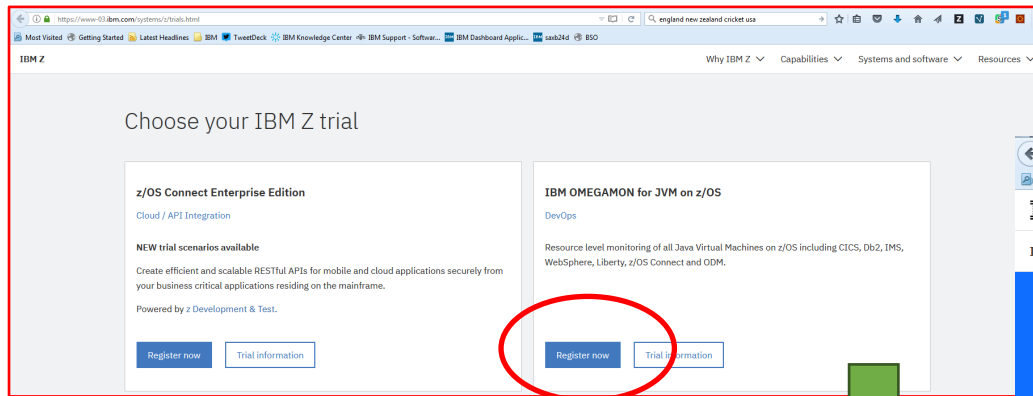
Host	Port
https://wlag.svl.ibm.com	45999

Columns 2 to 8 of 8

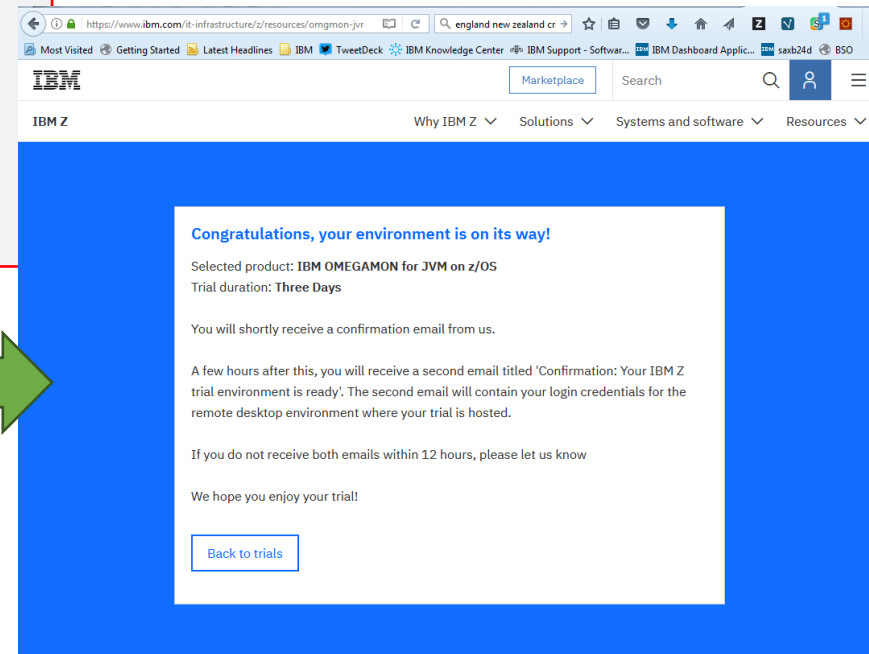
Event Time	Request ID	Method	ΔResponse Time	Remote Address	Request Length	Response Length	+Query String
15:30:28	1	GET	.250751s	9.30.238.55	0	0	null
15:31:24	4	POST	.012942s	9.30.238.55	87	0	null
15:31:11	3	GET	.011941s	9.30.238.55	0	0	startItemID=0011
15:31:01	2	GET	.001097s	9.30.238.55	0	0	null
15:31:50	6	POST	.001062s	9.30.238.55	88	0	null

Try OMEGAMON for JVM for Free Today

1) Go to www.ibm.biz/ibmztrial



2) Click on “Register now” for OMEGAMON for JVM



3) After confirmation you should get an email within 24 hours – often quicker – with logon details

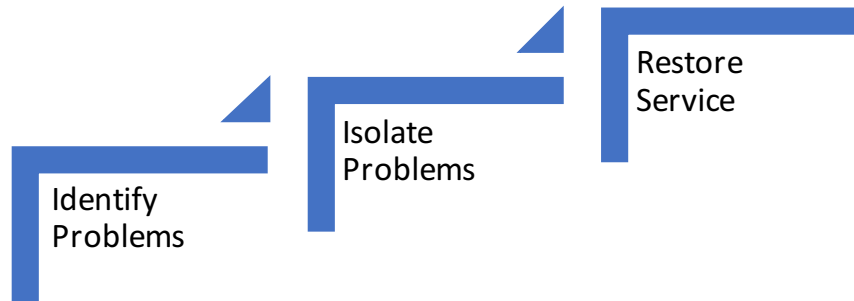
The trial is live for 3 days. After then, simply re-register. Completely free!

Leveraging Monitoring Data and Integration across System Management

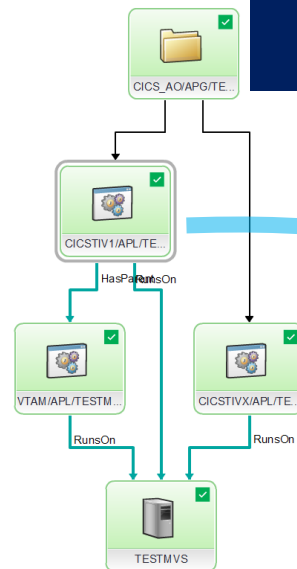
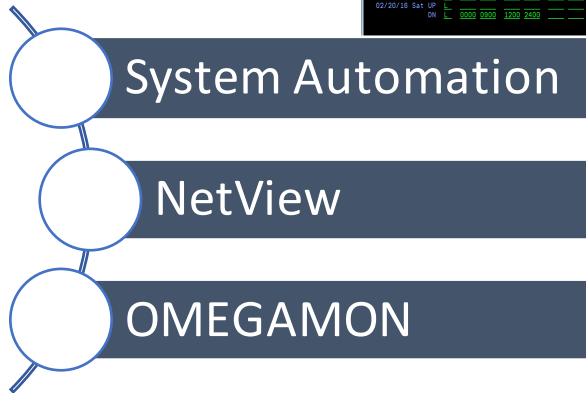
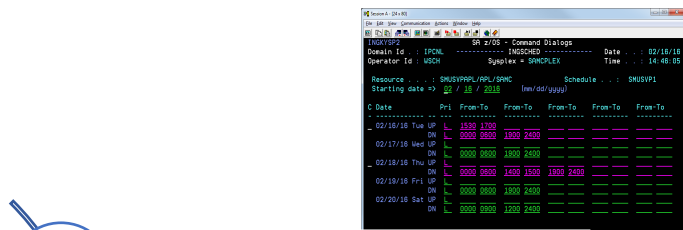
Integrating with Automation with Service
Management Unite

Leverage OMEGAMON functions for application
insights with ADDI and APA

Service Management Unite: 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
- Automate and control applications on z/OS and Linux
- Improve productivity through intuitive systems control



SMU V1.1.4 – What’s New?

Monitoring (OMEGAMON)

OMEGAMON Storage Dashboards for Storage Problem Identification

- See OM Storage events on System Health page
- Storage Overview Page
- Storage subsystem details page

OMEGAMON for JVM dashboards added as part of V1.1.3

Automation (SA z/OS)

Modernize SA operations experience

- Customer RFE’s
 - Add REMOVE=SYSGONE option to stop request
 - Calculate worst resource state on system level
 - Allow to hide operational tasks for systems

End-to-End Automation

- End-to-End Automation: Support to automate applications running on non-z/OS systems
- Universal Automation Adapter in SMU

- **SMU High-Availability** – improved failover support
- **SMU as Docker Container** – Faster deployment by reducing the pre-req steps needed to bring up the SMU server
- **Watson Doc Bot** – Get intuitive help within the dashboard interface to solve problem faster

Workspaces for JVM Monitoring

JVM Overview

0 1 2

JVM Summary

Evaluated Status	Job Name	Subsystem Type	Application	Threads Blocked	GCs per Min	% Time in GC Pauses	Heap Occupancy	General CPU %	ZIP on CP %	System.gc() Count	Locks Missed %	Lock Util %	Avg Lock Hold Time(ms)	Thread Count	JVM Profile	ASID	Process ID
	Lock Mlc	BAQSTRTB	Liberty	z/OS Connect	0	2.79	0%	1%	0%	0%	10%	0%	44.908	88	N/A	47	16842780
	Healthy	CICSAOR1	CICS	z/OS Connect	0	2.19	0%	24%	0%	0%	0%	0%	484.615	76	DFHZOSC	199	33620667
	Healthy	CTGATE	CTG	null	0	0	0%	0%	0%	0%	0%	0%	0	0	N/A	137	83951716

System Health

Health Status

- z/OS Critical(1)
- MQ Critical(3)
- JVM Warning(1)

Events

Severity	Ack	Source	Summary
	Open	KJMA:MVST_JVM	Warning alert if lock missed percent is more than 10

View Event Details
View Affected JVMs
Properties...

Use the Situation alerts from OMEGAMON for JVM, drill-down to look at suggested solutions

New Workspaces for Storage Monitoring

Evaluated Status	Largest Free Extent GB	Group Name	Free Space Percent	Total Volumes	VTOC Index Status	Low Volume Free Space %	High Volume Fragmentation Index	High Response Time	Largest Free Extent MB	Free Space MB	Total Space MB
Healthy	1.3		29%	1	Enabled	29%	149	0	1,337	2,330	8,119
Healthy	1.3		26%	2	Enabled	22%	149	0	1,337	4,154	16,238
Healthy	1.3	OSGROUP	26%	2	Enabled	22%	149	0	1,337	4,154	16,238
Healthy	4.4		100%	1	Exclude List	100%	99	0	4,455	6,347	8,120
Healthy	4.4		100%	1	Exclude List	100%	99	0	4,455	6,347	8,120
Healthy	14.3	DLGROUP	100%	8	Enabled	100%	41	—	14,658	63,030	81,191
Healthy	14.3		100%	8	Enabled	100%	41	—	14,658	63,030	81,191
Healthy	35.7		34%	43	Enabled	0%	543	1	36,541	167,595	495,270
Healthy	0.1		1%	18	Enabled	0%	843	1	78	2,074	170,500
10% > Free Spc	35.7	PRIVATE NON-SMS	1%	7	Enabled	9%	514	1	36,541	81,663	146,149
Free Space Per	0.1	PRIMARY	1%	18	Enabled	0%	843	1	78	2,074	170,500
Healthy	0.1		1%	18	Enabled	0%	843	1	78	2,074	170,500
10% > Free Spc	2	DAGROUP	21%	8	Enabled	5%	348	0	2,065	16,673	81,191
Healthy	2		21%	8	Enabled	5%	348	0	2,065	16,673	81,191
Healthy	0.1		1%	18	Enabled	0%	843	1	78	2,074	170,500
Healthy	0.1		1%	18	Enabled	0%	843	1	78	2,074	170,500

- Health overview of all storage subsystems and the key metrics
- Search and analyze logs for the selected instance by using IBM Z Operations Analytics to reduce problem diagnosis and resolution time.
- Details of a selected Storage group, including the lowest and highest Volume free space, volume highest response time.
- Use the Storage Group Summary widget to see connection data for monitored storage subsystem instances.

What Comes Next?

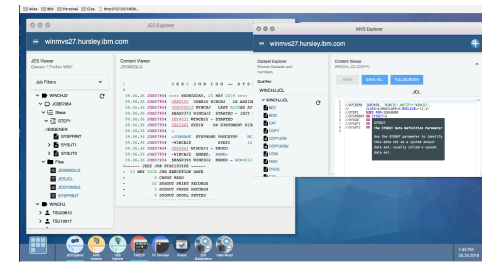
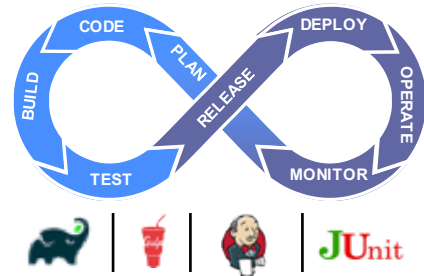
The Art of the Possible




Leveraging Zowe for Tomorrow's
Z User Experience

Zowe

Open. Simple. Familiar.

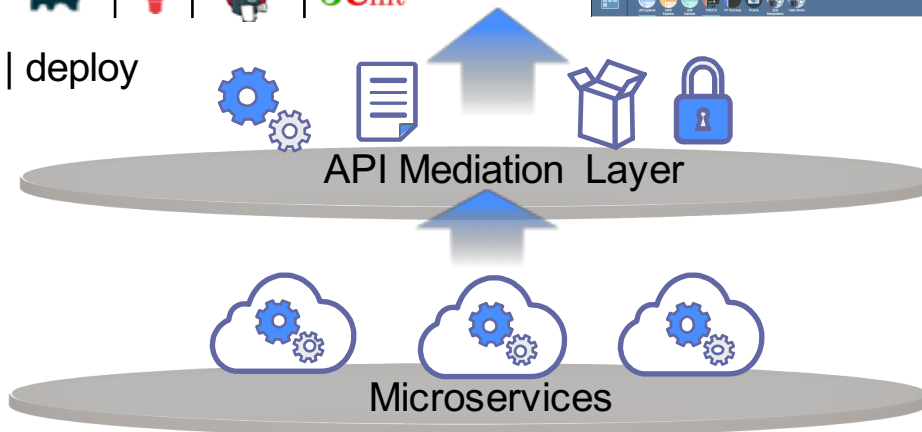
-  Plugins
-  Plugins
-  Plugins



-  Plugins
-  Plugins
-  Plugins

CLI: build | deploy

Web Desktop



Statements of Direction

Zowe was announced on August 14, 2018. The direction we will be heading is defined as Statement of Directions in the following announcement letters:

Zowe ([ENUS218-405](#)):

IBM intends to exploit Zowe technology in future development of its extensive IBM z/OS software portfolio to improve ease of use and provide flexibility to integrate z/OS offerings across a broad range of solutions from IBM, ISVs, and Cloud Service providers and open source technology.

...

As a simple, intuitive environment, IBM intends to use Zowe capabilities to:

- Enable a wide variety of IT professionals to perform development, test, operation, and administration tasks for z/OS.*
- Modernize the user experience of z/OS through product offerings to provide access consistent with cloud interfaces today.*
- Radically reduce the learning curve for the next generation of operators and system administrators, while making experienced professionals more efficient.*

IBM Service Management Suite for z/OS / IBM OMEGAMON for Storage on z/OS ([ENUS218-361](#)):

IBM intends to use Zowe to modernize the user experience for z/OS IT Service Management offerings while capturing and preserving the investment clients have made in customization.

What could Zowe do for Monitoring?

• Leverage core Zowe capabilities such as single sign-on and API access to data

Evolve current UI for modern user requirement while leveraging existing investments

Increase integration between tool sets from TEP to Service Management Unite and Enhanced 3270UI

Simplify installation and workflows to lower skills barrier to monitor and manage

What could a TEP based on Zowe look like?



Storage Groups with Free Space % < 10

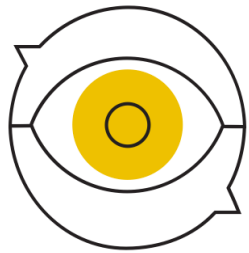
Group Name	Storage Group Status	Storage Group Type	Non-Enabled Volumes	Total Volumes	VTOC Index Status	Low Volume Free Space %	High Volume Fragmentation Index	Largest Free Extent MB	Free Space MB	Free Space Percent	Total Space MB	Track Managed Low Volume Free Space %	Track Managed High Volume Frag Index	Track Managed Largest Free Extent MB	Track Managed Free Space MB	Track Managed Free Space Percent	Track Managed Total Space MB	Track Managed Used Space Percent	Track Managed Used Space MB	Inactive Freespace MB	Track Managed Inact Freespace MB
AAAMPP	Enabled	Pool	Yes	1	Exclude List	n/a	n/a	n/a	n/a	0.0	2707	n/a	n/a	n/a	n/a	n/a	2707	100.0	n/a	n/a	n/a
ABPG1	Enabled	Pool	No	2	Enabled	99.7	0	8114	10815	99.8	10826	99.7	0	8114	10815	99.8	10826	0.2	0.2	n/a	n/a
AOCSHARE	Enabled	Pool	Yes	3	Enabled	0.0	616	246	2763	3.7	73077	0.0	616	246	2763	3.7	73077	96.3	96.3	n/a	n/a
ARYMPP	Enabled	Pool	Yes	1	Exclude List	n/a	n/a	n/a	n/a	0.0	2707	n/a	n/a	n/a	n/a	n/a	2707	100.0	n/a	n/a	n/a
ARYSED1	Enabled	Copy Pool Backup	No	4	Error	n/a	223	2685	5847	54.0	10826	n/a	223	2685	5847	54.0	10826	46.0	46.0	n/a	n/a
ARYSEL1	Enabled	Copy Pool Backup	No	2	Enabled	62.4	72	2685	4377	80.8	5413	62.4	72	2685	4377	80.8	5413	19.2	19.2	n/a	n/a

Hub Time: 29/06/2018 12:48 PM Available SMS Storage Groups Space - WAL-VM-OXESD015

12:48 PM 06.29.2018

Take the aspects of TEP you have already invested in (customized workspace, situations) and make it visible in a modern browser based environment

Interested in helping us create the next generation of monitoring tooling?



We invite you to become a Sponsor User.



IBM OMEGAMON

Key topics we want to engage with you on:

- Monitoring of APIs using OMEGAMON
- Next generation of operations tooling exploiting Zowe



Zowe

Additional Resources



OMEGAMON Product Home

- www.ibm.com/OMEGAMON

OMEGAMON for JVM Redpaper

- www.ibm.biz/omegJVMRedpaper

IBM Z IT Service Management Newsletter

- www.ibm.biz/zITSMNewsletterSubscribe

Announcement Letter

- www.ibm.biz/SMSzAnnounce

OMEGAMON Best Practice Guide

- www.ibm.biz/OMEGAMONBestPractice

Z Trial Program (including OMEGAMON for JVM trial)

- www.ibm.biz/ibmztrial

OMEGAMON Enhanced 3270UI Webinar Series

- www.ibm.biz/enhanced3270ui

Service Management Connect

- www.ibm.biz/zITSMBlog

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