# What's New and Exciting in OMEGAMON XE For IMS V4.20

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## OMEGAMON XE For IMS on z/OS V4.20 Components And Facilities

## Real Time

#### Real Time Monitor

- Subsystems, regions, resources, pools, DBs, Fast path
- IMS Connect, OTMA
- Response Time Analysis (RTA)
  - Transaction Response time by user defined groups
- Bottleneck Analysis
  - Workload performance and task analysis
- Operator Assist & Integrated Console Facility
  - IMS resource commands
- Near Term History
  - View recent transaction activity
- Application Trace Facility
  - Detailed Application Trace function
- Multiple System and Plex level information
  - N-way data sharing, Global Locking, Multiple Systems Coupling, shared queues
- Exceptions, Alerts, Integration
  - Integrated alert/automation and analysis

## Historical

- EPILOG Historical
  - Historical analysis of transaction response, bottlenecks and IMS resources by group & interval
  - Stored in Epilog Data Store (EDS)
- Transaction Reporting Facility (TRF)
  - Detailed transaction & database data – individual transactions
  - Data retrieved from IMS log
  - Integration with IBM IMS
     Performance Analyzer (IMS PA)
- XE Snapshot Historical
  - Snapshot historical stored in the Tivoli Data Warehouse
  - Reporting, trending, baselines





### OMEGAMON XE For IMS on z/OS V4.20 Recent Areas Of Enhancements

## Real Time

- Real Time Monitor
  - Subsystems, regions, resources, pools, DBs, locking, Fast path, IMS Connect, OTMA
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## OMEGAMON V4.20 and ITM 6.22 adds new function and capability

## Historical

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#### OMEGAMON XE For IMS V4.20 – User Interface Options Support For 3270 And Tivoli Enterprise Portal (TEP)

#### OMEGAMON XE GUI Interface

- Java client or browser Tivoli Portal
- Real time and historical
- Automation & alerts
- Multi-system Plex level information (CF, n-way, MSC, Shared queues, Global locking, IMS Connect)

**OMEGAMON 3270 Classic and CUA** 

- 3270 Interface command interface
- Real Time & Historical
- IMS resources, Response time analysis, Bottleneck analysis
- Exceptions
- Console facility & Operator Assist



#### Tivoli Enterprise Portal





#### OMEGAMON XE For IMS Information Included In The Tivoli Enterprise Portal (TEP)

- OMEGAMON XE For IMS provides many attributes of information into the TEP
- Categories of information include IMS address spaces, Databases, Transactions, Logging, Response time, Logging and overall subsystem performance
- Attributes may be viewed and filtered
- Attributes may be used as input to alert processing
- Many new TEP workspaces in V4.20 including Bottleneck Analysis and enhanced RTA displays



IMSA:MVSA:IMS
 □ ↓ IMS Health
 □ ↓ IMS Address Spaces
 □ ↓ IMS Bottleneck Analysis

🛃 IMS DASD Logging

🛃 IMS Dependent Regions 🗔 IMS Device Activity

🛃 IMS Coupling Facility Data Sharing Status

🛃 IMS DBCTL Thread Summaries

🛃 IMS Extended Recovery Facility 🗔 IMS External Subsystems

🛃 IMS Fast Path Balancing Groups

🛃 IMS Fast Path VSO Data Spaces

🛃 IMS Multiple Systems Coupling Facility (MSC)

IMS

Information

🛃 IMS Fast Path DEDB Activity 🛃 IMS Fast Path MSDB Information

💂 IMS Fast Path Regions 뤚 IMS Fast Path System

🛃 IMS HALDB Summarv

🛃 IMS IRLM Information

🛃 IMS Local Lock Conflicts

🛃 IMS Logical Terminals 🗔 IMS MQSeries Status

🛃 IMS OSAM BP Statistics

🛃 IMS OTMA Status 🗔 IMS Pools Display

🛃 IMS OSAM Subpool Statistics



#### **OMEGAMON XE For IMS V4.20 Includes Enhancements To Classic 3270 Interface**

> Hel > Ret	ZMENU lp/News PF1 turn to CUA PA2	VTM OI-II Exit PF3 Colors PF18	V420./C IVP1 Keys PF5	10/24/08 12:01:53 B Command Mode PF12					
>	Ente	Enhancements to RT	A displays <sup>i</sup>	ne.					
>	> OMEGAMON for LAS Performance Monitor Main Menu								
E   R   B   H	EXCEPTIONS RESPONSE TIME BOTTLENECKS TRANS HISTORY	Current and poten Transaction respo Resource contenti Near-Term History	ntial system pro onse times (RTA on (bottleneck J, Application T	blems, latch conflicts users) analysis) (DEXAN users) race					
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_ F _ 0	FAST PATH OTHER SYSTEMS	IMS Fast Path inf External subsyste	ormation ms (DB2 and MQ)	and XRF information					
_ T _ P	TOOLS PROFILE	Operator tools Profile maintenan	ice and session	settings					



#### OMEGAMON XE For IMS on z/OS V4.20 Categories Of Enhancements

## Enhancements fall into two primary categories

- Enhancements to core monitoring
  - Historical collection enhancements
  - Trace enhancements
- Usability and user interface enhancements
  - Enhancements at the 3270 interface level
  - Enhancements at the Tivoli Enterprise Portal level
    - Bottleneck analysis added to the TEP
    - Response time analysis support expanded in the TEP
    - Locking analysis expanded in the TEP
    - New core features and functions of ITM 6.22
      - » New usability features, historical capabilities, alert functions



#### OMEGAMON XE for IMS on z/OS v4.20 Enhancements To Core Monitoring

- Response Time Analyzer (RTA) Classic interface enhanced
  - Response time components precision increased to 0.000000 seconds
- Application Trace Facility
  - Supports all DL/I calls, collect SSA, IOAREA, and Key Feedback area
  - Adds DB2 SQL statement support and MQSeries support
  - New displays in the Classic 3270 interface
- Near Term History Facility
  - Capture transactional instance information and metrics
    - Contains transaction response time data and database access metrics
  - New displays in the Classic 3270 interface
  - NTH data is reportable from Classic 3270 and OMEGAMON IMS Tivoli Portal interfaces



#### OMEGAMON XE for IMS on z/OS v4.20 Enhancements To Tivoli Enterprise Portal

- Bottleneck Analysis information added to the Tivoli Portal
  - Take advantage of the power of the TEP to analyze IMS bottlenecks
- Response Time Analysis support expanded in the Tivoli Portal
  - More detail, precision, and workspaces
- Lock detail expanded in the Tivoli Portal
  - Supports both IRLM and PI locking
  - Application Lock Workspace (accessed from Dependent Region Workspace)
- Dynamic Workspace Links added for cross monitor navigation
  - Mainframe for Networks (IMS Connect TCP/IP Usage), z/OS (Coupling Facility, Address Space Detail), Storage (DASD, Dataset information), MQSeries (Messaging detail, OTMA)
- Exploitation of ITM capabilities
  - Exploit historical enhancements, graphics improvements in the TEP, historical trending and baselines
  - More RTA and Bottleneck attributes available in the TEP expands situation alert options and flexibility



#### Enhancements To Core Monitoring IMS Transaction Response Time Analysis





#### More On The Application Trace Facility And Near Term History

#### Application Trace Facility

- Specify application trace collection options
- Data written to/read from Journaling Logging Facility
- Trace output supports all DL/I calls and relevant detail including SSA, IOAREA, and Key Feedback area
- Trace now adds DB2 SQL statement support and MQSeries call support
- Trace is based on a new set of screen spaces in the Classic interface
  - Trace start/stop, view, and filter displays with drill downs

#### Near Term History Facility

- Captures transactional instance information and metrics (including database access information)
- NTH is based on a new set of screen spaces in the Classic interface
  - · View, and filter displays with drill downs
- Data written to/read from Journaling Logging Facility
  - Automatic collection may be enabled at startup



#### **Application Trace Facility - Specifying A Trace**





#### **Application Trace Search And Filter**

<pre>KOIATFL VT Help PF1 Back PF3 </pre>	M OI-II V420./C I91A 12/01/08 18:33:15 B Up PF7 Down PF8 Zoom PF11
> > (H.A.C) Applic >	ation Trace Search and Filter Criteria
> > A - Manage Trace B - ' >	View Trace * - Search Trace filter criteria to access
THFL +	a specific traced event
+	Date and Time Limits
<pre>+     Start Date.(YYYYMMDD):     Start Time(HHMMSS):     End Date(YYYYMMDD):     End Time(HHMMSS): +</pre>	Last nn minutes (1-99):         15           Last nn hours (1-99):
<u>+</u>	Search Filter Criteria
<pre>* Response Time &gt; n.nnnnnn: : Transaction ID : Database DBD ID : User ID</pre>	KOIATVS     VIM     OI-II     V420./C     IMS9     02/19/10     16:03:57     B       > Help PF1     Back PF3     Up PF7     Zoom PF11         Trace summary
+ + -	<pre>&gt; (H.A.B) View Application Trace Summary &gt;</pre>
+ : Group results by	> > A - Manage Trace
	ATVS + Strt Date\Time Trancode PSB Name RGN Name LTERM Elap Time CPU Time Abend +
	+ 02/19 15:58:35 PART DFSSAM02 IMS9MPR1 TECH08 0.4475s 0.0114s + 02/19 15:58:43 PART DFSSAM02 IMS9MPR1 TECH08 0.0366s 2,781μs + 02/19 15:58:47 PART DFSSAM02 IMS9MPR1 TECH08 0.0296s 2,263μs + 02/19 16:00:03 PART DFSSAM02 IMS9MPR1 TECH08 0.0388s 2,625μs
	+ 02/19 16:00:13 PART + 02/19 16:00:24 PART + 02/19 16:01:45 PART + 02/19 16:01:45 PART + 02/19 16:01:49 PART DESSAM02 IMS9MPI DESSAM02 IMS9MPI DESSAM02 IMS9MPI F11 zoom to drill down
	+ 02/19 16:01:53 PART DFSSAM02 IMS9MPR1 TECH08 0.0415s 2,514μs

2		2

> Help PF1 >	KOIAT Back	VW VTM PF3	0I-II Up PF7	V420./C IMS9 Down P	02/19/10 16: F8	04:37 Zoom P	Р Р 1 1	<b>Frago</b>		orvio	λ. Λ.	ad	
> > >	(H.A.B)	View Applica	ation Trac	e Overview									
> > A - Near- >	-Term Histo	ry		Trace of	overviev	V			JOWI	n FO	r Det	all	
ATVW + Transaction + Logical Ter + Region Type + Region ID + Jobname + UserID.	n	PART TECH08 MPP 1 IMS9MPR1 TECH08	P T M S Q Q	SB ransaction Cl essage Source rimed Messag tep Name uick Schedul	DFSS ass 001 TERM > Help PF1 >	AM02 K	OIATVD VTN Back PF3	1 0I-II Up Pi	V420 F7	/C IMS9 02 Down PF1	2/19/10 16: 3	05:04 Zoom PF	B 7 1 1
+ Abend Code. + Start Date. + Total Elaps	  sed Time	02/19/10 0.4475s	S T	tart Time otal CPU Time	> >	(H.A	.B) View Ap	oplication	Trace Deta	ail			
+ + + Event + + DLI TM	Туре  GU	Count  1	To Elapse 	tal d Time  104µs	ATVD + Transaction + Start Date + Start Time	n	PART 02/19/ 15:58:	/10 35.983	PSB . Region	 Name	Call de	AM02 MPR1	
+ DLI DB + DLI DB + DLI TM	GU GN ———— ISI —	Help PF1	O KOIATVX V	.02185 /TM 0I-II	+ + + Start Time	LVL	Duration	Event Descripti	on	Resources	6	Func Verb R	RC
	======= ATVX + Trans + Star + Star + DL/I + Statu + Segme + 0000 + 0010 + 0020 + 0030 + + IO Au + + 0000 + 0010 + 0020 + 0020 + 0030 + 0030	Saction t Date t Time Call us Code ent Search A D7C1D9E3 D 40407EF0 F 4040404040 5 00000000 rea: F0F2F1F2 F 404040404 4 40400000 0		APPLICATION 19/10 58:35.983 ank> (SSA): 007C1D9 E3D2C 4F54040 40404 0000000 000000 0404040 404040 040C140 404040 04000000 000000	+ 15:58:36.40 + 15:58:36.41 + 15:58:36.41 + 15:58:36.40 + 15:5	94 0 14 1 14 1 95 0 27 0	104µs 520µs 0.0118s 0.0218s 49µs 46µs 13µs 20µs 15µs KEY* * * <b>Drill d</b> (See S	DL/I CALL VSAM CALL DL/I CALL SAL	(TM) (DB) (TM) (TM) (TM) (TM) (DB) all det	DI21PART DI21PART DI21PART DI21PART DI21PART	I/O PCB PARTROOT STANINFO I/O PCB I/O PCB I/O PCB I/O PCB	GU GN ISRT ISRT ISRT STAT	
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#### **Application Trace - IMS/DB2 Trace Example**

> > >	Help PF1	KOIATVW VTM Back PF3	0I-II V420 Up PF7	)./C I91 Dowr	LA 127 ח PF8	01/0	8 18:36:03 Zoon	B B PF11		
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				ATVD + Transad + Start [ + Start ] +	ction Date. Fime.		. DSN8CS . 12/01/ . 18:34:	PSI 08 Reg 11.565	B gion Name	DSN8IC0 IMS9AMS1
				+ + Start 1 +	Time	LVL	Duration	Event Description	Resources	Func Verb RC
		Trace deta	il with dri	ill	12.682 12.697 12.470 12.906	1 1 0 0	$\begin{array}{c} 00.014971 \\ 00.000043 \\ 47.361752 \\ 00.000012 \end{array}$	BLOCK LOAD IWA DL/I CALL (TM) MPP SCHEDULING DL/I	IT DSN8IC0 JMAHE	
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				23:34:3	14.448	0	00.001140	DB2 SQL	D81X	



#### **Near Term History Of IMS Transactions**

> He	≥lp PF1	Back PF3	Up PF7	420.76 1918 127017 Down PF8	Zoom PF11	
> > >		(H.B.A) Manag	e Near Term Histo	ory (Define/Start/S	top)	
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+ NTM	1N			hi	story collection	1 I
+ + -	Act	ions: A=Add D	=Delete M=Modify	I=Activate/Inact	ivate	
+ V + -	Trace ID	Date Time	Minutes Status	Trace Selection	Criteria	
:	MAHERJOX	12/01 18:43	*** <mark>Active</mark>	TRAN=PART*, USER=	*,TERM=*,PSBN=*,	
		> Help >	PF1 KOINTV Back	S VIM 01-11 PF3 Up PF7	V420.7C 191A 12701 Down PF8	708 18:52:53 B Zoom PF11
		> >	(H.B.B) V	iew Near-Term Histo	ry Summary	
		> > A -	Manage Trace	* - View Trace	C - Search and Fil	er Criteria
		NTVS				
		+ Strt	Date\Time Trancod	e PSB Name RGN Name	LTERM R1 Time	CPU Time Abend
		+ 12/01 + 12/01 + 12/01 + 12/01	18:43:27 PART 18:43:27 PART 18:43:28 PART 18:43:28 PART	DFSSAM02 IMS9AMS1 DFSSAM02 IMS9AMS1 DFSSAM02 IMS9AMS1 DFSSAM02 IMS9AMS1	USER0014 00.004384 USER0013 00.004491 USER0003 00.004200 USER0003 00.004200	00.000000 00.000000 00.000000
		+ 12/01 + 12/01 + 12/01 + 12/01	18:43:28 PART 18:43:28 PART 18:43:28 PART 18:43:28 PART	DFSSAM02 IMS9AMS1 DFSSAM02 IMS9AMS1 DFSSAM02 IMS9AMS1 DFSSAM02 IMS9AMS1	USER0012 00.003862 USER0008 00.007028 USER0006 00.011250	00.000000 00.000000 00.000000
		Near term his	story with dril	DFSSAM02 IMS9AMS1	USER0010 00.004455	00.000000
		down for mo	re detail	DFSSAM02 IMS9AMS1 DFSSAM02 IMS9AMS1 DFSSAM02 IMS9AMS1	USER0009 00.006432 USER0004 00.006432	00.000000
		+ 12/01 + 12/01 + 12/01	18:43:29 PART 18:43:29 PART 18:43:29 PART	DFSSAM02 IMS9AMS1 DFSSAM02 IMS9AMS1 DFSSAM02 IMS9AMS1	USER0011 00.004123 USER0001 00.002896 USER0005 00.004620	00.000000 00.000000 00.000000



#### **Drill Down To See Near Term History Data**

→ Help PF1 E	DINTVW VTM Back PF3	0I-II Up PF7	V420./C I9: Down	1A 12/01/08 n PF8	3 18:53:12 Zoom	B PF11
> > (H.B. >	B) View Near-T	erm Histo	ory Overview			
> > A - Application >	Trace Facility					
NTVW + Transaction	PART		PSB		DFSSAM02	
+ Logical Terminal.	USER0008		Transaction	Class	001	
+ Region Type	MPP		Message Sour	rce	TERM	
+ Region ID	. 4		Primed Messa	age	NO	
+ Jobname	IMS9AMS1		Step Name .		REGION	
+ UserID	USER0008		Quick Schedu	ule	NO	
+ Abend Code			Current SPA	51Ze	N/H 19.49.99 1	000
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+ Response Time (RA)	• • • • • • • • • • • • • • • • • • •	03.220	Storage Use	d (16mb	152K	000
+ Response Time (R1)	00:00:00.0	07.028	Storage Used	d > 16 mb.	1184K	
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+ DLI DB GU	1	00:00.	000.115	00:00.000	. 115	



#### **Journal Logging Facility - Interface And Control**

h <mark></mark> ZI > Help/News PF1 > Return to CUA PA2 >EI	IENU VTM OI-II V420./C I91A 12/01/08 18:30:42 B Exit PF3 Keys PF5 Command Mode PF12 Colors PF18 hter a selection letter on the top line.
→ OME _ E EXCEPTIONS _ R RESPONSE TIME _ B BOTTLENECKS _ H TRANS HISTORY _ M MONITOR ↓ WORKLOAD Y OTMA	AMON for IMS Performance Monitor Main Menu Current and potential system problems, latch conflicts Transaction response times (RTA users) Resource contention (bottleneck analysis) (DEXAN users) Near-Term History, Application Trace IMS status, graphs, and time controlled operations PSBs, DMBs, transactions, regions, and classes OTMA status, TMEMBERS, and TPIPEs s. nodes. and lines
KOIATE VTM VI-II V420./C IVP1 10/24/08 1 > Help PF1 Back PF	3:26:13 B ation, database, and program pools ging, storage, and control blocks/modules
> Enter a selection letter on the top line	Path information subsystems (DB2 and MQ) and XRF information
> APPLICATION TRACE FACILITY MENU	tools maintenance and session settings
_ A MANAGE TRACE Manage application trace requests _ B VIEW TRACE View active traces	
C GROUP/FILTER TRACE Group and/or Filter trace views D JOURNAL FACILITY Application Trace Journal information	CSOG VTM OI-II V420./C I91A 09/10/08 17:02:25 B ICK PF3 Up PF7 Down PF8 Zoom PF11
	Journal Facility - CSO Extent Display
Journal Logging Facility	aximum Extents:       128       CSO Start Key (GMT): 21014842         allocated Extents:       2       CSO End Key (GMT): 21022545         ctive Extent (Write):       2       Retention Period (Secs).:       37         otal Records:       3152       CSO Size (Megabytes):       4         otal Write Requests:       197       CSO Max Size (Megabytes):       384         rite Rate (Recs/Sec):       55       CSO Wrap Count       0         nallocated       Active/Writing       Read/Ready-To-Archive

Archiving

CSO ID=I2ATF,VSAM

A 64-bit Cache Manager with automatic VSAM Archival. Cache Memory organized in blocks (up to 128 blocks can be created and Cache Manager is continuously wrap-able). Data is buffered in ATF/TRF and written to JLF in blocks.

(64)

(96)

Unobtainable Storage

CSO VSAM Archival Information



#### Enhancements To Tivoli Enterprise Portal Bottleneck Analysis Information Added To The Tivoli Portal

Tivoli. Enterprise Portal Welcome Ed Woods			Log out IBM.
File Edit View Help			
♠ 🖬   🔤 🖉 😵 🔽 各 🛡 🛱   💵 🥥 🖑 📰 🔌   🥝 🌆	، 属 🏓 🔟 🗒 💷 🗎 👻 🔗 📕	å 🔲 🛅 🛅	5
😪 Navigator 🌲 💷 🗄	CPU Use Percentage (Short Term)		🕼 CPU Use Percent 🥖 🏦 🔟 🖯 🗮 🗡
🛷 📝 View: Physical 🔽 🔍	r 🔁		🗟 🔁
<ul> <li>IMSC:MVSA:IMS</li> <li>IMS Health</li> <li>IMS Address Spaces</li> <li>IMS Bottleneck Analysis</li> <li>IMS Coupling Facility Data Sharing Status</li> <li>IMS DASD Logging</li> <li>IMS DBCTL Thread Summaries</li> </ul>		Using CPU Percent Using CPU In Appl Percent Using CPU In IMS Percent	Using CPU Percent Long Term Using CPU In Appl Percent Long Term Using CPU In IMS Percent Long Term
- 🛃 IMS Dependent Regions	- III Transaction Counts (Short Term)		🛯 Transaction Cou 🖉 🚖 🔟 🖯 🗮 🗡
- Mis Device Activity	R 🗃		🗟 🖬
Bottleneck analysis does a detailed analysis of IMS workload and determines	1	Avg Total Transactions Avg Executing Transactions Avg Competing Transactions Avg Non-Competing Transactions	0 r Avg Total Transactions Long Term Avg Executing Transactions Long Term Avg Competing Transactions Long Term Avg Non-Competing Transactions Long Term
where the workload is		Wait Percentages by Category (Long	Term) / 🖈 🗉 🖯 🗡
🗖 🗃 spending its time. Delay		🗔 🔂	
percentages are broken out for short term and long term intervals.	Scheduling Waits Percent Database IO Waits Percent MVS Waits Percent IMS Activity Percent Output Waits Percent ESS Activity Percent Other Waits Percent		<ul> <li>Scheduling Waits Percent Long Term</li> <li>Database IO Waits Percent Long Term</li> <li>MVS Waits Percent Long Term</li> <li>IMS Activity Percent Long Term</li> <li>Output Waits Percent Long Term</li> <li>ESS Activity Percent Long Term</li> <li>Other Waits Percent Long Term</li> </ul>
Wait Counts by Category (Short Term)			
		% dolay by d	ategory
IMS MVS Scheduling Database IO MVS IMS Output I ID ID Waits Waits Waits Activity Waits A	SS Other Elapsed Count Interval Count Short Term	ount Long Term Timestamp	



#### **Response Time Analysis In The Tivoli Enterprise Portal New Workspaces – More Precision – New Information**





#### Response Time Analysis In The Tivoli Enterprise Portal More Complete RTA Support In The TEP

Ti																			
File	Edit V	'iew Help																	
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🗠 Havigator 🏦 🛛 🖶 🛄 R1 Response Time											×□								
View: Physical E Q E BTA response time analysis minute by minute interval									rval										
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		— 🔙 IM	S RTA Fir	st 50 Exce	ptions			+									<b>_</b>	rrent Minut	e-7
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Ø	IMSB	CLASS 1	1	Yes	No	0.1	0.000000	0.005186	0.000000	0.000000	0.003449	0.004480	0.000000	0.005663	0.005009	0.003375	3	MVSA	IMSB

#### More detail, more precision, more options for analysis



#### **More Lock Analysis Information In The TEP**





#### **New IMS Health Workspace**



#### **Dynamic Workspace Links Expands Integration Options**





#### New Workspaces And New Attributes Means More Options For Situation Alerts

Elect condition	
Condition Type Attribute Comparison Situation Comparison Attribute Group Extended Recovery Facility External Subsystems Fast Path Regions Fast Path Regions Fast Path System HALDB Database Summary HALDB Partition Detail I/O Devices IMS All RTA Interval Summary IMS Bottleneck Analysis Detail MS Bottleneck Analysis Summary	With V4.20 you may create situation alerts incorporating IMS wait reasons and percentages as part of the situation logic
Select All Description Use the IMS Bottleneck Analysis Summary attributes to create table vie situations that monitor workloads, rather than on resources.	Using CPU MVS In Appl Waits Percent Percent 1 > 25.0 2 > 30.0 3 MVS Waits Percent The percentage of total samples where transactions were delayed due to MVS waits (short term). Valid format is an integer.
Create situations using B Analysis data. More RTA TEP means more situation for response time based a	Situation Formula Capacity       15%       Add conditions       Advanced         data in the options lerts.       Sampling interval       Sound       State         @//_0:_4!:_0_       Enable critical.wav       Run at startup
	<u>O</u> K Ca <u>n</u> cel <u>Apply</u> <u>G</u> roup <u>H</u> elp



## Create Situations Using RTA Metrics Alert On Transaction Rates And Counts

Situations for - IMS RTA Interval	Sun	ımary	
Image: Second system       Image: Second system         Image: Image: Second system       Image: Second system         Image: Image: Second system       Image: Second system         Image: Second system       Image: Second system <td< th=""><th></th><th>Formula     Distribution     Expert Advice     6       Name     EW_Demo_RTA_Alert       Description</th><th>Action EIF O Until</th></td<>		Formula     Distribution     Expert Advice     6       Name     EW_Demo_RTA_Alert       Description	Action EIF O Until
		Formula	Select condition
		Item Transaction Local Name Rate Output 1 == DEMO1 ≥ 10.00	Attribute Comparison     Situation Comparison
		2 == DEMO2 > 20.00 3	Attribute Group Attribute Item Attribute Item IMS Local Lock Conflicts IMS Local Locks Held IMS Local MSC Performance Statistics
		Local Output Message Rate The number of loca is an integer. Situation Formula Capacity 25%	Input CQS Rate IMS Lock Conflicts IMSplex Filter IMSPLEX Health IMS RTA ETE Time Groups
RTA data in the TE transaction rate in	EP Ifo	provides rmation	IMS RTA ETE Times Network Nodes IMS RTA Exceptions IMS RTA Group Items Recent Mins IMS RTA Group Items Slots
correlated by RTA	g	roup.	Select All Deselect All
		OK Ca EW_Demo_RT/	Description Use the IMS RTA Group Items Slots attributes to create table views, charts, and situations that monitor response time details for all RTA items in a specific RTA group, based on different time slots of the day



#### Using OMEGAMON And The Tivoli Enterprise Portal To Analyze IMS Processing And Bottlenecks

- Managing and analyzing IMS performance depends upon an understanding of the flow of the workload
  - What is the workload? What is the flow of the workload? Where are the potential workload bottlenecks? If the workload is bottlenecked, to what extent?
- OMEGAMON XE For IMS V4.20 adds useful information to the Tivoli Enterprise Portal to aid in IMS performance analysis
  - Bottleneck analysis (wait states for the system and by workload group)
  - Transaction rate information at various level
    - Transaction rates at the IMS RTA group level
    - Transaction enqueue/dequeue rate at various levels
      - Enqueue/dequeue rate at the system level
      - Enqueue/dequeue rate at the OTMA level
      - Enqueue/dequeue rate at the Fast Path level
  - Transaction queue depth
    - Queuing at the system level
    - Queuing at the transaction level
  - Dependent region processing (region occupancy)



#### **New Historical Collection Options In The Tivoli Portal**





## **Analyze Historical Bottleneck Analysis Data In The TEP**

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IMS Address Spaces	Time Column Recording Time
MS Bottleneck Analysis	○ Use summarized data
IMS DASD Logging	Shift All shifts
IMS DBCTL Thread Summaries	Days All days
IMS Dependent Regions	
IMS Extended Recovery Facility	Trend and analyze
IMS External Subsystems	Rottlonook Analysis data
IMS Fast Path Balancing Groups	O Use detailed data DOLLIENECK ANALYSIS GATA
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#### Using The History Functions Of The Tivoli Enterprise Portal To Analyze IMS Processing And Bottlenecks





#### **IMS Historical Performance Analysis Workspace**





#### **ITM 6.22 Expands The Notion Of Baselines**

A baseline in ITM6.2.2 can be a line or series in a chart as a basis for comparison.

- ITM6.2.2 introduces several visual baseline functions to the TEP
  - Model Situation, Monitored Baseline, Statistical Baseline, Historical Baseline
- Model Situation create a Situation using historical data and statistical functions to "model" and select optimal threshold values
- Statistical Baseline enables the results of statistical functions to be drawn as lines in the chart to visually determine what is normal in an environment
- Monitored Baseline Situation thresholds can be visualized in a bar, area, or plot chart. Allows a user to track in real-time how a metric is performing relative to its threshold.
- Historical Baseline Work with detailed (not summarized) historical data from the data warehouse

Example – Monitored Baseline





#### ITM Provides New Chart Functions And Statistical Analysis Features

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Area plot charts provide a	different perspective of	B Last 1 Hour	'S.	



#### Example – Area Plot Chart Of IMS R0 Response Time With Statistical Baseline





## **Tivoli Common Reporting**

- Tivoli Common Reporting (TCR) provides:
  - Installable package
  - Import / export of reports
  - Report management and categorization
  - Report snapshot generation
  - Search functionality
  - Data source modification

Tivoli Common Reporting Web Site On IBM DeveloperWorks http://www.ibm.com/ developerworks/spa ces/tcr

Interaction with TCR can occur via browser using the web application or through the command line interface (CLI)



#### **Tivoli Common Reporting Report Viewer Example**





#### Use OMEGAMON And the Tivoli Enterprise Portal To Understand IMS Processing And Performance Bottlenecks



## Use OMEGAMON And The Tivoli Enterprise Portal To Consolidate Key Performance Analysis



#### Use OMEGAMON And The Tivoli Enterprise Portal To Consolidate Performance Analysis - Example





### IT Composite Application Management (ITCAM) And Resource Monitoring

- Monitor application response to ensure business expectations are met
- Understand transaction flows over complex topologies
- Monitor infrastructure performance and availability
- <u>Diagnose</u> application performance issues
- Increase application availability and customer satisfaction
- Improve <u>MTTR</u> and <u>MTBF</u>





#### From The ITCAM Analysis Drill Down to Resolve To The Corresponding OMEGAMON Monitor



OMEGAMON XE Detailed drill down

- Uses Dynamic Workspace Links to launch in context into appropriate SME tool.
- Launch destinations depend on type on data source. Examples -
  - MQ / Broker -> OMEGAMON for Messaging
  - WAS -> ITCAM for WAS
  - CICS -> OMEGAMON for CICS
  - IMS ->OMEGAMON for IMS
- Where appropriate, can drill down to specific workspace (ie. In MQ, Queue Manager drilldown links to the Queue Manager Status Workspace for the specific Queue Manager).



#### Summary

- OMEGAMON XE For IMS V4.20 offers many exciting new features and capabilities
  - Application tracing has been greatly enhanced
  - Near Term History is powerful and convenient
  - Response Time Analysis is much more granular
  - Bottleneck Analysis in the TEP make the TEP much more useful
- Enhancements are to both the 3270 and to the TEP
  - New IMS data in the TEP and new features of ITM 6.22 make the TEP more powerful
- Integration becomes the key
  - Integration in the form of dashboard views
  - Integration with other monitoring and management technologies



### Check Out My Blog http://tivoliwithaz.blogspot.com

街 Tivoli With A z - Microsoft Internet Explorer				
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Share Report Abuse Next Blog»	Create Blog Sign In			
Trivoli Writin Azz         This is a blog to discuss what is happening in the area of IBM z/Series, Tivoli, OMEGAMON monitoring, System Automation, and other relevant IBM Tivoli technology for z/OS performance and availability management.				
Wednesday, March 10, 2010 <b>New article in IBM System z Advisor</b> I just published an article in the IBM System z Advisor on "Leveraging OMEGAMON XE and the Tivoli Enterp Portal to create Management By Exception Views". This is a more detailed discussion of some of the posts made earlier in this blog on how to use the TEP to create what I call Management By Exception workspace Here is a link to the article:	ED WOODS I'm an IT Specialist with IBM Corporation supporting Tivoli Performance solutions on z/OS. I've Please note that comments made on this blog I's. are my own, and do not necessarily reflect the position of IBM Corporation. <u>View my complete profile</u>			
Dested by Ed Woods at 8:50 AM 0 comments	Links To My Articles			
Posted by Ed woods at <u>0.35 Art 0 comments</u> 22	Management By Exception			
	DB2 Thread Situations			
Upcoming OMEGAMON webcast         I will be doing a webcast on "What's new and exciting In OMEGAMON XE for IMS to at 11 AM ET. I will be spending time on the new enhancements to the tool, and a capabilities you get with ITM 6.22, and how to exploit them in OMEGAMON.         It's a freebie, and here is the URL to sign up for the event:         http://www-01.ibm.com/software/os/systemz/telecon/25mar/         Posted by Ed Woods at 8:48 AM 0 comments	olog on IBM Tivoli nce and availability nent of System z. Lots of on on OMEGAMON, on, and many things Tivoli			



## Thank You!!