



IBM Software Group

Monitoring IMS and CICS Using OMEGAMON and Tivoli Enterprise Portal

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Tivoli software



Agenda

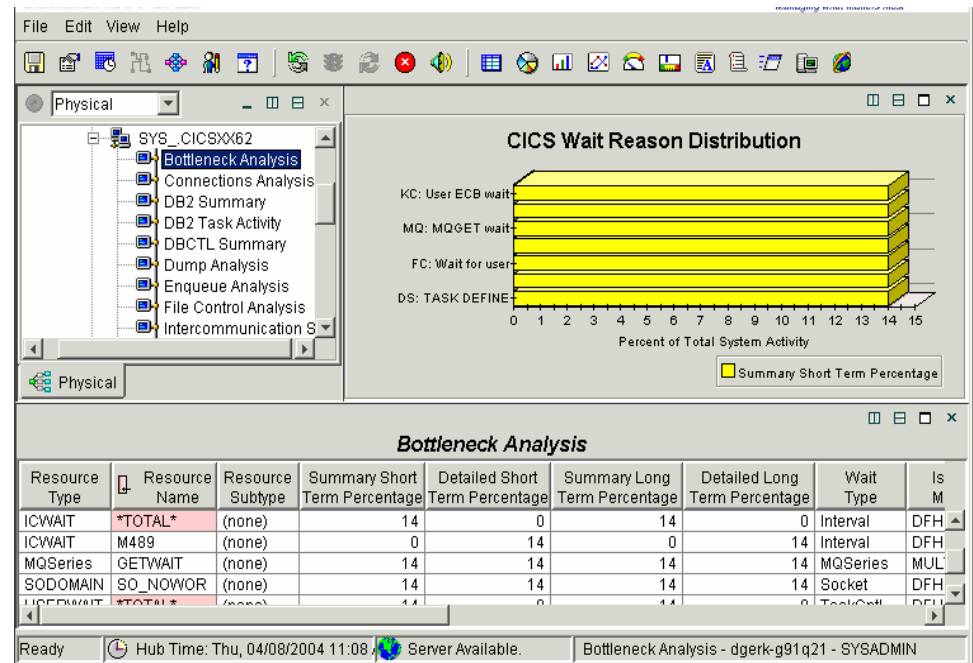
- OMEGAMON And The Tivoli Enterprise Portal (the TEP)
- About CICS And IMS Subsystems
- Typical Performance And Availability Challenges
- Monitoring CICS And IMS With OMEGAMON
- Defining An Integrated Management Strategy
- What's coming with OMEGAMON CICS and IMS



OMEGAMON XE for CICS V4.1

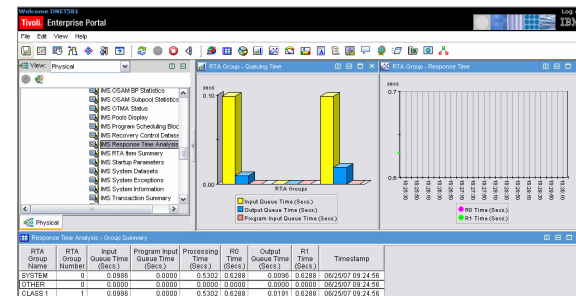
Provides Alerts and Information in the Following Areas

- **Service Level Analysis**
- **Transaction Analysis**
- **Bottleneck Analysis**
- **Journal Analysis**
- **CICS System Initialization Table**
- **Storage Analysis**
- **UOW Analysis**
- **VSAM File and Lock Analysis**
- **Connections Analysis**
- **Logstream Analysis**
- **Temporary Storage Usage**
- **CICS Region Overview**
- **DB2 Summary and Task data**



OMEGAMON XE For IMS on z/OS V4.1 Components And Facilities – Real Time And Historical

- **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
- **Online Transaction Reporting Facility (Online TRF)**
 - ▶ View TRF information in the TEP
- **Trace Facilities**
 - ▶ Application Trace & TRF trace
- **Exceptions & Alerts**
 - ▶ Integrated alert/automation in the TEP
- **Plex level information**
 - ▶ N-way data sharing, MSC, shared queues (in the TEP)
- **EPILOG Historical**
 - ▶ Historical analysis of transaction response, bottlenecks and IMS resources
 - ▶ Stored in VSAM Epilog Data Store (EDS) by group and time interval
- **Transaction Reporting Facility (TRF)**
 - ▶ Detailed transaction & database data – individual transactions
 - ▶ Suitable for performance analysis & chargeback
 - ▶ Data retrieved from IMS log
- **XE Snapshot Historical**
 - ▶ Snapshot historical stored in the Tivoli Data Warehouse



IBM And The Tivoli Enterprise Portal

End to End Performance And Availability Management

Business Service Management

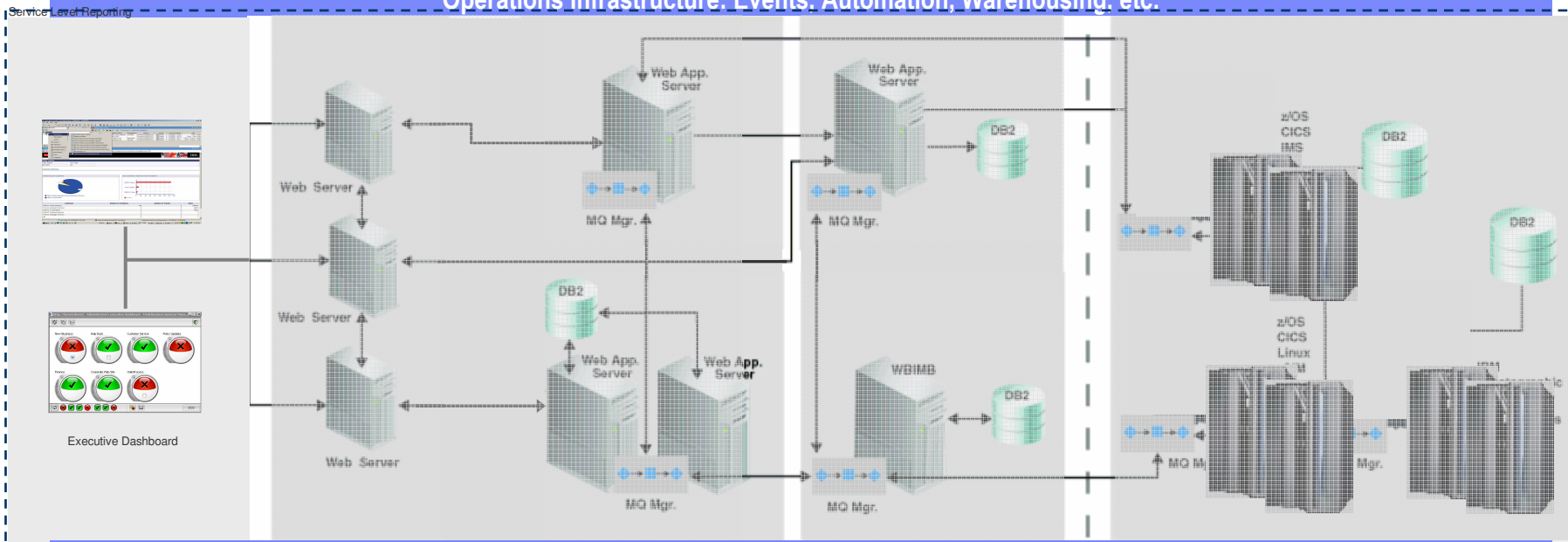
SOA Management

Composite Application Management

Network Management

Systems Management

Operations Infrastructure: Events, Automation, Warehousing, etc.



Operations Infrastructure: Events, Automation, Warehousing, etc.

Asset Management

Storage Management

Workload Management

Security Management

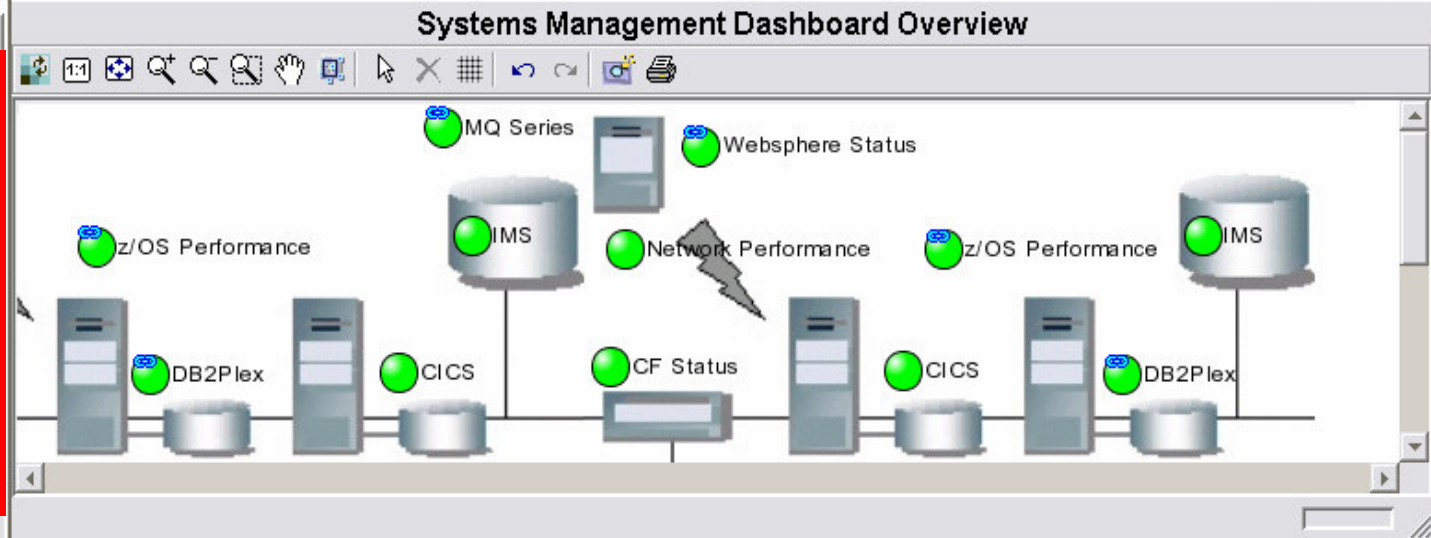
Usage & Accounting Management

Use TEP To Build A Consolidated Management View Consistent Methodology And Interface

IMS & CICS as part of bigger picture

A dashboard allows for key technology elements to be combined into a single view.

Integrate information from a variety of components and subsystems.



z/OS Performance				
Service Class	Period	Goal Type	G	Perc
BATCH	1	Velocio		
BATCH		io		
BATHI		io		

z/OS
Service class details

CICS Region Overview				
System ID	CICS Region Name	CICS Version	R	S
SP12	CCCD18	6.2.0	N/	
SP12	CCCD19	6.2.0	N/	
SP12	CCCD20	6.2.0	N/	

CICS
See multiple regions

IMS Address Spaces		
Originating System Identifier	MVS System	IM
XEIMS:SP12:MVS	SP12	I71
XEIMS:SP12:MVS	SP12	I71

IMS
Manage key regions

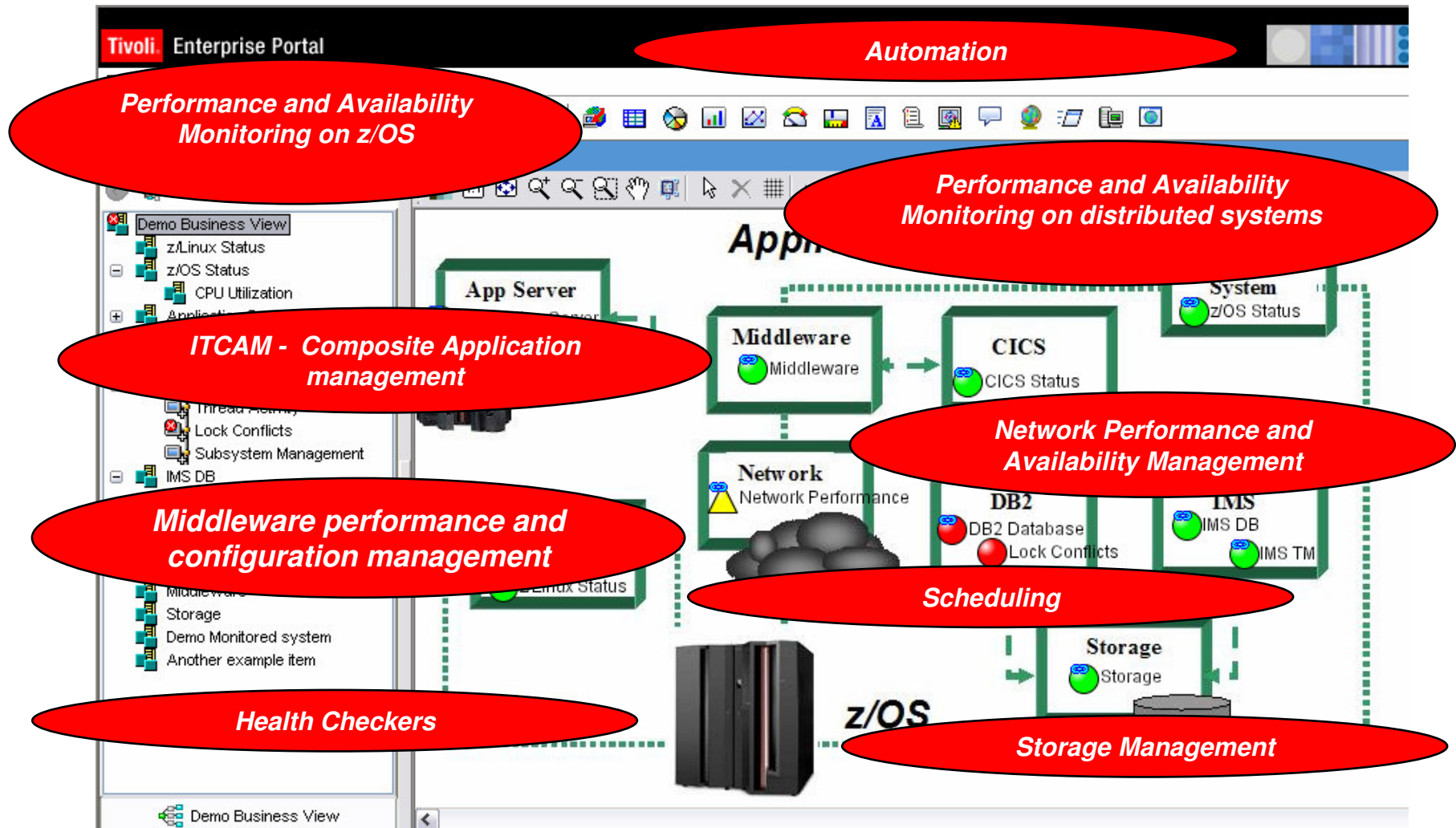
DB2 Threads	
Originnode	
D71G:SP12:DB2	02/08

DB2
Track key threads

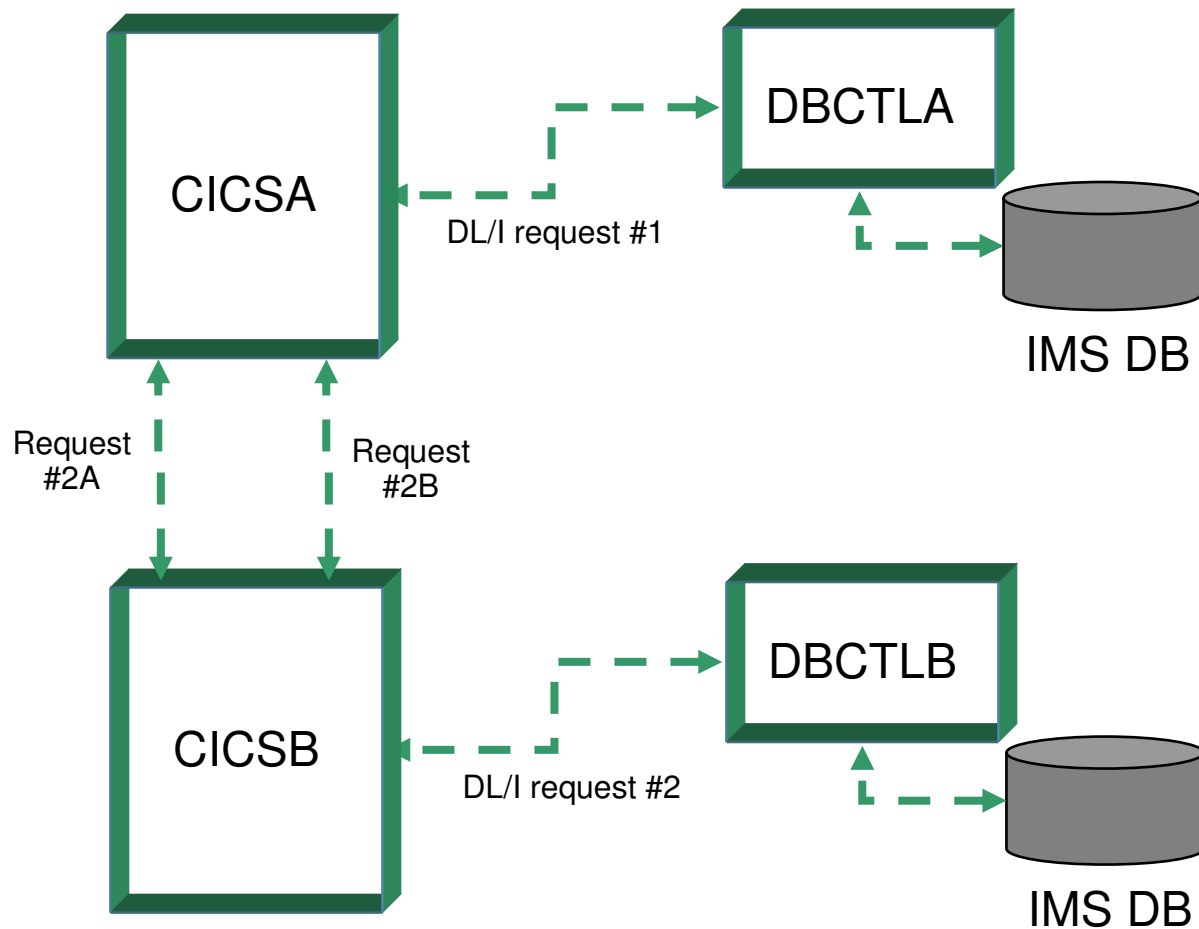
MQ Series	
Origin Node	P
MQ12:SP12:MQESA	04
MQ12:SP12:MQESA	03

MQ
Queues and channels

The TEP Is The Focus Of An Integrated Performance, Availability And Systems Management Approach



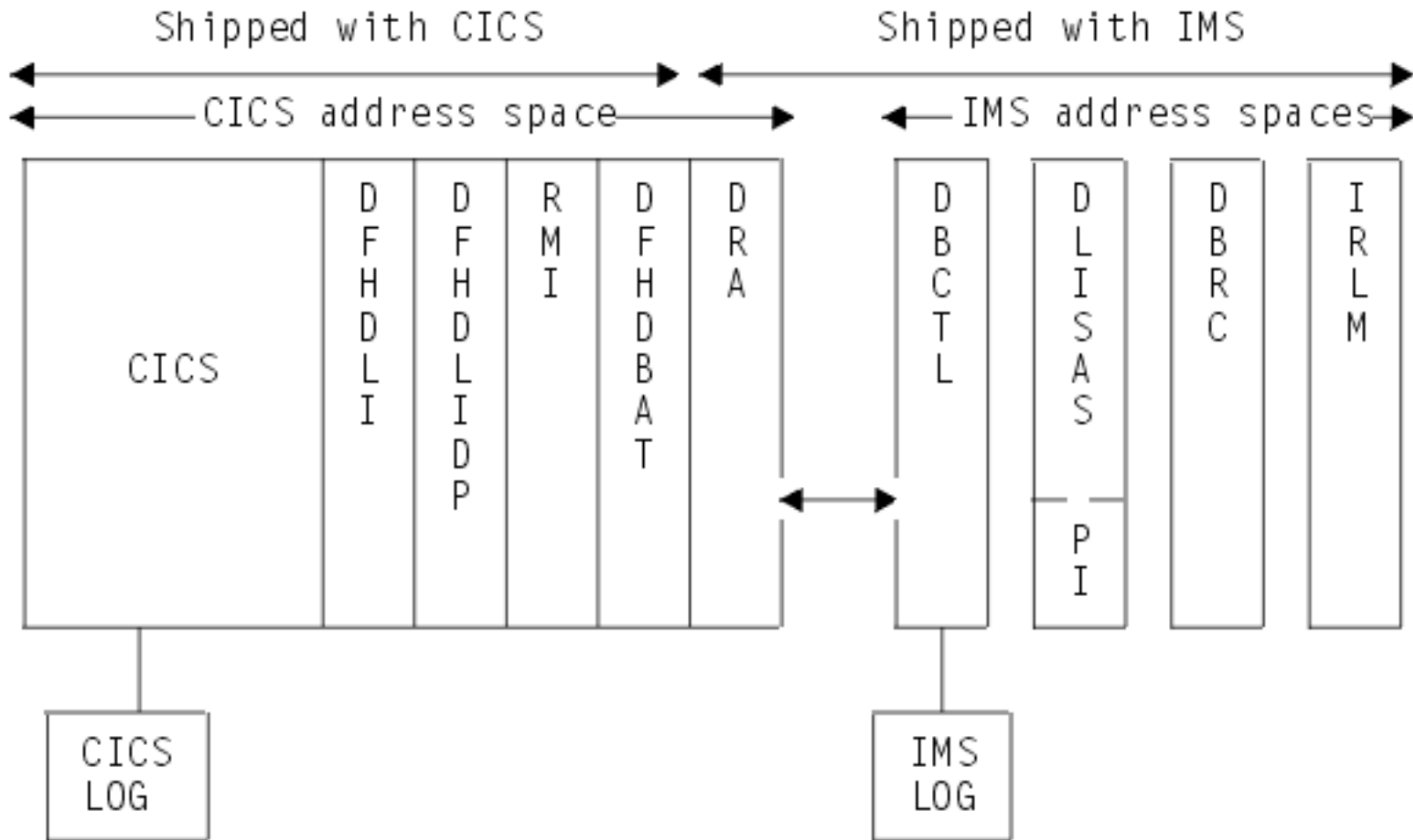
DL/I Request Handling With CICS And IMS DBCTL



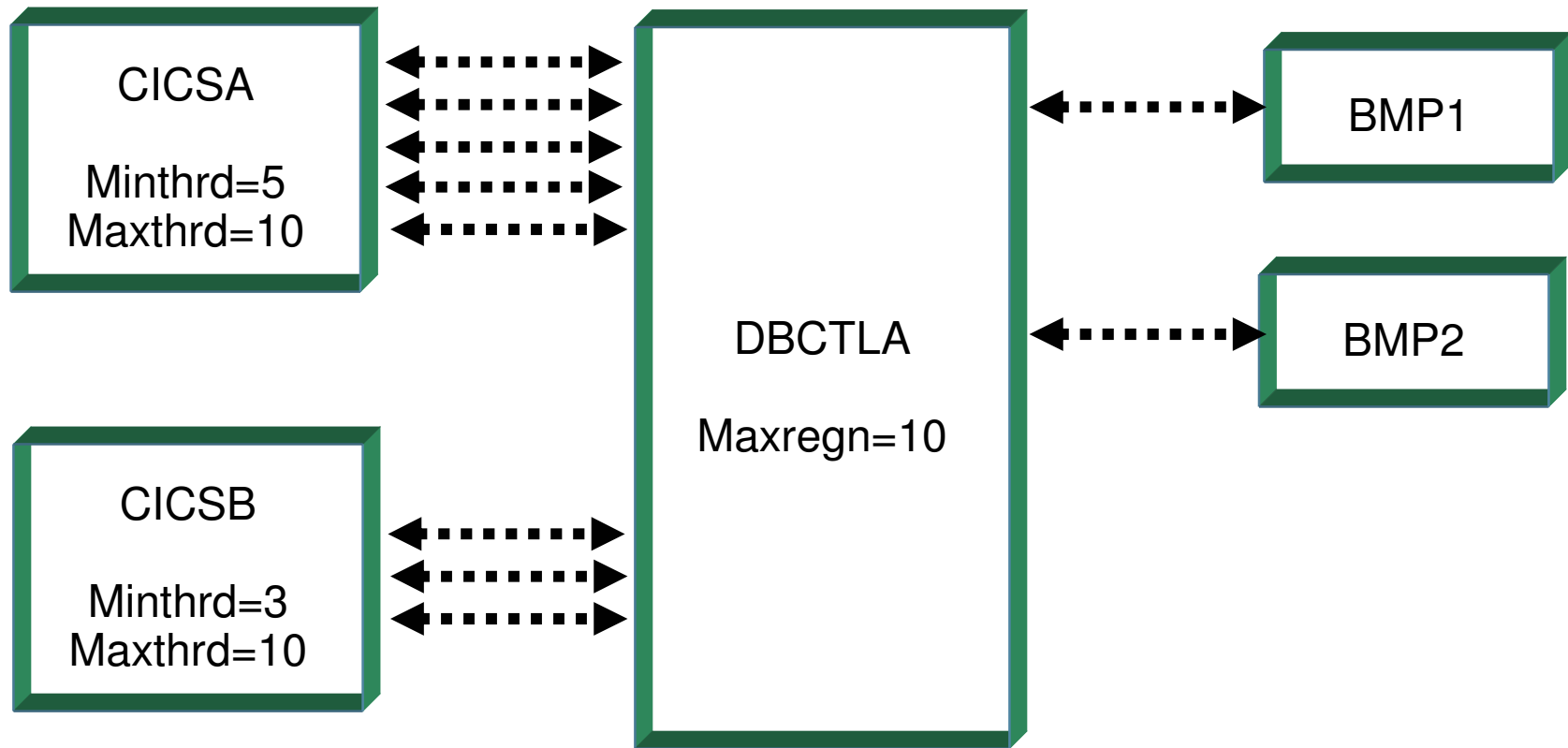
CICSA may access IMS data via a request to DBCTLA
 CICSA may access data via function shipping to CICSB and CICSB accesses DBCTLB



CICS And IMS DBCTL Subsystems And Address Spaces



Threads, Address Spaces And Subsystems



- Number of threads specified will impact performance
- Maximum number of threads in DBCTL is 255
- One thread equates to one TCB

Typical Performance, Availability And Resource Challenges

- Performance

- ▶ Transaction rate, transaction response time, CICS and IMS internal processing bottlenecks

- Resource

- ▶ CICS – CPU, storage, tasks, critical file I/O
- ▶ IMS – CPU, storage, threads, IMS pools, IMS databases, PSBs, IMS database buffer pools, logging, IMS database locking

- Availability

- ▶ IMS and CICS subsystem availability
- ▶ IMS to CICS connection availability
- ▶ IMS database status and availability



Components Of An Integrated Solution

- What OMEGAMON XE For CICS provides
 - ▶ In depth real time and historical analysis of CICS performance including CICS response time and CICS region resource usage
 - ▶ Both 3270 and Tivoli Enterprise Portal interfaces
- What OMEGAMON XE For IMS provides
 - ▶ In depth real time and historical analysis of IMS and IMS/DBCTL performance including IMS database and DL/I call level detail
 - ▶ Both 3270 and Tivoli Enterprise Portal interfaces
- OMEGAMON Dashboard Edition
 - ▶ Required to create integrated multi-component views in the Tivoli Enterprise Portal
- Additional useful information
 - ▶ Add OMEGAMON XE For z/OS to monitor the operating system
 - ▶ Add OMEGAMON XE For Mainframe Networks to add network performance information



OMEGAMON XE For CICS V4.1 CICS Region Overview Workspace

Navigator

- View: Physical
- MVS TCB Summary
- Pagepool Summary
- Recovery Manager Analysis
- Region Overview**
- Response Time Analysis
- Service Level Analysis
- Service Task Details

Transaction Rate

Rate per Minute

Time

Maximum Tasks Percent

Maximum Tasks Percent

3

CICS CPU Utilization

CICS CPU Utilization

16.9

CICS Region Overview

Origin Node	System	CICS Region Name	CICS Version	Region Status	CICS SYSIDNT	VTAM Applid	VTAM Generic Applid	VTAM ACB Open	SOS	Maximum Tasks Percent	Transaction Rate	I/O Rate	Page Rate
MVSA.CICSAOR1	MVSA	CICSAOR1	6.4.0	N/S	C22A	CICSACB1	CICSACB1	Yes	No	3	0	242.4	0.0

Drill down for storage usage detail

The Region overview workspace provides a summary view of transaction rate, CPU usage, I/O and other performance information

Performance Monitoring CICS Transaction Response Time

Tivoli Enterprise Portal Welcome DNET581 Log out IBM

File Edit View Help

Navigator View: Physical

- JVM Analysis
- Log Stream Analysis
- LSR Pool Status
- Message Queuing Analysis
- MVS TCB Summary
- Pagepool Summary
- Recovery Manager Analysis
- Region Overview
- Response Time Analysis**
- Service Level Analysis
- Service Task Details
- Storage Analysis
- System Details

Physical

Current Response Profile

Group Number

Seconds

Response Time Analysis

System ID	CICS Region Name	Group Number	Group Type	Group Name	Exceeds RTA Threshold	Response Time	Response Time 1 Minute Ago	Response Time 2 Minutes Ago
MVSA	CICSAOR1	3	Transaction	TRAN GRP C*	No	00:00:00	00:00:00.01	

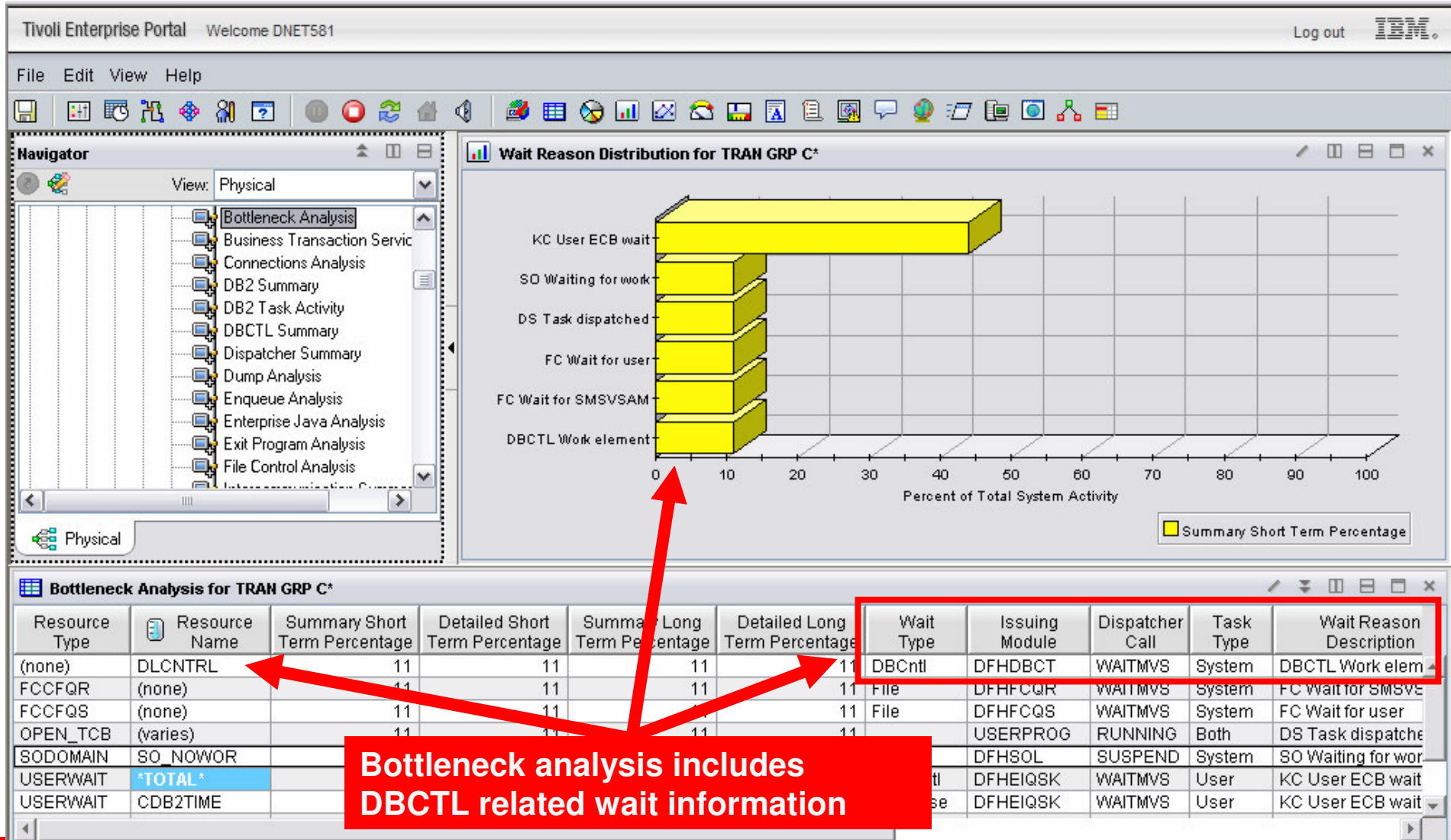
- Response Time Elements
- Bottleneck Analysis
- Link Wizard...
- Link Anchor...

OMEGAMON XE For CICS monitors transaction response time (RTA)

Recommendation - customize RTA transaction groups for critical transaction

To see bottleneck data for the RTA group

CICS Bottleneck Analysis Is The Issue In CICS Or IMS?



Transaction Response Time Situation Alert

Formula **Distribution** **Expert Advice** **Action** **Until**

Description

Formula

Group Name	Response Time
1 == DEMO	> 00:00:00.1
2 == DBCTL	> 00:00:00.2
3	

Response Time Is the average group response time for the current one-minute interval. Values are expressed in the format hh:mm:ss.th

where: Done

Situation Formula

Select condition

Condition Type

Attribute Comparison

Situation Comparison

Sampling: 0 ddd

Attribute Group

- CICSplex File Control Analysis
- CICSplex Intercommunication Summary
- CICSplex Internet Status
- CICSplex JVM Classcache Details
- CICSplex JVMPPOOL Statistics
- CICSplex MQ Connection Details
- CICSplex MVS TCB GLOBAL details
- CICSplex Pagepool Summary
- CICSplex Program Details
- CICSplex Recovery Manager Details
- CICSplex Region Overview
- CICSplex Response Time Analysis

Attribute Item

- CICS Region Name
- Exceeds RTA Threshold
- Group Name
- Group Number
- Group Type
- Origin Node
- Response Time
- Response Time 1 Minute Ago
- Response Time 2 Minutes Ago
- Response Time 3 Minutes Ago
- Response Time 4 Minutes Ago
- Response Time 5 Minutes Ago

Hub Time: Mon, 08/11/2008 09:28 AM

For proactive response time alerts create RTA situations based upon RTA groups

Add additional attributes to make situations more robust and meaningful

Add actions to automate corrections

Monitor CICS And IMS DBCTL Availability

The screenshot displays the IBM Tivoli Monitoring console interface. The main window is titled "DBCTL Summary - IBM-1E47754C52F - SYSADMIN". It features a menu bar (File, Edit, View, Help) and a toolbar with various icons. The interface is divided into several panes:

- Left Pane:** A tree view showing the physical structure of the system. The "DBCTL Summary" folder is highlighted, and a red arrow points to it.
- Top Right Pane:** A table titled "Database Control for IMS" showing the status of DBCTL subsystems. A red arrow points to the "DBCTL Active" column.
- Bottom Right Pane:** A configuration window titled "Situations for - DBCTL Summary". It shows a tree view with "DBCTL Summary" and "CICSPlex" folders. Under "CICSPlex", the "DBCTL_Avail_Alert" situation is selected. A red box highlights this configuration area, and a red arrow points to the "Formula" section.

Table Data:

System ID	CICS Region Name	DBCTL Active	DBCTL Subsystem Name
SYSL	CICSL153	Yes	I91F

Situations Configuration:

Description:

Formula:

	DBCTL Active
1	== No
2	
3	

Monitor DBCTL status

Use a situation for an availability alert

OMEGAMON XE For IMS V4.1 DBCTL Monitoring With Drill Down For Detail

IMS DBCTL Thread Summaries - IBM-93CF507EC63 - SYSADMIN *ADMIN MODE*

File Edit View Help

View: Physical

Thread Counts

Thread ID	CICS Jobname	Active Threads	Available Threads	Unavailable Threads	Indoubt Threads	Active Threads Percent	IMS ID	MVS System	Sysplex Name	Timestamp
CICSMOCK	N/A	0	0	0	3	0.00	I91P	SP22	LPAR400J	05/24/06 14:32:32
CICS22RS	CICS22RS	1	1	1	2	33.33	I91P	SP22	LPAR400J	05/24/06 14:32:32
CICSSTR	CICS22IP	1	1	1	2	33.33	I91P	SP22	LPAR400J	05/24/06 14:32:32

DBCTL Thread Summary

- Detailed Thread Activity (Active)
- Detailed Thread Activity (Available)
- Detailed Thread Activity (Unavailable)
- Detailed Thread Activity (Indoubt)

DBCTL Thread Detail

DBCTL Detailed Thread Activity (Active) - IBM-1E47754C52F - SYSADMIN

File Edit View Help

View: Physical

- 191F:SYSL:IMS
 - IMS Address Spaces
 - IMS Coupling Facility Data Sh
 - IMS DASD Logging
 - IMS DBCTL Thread Summary
 - IMS Dependent Regions
 - IMS Device Activity
 - IMS Extended Recovery Fac
 - IMS External Subsystems
 - IMS Fast Path Balancing Gro
 - IMS Fast Path DEDB Activity
 - IMS Fast Path MSDB Informa
 - IMS Fast Path Regions
 - IMS Fast Path System
 - IMS Fast Path VSO Data Spa

Physical Integrated Overview

Elapsed Times

Enqueues and Dequeues

DBCTL Detailed Thread Activity (Active)

Thread ID	Region ID	PSB Name	Thread State	Thread Status	CICS Jobname	CICS Transaction ID	CICS Task Number	CICS Terminal ID	Database I/O Count	DLI Call Count	Elapsed Thread Time	Recovery Token	Elapsed Wait Time Poolspace	Elas V T In
CICSL153	6	DEHSAM05	Active	Wait-IRLM	CICSL153	WD80	00149	M440	0	1	2180	BF70852892CA7D30	0.000000	0.00

Display Active Thread Call Statistics
 Display CICS Transaction Information

Thread DBCTL Thread With Call Level Detail

PSB information

Thread status

Call counts

Call detail

Thread ID	Region ID	PSB Name	Thread State	Thread Status	CICS Jobname	CICS Transaction ID	CICS Task Number	CICS Terminal ID	Database I/O Count	GU Call Count	GHU Call Count	GN Call Count	GHN Call Count	GNP Call Count	GHNP Call Count	DLET Call Count	ISRT Call Count	REPL Call Count
CICSL153	6	DFHSAM05	Active	Wait-IRLM	CICSL153	WD80	00149	M440	0	0	1	0	0	0	0	0	0	0

Thread ID	Region ID	PSB Name	Call Function	Call PCB Database Name	Call PCB Segment Level	Call PCB Status Code	Call PCB PROCOPT	Call PCB Segment Name	Call PCB Sensitive Segments	Call SSA	Call SSA Hex
CICSL153	6	DFHSAM05	GHU	DI21PART	00		G	HISAM	5	PARTROOT*-----	40D7C1D9E3D9D6D6E35C60601

Understanding IMS Database Locking Who Are The Owners And Waiters?

The screenshot displays the 'Global Lock Conflicts Table View' interface. It includes a navigation pane on the left, a toolbar, and three main panels: 'Global Lock Conflicts', 'Global Lock Rates', and 'Global Lock Conflicts Detail View'.

Global Lock Conflicts Chart: A horizontal bar chart comparing 'Lock Elapsed Time (Secs.)' (blue) and 'Elapsed Time Syncpoint (Secs.)' (yellow) for tokens AF2392E7 and E3EB36C3. The x-axis ranges from 0 to 2000.

Global Lock Rates Chart: A horizontal bar chart comparing 'Locks Held' (yellow) and 'Database Updates' (blue) for tokens AF2392E7 and E3EB36C3. The x-axis ranges from 0 to 300.

Global Lock Conflicts Detail View Table:

Lock Status	Token	DB/Area Name	IMS ID	MVS ID	Jobname	PSBNAME	Transaction Name	Region Type	Region Status	Lock Elapsed Time	DCB Number	Lock Intent	Elapsed Time Syncpoint	Locks Held	Database Updates
LockOwner	E3EB36C3	DI21PART	I91F	SYSL	IMSLK9F	CAND019		BMP	EX DRGN	00:30:02	01	Update	00:28:39	91	285
LockOwner	AF2392E7	DI21PART	I91F	SYSL	IMSLK9F	CAND019		BMP	EX DRGN	00:30:02	01	Update	00:28:39	91	285
LockWaiter	AF2392E7	DI21PART	I91F	SYSL	IMSLK9F2	CAND019		BMP	WT IRLM	00:29:32	01	Update	00:28:10	1	0
LockWaiter	E3EB36C3	DI21PART	I91F	SYSL	IMS9FMS1	DFSSAM02	PART	MPP	WT IRLM	00:02:18	01	Share	00:02:12	1	0
LockWaiter	AF2392E7	DI21PART	I91F	SYSL	CICSL153	DEHSAM05	WD80	DBC	WT IRLM	00:26:59	01	Share	00:25:45	1	0

At the bottom of the table, there are two options: 'Display IMS DBCTL Thread Detail' and 'Display CICS Transaction Information'. A red box highlights these options, with an arrow pointing to them from the text 'Drill into thread detail'.

Red annotations include a box labeled 'Lock owner/waiters' with arrows pointing to the 'Lock Status' and 'Token' columns, and another box labeled 'Drill into thread detail' with an arrow pointing to the bottom options.

Monitor IMS Database And PSB Status

IMS Program Scheduling Blocks - IBM-1E47754C52F - SYSADMIN

View: Physical

PSB information

PSB Name	Active Count	Arrival Count	Processed Count	DL1-SAS Storage
PSBLDLK2	0	0	0	NotInMemory
PSBLDLK3	0	0	0	NotInMemory
PSBLDLK4	0	0	0	NotInMemory
PSBLDLK5	0	0	0	NotInMemory
PSBLDLK6	0	0	0	NotInMemory
PSBLDLK7	0	0	0	NotInMemory
PSBLDLK8	0	0	0	NotInMemory
PSBLDLK9	0	0	0	NotInMemory
PSBUPLK1	0	0	0	NotInMemory

IMS HALDB Summary - IBM-1E47754C52F - SYSADMIN

View: Physical

Database information (including HALDB and Fastpath support)

Database Name	Database Version Number	Database Organization	Database Access Method	Partition Selection Method	Partition Count	Partition Stopped Count	Partition OLR Active Count	Partition Selection Exit	Longest Key String	Timestamp
IVPDBB	3	PHDAM	VSAM	Key	3	0	0			
IVPDBC	3	PHIDAM	VSAM	Key	3	0	0			
IVPDBD	3	PHDAM	OSAM	Key	3	0	0			
IVPDBEI	3	PSINDEX	VSAM	Key	3	0	0			
IVPDB1	3	PHIDAM	OSAM	Key	3	0	0			

Monitor Critical IMS Pools

OSAM and VSAM DB pool performance details

Subpool Number	Subpool Identifier	Number of Buffers	Buffer Size	Locate Calls	Locates Found in Pool	Subpool Hit Ratio	Elapsed Time
1		5	1024	7	5	71.42	00:00:05
2		5	2048	0	0	0.00	00:00:05
3		5	4096	0	0	0.00	00:00:05
4		5	8192	0	0	0.00	00:00:05

IMS Pools Display

Pool Name	Pool Type	Pool Size	Current Storage Used	Utilization Percentage	Free Space	Free Blocks	Largest Free Block	Pool Group
Communications I/O Pool	CIOP	17976	528	2.93	17392	0	0	Communications
High I/O Pool	HIOP	184672	6160	3.33	178288	0	0	Communications
LU 6.2 Manager Private Area Pool	LUMP	399224	22576	5.66	376648	0	0	Communications
MFBP	MFBP	49152	0	0.00	49152	0	0	Communications
Expedited Message Handler Buffer	EMHB	33592	3096	9.22	30496	0	0	Communications
PSB Pool in Common Storage	DLMP	12288	4456	36.30	7832	0	0	Communications
Extended PCB Pool	EPCB	12288	2008	16.35	10280	0	0	Communications
Fast Path Work Pool	FPWP	0	0	0.00	0	0	0	Communications
Auto Operator Interface Pool	AOIP	82768	144	0.17	82624	0	0	Communications

IMS subsystem pools including PSB pools

OMEGAMON IMS Bottleneck Analysis Information May Be Integrated Into The TEP

Analyze where IMS workload is spending its time. Provide analysis of where to tune.

The screenshot shows the Tivoli Enterprise Portal interface. On the left, the Navigator pane displays a tree view of IMS components, with 'IMS Address Spaces' selected. The main window displays a wait reason analysis for 'IMS Address Spaces'. A red box highlights the following data:

```

Database I/O Waits : .3:> . : .2:> . :
HISTDB : 20.0:-----> . : .20.0:----->
D1B80002 : .30:-----> . : .30
MVS Waits: : 3.2:> . : 2.0:
CPU Wait (DEP) : 3.20:> . : 2.00:----->
Program Fetch I/O : 0: . : 0:
    
```

Below this, a table titled 'IMS Address Spaces' provides a summary of the workload:

IMS ID	Job Name	Type	Swapped Out	CPU Time	CPU Percentage	TCB CPU Time	TCB CPU Percentage	SRB CPU Time	SRB CPU Percentage	Task Elapsed Time	Common Page-Ins	Common Page-In Rate	Private Page-Ins	Pr Pa F
IMSA	IMSAMAST	Control	No	41.43	0.00	31.03	0.00	0.50	0.00	4 Days	1	0.0	0	
IMSA	IMSADLI	DL/I SAS	No	0.08										
IMSA	IMSADBRC	DBRC	No	0.08										
IMSA	IMSAIRLM	IRLM	No	42.80										
IMSA	CICSAOR1	DBCTL	No	34,603.80										

DEXAN data based on groups defined in KOIGBLxx macro
 Recommendation - For DBCTL workload create program based groups in KOIGBLxx

Situation Example – Monitor Thread Usage

The screenshot displays the 'Situations for - IMS DBCTL Thread Summaries' window. On the left, a tree view lists various system attributes, with 'IMS_Threads_Active_High' selected. The main area shows the configuration for this situation:

- Description:** IMS Threads Active High
- Formula:** A table with columns 'Active' and 'Threads'. Row 1 contains '> 127'.
- Select condition dialog:** Shows 'Attribute Comparison' selected. The 'Attribute Group' is 'DBCTL Thread Summaries' and the 'Attribute Item' is 'Active Threads'.

This product provided situation may be customized to monitor thread usage and to monitor it by CICS jobname

The Value Of Using The Tivoli Enterprise Portal To Manage This Environment

- Provides an integrated overview of CICS and IMS processing and activity
 - ▶ See the 'BIG PICTURE' from a single screen
 - Integrated graphical overview with alerts
 - Integrated technical view with detailed information
 - ▶ Speed problem notification
 - ▶ Improve problem isolation
 - Is the problem in CICS or IMS or somewhere else?
 - ▶ Automate notification and problem correction
- Dynamic navigation and ease of use
- Historical and real time analysis

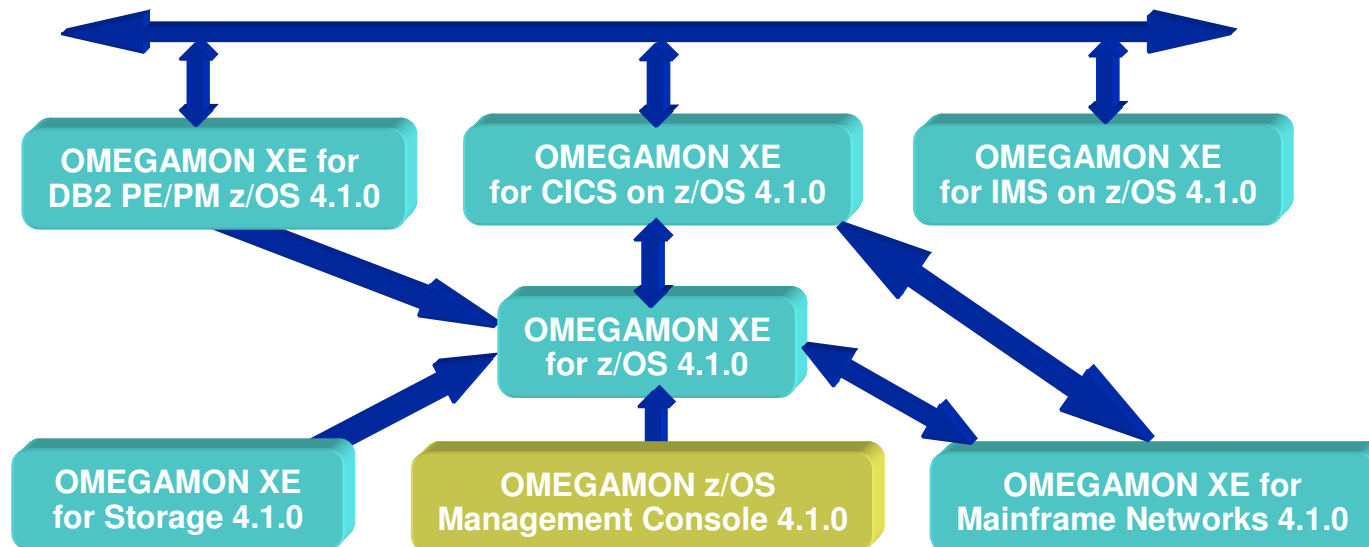


V4.1 Added Dynamic Workspace Linking Functionality To The z/OS Monitoring Solutions

Problem: How do I quickly find a potential problem that requires multiple monitoring products?

Scenario: Dynamically link **IN CONTEXT** between various monitoring technologies

Solution: Dynamic Workspace Linking
Product provided links & user customized links



Examples

Product Provided Dynamic Workspace Links With V4.1

- OMEGAMON XE On z/OS
 - ▶ TN3270 Server Sessions, Applications, TCP Listeners, TCP Listeners, Applications
- OMEGAMON XE For CICS
 - ▶ Temporary Storage Queues, Log Stream Analysis, Transaction Analysis, Transaction Analysis, DB2 Summary, DBCTL Summary, TCPIP Statistics, Message Queuing Analysis
- OMEGAMON XE For IMS
 - ▶ IMS Dependent Regions, IMS Dependent Regions, IMS DBCTL Thread Details, Global Lock Conflicts
- OMEGAMON XE For DB2 PM/PE
 - ▶ Enclave Thread Summary, Thread Enclave, IMS Thread Summary, Thread Detail, Detailed Thread Exception, CICS Thread Summary, Thread Detail, Detailed Thread Exception
- OMEGAMON XE For z/VM and Linux
 - ▶ Linux Workload and ApplData



Dynamic Workspace Links Between IMS And CICS

DBCTL Detailed Thread Activity (Active) - IBM-1E47754C52F - SYSADMIN

View: Physical

Elapsed Times

Enqueues and Dequeues

OMEGAMON XE For IMS DBCTL thread detail

Thread ID	Region ID	PSB Name	Thread State	Thread Status	CICS Jobname	CICS Transaction ID	CICS Task Number	CICS Terminal ID	Database I/O Count	DLI Call Count	Elapsed Thread Time	Recovery Token	Elapsed Wait Time Poolspace	Elas Y T In
CICSL153	6	DFHSAM05	Active	Wait-IRLM	CICSL153	WD80	00149	M440	0	1	2180	BF70852892CA7D30	0.000000	0.00

Display Active Thread Call Statistics
 Display CICS Transaction Information

Bi-directional dynamic workspace link

Single Transaction Analysis - IBM-1E47754C52F - SYSADMIN

CPU versus Suspend Time

OMEGAMON XE For CICS CICS transaction detail

00149 Task number

Units of Work
 Online Data Viewing
 Transaction Details
 Storage Use
 Timings
 Statistics
 Transaction and Program Definition
 Transaction T8Queue Details
 Transaction File Details
 Umbrella Information
 Remote Information
 DBCTL Detailed Thread Execution
 Link Wizard...
 Link Anchor...

User ID	Terminal ID	Task Number	Resource Type	Resource Name	Task State	Elapsed Time	CPU Time	Program ID	Exceeds MAXR Threshold	D				
SYSL	CICSL153	L153	WD80	CICSUSER	M440	00149	DBCTL	DLSUSPND	Suspend	00:25:...	00:00:00	WKDL8D10	No	n/

Dynamic Workspace Link From IMS Lock Conflict To CICS Transaction Detail

**OMEGAMON XE For IMS
DBCTL lock conflict display**

Lock Status	Token	DB/Area Name	IMS ID	MVS ID	Jobname	PSBNAME	Transaction	Region	Region	Lock Elapsed	DCB	Lock	Elapsed Time	Locks Held	Database Updates
LockOwner	E3EB36C3	DI21PART	I91F	SYSL	IMSLK										
LockOwner	AF2392E7	DI21PART	I91F	SYSL	IMSLK										
LockWaiter	AF2392E7	DI21PART	I91F	SYSL	IMSLK										
LockWaiter	E3EB36C3	DI21PART	I91F	SYSL	IMS9F										

Display IMS DBCTL Thread Detail
 Display CICS Transaction Information

**OMEGAMON XE For CICS
CICS transaction detail**

System ID	CICS Region Name	CICS SYSIDNT	Transaction ID	User ID	Terminal ID	Task Number	Resource Type	Resource Name	Task State	Elapsed Time	CPU Time	Program ID	Exceeds MAXR Threshold	D
SYSL	CICSL153	L153	WD80	CICUSER	M440	00149	DBCTL	DLSUSPND	Suspend	00:25...	00:00:00	WKDL8D10	No	n/

Create An Integrated Graphic Overview Of CICS And IMS Activity

Note – Creating a custom graphic overview requires that OMEGAMON DE be enabled in the TEP

Custom navigation tree

Custom graphic overview with icons for alerts

CICS RTA

IMS Threads

CICS Region Name	Group Name	Response Time	Response Time 1 Minute Ago	Re 2
CICSL153	TRAN		00:00:00	
CICSL153	TRAN		00:00:00	
CICSL153	TRAN		00:00:00	
CICSL153	TRAN		00:00:00	

Thread ID	CICS Jobname	Active Thread	Available	Unavailable	Indoubt
CICSL153	CICSL153				

Create An Integrated Technical CICS And IMS Workspace

The screenshot displays the 'Response Time Analysis - IBM-1E47754C52F - SYSADMIN' application. It features a navigation tree on the left and several data tables in the main workspace:

- IMS Regions:** A table showing region details. A red box labeled 'IMS region activity' highlights the first five rows.
- IMS DBs:** A table showing database status. A red box labeled 'IMS DB status' highlights the first five rows.
- IMS Lock Conflicts:** A table showing lock conflict details. A red box labeled 'IMS lock conflicts' highlights the first five rows.
- CICS Transactions:** A table showing transaction response times. A red box labeled 'CICS response time' highlights the first five rows.
- CICS Tasks:** A table showing task details. A red box labeled 'CICS tasks' highlights the first five rows.
- DBCTL Threads:** A table showing thread status. A red box labeled 'DBCTL threads' highlights the first five rows.

At the bottom, the status bar shows 'Hub Time: Sun, 12/09/2007 11:01 PM', 'Server Available', and 'Response Time Analysis - IBM-1E47754C52F - SYSADMIN'.

Use The Portal To See IMS Historical Performance Data

Click to select desired time intervals

Select the Time Span

Real time

Last Hours

Last parameters

Use detailed data

Time Column: Recording Time

Use summarized data

Shift: All shifts

Days: All days

Custom

Use detailed data

Time Column: Recording Time

Use summarized data

Interval: Hours

Shift: All shifts

Days: All days

Start Time: 10/27/2006 10:53 AM

End Time: 10/27/2006 10:53 AM

Apply to all views associated with this view

History data showing recording time. Data is viewable and sortable.

File Edit View Help

View: Physical

IVP1:SYS1:IMS

- IMS Address Spaces
- IMS Connect CPU Usage
- IMS Coupling Facility Data Sh
- IMS DASD Logging
- IMS Dependent Regions
- IMS Delete Activity
- IMS Extended Recovery Faci
- IMS External Subsystems
- IMS Fast Path Balancing Gro
- IMS Fast Path DEDB Activity
- IMS Fast Path MSDB Informa
- IMS Fast Path Regions

IMS ID	Job Name	Type	Swapped Out	CPU Time	CPU Percentage	TCB CPU Time	TCB CPU Percentage
IVP1	IMS91CR1	Control	No	323.77	0.18	244.84	0.14
IVP1	IMS91DL1	DLI_SAS	No	0.66	0.00	0.51	0.00
IVP1	IMS91DL1	DBRC	No	1.08	0.00	0.99	0.00
IVP1	IMS			.73	0.34	0.28	0.00
IVP1	IMS			.24	0.00	0.20	0.00

Welcome to ADMIN

Tivoli Enterprise Portal

File Edit View Help

IMS Address Spaces

Recording Time	IMS ID	Job Name	Type	Swapped Out	CPU Time	CPU Percentage	TCB CPU Time	TCB CPU Percentage	SRB CPU Time	SRB CPU Percentage
10/27/06 08:15:00	IVP1	IMS91CR1	Control	No	312.88	0.18	236.61	0.14	76.27	0.04
10/27/06 08:00:00	IVP1	IMS91CR1	Control	No	311.18	0.18	235.32	0.14	75.86	0.04
10/27/06 07:45:00	IVP1	IMS91CR1	Control	No	309.48	0.19	234.04	0.15	75.44	0.04
10/27/06 07:30:00	IVP1	IMS91CR1	Control	No	307.76	0.18	232.74	0.14	75.02	0.04
10/27/06 07:15:00	IVP1	IMS91CR1	Control	No	306.05	0.18	231.45	0.14	74.60	0.04
10/27/06 07:00:00	IVP1	IMS91CR1	Control	No	304.35	0.18	230.16	0.14	74.19	0.04
10/27/06 06:45:00	IVP1	IMS91CR1	Control	No	302.65	0.19	228.88	0.15	73.77	0.04
10/27/06 06:30:00	IVP1	IMS91CR1	Control	No	300.99	0.18	227.62	0.14	73.37	0.04
10/27/06 07:30:00	IVP1	IMS91DL1	DLI_SAS	No	0.66	0.00	0.51	0.00	0.15	0.00
10/27/06 06:45:00	IVP1	IMS91DL1	DLI_SAS	No	0.66	0.00	0.51	0.00	0.15	0.00
10/27/06 07:15:00	IVP1	IMS91DL1	DLI_SAS	No	0.66	0.00	0.51	0.00	0.15	0.00



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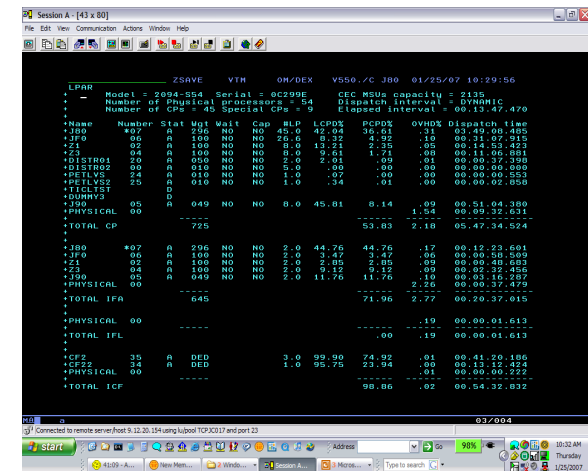
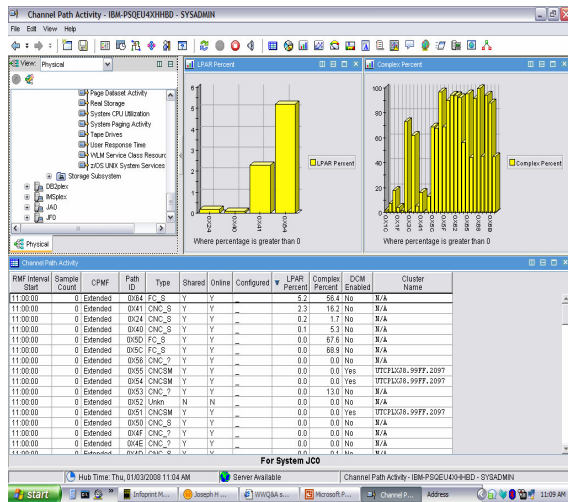
What's Coming – OMEGAMON V4.2.0 Launch in Context

Coming in 4.2.0

OM XE for z/OS, CICS, IMS, DB2

From Tivoli Enterprise Portal

To 3270



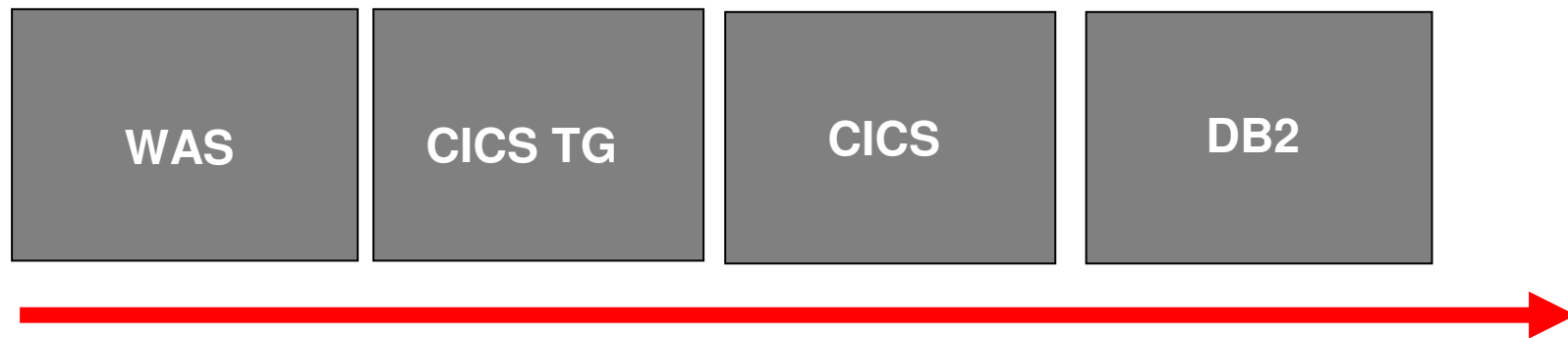
OMEGAMON XE for CICS on z/OS V4.1.0 Interim Features And V4.2.0

- **V4.1.0 Interim Features**
 - ▶ **08 Summer**
 - **Enhancements to OMEGAMON XE for CICS on z/OS v4.1.0**
 - **TEP reports to take advantage of TEP “1 minute history”**
 - **Dynamic Workspace Links from TEP reports to 3270**
 - **Initially TRANSACTION ANALYSIS and ONDV**
 - ▶ **08 Year end**
 - **Integration of OMEGAMONs using ITCAM for Transactions**
- **V4.2.0 – Please note – some of these items may be subject to change**
 - ▶ **Historical linking between products**
 - ▶ **Restructuring of product workspaces**
 - ▶ **Active Transactions SNAPSHOT capability**
 - ▶ **Service Level Analysis enhancements**
 - ▶ **Resource Limiting enhancements**
 - ▶ **New CICS TS release support**



ITCAM For Transactions

An 'integrated' view of an application – transaction tracking



Using the ITCAM for Transaction Trace we start to build a picture of the application's 'flow'.

Using ITCAM as a starting point gives us WAS, J2EE etc.

OMEGAMON XE for IMS on z/OS

V4.2.0

- **Please note – specific items and time lines may be subject to change**
 - ▶ **Some items may appear in subsequent maintenance after V420 GA**
- **Product Simplification**
 - ▶ **Enable Classic/CUA only data within XE TEP**
- **Transaction History**
 - ▶ **Improve collection performance and collect additional application information**
- **Integrated zApplication Trace with ITCAM for IMS key technology**
- **Improved performance by streamlining data collection**
- **Improved ICAT configuration**
- **Bottleneck Analysis in Tivoli Enterprise Portal**
 - ▶ **Competing, Non-Competing, Executing - Short and Long term**
- **Full RTA Support in Tivoli Enterprise Portal**
 - ▶ **Response Time Monitor**
 - ▶ **Display 10 worst performing transactions**
 - ▶ **Interval Response Time**



Summary

- OMEGAMON And The Tivoli Enterprise Portal (the TEP) provide an integrated management capability
- When defining a performance and availability management strategy consider an integrated approach
- OMEGAMON and the TEP continue to be enhanced and expanded



Thank You!!

