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

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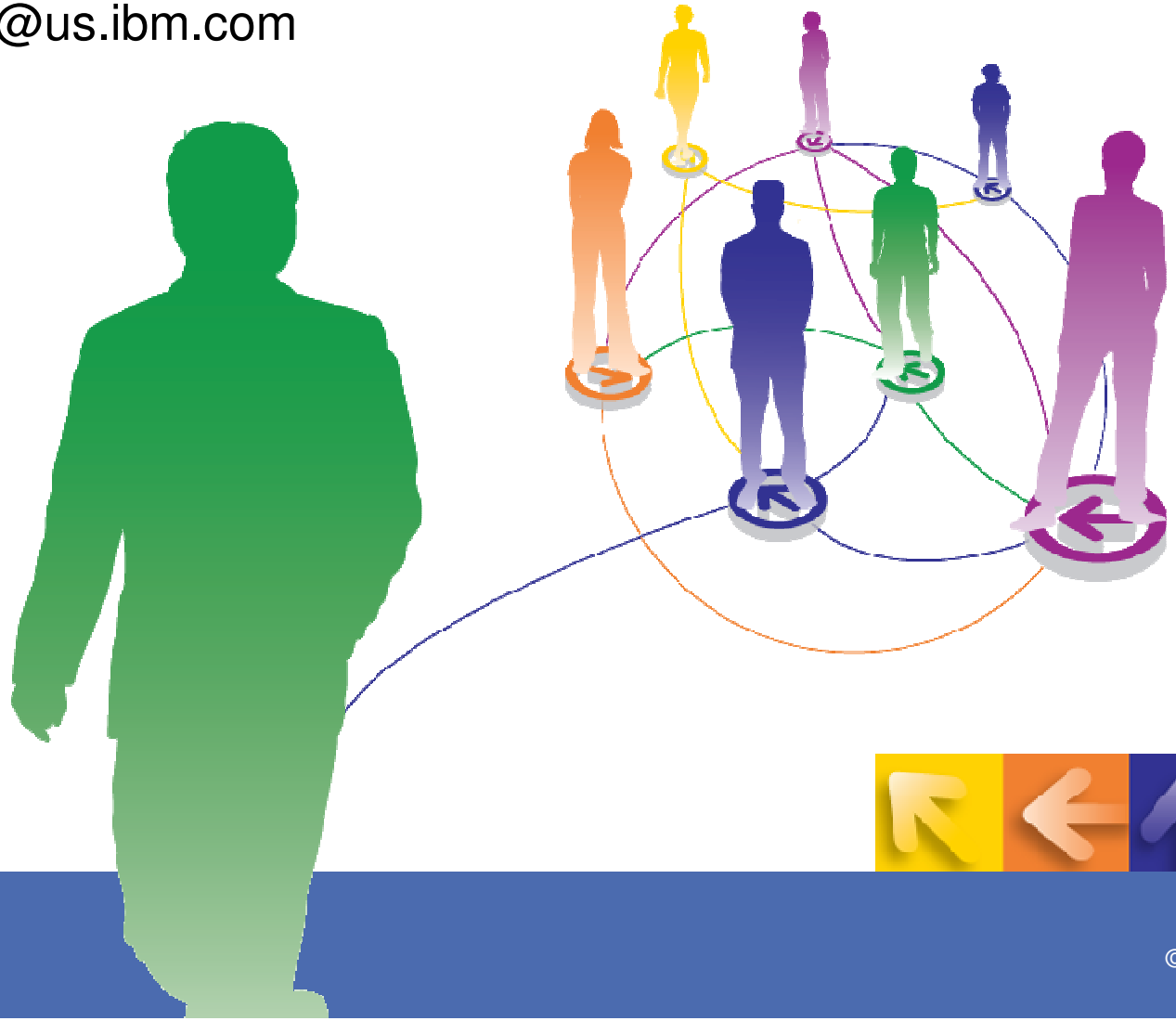


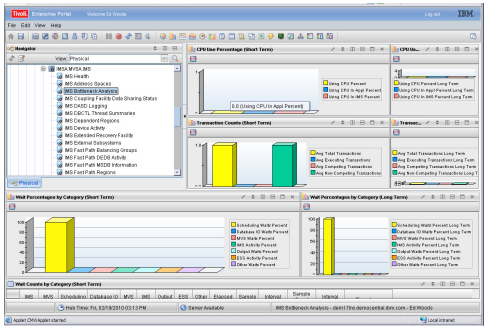
OMEGAMON XE For IMS on z/OS V4.20 Components And Facilities

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
- **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

OMEGAMON V4.20 and ITM 6.22 adds new function and capability

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
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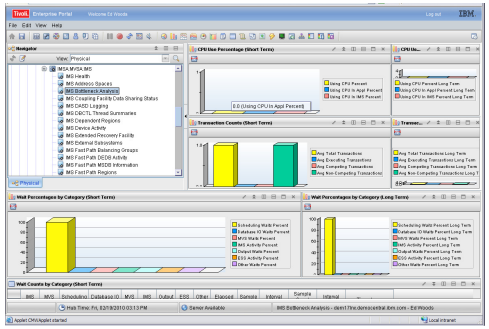
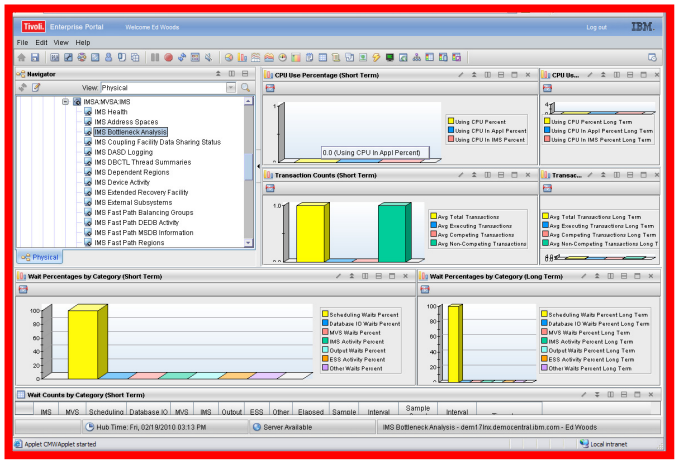
  - Snapshot historical stored in the Tivoli Data Warehouse
  - Reporting, trending, baselines



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

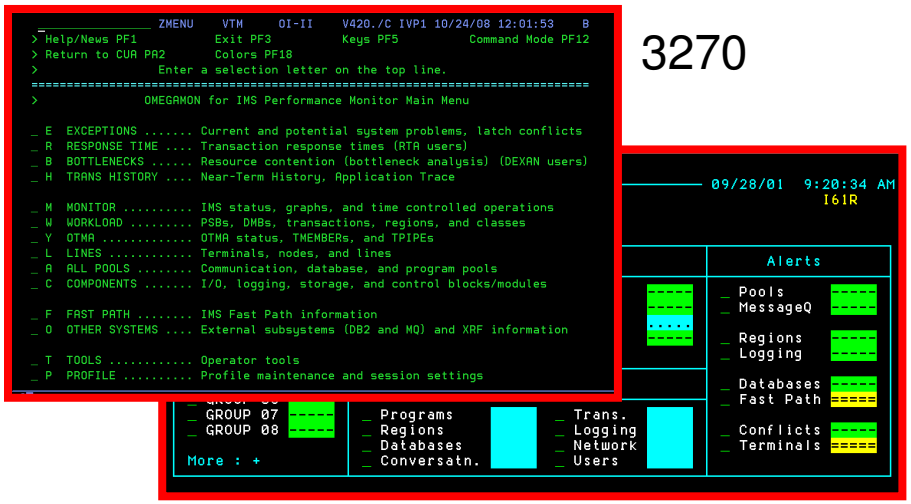
- **OMEGAMON XE GUI Interface**
  - Java client or browser - Tivoli Portal
  - Real time and historical
  - Automation & alerts
  - Multi-system Plex level information (CF, n-way, MSC, Shared queues, Global locking, IMS Connect)



Tivoli Enterprise Portal

OMEGAMON 3270 Classic and CUA

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



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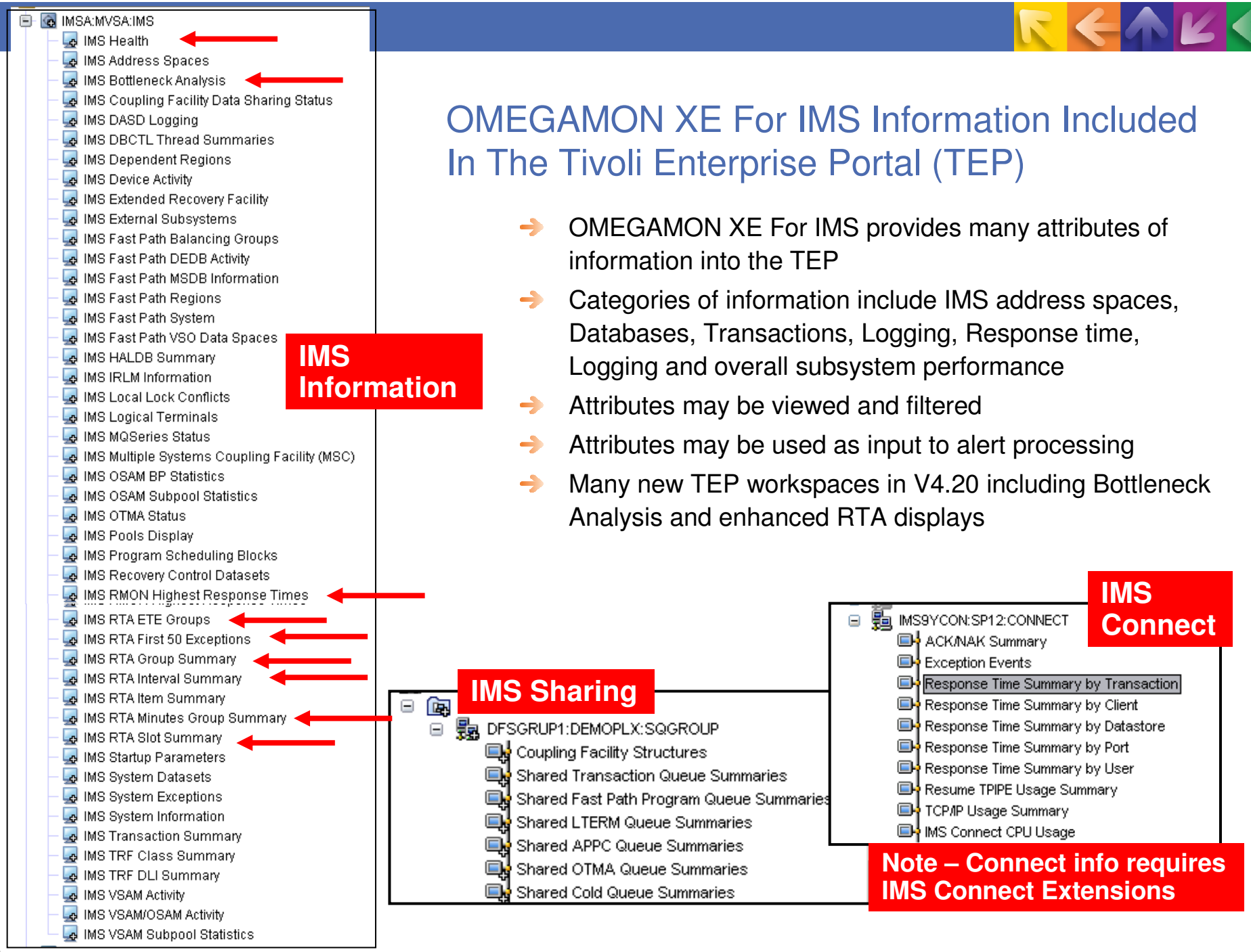
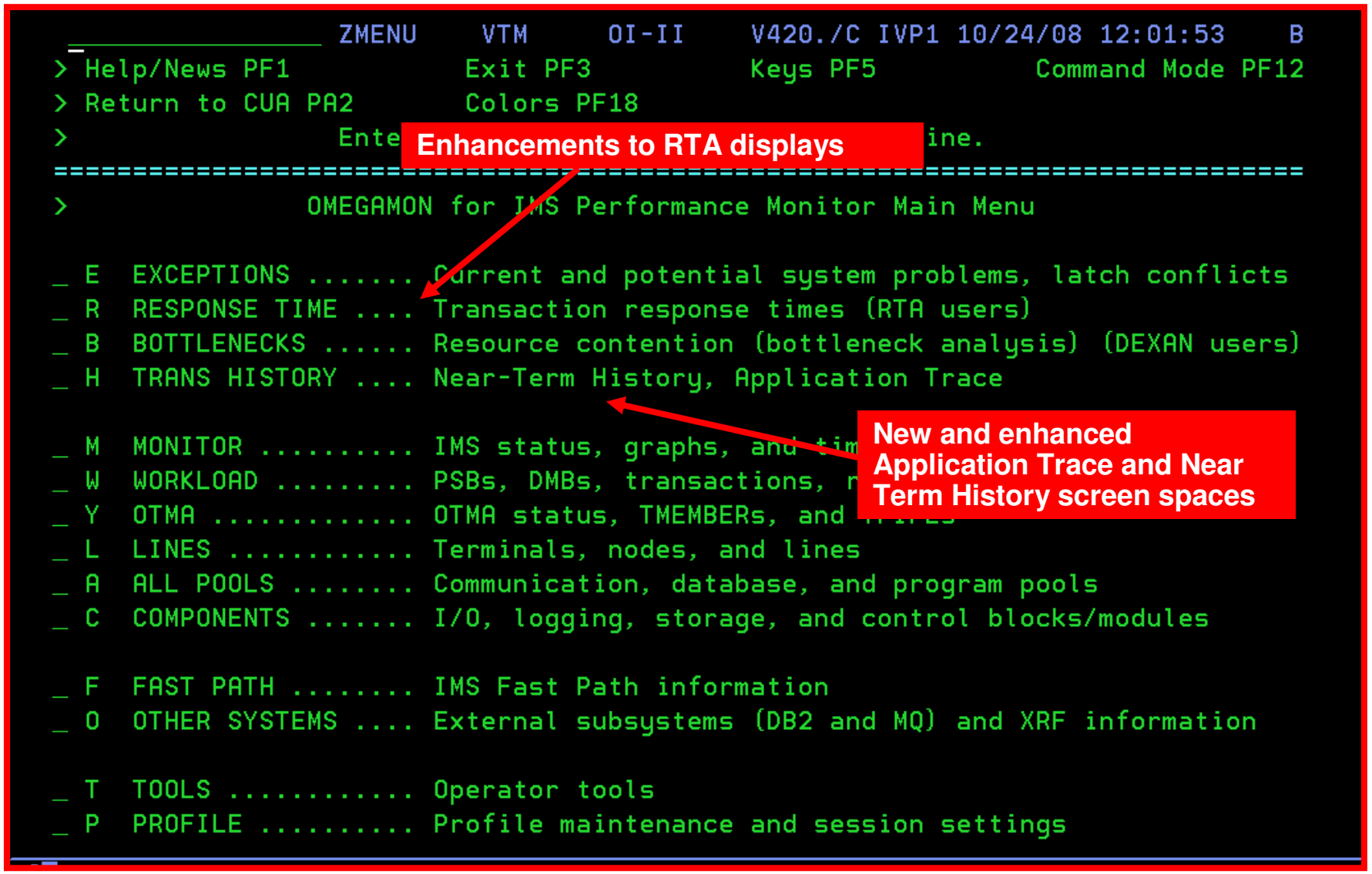
OMEGAMON XE For IMS Information Included In The Tivoli Enterprise Portal (TEP)

- 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



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



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

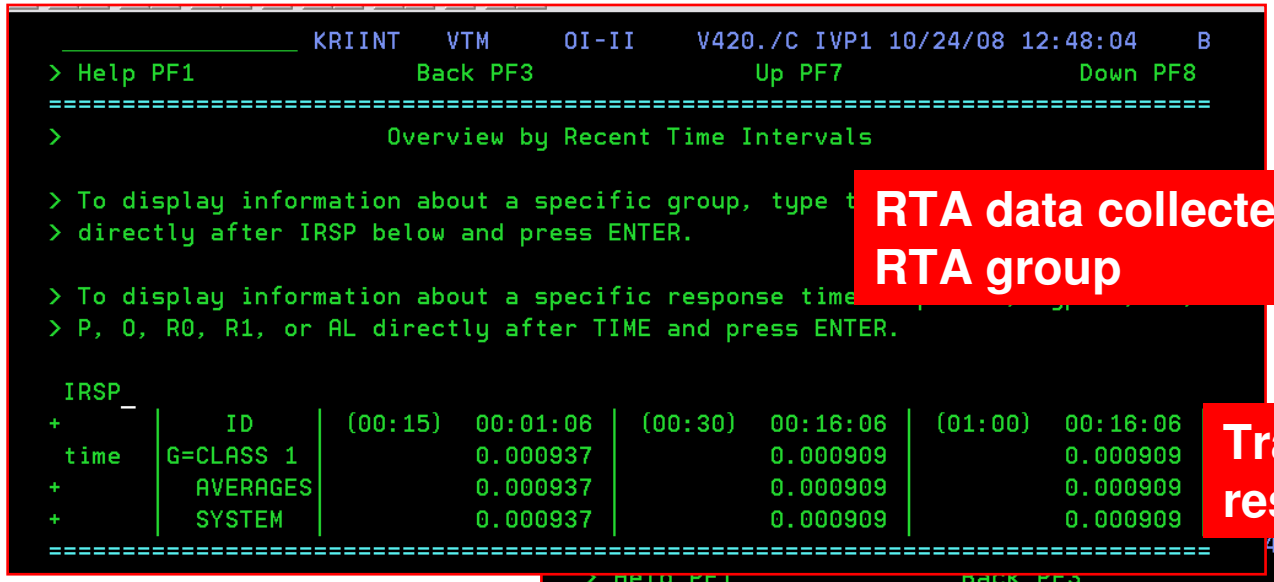
OMEGAMON XE for IMS on z/OS v4.20 Enhancements To Core Monitoring

- 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

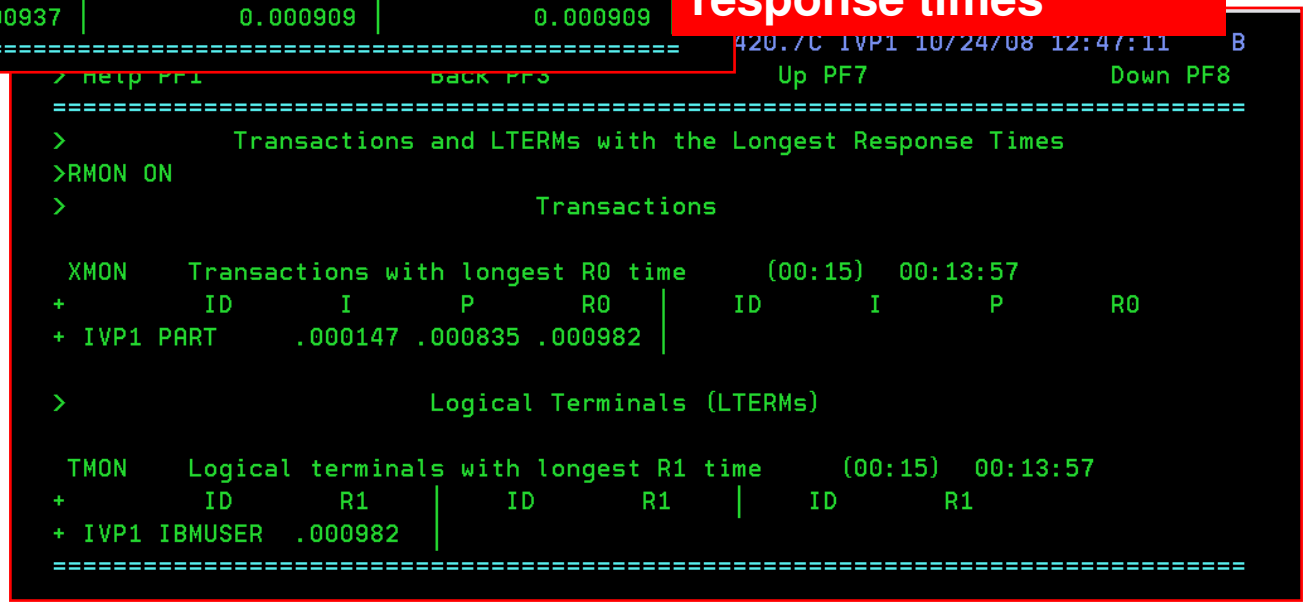
- Bottleneck Analysis information added to the Tivoli Portal
  - Take advantage of the power of the TEP to analyze IMS bottlenecks
- Response Time Analysis support expanded in the Tivoli Portal
  - More detail, precision, and workspaces
- Lock detail expanded in the Tivoli Portal
  - Supports both IRLM 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



RTA data collected by RTA group

Trans with longest response times

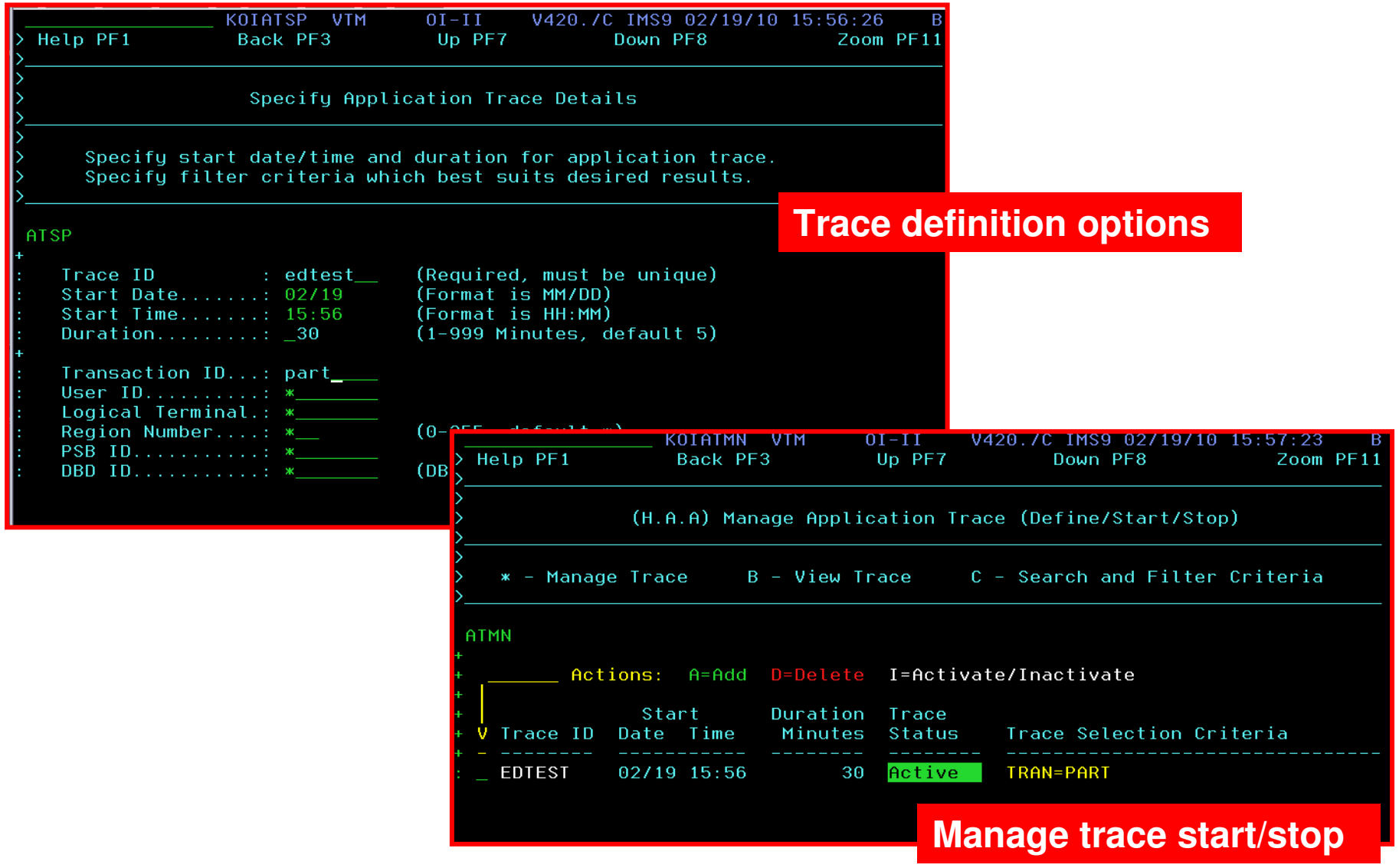


RTA groups defined by command or KOIGBLxx macro definition. May group trans based on business/technical needs and use wild cards.

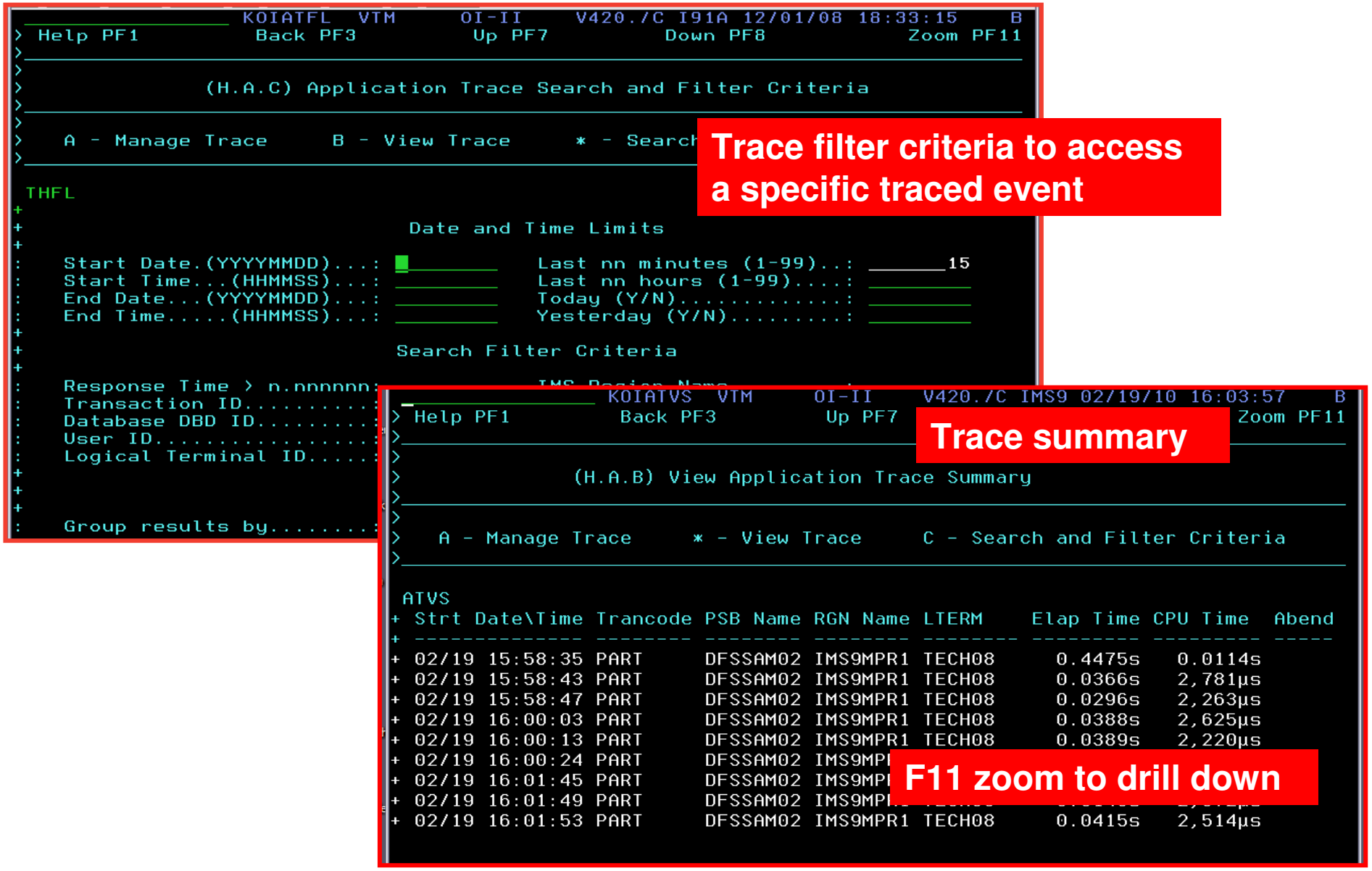
More On The Application Trace Facility And Near Term History

- 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

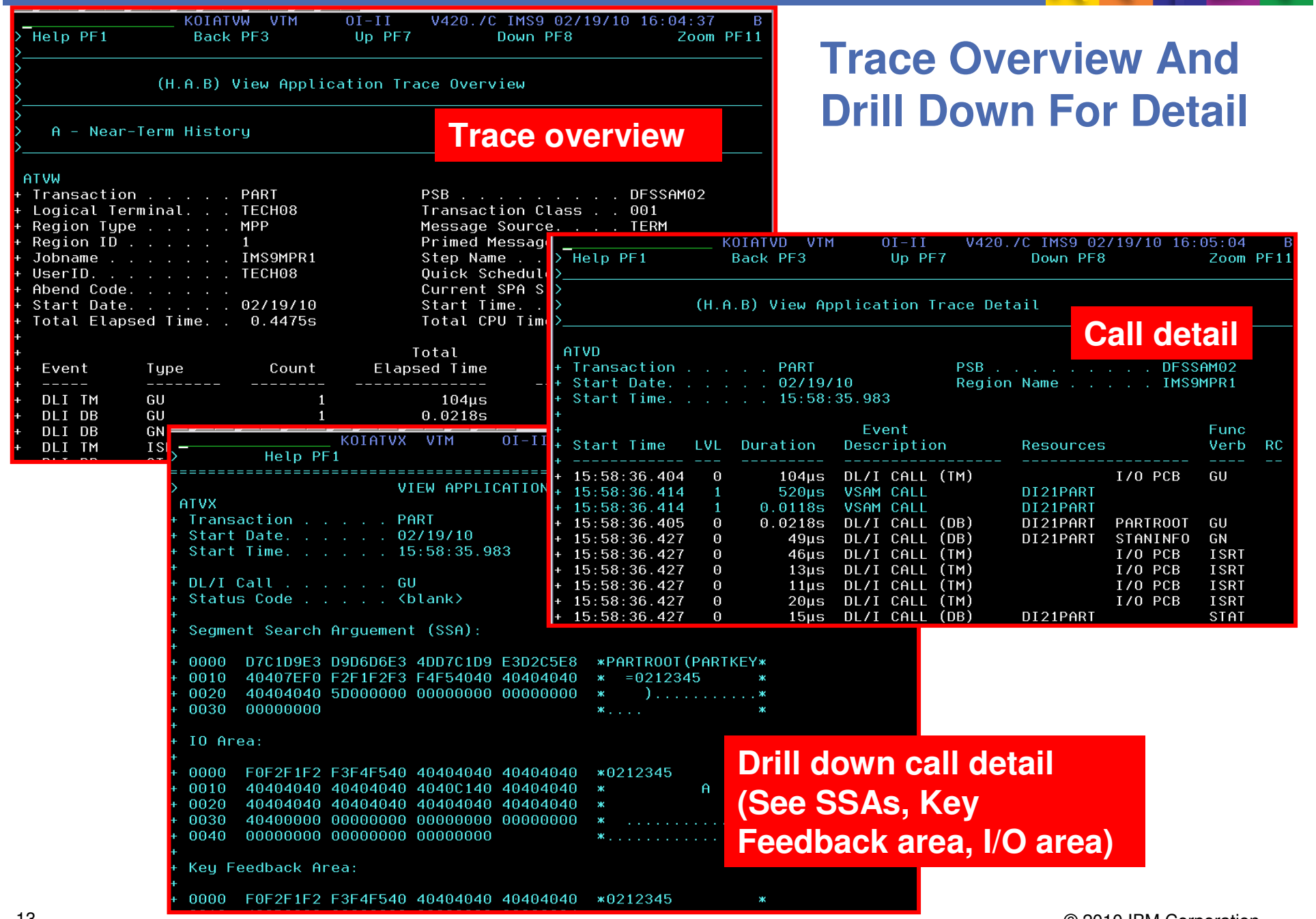
Application Trace Facility - Specifying A Trace



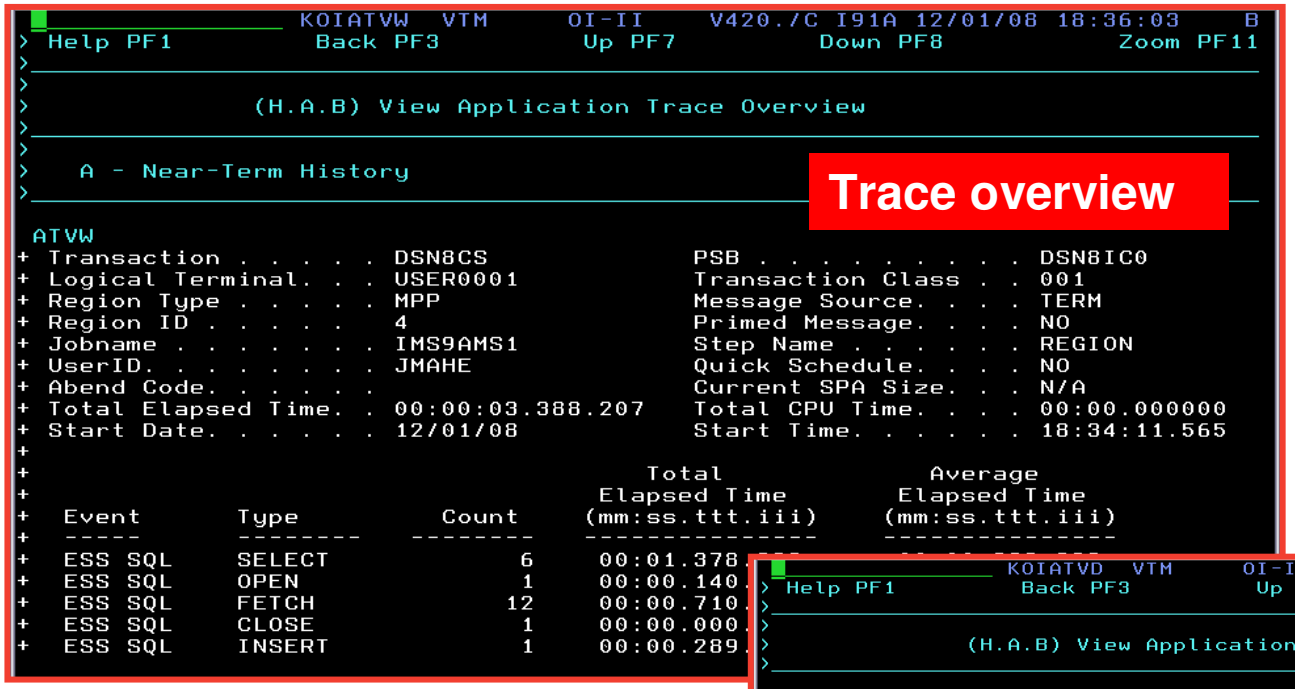
Application Trace Search And Filter

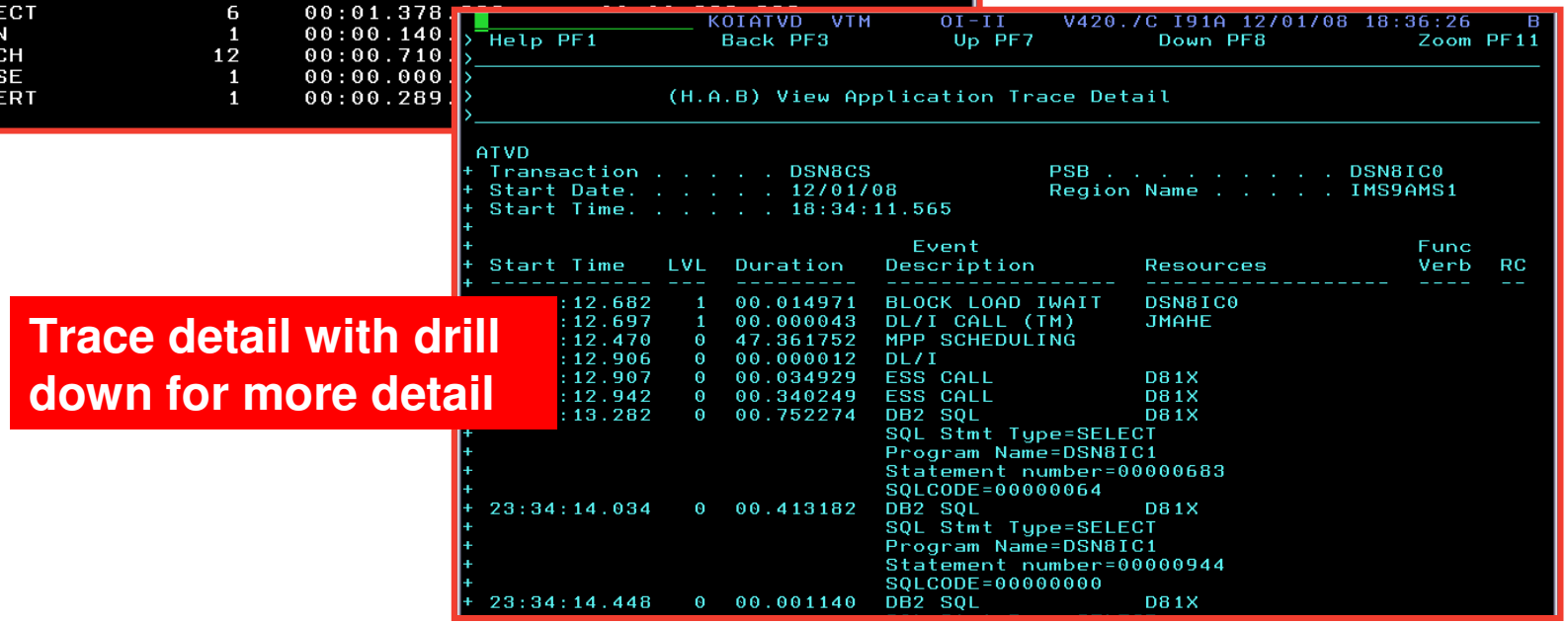


Trace Overview And Drill Down For Detail



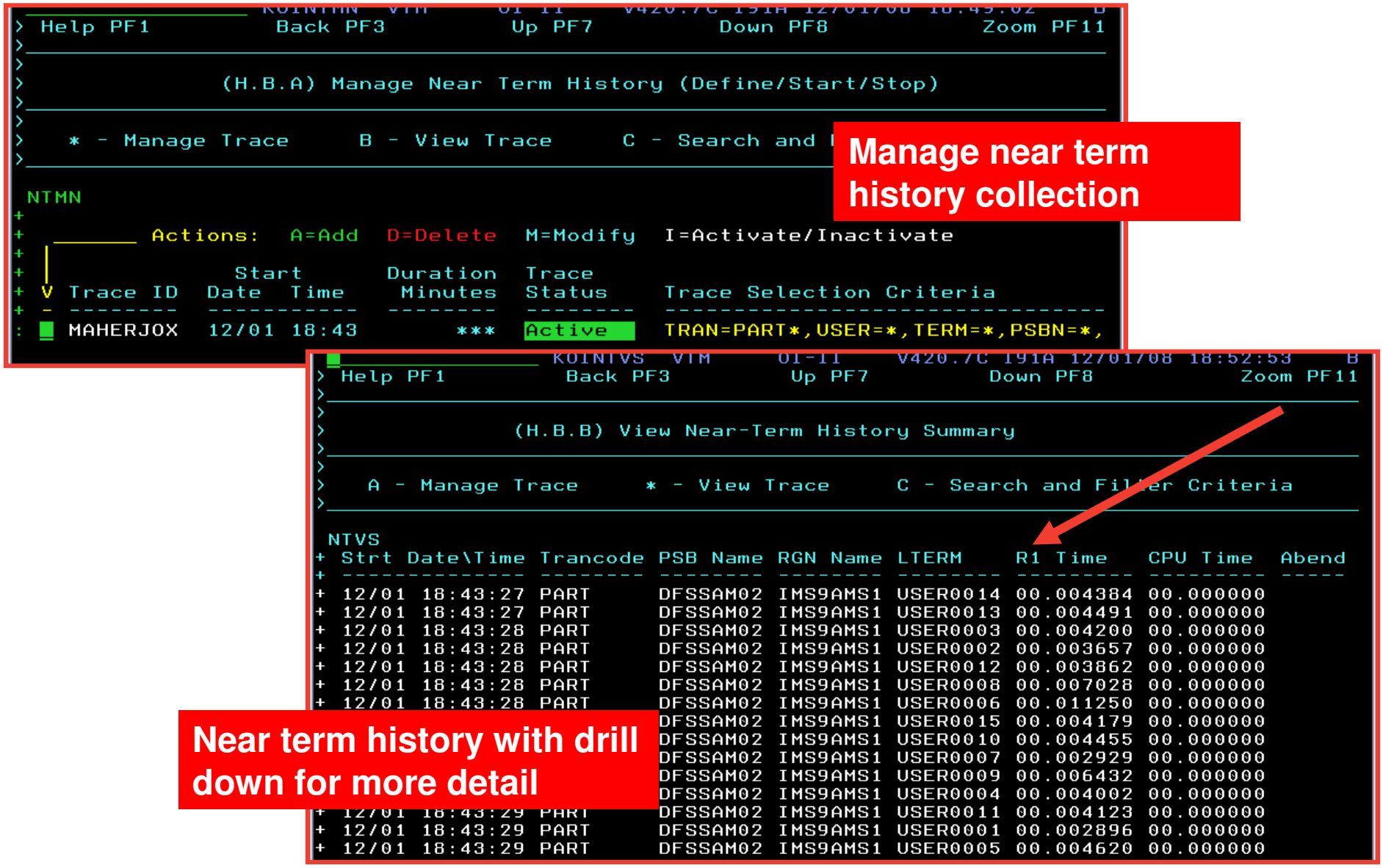
Application Trace - IMS/DB2 Trace Example



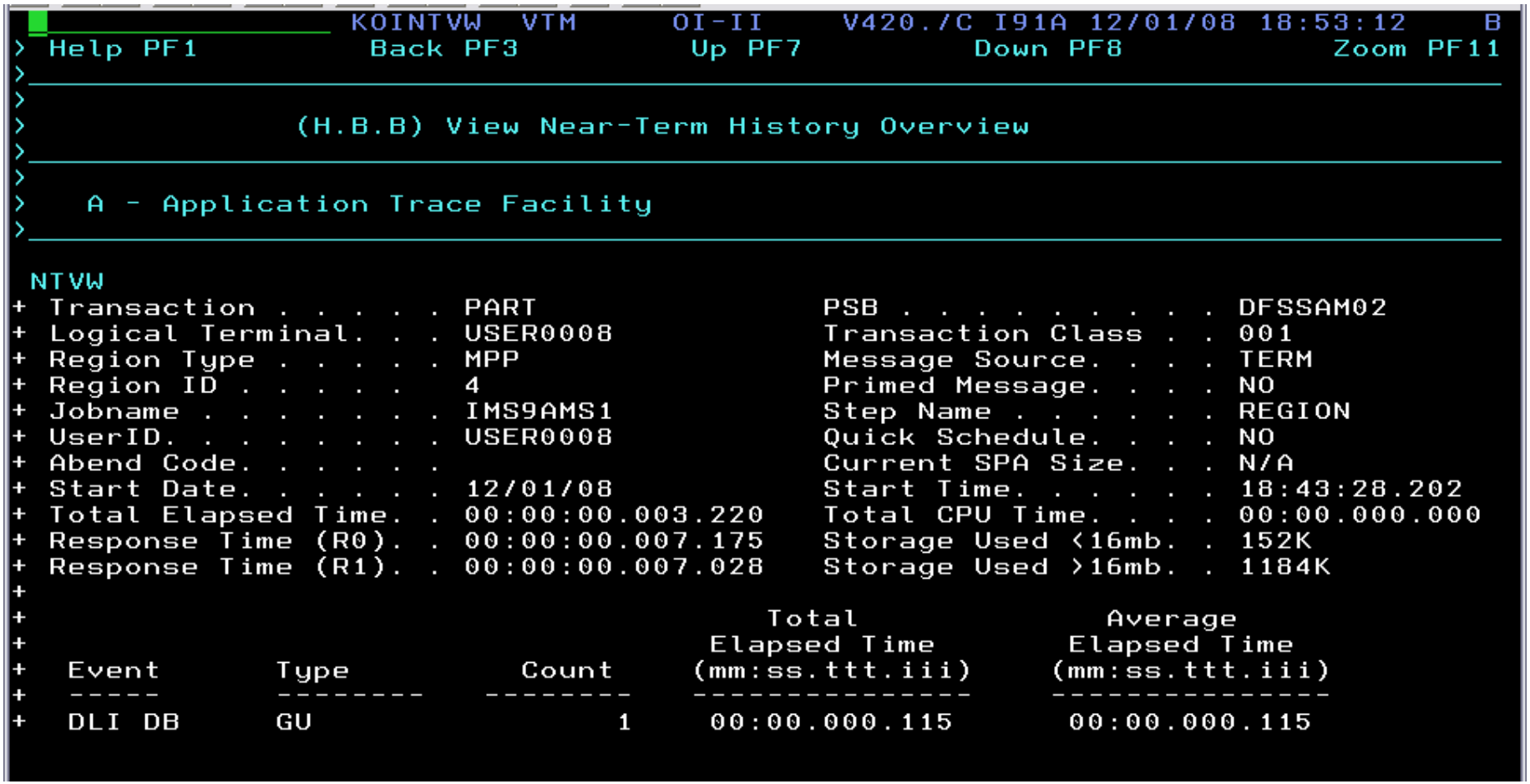


Trace detail with drill down for more detail

Near Term History Of IMS Transactions



Drill Down To See Near Term History Data

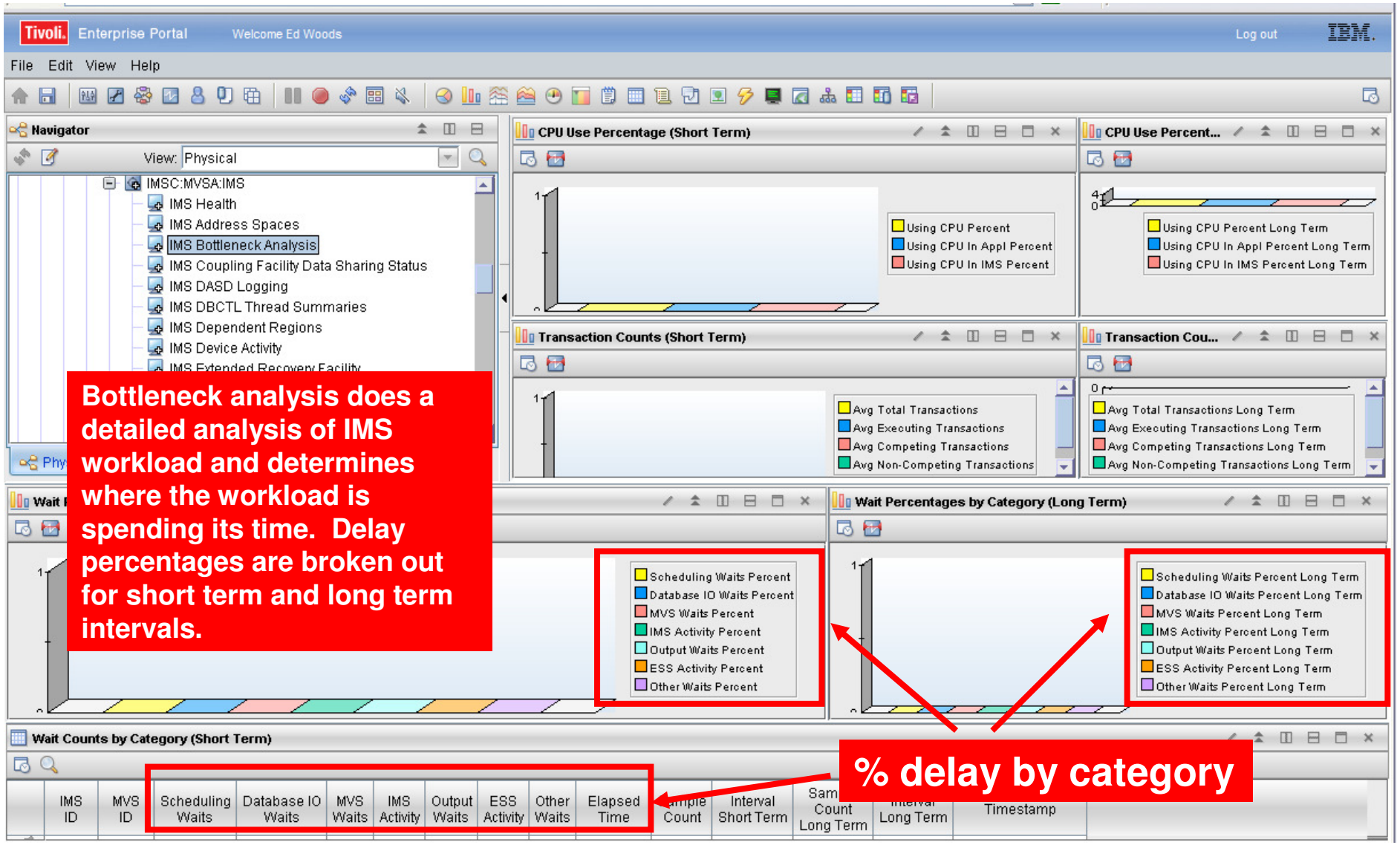


Journal Logging Facility - Interface And Control

Journal Logging Facility

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.

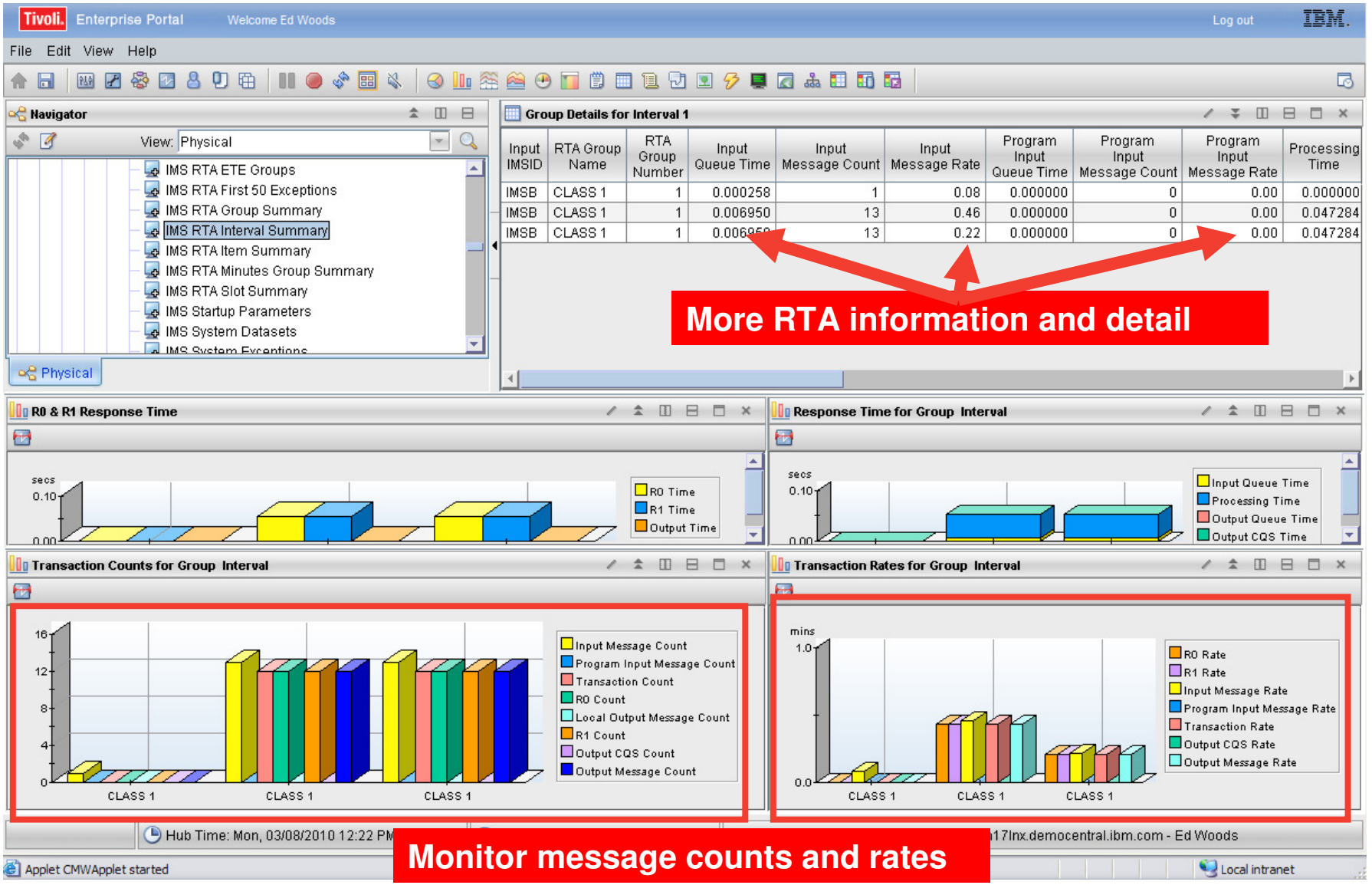
Enhancements To Tivoli Enterprise Portal
Bottleneck Analysis Information Added To The Tivoli Portal



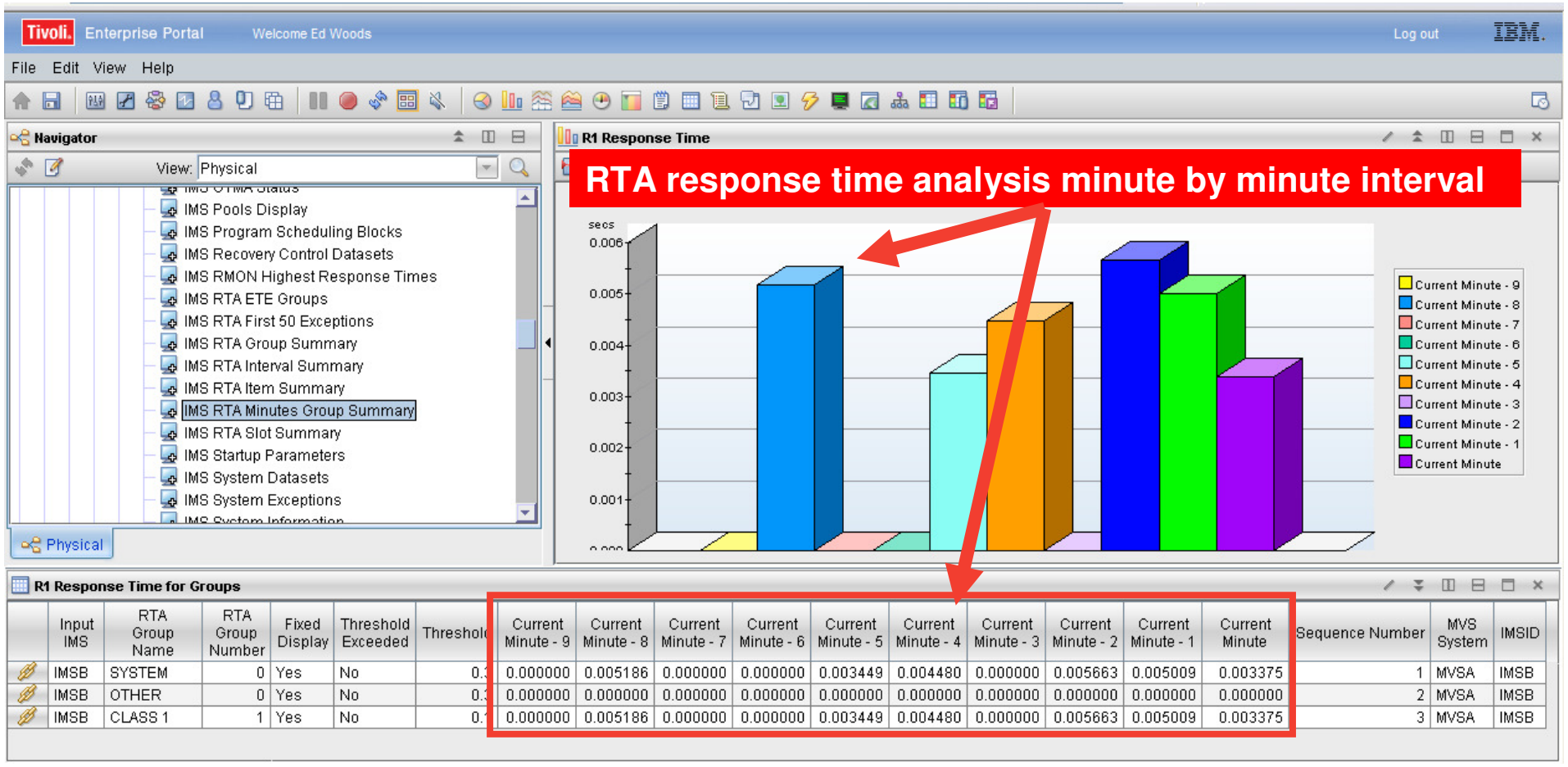
Bottleneck analysis does a detailed analysis of IMS workload and determines where the workload is spending its time. Delay percentages are broken out for short term and long term intervals.

% delay by category

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



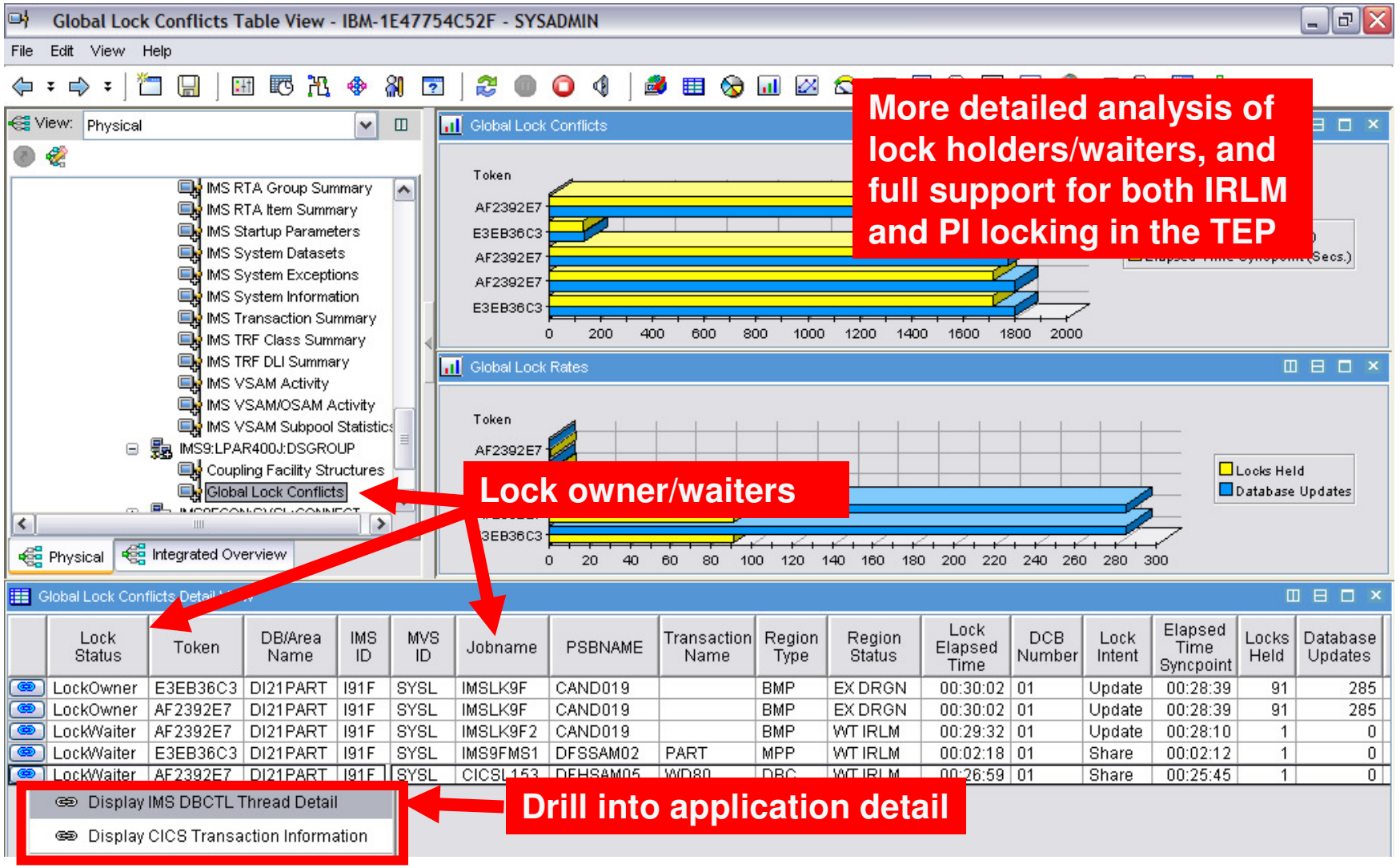
Response Time Analysis In The Tivoli Enterprise Portal
More Complete RTA Support In The TEP



Input IMS	RTA Group Name	RTA Group Number	Fixed Display	Threshold Exceeded	Threshol	Current Minute - 9	Current Minute - 8	Current Minute - 7	Current Minute - 6	Current Minute - 5	Current Minute - 4	Current Minute - 3	Current Minute - 2	Current Minute - 1	Current Minute	Sequence Number	MVS System	IMSID
IMSB	SYSTEM	0	Yes	No	0.	0.000000	0.005186	0.000000	0.000000	0.003449	0.004480	0.000000	0.005663	0.005009	0.003375	1	MVSA	IMSB
IMSB	OTHER	0	Yes	No	0.	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	2	MVSA	IMSB
IMSB	CLASS 1	1	Yes	No	0.	0.000000	0.005186	0.000000	0.000000	0.003449	0.004480	0.000000	0.005663	0.005009	0.003375	3	MVSA	IMSB

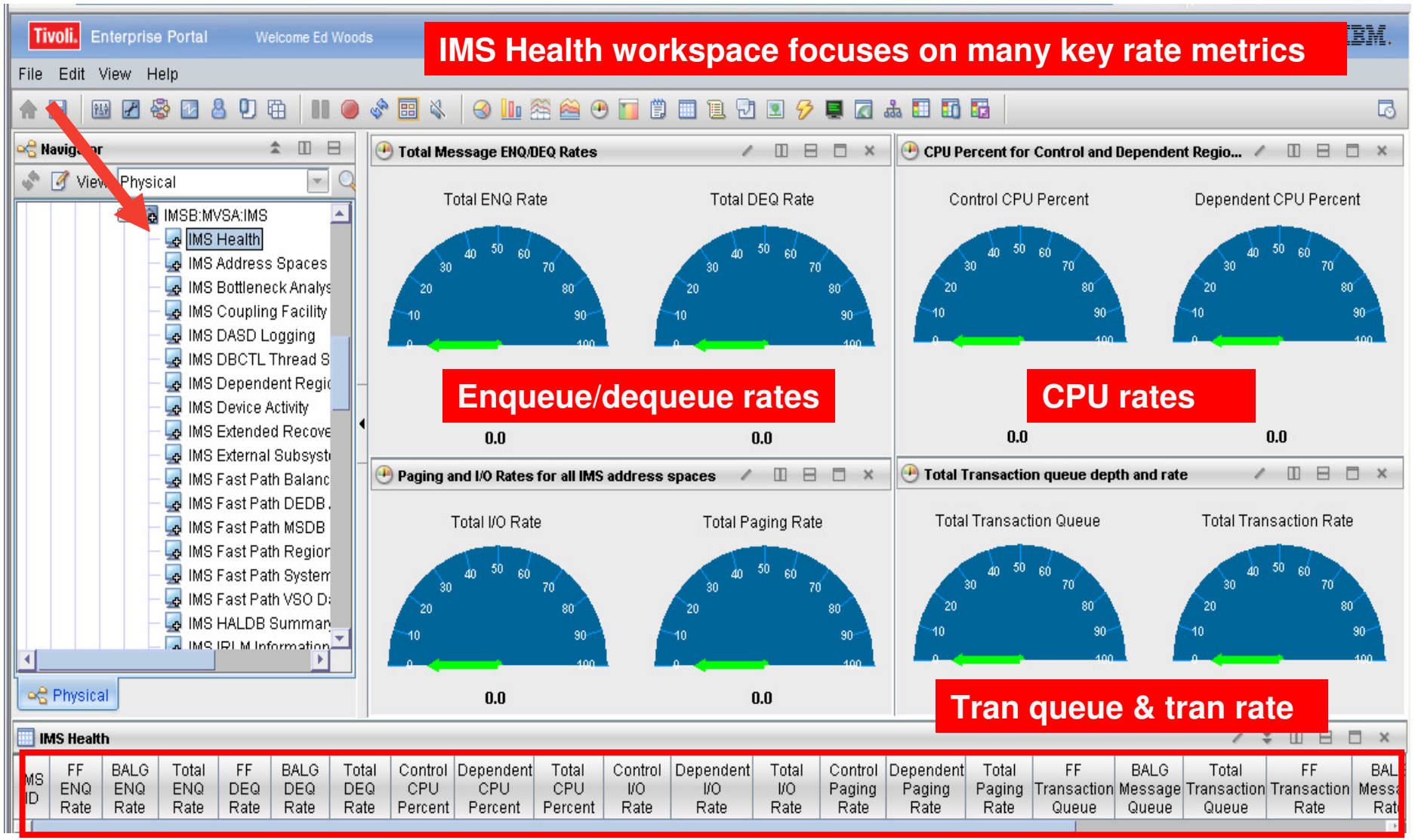
More detail, more precision, more options for analysis

More Lock Analysis Information In The TEP

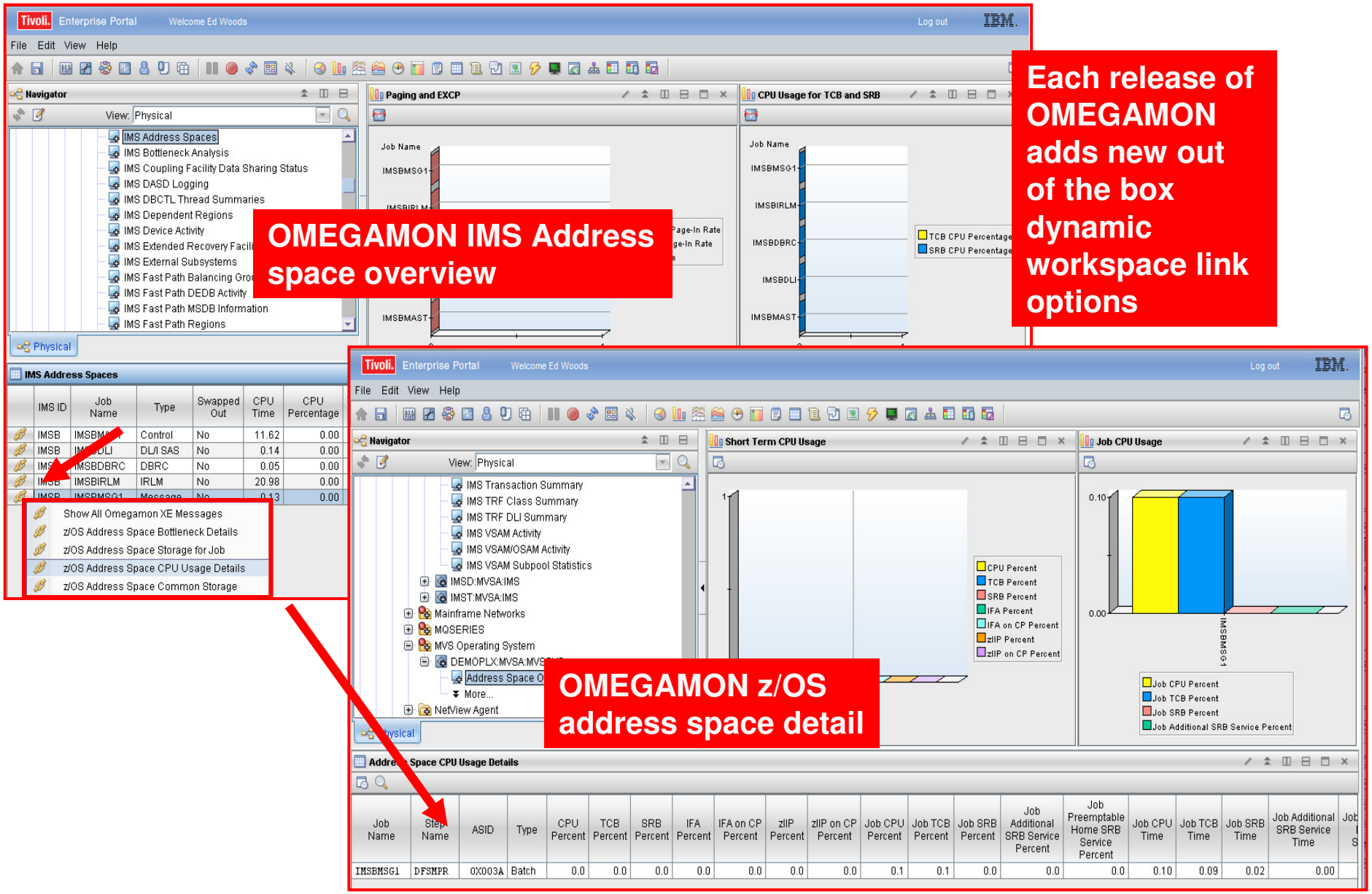


Lock Status	Token	DB/Area Name	IMS ID	MVS ID	Jobname	PSBNAME	Transaction Name	Region Type	Region Status	Lock Elapsed Time	DCB Number	Lock Intent	Elapsed Time Syncpoint	Locks Held	Database Updates
LockOwner	E3EB36C3	DI21PART	I91F	SYSL	IMSLK9F	CAND019		BMP	EX DRGN	00:30:02	01	Update	00:28:39	91	285
LockOwner	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	DFHSAM05	WD80	DBC	WT IRLM	00:26:59	01	Share	00:25:45	1	0

New IMS Health Workspace

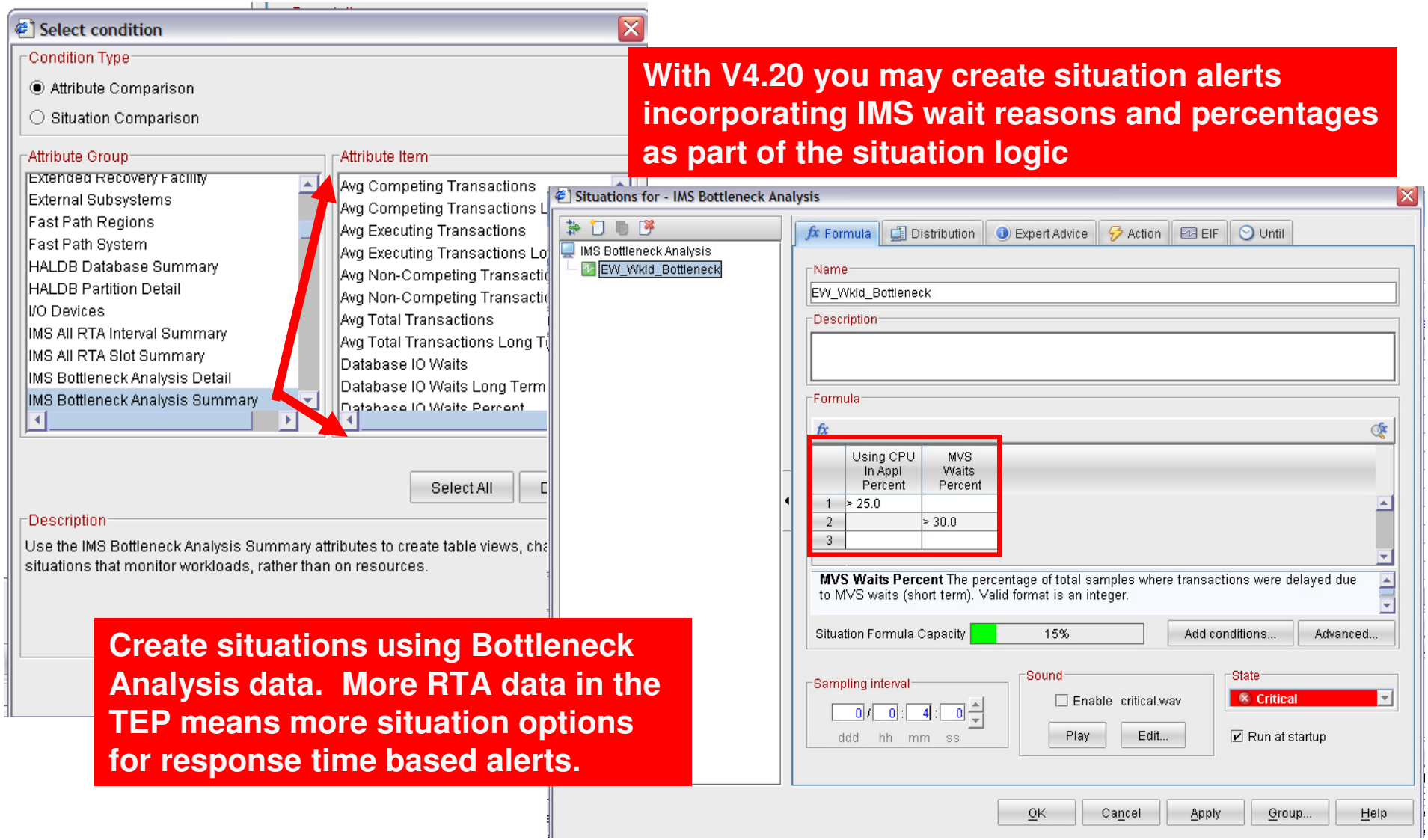


Dynamic Workspace Links Expands Integration Options



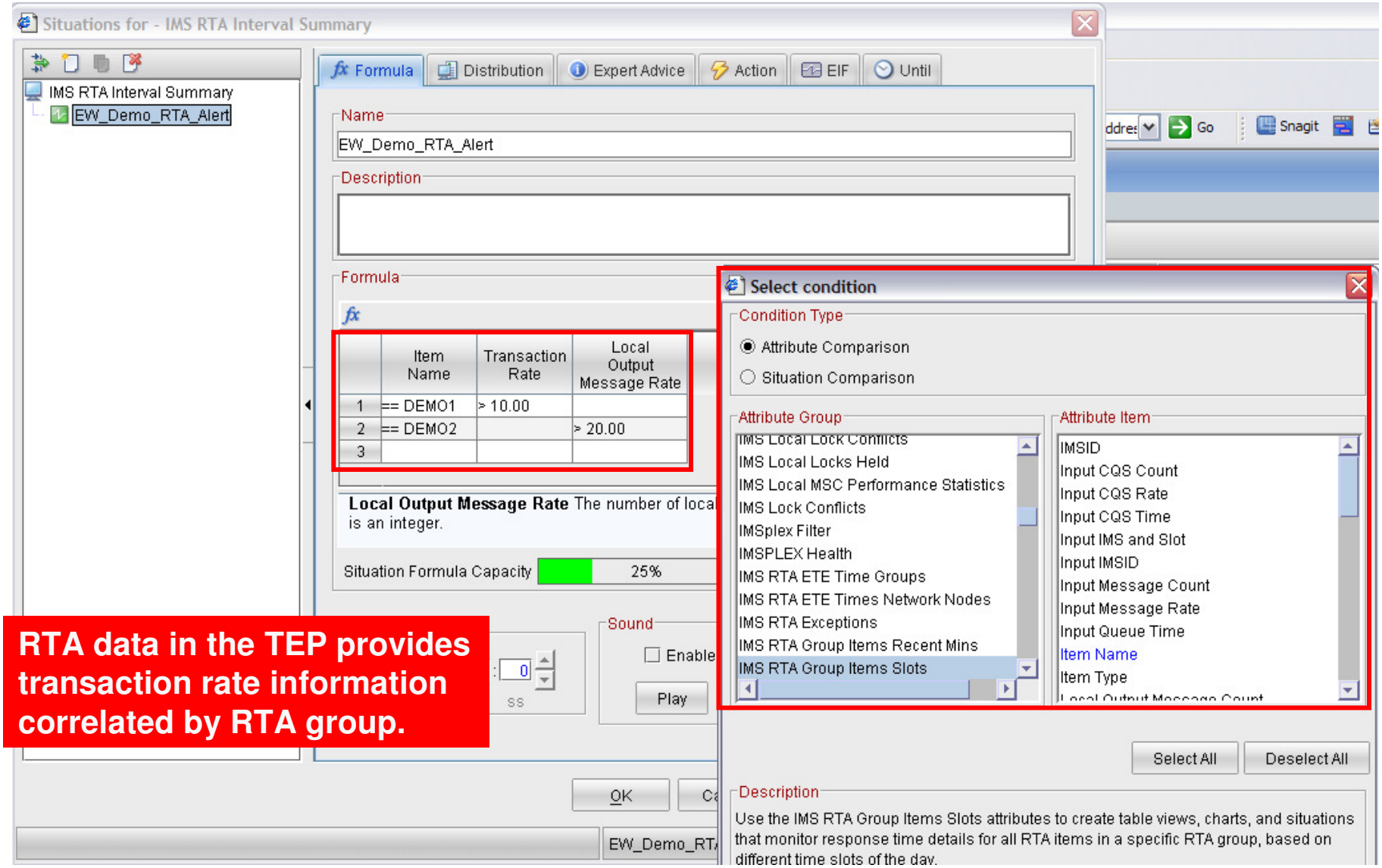
New Workspaces And New Attributes Means More Options For Situation Alerts

With V4.20 you may create situation alerts incorporating IMS wait reasons and percentages as part of the situation logic



Create situations using Bottleneck Analysis data. More RTA data in the TEP means more situation options for response time based alerts.

Create Situations Using RTA Metrics
Alert On Transaction Rates And Counts

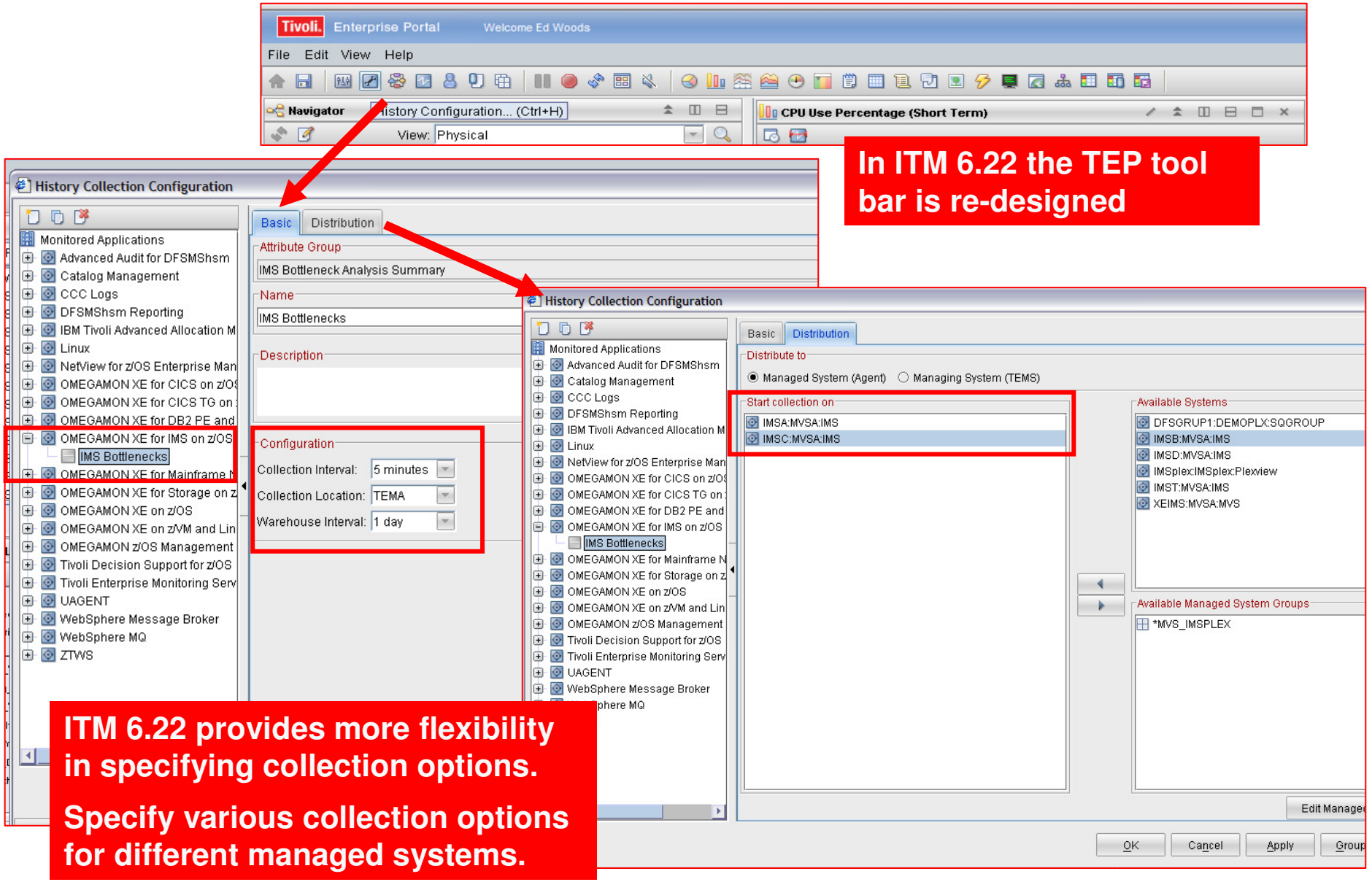


RTA data in the TEP provides transaction rate information correlated by RTA group.

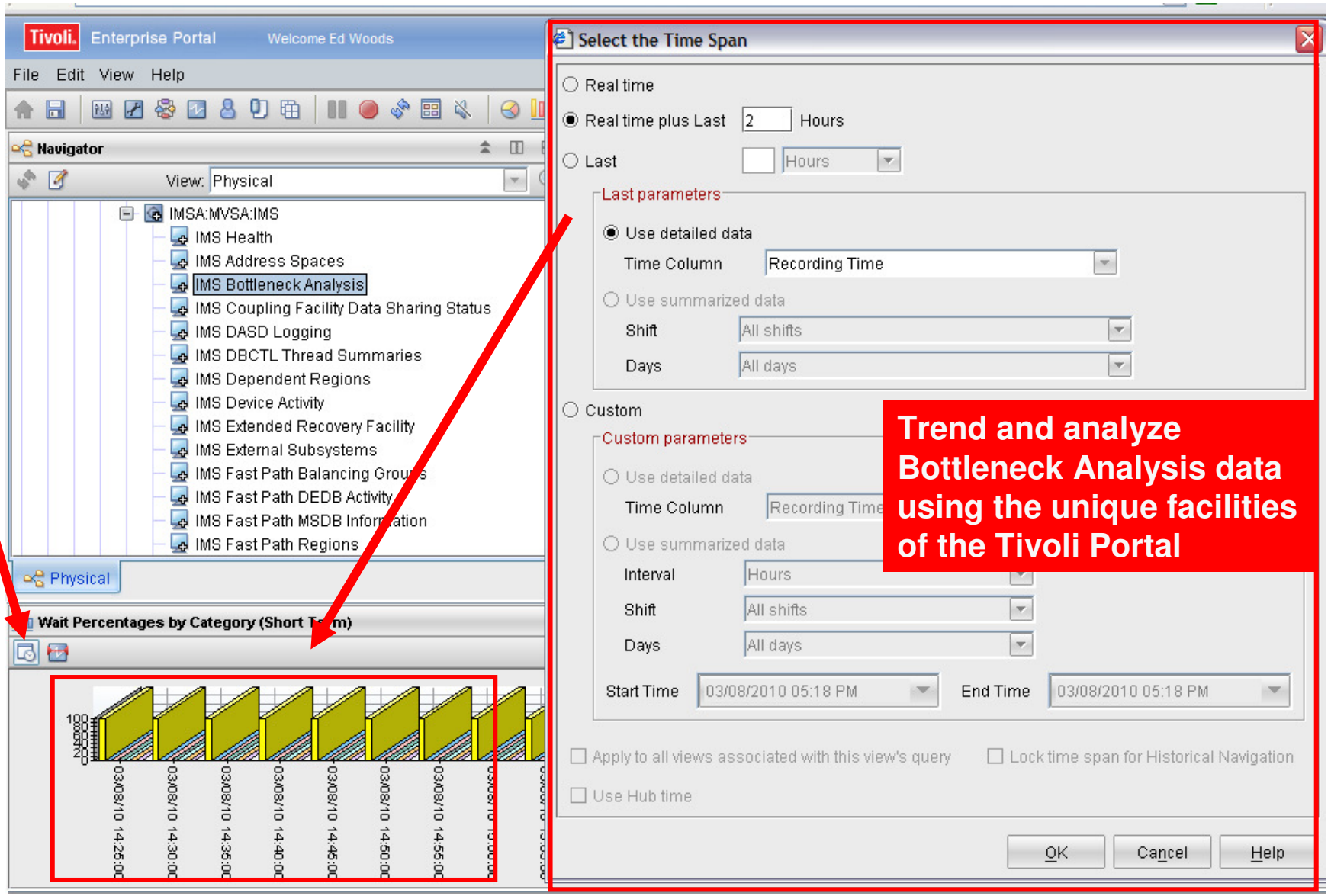
Using OMEGAMON And The Tivoli Enterprise Portal To Analyze IMS Processing And Bottlenecks

- 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)

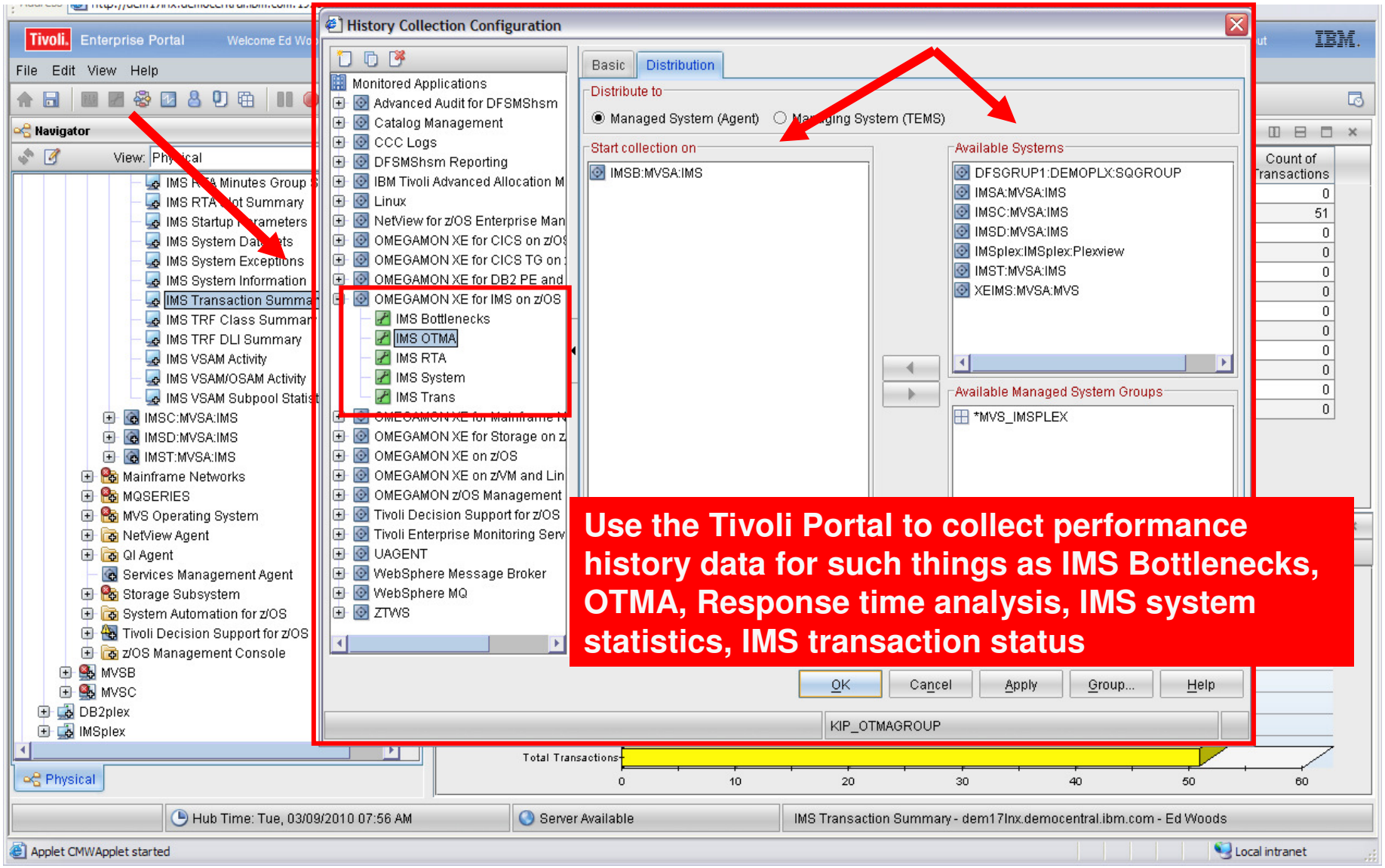
New Historical Collection Options In The Tivoli Portal



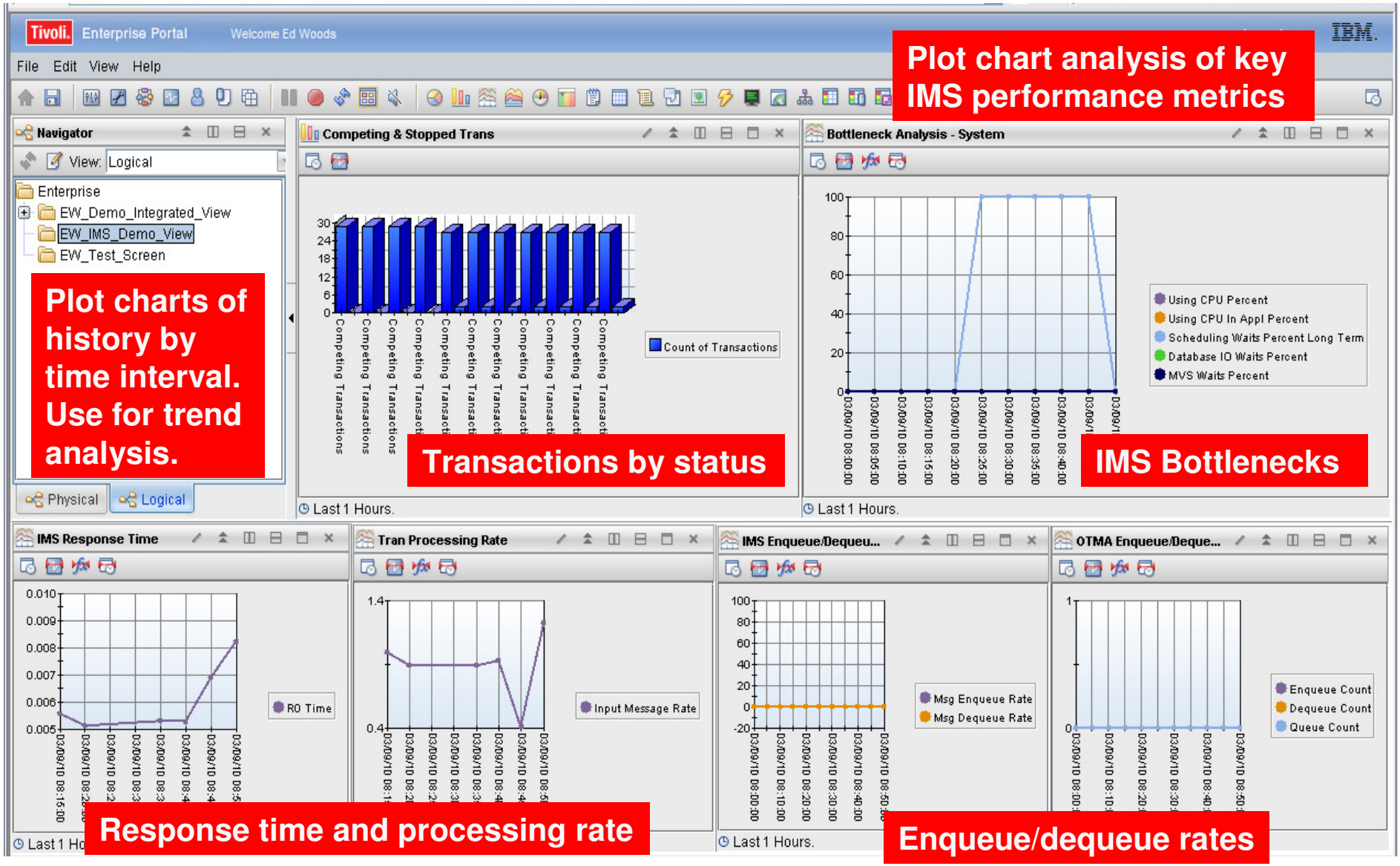
Analyze Historical Bottleneck Analysis Data In The TEP



Using The History Functions Of The Tivoli Enterprise Portal To Analyze IMS Processing And Bottlenecks



IMS Historical Performance Analysis Workspace

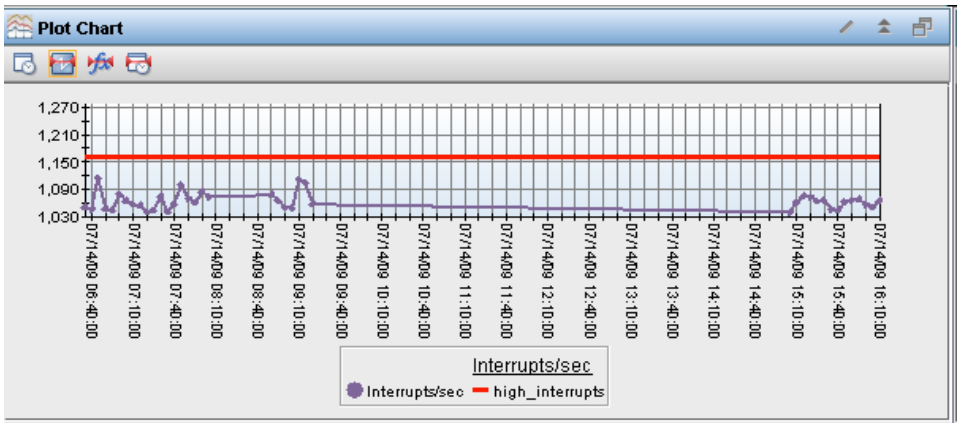


ITM 6.22 Expands The Notion Of Baselines

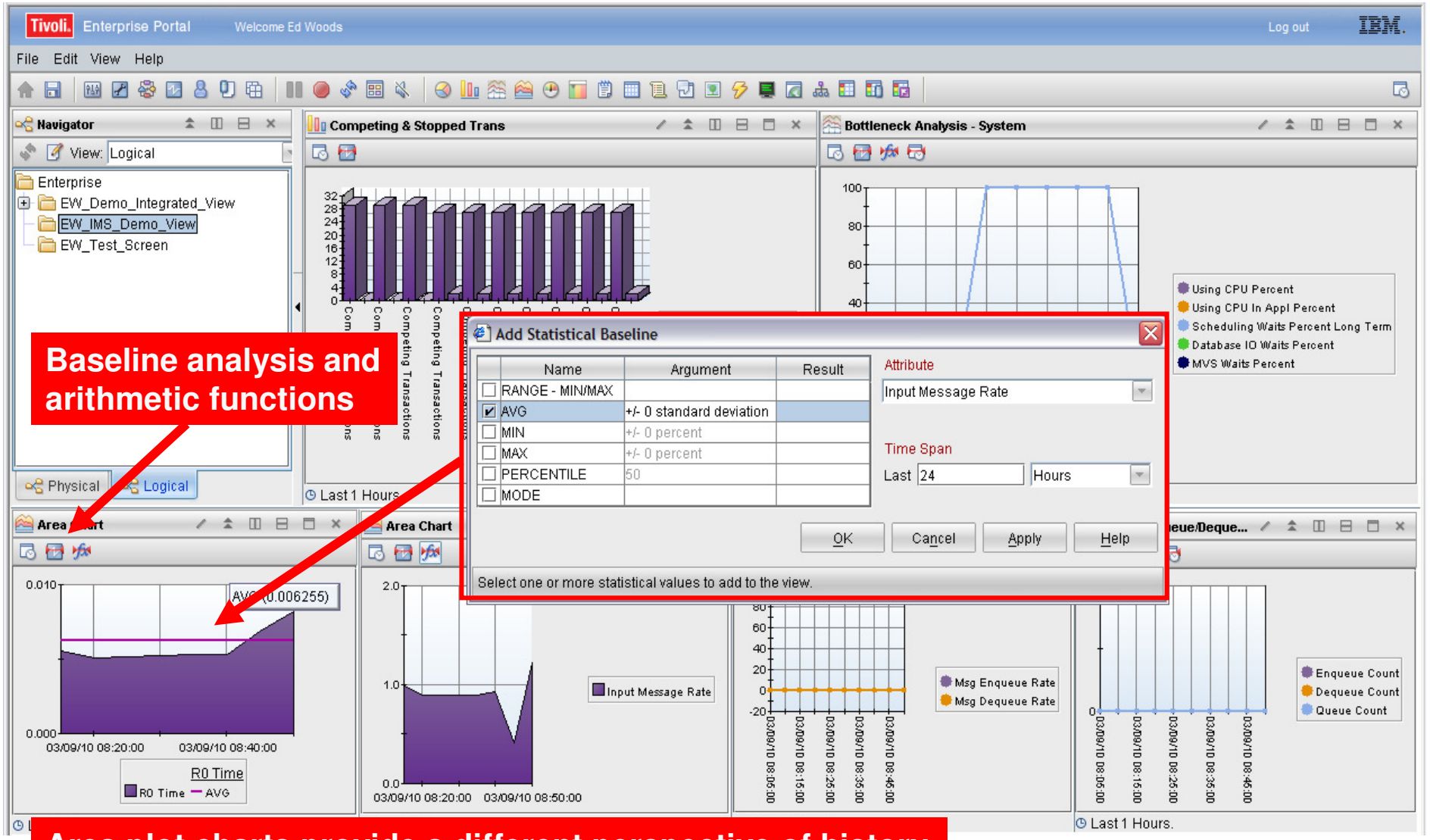
A baseline in ITM6.2.2 can be a line or series in a chart as a basis for comparison.

- 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



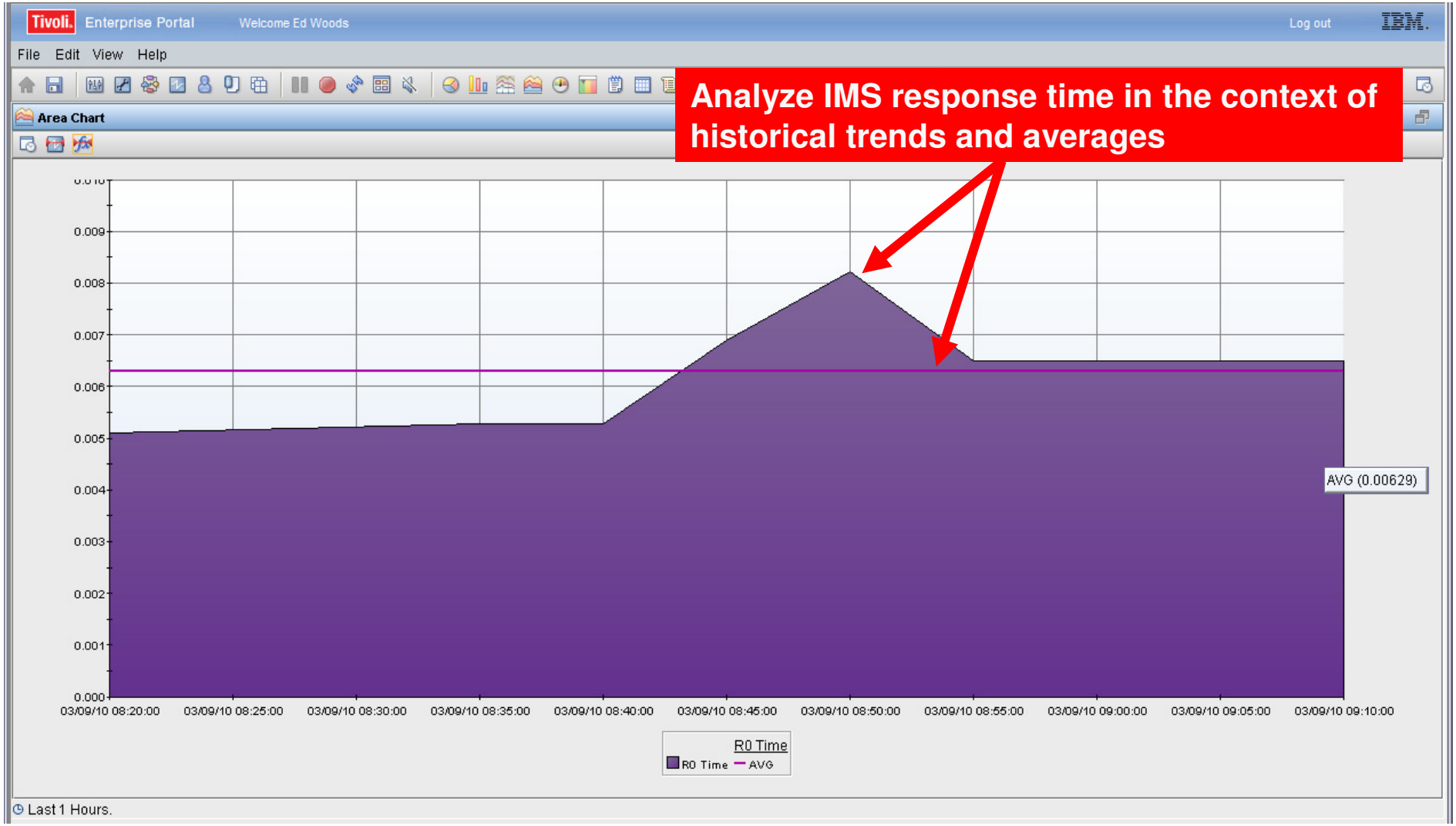
ITM Provides New Chart Functions And Statistical Analysis Features



Baseline analysis and arithmetic functions

Area plot charts provide a different perspective of history

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



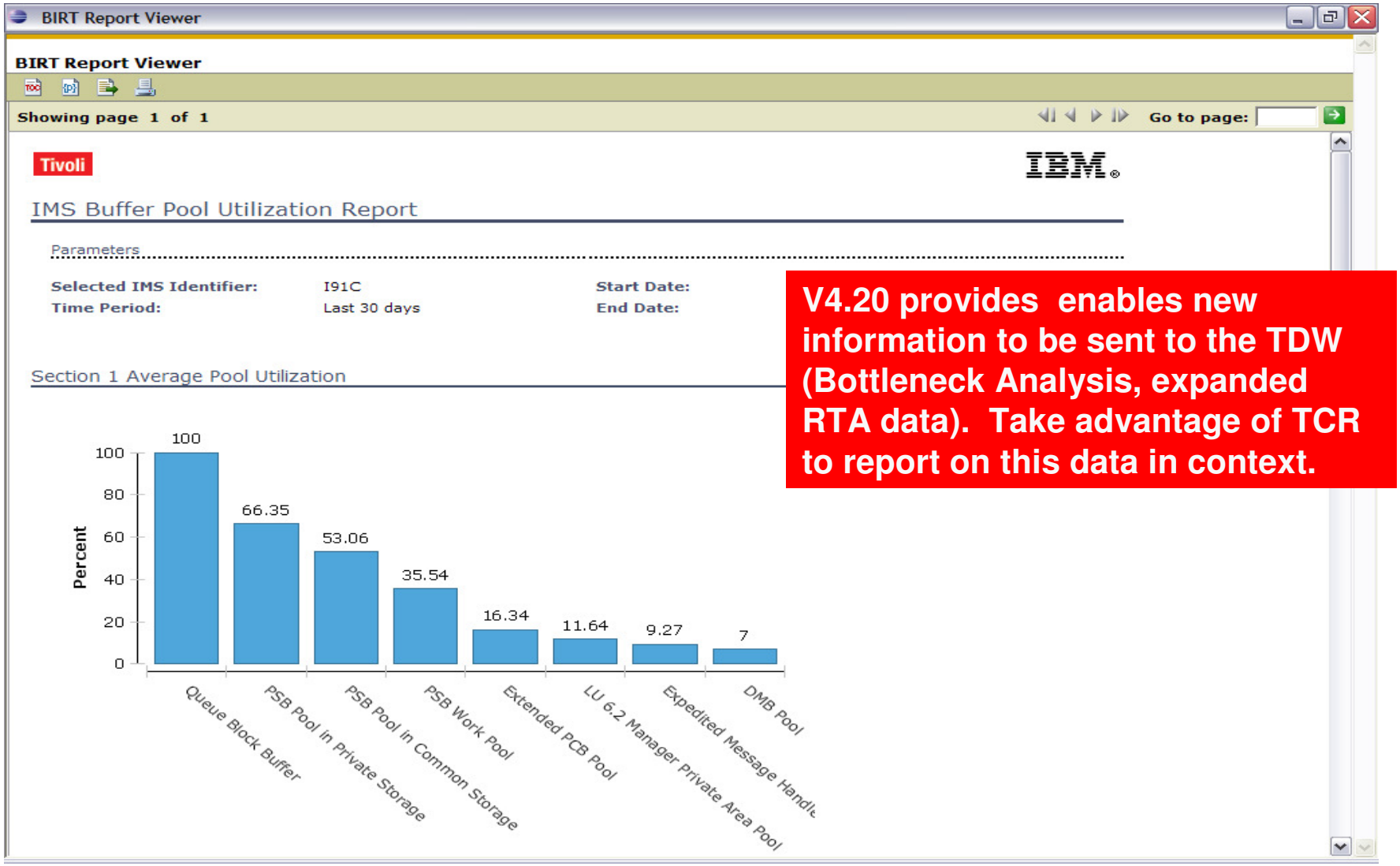
Tivoli Common Reporting

- 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/spaces/tcr

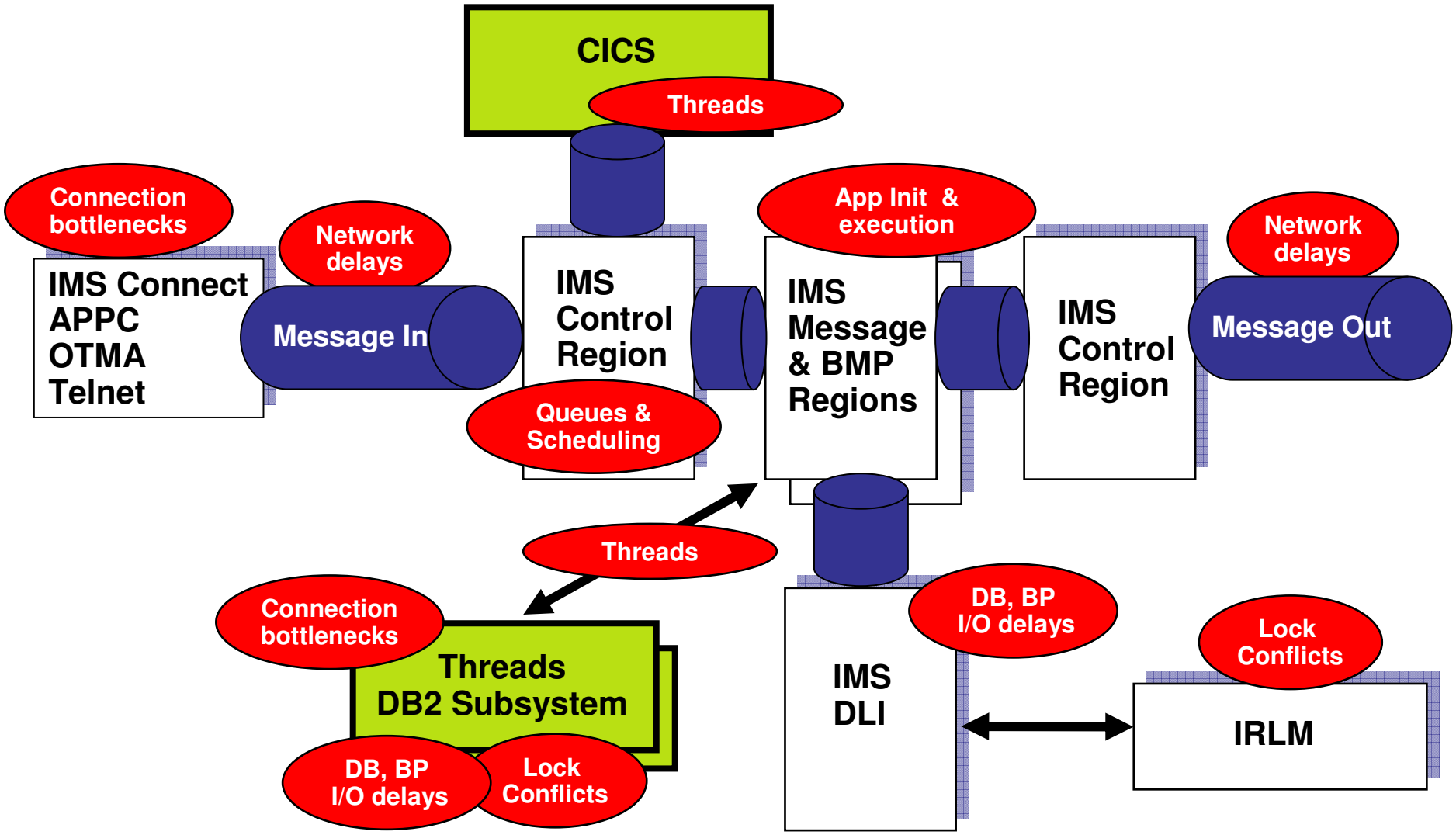
- Interaction with TCR can occur via browser using the web application or through the command line interface (CLI)

Tivoli Common Reporting Report Viewer Example

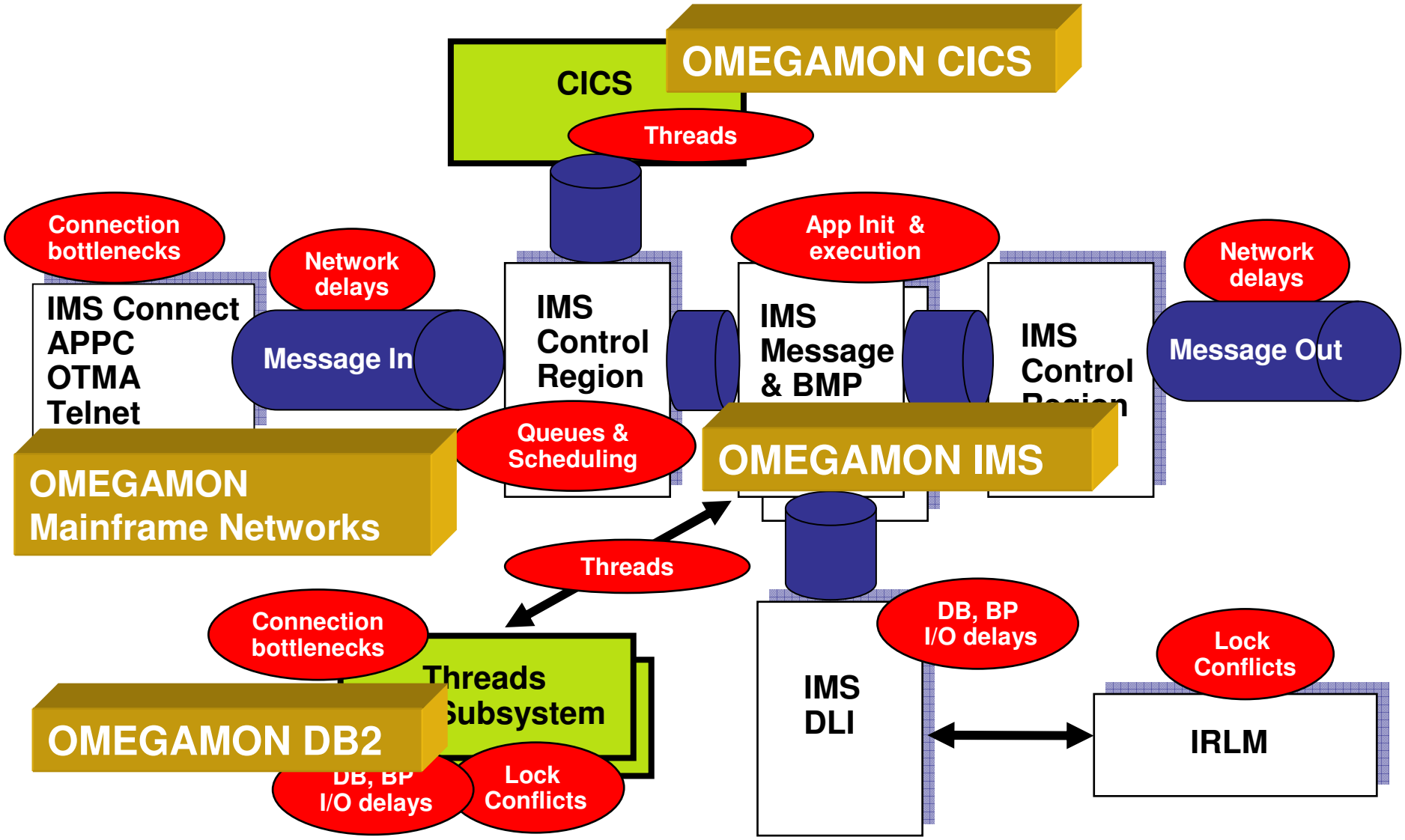


V4.20 provides enables new information to be sent to the TDW (Bottleneck Analysis, expanded RTA data). Take advantage of TCR to report on this data in context.

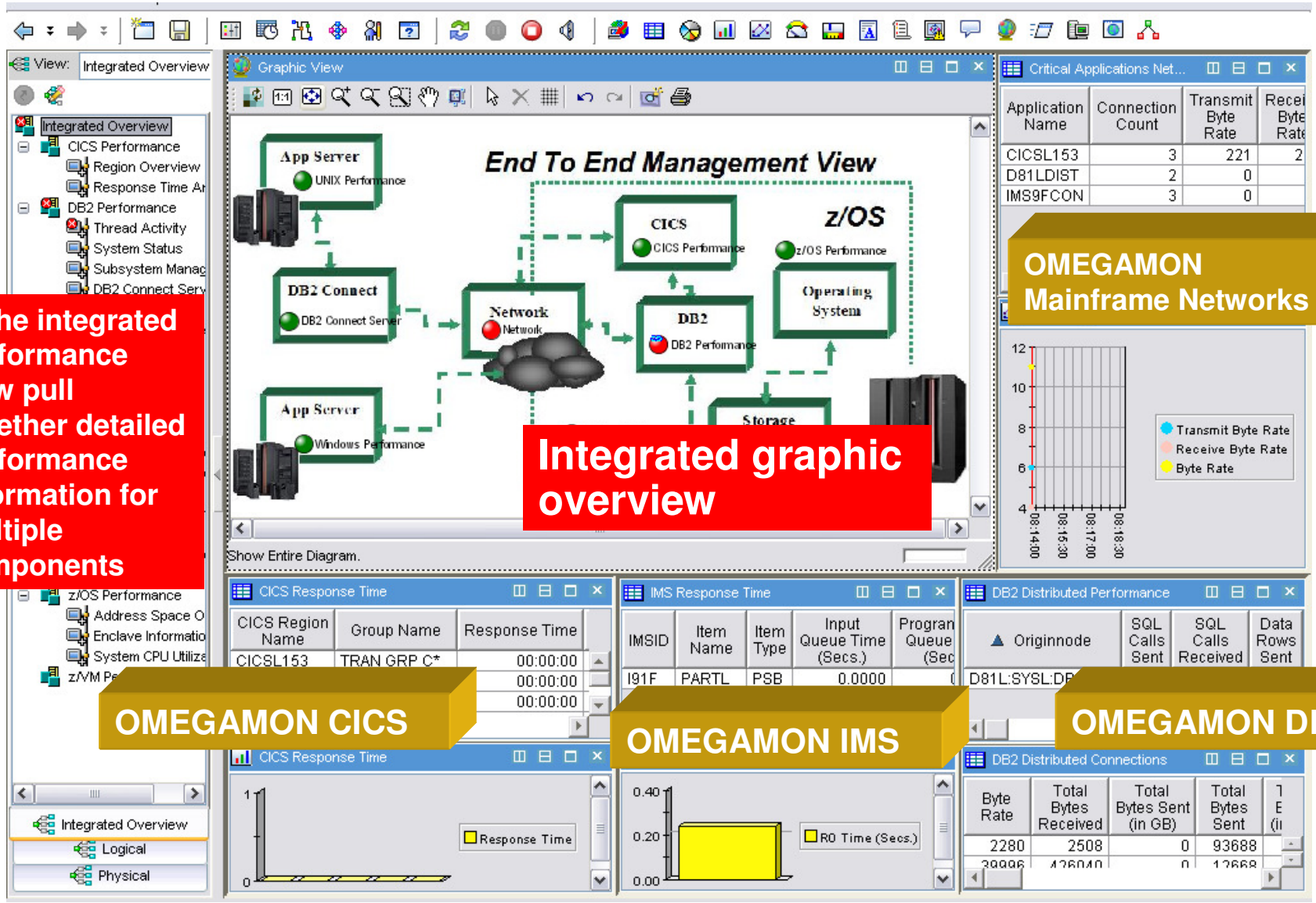
Use OMEGAMON And the Tivoli Enterprise Portal To Understand IMS Processing And Performance Bottlenecks



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



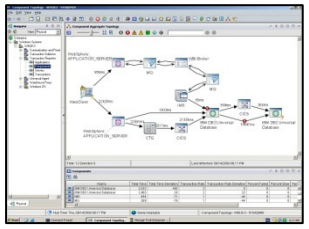
Use OMEGAMON And The Tivoli Enterprise Portal To Consolidate Performance Analysis - Example

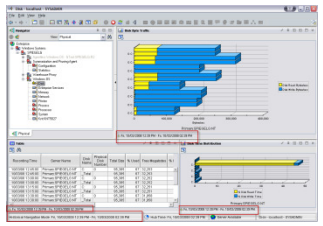


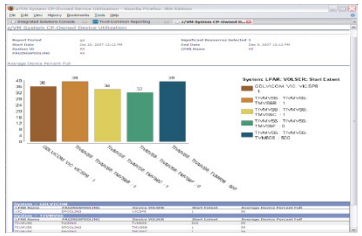
IT Composite Application Management (ITCAM) And Resource Monitoring

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

IT Staff





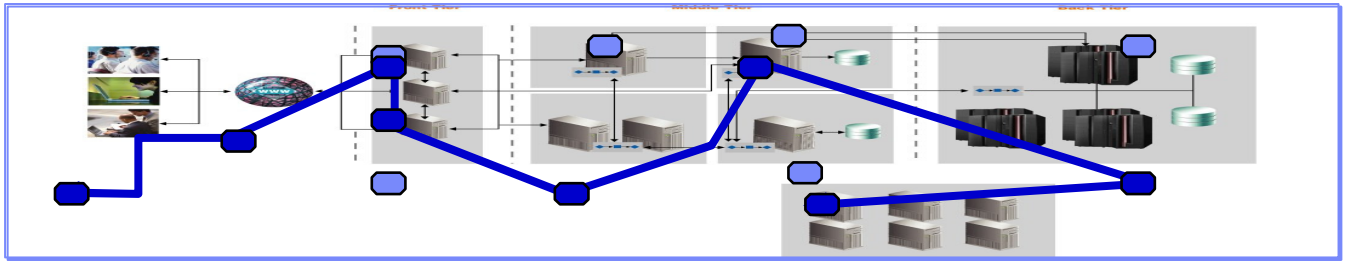


Transactions

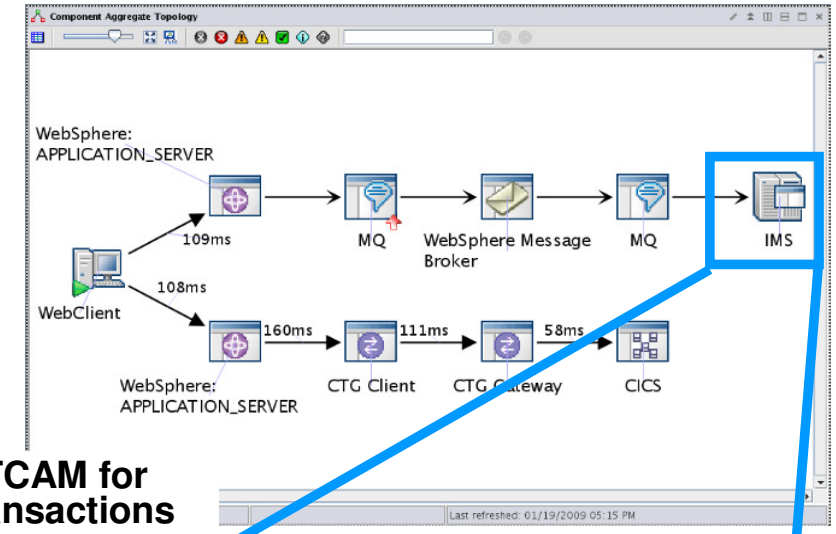
Applications

Servers

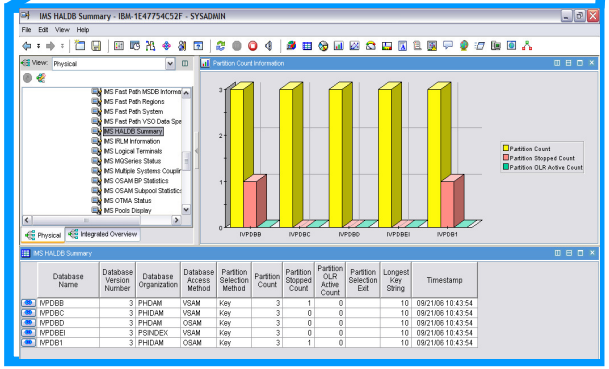
IT Customer



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



ITCAM for Transactions



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

Visit my blog on IBM Tivoli performance and availability management of System z. Lots of information on OMEGAMON , Automation, and many things Tivoli…

Thank You!!