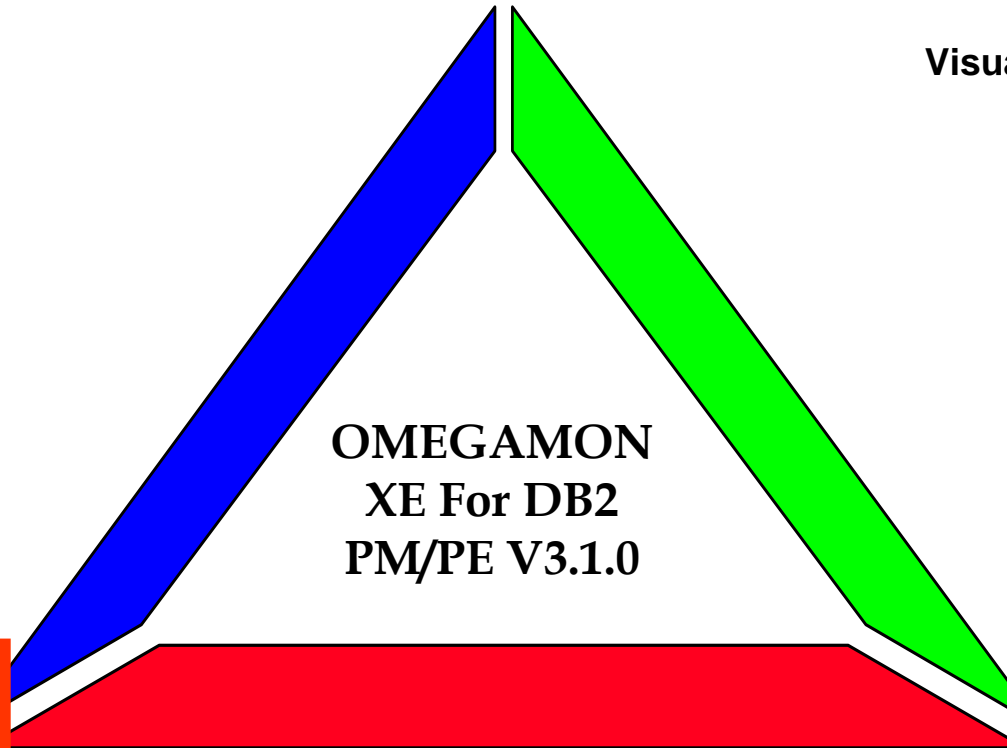


# OMEGAMON And Tivoli Enterprise Portal An Integrated Solution

## *Tivoli Enterprise Portal & OMEGAMON DE – Dashboard Edition*



High level monitoring  
Visualization And Analysis  
Multi-system view  
Cross Platform View

### **3270 Interface**

Subsystem details  
3270 Interface  
Historical details

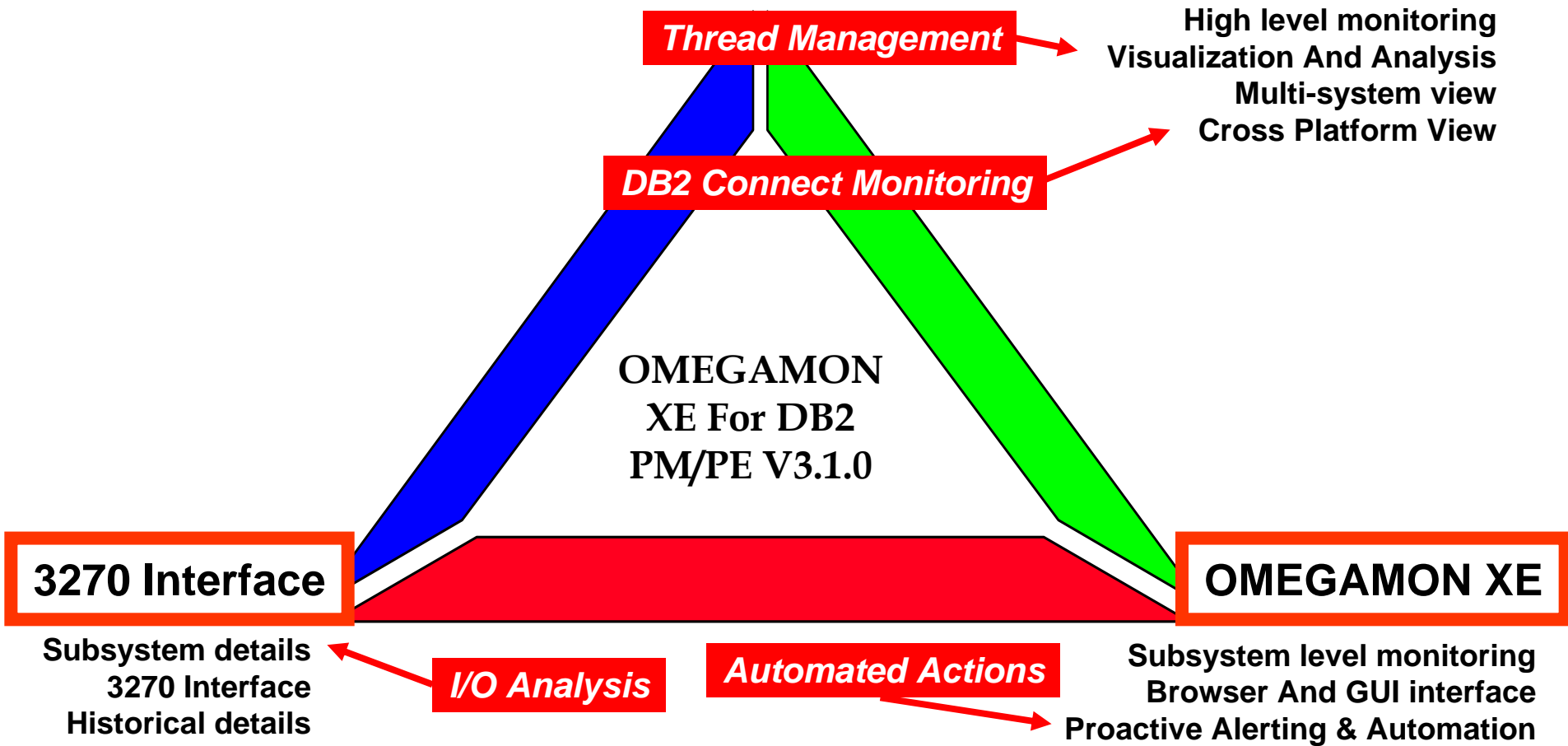
### **OMEGAMON XE**

Subsystem level monitoring  
Browser And GUI interface  
Proactive Alerting & Automation



# OMEGAMON Example Scenarios

**Tivoli Enterprise Portal & OMEGAMON DE – Dashboard Edition**



# Using OMEGAMON XE For DB2 PM/PE Example Solution Scenario

- DB2 Thread Management
  - ▶ DB2 performance analyst is responsible for identifying and managing problem applications on multiple DB2 subsystems
  - ▶ The DB2 performance analyst would like to have a customized view of DB2 thread activity with the ability to filter and highlight problems
  - ▶ If a problem is identified the DB2 performance analyst would like to be able to issue manual actions to address the issue



# Use The OMEGAMON XE Portal

## Tivoli Enterprise Portal (TEP) Provides Powerful Capabilities

The screenshot displays the Tivoli Enterprise Portal (TEP) interface. The top menu bar includes 'File', 'Edit', 'View', and 'Help'. The main window is titled 'Enterprise Event Console' and shows a list of events with columns for Status, Situation Name, Display Item, Source, and Impact. A red arrow points from the 'Enterprise Event Console' area to the 'Open Situation Counts' chart in the bottom left corner.

**Enterprise Event Console**

Status	Situation Name	Display Item	Source	Impact
Open	DNET556_Disk_High_RespTime		CXEGA01:MVSA:STORAGE	Storage Subsystem
Open	DEMO_HIGH_CPU_USER_CRIT	CXEGA30	DEMOPLX:MVSA:MVSSYS	Address Space CPU
Open	DEMO_HIGH_CPU_USER_CRIT	CXEGA30	DEMOPLX:MVSA:MVSSYS	Address Space CPU
Open	DEMO_HIGH_CPU_USER_CRIT	CXEGA30	DEMOPLX:MVSA:MVSSYS	Address Space CPU
Open	MQSeries_MQ_Channel_Stopped			
Open	MQSeries_Dead_Letter			
Open	NT_Log_Space_Low			
Open	NT_Log_Space_Low			

**Open Situation Counts**

The chart shows the following data points:

Situation Name	Count
NT_Process_CPU_Critical	1
MQSeries_MQ_Channel_Stopped	1
IRS_Log_Alert	1
demo	1

**Navigation Tree (Left Panel):**

- Physical
  - CICS
  - DB2
    - DSNA:MVSA:DB2
    - DSNB:MVSA:DB2
    - DSNC:MVSA:DB2
    - DSND:MVSA:DB2
    - DSNT:MVSA:DB2
  - IMS
  - Mainframe Networks
  - MQSERIES
  - OS/390 Unix (USS)
  - Partition MVSA Production
  - Storage Subsystem
  - WebSphere Application Server OS/390

The Enterprise view is one of the default views

The portal enables the ability to manage multiple subsystems from a single screen. Systems are selectable from the navigation tree.

# Portal Workspace Customization

- OMEGAMON XE For DB2 PM/PE provides the ability to build customized real time displays (workspaces)
- Any of the product provided workspaces may be adjusted to meet user needs
- The user may make new workspaces as needed to target specific monitoring needs
  - ▶ Create workspaces to target specific technical problems
- These new workspaces are stored in the Tivoli Enterprise Portal (TEP) server
  - ▶ New workspaces may be used by any user with appropriate authority and access to the TEP



# Building A Custom Thread Management View

**Tivoli Enterprise Portal** **Tivoli software**

File Edit View Help

Physical Total Events: 9 Item Filter: Enterprise

- XCF Paths Data for Sysplex
- XCF Systems Data for Sysplex
- MVSA
  - CICS
  - DB2
    - DSNA: MVSA: DB2
      - Thread Activity
      - Detailed Thread Exception**
      - Lock Conflicts
      - Subsystem Management
      - Log Manager
      - Utility Jobs
      - EDM Pool
      - Buffer Pool Management
      - Volume Activity
      - CICS Connections

- Mainframe Networks
- MQSERIES
- OS/390 Unix (USS)
- Partition MVSA Production
- Storage Subsystem

### Enterprise Event Console

Status	Situation Name	Display Item	Source	Impact
Open	DEMO_HIGH_CPU_USER_CRIT	CXEGA02	DEMOPLX: MVSA: MVSSYS	Address Space CPU I
Open	DEMO_HIGH_CPU_USER_CRIT	XCFAS	DEMOPLX: MVSA: MVSSYS	Address Space CPU I
Open	DEMO_HIGH_CPU_USER_CRIT	CAESTART	DEMOPLX: MVSA: MVSSYS	Address Space CPU I
Open	DEMO_HIGH_CPU_USER_CRIT	CXEGA03	DEMOPLX: MVSA: MVSSYS	Address Space CPU I
Open	DEMO_HIGH_CPU_USER_CRIT	WLM	DEMOPLX: MVSA: MVSSYS	Address Space CPU I
Open	MQSeries_MQ_Channel_Stopped		WMQA: MVSA: MQESA	MQSeries Events
Open	MQSeries_Dead_Letter		WMQA: MVSA: MQESA	Dead-Letter Queue M
Open	NT_Log_Space_Low	Application	Primary: HQDNT2: NT	System
Open	NT_Log_Space_Low	Security	Primary: HQDNT2: NT	System

Select A DB2 subsystem and select one of the thread views (in this example Detailed Thread Exceptions).

Ready Hub Time: Fri, 01/06/2006 04:00 AM Server Available. Enterprise Status - hqcnt2.demopkg.ibm.com - DNET581

# Thread View Customization

## Control The Content And Layout Of The Workspace

**Tivoli Enterprise Portal** Tivoli software

File Edit View Help

Physical

- XCF Paths Data for Sysplex
- XCF Systems Data for Sysplex
- MVSA
  - CICS
  - DB2
    - DSNA-MVSA-DB2

Take Action...  
 Edit Action...  
 Link Wizard...  
 Link Anchor...  
 Export ...  
 Split vertically  
 Split horizontally  
 Remove  
 Print Preview...  
 Print...  
 Properties...

**Locks Owned**

**Detailed Thread Exceptions**

Time	Plan Name	Package	Collection	Correlation	Connection	Authorization	MVS	Interval
01/06/06 04:06:31	DSNACLI							
01/06/06 04:06:31	ASNTA820	ASN						
01/06/06 04:06:31	ASNTA820	ASN						
01/06/06 04:06:31	Allied	Unknown	ASNTC820	ASN				
01/06/06 04:06:31	Allied	Unknown	ASNTC820	ASN				
01/06/06 04:06:31	Allied	DB2_Call_Attach	ASNTA820	ASNMSGT	ASNCOMMON	DPROPAPP	DB2CALL	SYSSTC
							DSNA	MVSA
								00:04:58

**DB2 System: DSN, MVS System: MVSA**

Ready Hub Time: Fri, 01/06/2006 04:20 AM Server Available. Detailed Thread Exception - hqdtnt2.demopkg.ibm.com - DNET581

**Right click and select 'properties' to begin the customization process.**

# Add Filters To The View To Control Content

Select the Filters Tab.

Select which columns are to appear in the workspace.

Select the Filters Tab.

Value of expression  
Return a subset of the string  
Scan for string within a string

Click in the column area under Plan Name. Click on the v symbol to select a string scan function.

And/Or logic may be used to monitor just for JDBC & Disterv threads

The screenshot shows the 'Properties - Detailed Thread Exception' window in the IBM Tivoli Enterprise Performance Center. The window displays a table of thread exceptions with columns: Connection Type, Plan Name, Package Name, Correlation Identifier, Authorization Identifier, DB2ID, and C Utilit. The 'Filters' tab is selected, and a filter is applied to the 'Plan Name' column. A dropdown menu is open under the 'Plan Name' column, showing options: 'Value of expression', 'Return a subset of the string', and 'Scan for string within a string'. The 'Scan for string within a string' option is selected. Red arrows point from text boxes to the 'Filters' tab, the 'Plan Name' column, and the dropdown menu.

Connection Type	Plan Name	Package Name	Correlation Identifier	Authorization Identifier	DB2ID	C Utilit
known	DSNACLI	ASNAMAN	WMQA			
Call Attach	ASNTAR20	ASNAMAN	DPRO			
known	DSNJDBC		BBOS001S	DSN328	DSNA	
known	DSNJDBC		BBOS001S	ASSR	DSNA	
known	ASNTC820	ASNPRUNE	DPRO			
known	DSNJDBC		BBOS			
known	ASNTC820	ASNCMON	DPRO			
known	ASNTC820	ASNUOW	DPRO			



# Highlight Potential Problems

The screenshot shows the 'Properties - EW\_DB2\_Demo' window. The 'Detailed Thread Exceptions' table lists two connections: 'Unknown DSNJDBC' and 'Unknown DSNIDBC'. The 'DB2 Elapsed Time' threshold table shows several rows with 'Critical' status. A red arrow points from a text box to the 'DB2 Elapsed Time' column in the threshold table.

Connection Type	Plan Name	Package Name	Correlation Identifier	Authorization Identifier	DB2ID	CPU Utilization	DB2 CF Used
Unknown	DSNJDBC		BBOS001S	ASSR1	DSNA	0.0	00:00:02.74
Unknown	DSNIDBC		BR0S001S	ASSR1	DSNA	0.0	00:00:00.24

Identifier	DB2ID	CPU Utilization	DB2 CPU Used	DB2 Elapsed Time	Getpage Count	Locks Owned
4						
5						
6			GT 00:00:02.000			
7						

Identifier	DB2ID	CPU Utilization	DB2 CPU Used	DB2 Elapsed Time	Getpage Count	Locks Owned
	DSNA	0.0	00:00:00.025	00:00:08.0	0	4
	DSNA	0.0	00:00:00.047	00:00:04.3	0	11
	DSNA	0.0	00:00:00.000	00:00:00.0	0	2
	DSNA	0.0	00:00:00.002	00:00:00.1	0	8
	DSNA	0.0	00:00:00.000	00:00:00.0	0	8
	DSNA	0.0	00:00:06.050	00:00:45.3	12	3

Specify if certain columns may be highlighted as warning or critical.

# Thread Exceptions View Is Now Filtered And Highlighted

**Tivoli Enterprise Portal** **Tivoli software**

File Edit View Help

Physical

MVSA  
 CICS  
 DB2  
 DSN:MVSA:DB2

### Locks Owned

Count

Filtered display showing just JDBC & Disterv.

Highlight problem threads.

### Detailed Thread Exceptions

Connection Type	Plan Name	Package Name	Correlation Identifier	Authorization Identifier	DB2ID	CPU Utilization	DB2 CPU Used	DB2 Elapsed Time	Getpage Count	Locks Owned	Thread Status
Unknown	DSNJDBC		BBOS001S	ASSR1	DSNA	0.0	00:00:02.782	00:00:06.4	136	1	NOT_IN_DB2
Unknown	DSNJDBC		BBOS001S	ASSR1	DSNA	0.0	00:00:00.257	00:00:00.4	260	1	NOT_IN_DB2

# To Issue A Command

**Tivoli Enterprise Portal®** Tivoli software

File Edit View Help

Physical

XCF Systems Data for Sysplex  
 MVSA  
 CICS

Take Action...  
 Edit Action...  
 Link Wizard...  
 Link Anchor...  
 Export ...  
 Split vertically  
 Split horizontally  
 Remove  
 Print Preview...  
 Print...  
 Properties...

**Getpage Counts**

**Detailed Thread Exceptions**

Conn Ty	Correlation Identifier	Authorization Identifier	DB2ID	CPU Utilization	DB2 CPU Used	DB2 Elapsed Time	Getpage Count	Locks Owned	Thread Status
Unknown	DSNJDBC	BBOS001S					64	1	NOT_IN_DB2
Unknown	DSNJDBC	BBOS001S					124	1	NOT_IN_DB2

**Right click and select take action to issue a command.**

# Select A Command

**Tivoli Enterprise Portal®** Tivoli software

File Edit View Help

Physical

XCF Systems Data for Sysplex

- MVSA
  - CICS
  - DB2
    - DSNA:MVSA:DB2
      - System Status
      - Detailed Thread Exce
      - Lock Conflicts
      - Subsystem Managem
      - Log Manager
      - Utility Jobs
      - EDM Pool
      - Buffer Pool Managem

Physical

**Take Action**

Action

Name: Cancel Thread

Command: @ CANCEL THREAD (6832)

Arguments...

Destination System(s)

- DSNA:MVSA:DB2
- DSNB:MVSA:DB2
- DSNC:MVSA:DB2
- DSND:MVSA:DB2
- DSNT:MVSA:DB2
- XEDB2:MVSA

OK Cancel Help

Connection Type	Plan Name	Package Name	...
Unknown	DSNJDBC		BB...
Unknown	DSNJDBC		BBOS001S ASSR1 DSNA 0.0 00

Getpage Count

110 120 130

Thread Status

Select a command from the drop down menu.

# OMEGAMON XE For DB2 PM/PE Workspace Customization

- The workspace customization techniques demonstrated here may be used for any of the various OMEGAMON XE workspaces
  - ▶ Customized views if saved are stored in the portal server
- The approach may be used for single DB2 subsystem views and to create multiple subsystem views of DB2 activity
- If OMEGAMON DE (Dashboard Edition) is available, information from other OMEGAMON monitors (example CICS, IMS, z/OS) may be added to custom displays



# Using OMEGAMON XE For DB2 PM/PE Automation Scenario

- Automated DB2 Thread Management
  - ▶ DB2 performance analyst is responsible for identifying and managing problem applications on multiple DB2 subsystems
  - ▶ The DB2 performance analyst would like to have a OMEGAMON automatically identify problem application threads
  - ▶ If a problem is found OMEGAMON is to issue a command automatically to address the issue



# Automation Example

## Automated Kill Of A Runaway Thread Scenario

Situation(s) for - DSN1:SYS1:DB2

Condition Distribution Expert Advice Action Until

Description

Condition

	Getpage Count	Plan Name
1	GT 1000	abc EQ DSNEE
2		
3		

of the tabular editor above to see a description of the attribute for that  
compose the expression.

Add an attribute to the condition by clicking Add Attributes and selecting the attributes you  
want to include

Add attributes... Advanced...

Sampling interval

0 / 0 : 1 : 0  
dd hh mm ss

Sound

Enable critical.wav

Play Edit...

State

Critical

Run at startup

**Specify multiple attributes with And/Or logic**

**Create an alert tracking for problem DB2 threads. Click add attributes to add more logic to the check.**

**Specify sampling interval**

# Automated Correction Example Specifying The Cancel Command

The screenshot displays the 'Situation(s) for - DSN1:SYS1:DB2' configuration window. The left-hand tree view shows the hierarchy: DSN1:SYS1:DB2 > MVS DB2 > EW\_Demo\_Runaway\_Thread. The right-hand pane is set to the 'Action' tab. Under 'Action Selection', 'System Command' is selected. The 'System Command' field contains the text '&DB2\_Thread\_Exceptions.Cancel\_Command'. Below this, there are options for 'If the condition is true for more than one m...' (Only take action on first item, Take action on each item), 'Where should the Action be executed (per...)' (Execute the Action at the Managed System, Execute the Action at the Managing System), and 'If the condition stays true over multiple intervals:' (Don't take action twice in a row (wait until situation goes false then true again), Take action in each interval). A red callout box with white text points to the 'Action' tab and the command field, stating: 'Action tab allows specification of the DB2 Cancel command with the correct token already specified.'



# Seeing The Command In Action

## Monitoring The Problem Thread

**Detailed Thread Exceptions**

Package Name	Authorization Identifier	DB2ID	CPU Utilization	Elapsed Time	Getpage Count	Thread Status
DSNESM68	P390A	DSN1	7.2	00:00:22	10577	IN_DB2

**DB2 System: DSN1, MVS System: SYS1**

Ready | Hub Time: Mon. 04/04/2005 02:59 PM | Server Available. | Detailed Thread Exception - 9.73.235.210 - SYSADMIN \*ADMIN MODE\*

# Automated Corrections Example

## The Cancel Command Is Issued

```
Display Filter View Print Options Help
-----
SDSF SYSLOG      12.101 SYS1 SYS1 04/04/2005 2W   32267      COLUMNS 38 117
COMMAND INPUT ==>          SCROLL ==> CSR
STC00625 00000090  CSV002I REQUESTS FOR MODULE KPDCSVG EXCEED MAXIMUM USE COUNT
STC00625 00000090  CSV002I REQUESTS FOR MODULE KPDCSVG EXCEED MAXIMUM USE COUNT
STC00625 00000090  CSV002I REQUESTS FOR MODULE KPDCSVG EXCEED MAXIMUM USE COUNT
STC00625 00000090  CSV002I REQUESTS FOR MODULE KPDCSVG EXCEED MAXIMUM USE COUNT
STC00625 00000090  CSV002I REQUESTS FOR MODULE KPDCSVG EXCEED MAXIMUM USE COUNT
STC00625 00000090  CSV002I REQUESTS FOR MODULE KPDCSVG EXCEED MAXIMUM USE COUNT
STC00625 00000090  CSV002I REQUESTS FOR MODULE KPDCSVG EXCEED MAXIMUM USE COUNT
STC00625 00000090  CSV002I REQUESTS FOR MODULE KPDCSVG EXCEED MAXIMUM USE COUNT
STC00625 00000090  CSV002I REQUESTS FOR MODULE KPDCSVG EXCEED MAXIMUM USE COUNT
STC00625 00000090  CSV002I REQUESTS FOR MODULE KPDCSVG EXCEED MAXIMUM USE COUNT
STC00625 00000090  CSV002I REQUESTS FOR MODULE KPDCSVG EXCEED MAXIMUM USE COUNT
STC00625 00000090  CSV002I REQUESTS FOR MODULE KPDCSVG EXCEED MAXIMUM USE COUNT
STC00625 00000090  CSV002I REQUESTS FOR MODULE KPDCSVG EXCEED MAXIMUM USE COUNT
STC00625 00000290  - CANCEL THREAD(556)
STC00023 00000090  DSNV426I - DSNVCT THREAD '556' HAS BEEN CANCELED
STC00023 00000090  DSN3201I - ABNORMAL EOT IN PROGRESS FOR USER=P390A 855
      855 00000090  CONNECTION-ID=TSO CORRELATION-ID=P390A JOBNAME=P390A ASID=004
      855 00000090  TCB=008E1798
5 DFS996I *IMS READY* IVP1
3 ISTEXC200 - DYN COMMANDS MAY BE ENTERED
***** BOTTOM OF DATA *****
```

## About OMEGAMON Automation

- OMEGAMON XE For DB2 PM/PE V3.1.0 provides powerful GUI based monitoring, alerting, and automation capabilities
- Any monitored attribute may be used in an alert
- Any alert may be used to drive automation
- Two main types of automation
  - ▶ Situations – ‘reflex’ automation
  - ▶ Policies – more sophisticated automation scenarios, multiple commands and components
- Automation integrated directly into the OMEGAMON user interface
  - ▶ No REXX or other procedural code required



# Using OMEGAMON XE For DB2 PM/PE Connect Monitoring Scenario

- Integrated DB2 Connect Monitoring
  - ▶ DB2 performance analyst is responsible for identifying and managing problem applications from a variety of sources, including DB2 Connect
  - ▶ The DB2 performance analyst would like to have a real time view of Connect activity integrated within the OMEGAMON XE portal
  - ▶ Have OMEGAMON highlight problem DB2 Connect applications



# OMEGAMON XE For DB2 PM/PE V3.1.0

## DB2 Connect Gateway Status

**Server Key Events**

Event Type	Count
AGENTS WAITING FOR TOKEN <td>~10</td>	~10
STOLEN AGENTS <td>~175</td>	~175
MAX AGENT OVERFLOWS <td>0</td>	0

**DB2 Connect Server**

Name	Ip Address	Status	Node Name	Node Number	Server Product Version ID	Server Instance Name	Server Version	Time Zone Displacement	Gateway Snapshot Time
BHJINTEL	9.152.196.89	ACTIVE	N/P	0	SQL08015	DB2	5	2	1041209101220123
B555Z5ZP	9.152.196.89	ACTIVE	N/P	0	SQL08015	DB2	5	2	1041209101220123

**DB2 Connect server status and performance overview is accessible from the portal.**

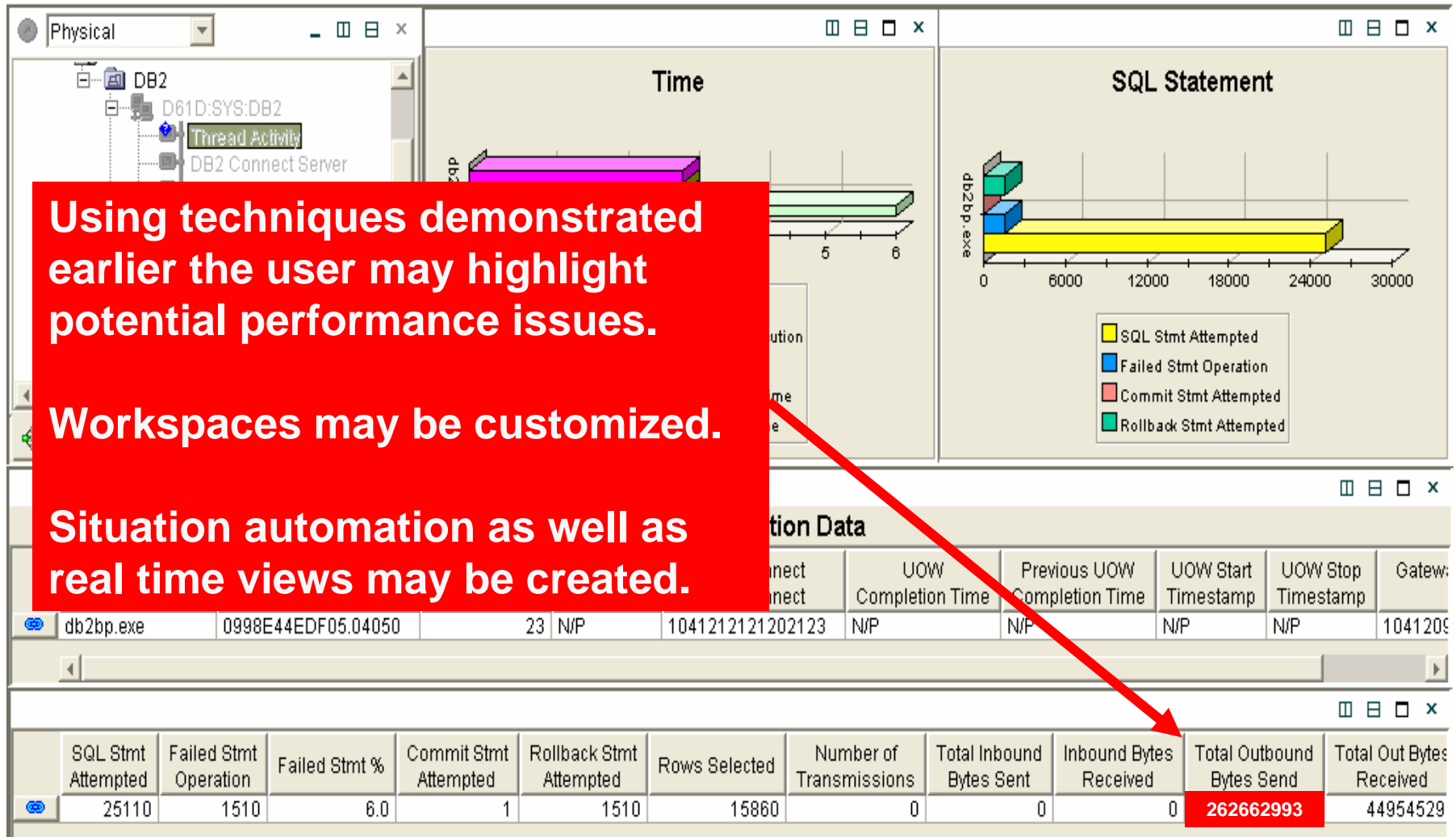
# Correlate DB2 Connect Activity With DB2 Thread Activity

The screenshot displays the IBM DB2 Performance Center interface. On the left, a tree view shows the hierarchy: Physical > D61D:SYS:DB2 > D71D:SYS:DB2 > Thread Activity. The 'Thread Activity' node is selected, and a red arrow points from it to the 'DB2 Connect Server' option in a context menu at the bottom left. The main area contains two charts: 'Top Ten In-DB2-CPU Time' and 'Top Ten Elapsed Time'. Both charts show a single bar for 'DB2 CPU Time' and 'Elapsed Time' respectively, with a legend below each chart. The table below the charts shows thread activity data.

**From the 'Thread Activity' view the user may see additional DB2 Connect information**

Elapsed Time	Plan	Thread Status	CPU Rate	Interval Start	MVS ID	DB2
	Thread Enclave	NOT-IN-DB2	0.0	04 14:01:01	SYS	D71D
	Thread DDF	SWAPPED-OUT	0.0	04 14:01:01	SYS	D71D
	All Threads					
	Thread Detail					
	Thread Wait Events					
	DB2 Connect Server					
	Link Wizard...					
	Link Anchor...					

# Highlight Potential Application Issues



# DB2 Connect Monitoring In Classic Interface

```

ZTCNS      VTM      02      V310./C D751 07/27/05 16:22:03  2
> Help PF1                                     Back PF3
>
>          THREAD INFORMATION:  Enter a selection letter on the top line.
>
> A-DB2 Connect Server  B-Overview  *-Statement Info  D-Package Statistics
>
=====
>          DB2 Connect Server - Statement Information
PLAN
+ Thread:  Plan=DISTSERV  Connid=SERVER  Corrid=DB2BP.EXE  Authid=JEN
+ Dist   :  Type=DATABASE ACCESS, Luwid=G998C447.PD0E.050727141933=267
+ Location :  PM05D751
tcns      ....
+
+ SQL Statements
+ -----
+ Section Number                =          201
+ Query Cost Estimate           =           0
+ Query Number of Rows Estimate =           0
+ Statement Operation           =  SELECT
+ Number of Successful Fetches  =          30
+ Blocking Cursor               =           1
+ Outbound Blocking Cursor      =           0
+ Application Creator           =  NULLID
+ Package Name                  =  SQLC2E03
+ Stmt Trans: No of Transmissions =           2
+ Stmt Trans: No of Statements  =           3
+
+ Time
+ -----
+ Statement Start Timestamp      = 2005-07-27-16.19.40.968000
+ Statement Stop Timestamp       = 2005-07-27-16.19.50.161000
+ Time Spent on Gateway Processing = 00:00:00.022361
+ Host Response Time            = 00:00:03.193351
+ Host Recent Stmt Elapsed Time  = 00:00:09.192430
+ Stmt Elapsed Execution Time    = 00:00:00.542800
+ Local: System CPU Time        = 00:00:00.000000
+ Local: User CPU Time          = 00:00:00.000000

```



# Using OMEGAMON XE For DB2 PM/PE DB2 Object Performance Analysis Scenario

- DB2 performance analyst would like to be able to analyze I/O and getpage activity real time
  - ▶ This analysis may be used as part of a buffer pool tuning exercise
  - ▶ The analyst would like to be able to see what applications are performing the I/O
- OMEGAMON XE For DB2 PM/PE object analysis provides the following:
  - ▶ Real-time monitoring of DB2 getpage and I/O activity
  - ▶ Monitor by database, pageset, dataset, and extent level
  - ▶ Monitor by DASD volume
  - ▶ Monitor by DB2 application
  - ▶ Analyze/Isolate application I/O activity
  - ▶ See the impact of non-DB2 I/O on the DB2 subsystem



# OMEGAMON XE For DB2 PM/PE

## Classic Interface Object Analysis Information

```

_____ ZMENU      VTM      O2      V310./C DB21 01/24/06 16:48:20  2
>  Help/News/Index PF1      Exit PF3      PF Keys PF5
>
>  Type a selection letter at the left end of the top line and press ENTER.
>
=====
>  OMEGAMON II FOR DB2 CLASSIC INTERFACE -- REALTIME MAIN MENU

_ S  SUMMARY ..... Summary of DB2 activity
_ E  EXCEPTIONS ..... Current or potential system problems
_ T  THREAD ACTIVITY ..... Thread activity information
_ U  THREAD ACTIVITY ..... Thread activity information by Package
_ L  LOCKING CONFLICTS .... Locking conflict information
_ R  RESOURCE MANAGERS .... Resource manager, other DB2 subsystem information
_ A  APPLICATION TRACE .... Trace and view application activity
_ D  DISTRIBUTED DATA .... Distributed database system information
_ O  OBJECT ANALYSIS ..... Object and Volume information
_ G  DB2 CONNECT SERVER . . DB2 Connect/Gateways with connection to DB2
_ C  MVS CONSOLE ..... MVS console to issue
_ B  DB2 CONSOLE ..... DB2 console to issue
_ M  MISCELLANEOUS ..... Address space information
_ P  PROFILE ..... Customize OMEGAMON
_ H  HISTORICAL ..... Online historical information
_ I  IFCID TRACE ..... Start an IFCID Trace

```

**From the classic interface main menu select option 'O' to see object analysis information**

# Object Analysis I/O & Getpage By Database With Drill Down Detail

```

_____ ZOJ01      VTM      O2      V310./I DB21 01/25/06 12:12:13  2
> Help PF1      Back PF3      Up PF7      Down PF8      Sort PF10      Zoom PF11
>
>      OBJECT ANALYSIS:  Enter a selection letter on the top line.
>
> A-DATABASE ALLOCS  *-DATABASE ACTIVITY  C-THREAD ACTIVITY  D-DISPLAY OPTIONS
=====
>
>      DATABASE ACT
>
> ZOJ01
+ Interval Time    = 00:15:00
+ Total Getpage    = 1189497
+
+ Database = SU06BPOB
+ *
+
+      % of      % of      Getp      Sync      Pre      Async      Other
+ Spacenam  Getp      I/O      per RIO   Read      Fetch      Write      Write
+ -----
+ GLWSDPT   13.2%    3.9%    67.4    157294    1406      926      217      0
+ GLWSEMP   12.8%   15.7%   17.1    152812    3629     5290     1136     0
+ GLWSEPA    .5%     2.3%    6.2     6351     940       77      469     0
+ GLWSPJA    .1%     1.5%    2.9     2027     621       57      324     0
+ GLWSPRJ   29.2%   21.6%   25.7   347403    2823    10690     309     0
+ GLWSSPL    .4%     .5%    22.8     4898     214        0     168     0
+ GLWS001    .3%     2.1%    3.4     4742    1202      168        0     0
+ GLWS002    1.2%    5.6%    4.5    15432    3400        0     183     0
+ GLWXACT1   .0%     .2%    1.0      192     189        0        0     0
+ GLWXDNG1   .0%     .3%    4.5      648     141        0       73     0
+ GLWXDPT1   3.0%    1.8%   33.3   36797     869      234       85     0
+ GLWXDPT2   .1%     .7%    4.9     1834     371        0     114     0
    
```

**To see detail for an object position the cursor and press F11.**

**To see the thread activity enter option 'C'.**



# Thread Activity For An Object

```

_____ ZOJT6      VTM      O2      V310./I DB21 01/25/06 12:08:45  2
> Help PF1      Back PF3      Up PF7      Down PF8      Sort PF10
>
=====
>
                                THREAD ACTIVITY BY DATABASE
OJT6
+ Interval Time      = 00:15:00      Interval Elapsed = 00:02:03
+ Total Getpage     = 524325      Total I/O       = 25181
+
+ Database = SU06BPOB
+ *
+
+ Planname  Authid  Correlation  Getpage  Sync      Prefetch I/O
+          Read   Seq         List     Dynamic
+ -----  -
+ DSNREXX  DMMJB  DMMJBRNB   524325  16918    7397     283     583
=====

```

Object analysis will correlate the I/O and getpage activity to the DB2 threads.

This helps to target potential problem applications.