



IBM Software Group

OMEGAMON XE For z/OS and CICS Situation Usage And Best Practices

Ed Woods
Consulting IT Specialist

Tivoli software

A decorative horizontal bar with a red background and various colorful patterns and icons, including a white asterisk, a woman's face, and a grid of dots.

@business on demand.

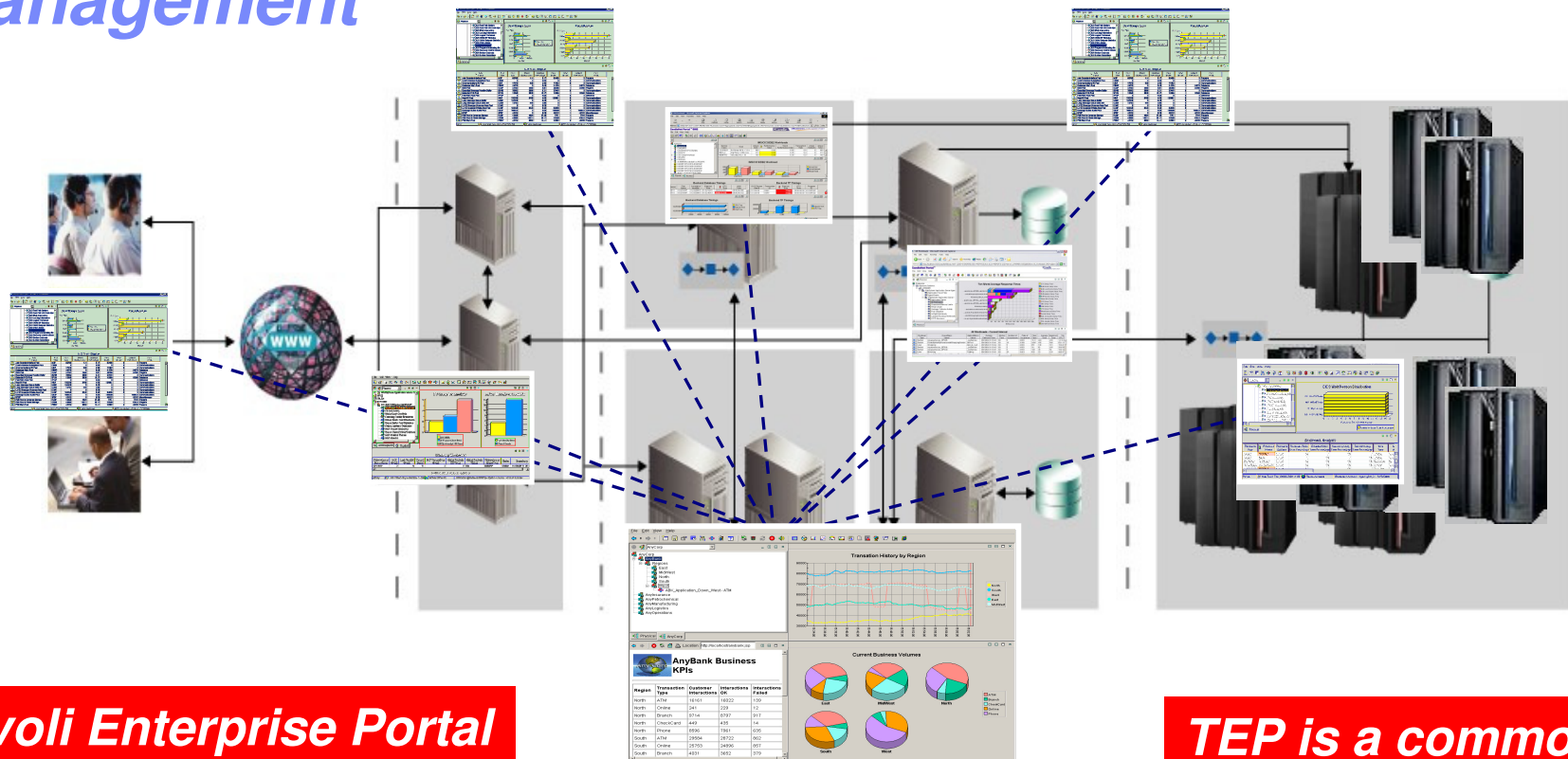
© 2008 IBM Corporation

Agenda

- About the Tivoli Enterprise Portal (TEP)
- Situations and situation benefits
- Recommendations on situation creation and usage
- Product-provided situations
- Types of alerts
- Examples of useful z/OS And CICS situations
- Summary and questions



Tivoli Enterprise Portal (The TEP) Integrated Performance, Availability, And Systems Management



Tivoli Enterprise Portal enables integrated alert and automation capabilities

Tivoli Enterprise Portal (TEP)

TEP is a common user interface for a variety of Tivoli solutions

Most Business Applications Are Complex In Nature And Incorporate A Variety Of Technologies

Tivoli Enterprise Portal (The TEP) enables integrated alert and automation capabilities

The screenshot displays the Tivoli Enterprise Portal interface. On the left is a tree view of the 'Demo Business View' containing items like 'zLinux Status', 'z/OS Status', 'Application Server', 'CICS Status', 'Transaction Analysis', 'DB2 Database', 'Thread Activity', 'EW_DB2_Thread_Ele', 'Lock Conflicts', and 'Subsystem Management'. The main area shows a 'Graphic View' titled 'Application View' with a complex diagram of system components and their interdependencies. Components include 'App Server', 'Middleware', 'CICS', 'Operating System (z/OS Status)', 'Network (Network Performance)', 'DB2 (DB2 Database, Lock Conflicts)', 'IMS (IMS DB, IMS TM)', 'Storage', and 'Operating System (zLinux Status)'. A red arrow points from a warning icon in the 'Network' component to a red box at the bottom right containing the text 'OMEGAMON has detected an issue'. The status bar at the bottom shows 'Hub Time: Mon, 06/19/2006 07:32 AM', 'Server Available', and 'Demo Business View - 9.73.221.32 - SYSADMIN'.

Customizable graphic overview

User-definable drill downs for detail

Combine information from multiple sources

OMEGAMON has detected an issue

About Situations

- Situations are the building blocks of systems management logic in the Tivoli Enterprise Portal (TEP)
- Situations may be used to highlight performance problems within key CICS and z/OS resources
 - ▶ Monitor z/OS resource usage (CPU, Storage, I/O)
 - ▶ Monitor CICS performance (response time, CPU, storage, I/O)
- Situations may be used to identify z/OS and CICS problems that impact availability
 - ▶ Monitor application availability
 - ▶ Monitor CICS subsystem availability



Situations Allow For Powerful And Flexible Alerts

- OMEGAMON XE situation capabilities allow for more intelligent alerts that integrate and correlate status and information
- Situations may incorporate Boolean logic
- Situations may be correlated with other situations
- Situations may in turn drive automated corrections



Situations – Usage And Benefits

Highlight Performance And Availability Issues

The screenshot shows the Tivoli Enterprise Portal interface. A red box highlights a 'CRITICAL' alert: 'OS390_WJ_Alloc_Common_Storage_C DEMOPLX:MVSA:MVSSYS 10/29/08 09:00:26'. A red arrow points from the alert to a red callout box that says 'Click to see alert detail'. Another red arrow points from the alert to a red callout box that says 'Flyover pop-up shows the name of the 'situation' alert'. Below the alert is a table with columns: Area, Allocation, Allocation Percent, In Use, In Use Percent, Total Size, Unowned, Growth, SQA Overflow, and ESQA Overflow. The table contains data for CSA, ECSA, SQA, and ESQA.

Area	Allocation	Allocation Percent	In Use	In Use Percent	Total Size	Unowned	Growth	SQA Overflow	ESQA Overflow
CSA	2342912	62	2222080	58.8	3776512	14336	0	0	0
ECSA	133705728	36	133001216	36.2	367751168	766976	45472	0	0
SQA	0	0	679936	23.2	2928640	25600	0	0	0
ESQA	0	0	28549120	46.1	61919232	2048	600	0	0

Situation Detail For The CSA Alert

What is the problem?

What are the details?

Area	Allocation Percent	In Use Percent	Managed System	Allocation	In Use	Total Size	Unowned
CSA	62	58.8	DEMOPLX:MVSA:MVSSYS	2342912	2222080	3776512	13312
ECSA	33	33.0	DEMOPLX:MVSA:MVSSYS	121982976	121333760	367751168	471040
SQA	0	23.2	DEMOPLX:MVSA:MVSSYS	0	679936	2928640	25600
ESQA	0	42.8	DEMOPLX:MVSA:MVSSYS	0	26520576	61919232	2048

Area	Allocation Percent	In Use Percent	Managed System	Allocation	In Use	Total Size	Unowned
CSA	62	58.8	DEMOPLX:MVSA:MVSSYS	2342912	2222080	3776512	13312
ECSA	36	36.2	DEMOPLX:MVSA:MVSSYS	133775360	133065728	367751168	761856
SQA	0	23.2	DEMOPLX:MVSA:MVSSYS	0	680960	2928640	25600
ESQA	0	46.0	DEMOPLX:MVSA:MVSSYS	0	28499968	61919232	2048

Any Predefined Actions?

Any expert advice?

```
ADVICE("km5:"+OS390_Allocated_CSA_Crit");Demo Situation is "TRUE" - deeper analysis necessary!
```


Situations – Usage And Benefits

‘Action’ To Perform Commands And Corrections

Where command is executed

Attribute substitution in the command line

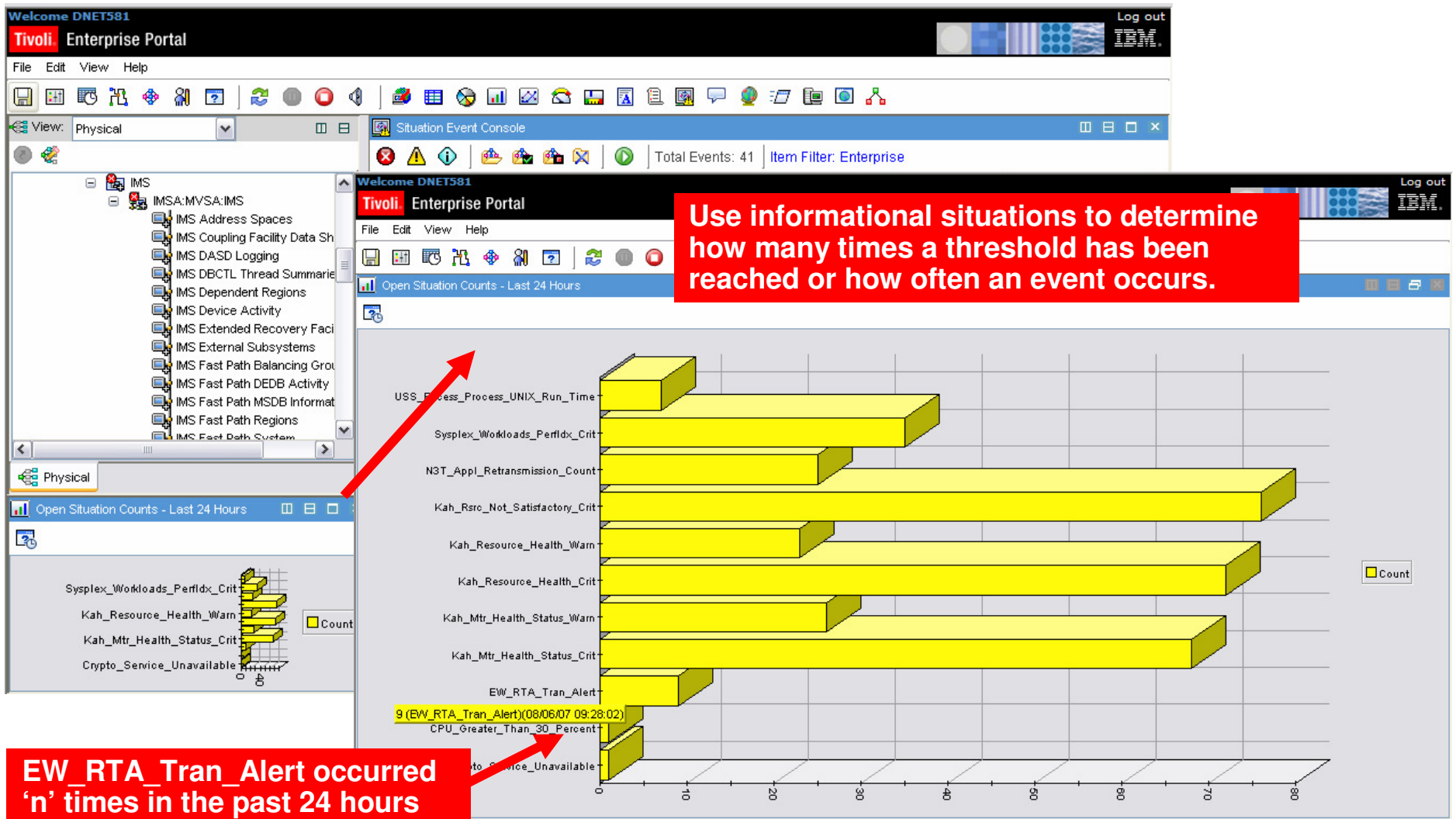
System command may be executed when the situation is true

Examples of actions include:

- Issuing messages to the console
- Any valid z/OS console command
- Issue commands to CICS

Situations – Usage And Benefits

Use Situations For Informational Event Analysis



EW_RTA_Trans_Alert occurred 'n' times in the past 24 hours

Use informational situations to determine how many times a threshold has been reached or how often an event occurs.

A Basic Example Situation Alert On z/OS CSA Utilization Growth

Start/stop situation

- Create New...
- Create Another...
- Start Situation
- Stop Situation
- Delete Situation
- Dissociate

Distribution tab to specify where situation runs. Expert advice is customizable. Action tab to execute command.

Specify alert criteria. This may include one or multiple attribute criteria.

	Area	Growth
1	== CSA	>= 50
2		
3		

Specify sampling interval

Sampling interval: 0 / 0 : 15 : 0
ddd hh mm ss

Specify severity and whether to run at Omegamon startup

State: **Critical**

Run at startup:

Take Advantage Of Boolean Logic Make Situations More Meaningful And Useful

Add boolean logic to make situations more robust

	Area	Allocation Percent	In Use Percent
1	== CSA	>= 25	
2	== ECSA	>= 20	
3	== ESQA		>= 15.0
4	== SQA		>= 15.0
5			

Note formula capacity to see how much logic may be added

Click 'add conditions' to add additional attribute logic

Situation Formula Capacity: 37%

Sampling interval: 0 / 0 : 3 : 0 (ddd hh mm ss)

Sound: Enable < none selected > [Play] [Edit...]

State: Critical [Run at startup]

Use Boolean Logic To Reduce The Number Of Required Situations

The image displays three screenshots of the 'Situation Editor' interface, illustrating how boolean logic can be used to reduce the number of required situations. Red arrows point from the text boxes to the relevant parts of the screenshots.

Top Left Screenshot: Shows a list of situations on the left. The 'Formula' tab is active, showing a description: 'Critical threshold exceeded for LSR pool 1 lookaside'. The formula table below is:

	Lookaside Ratio	Pool ID
1	< 10	== 1
2		
3		

Top Right Screenshot: Shows a similar situation for 'pool 2 lookaside'. The formula table is:

	Lookaside Ratio	Pool ID
1	< 10	== 1
2	< 10	== 2
3	< 20	== 3

Bottom Left Screenshot: Shows a situation for 'pool 2 lookaside' with a combined formula table:

	Lookaside Ratio	Pool ID
1	< 10	== 2
2		
3		

Annotations:

- Top Left:** *Instead of multiple redundant situations...*
- Top Right:** *Consider combining the logic where appropriate...*
- Bottom Right:**
 - Use boolean logic to reduce the number of required situations
 - Reduce monitoring/alerting overhead
 - Reduce alert management/maintenance



Use Persistence Option To Smooth Alert Spikes

With a persistence option the situation must be true 'n' times before the alert fires

Click 'Advanced' to specify persistence options

User persistence to eliminate alerts that are spikes or outliers

Advanced Situation Options

Situation Persistence: Display Item

Situation Persistence

Consecutive true samples: 3

OK Cancel Help

Formula

	Average CPU Percent
1	>= 90
2	
3	

State: Critical

Run at startup

Exploit Managed Systems Lists To Simplify Situation Deployment

The screenshot shows the 'Situation Editor' window. On the left is a tree view of various CICSplex components. The main area is divided into two panes. The top pane, titled '- Assigned', contains a list with 'PROD_CICS'. A red arrow points from a text box to this list. The bottom pane, titled 'Available Managed Systems', contains a list of system identifiers such as 'MVSA.CICSAOR1' through 'MVSA.CICSTIV3'. Below this is another section titled 'Available Managed System Lists' containing 'MVS_CICS' and 'DNET546_TESTE'. A red arrow points from the text box to the right arrow button between the panes. At the bottom right is a button labeled 'Edit Managed System Lists'.

Example
 Create a managed systems list for Test CICS, another for Prod CICS, and another for All CICS

Managed systems lists are user-definable and customizable.
Managed systems lists simplify the deployment of situations
Especially useful for CICS with the potentially large number of managed systems being monitored

Situations

General Recommendations And Rules Of Thumb

- Make situations Meaningful, Actionable, and Useful
- Meaningful situations
 - ▶ Situation naming is flexible – make the names understandable
 - ▶ Adopt a situation naming convention
 - Makes it easier to identify customer created versus product provided situations
- Actionable situations
 - ▶ Have appropriate notification
 - A workspace with an alert icon, command/message notification
 - ▶ As a standard have expert advice
 - ▶ Have pre-defined take actions where appropriate
- Useful situations
 - ▶ Eliminate phony alert indicators – tune out the noise
 - ▶ If an alert situation fires it should indicate an actual issue
 - An alert, an owner, and a consequence



Situations May Be Correlated With Other Situations

Correlated Alert Example

Correlates two situations. Both must be true for this situation to be true.

	EW_CICS_RTA_Alert @MVSA.CICSAOR1	OS390_AvgCPU_Pct_Crit @DEMOPLX:MVSA:MVSSYS
1		
2		
3		

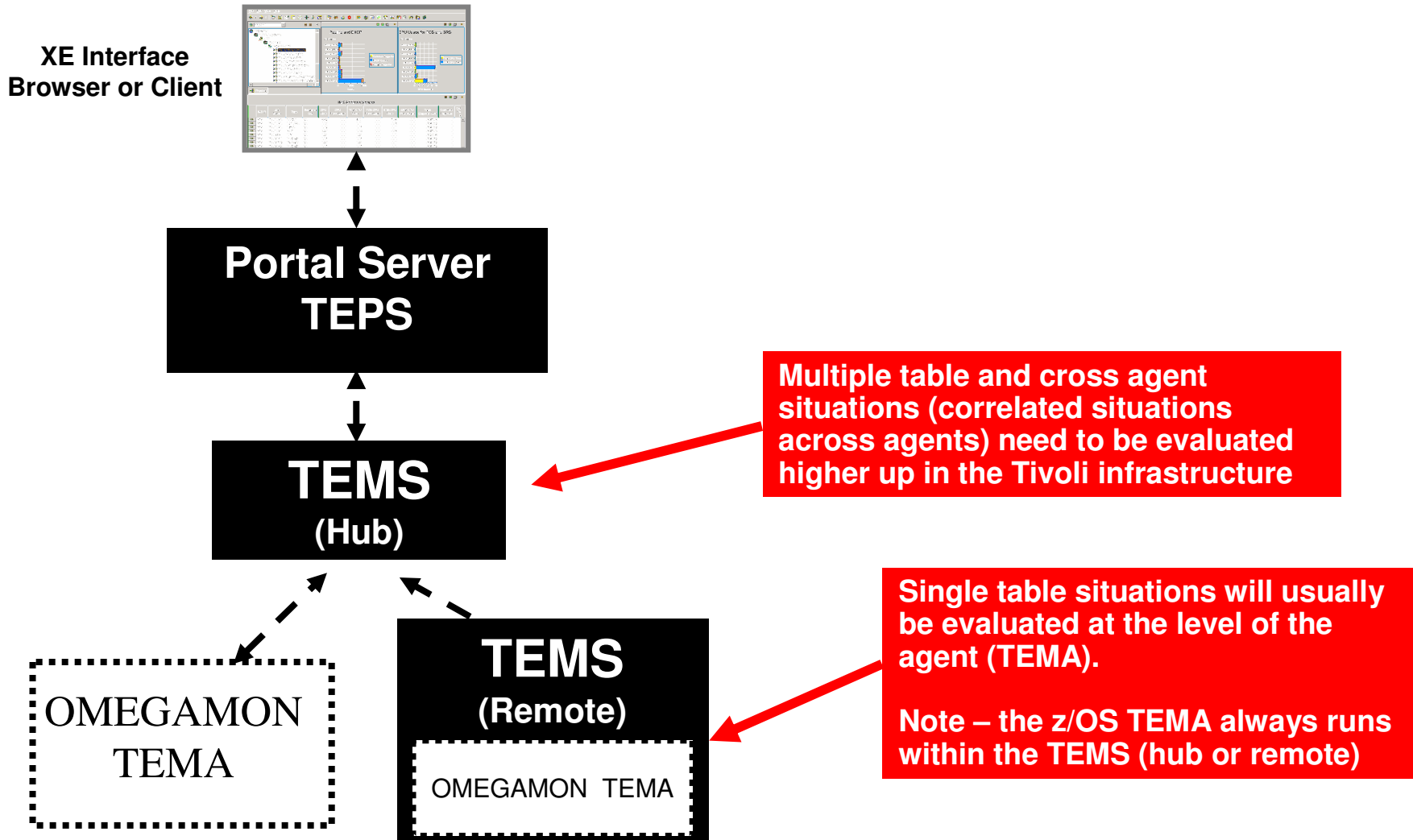
Select 'Add Conditions' to add additional logic.

Click inside a cell of the formula editor to see a description of the attribute for that column and to compose the expression.

Done

Situation Formula Capacity

Considerations For More Complex Situations



Additional Situation Considerations And Recommendations

- When creating and deploying a set of situations consider
 - ▶ The number of situations being deployed
 - ▶ The number of managed systems (i.e. z/OS LPARs and CICS tasks)
 - ▶ Refresh frequency of the situations
- Consider carefully the number of required situations
 - ▶ Use boolean logic to reduce the number of needed situations
 - ▶ Do not automatically make a warning alert to go with each critical alert
 - Create a warning if it will allow time to address an issue before going critical
 - ▶ Use managed system lists to send the right situations to the right managed systems
- Be aware of the situation refresh rates
 - ▶ Multiple situations on the same table with the same refresh rate may be optimized by the infrastructure
 - ▶ Potential to reduce monitoring overhead if done appropriately



Use 'Manage Situations' To Check Situation Status And Sampling Interval

The screenshot shows the Tivoli Enterprise Portal interface. A red box highlights the 'Manage Situations' menu item in the left-hand tree view. A red callout box with white text points to this menu, stating: "‘Manage Situations’ shows what situations are distributed to a managed system and the interval of the situations".

Below the menu, a 'Detailed Thread Exceptions' table is visible. To the right, a 'Manage Situation at Managed System: DSN1.MVSA:DB2' window is open, displaying a table of situation details. The 'Interval' column in this table is highlighted with a red box.

Name	Status	Description	Auto Start	Advice	Acti...	Interval
Atest_KDP_DWAT_Critical	Stopped	Wait for remote SQL time exceeds critical limit				0d / 0h : 15m : 0s
DB2_CMD_Lock_Wait_Time_Critical	Stopped	Automatic message when lock elapsed time exceeds 10...				0d / 0h : 2m : 0s
DB2_Lock_Waiter_Time_Critical	Started	Lock waiter elapsed time has exceeded the critical thres...	✓			0d / 0h : 0m : 30s
DB2_Lock_Waiter_Time_Warning	Started	Lock waiter elapsed time has exceeded the warning thre...	✓			0d / 0h : 0m : 30s
DB2_Thread_Wait_Time_Critical	Closed	DB2 thread wait time has exceeded the critical threshold.	✓			0d / 0h : 1m : 30s
DB2_Thread_Wait_Time_Warning	Closed	DB2 thread wait time has exceeded the warning threshold.	✓			0d / 0h : 1m : 30s
Demo_CF_Locks_False_Cont_Crit	Stopped	False Contention				0d / 0h : 1m : 0s
dnet289_lock_conflict	Stopped	detect presence of locking conflicts				0d / 0h : 5m : 0s
DNET546_Conflito_de_Lock_no_DB2	Started		✓			0d / 0h : 0m : 30s
DNET546_Excessivo_Lock_Wait	Stopped	Lock waiter elapsed time has exceeded the warning thre...	✓			0d / 0h : 1m : 0s
dnet956_Lock_Conflict_Exists	Closed	Situation for DB2 Lock Conflict Demo	✓			0d / 0h : 0m : 30s
EW_Thread_Alert	Open					0d / 0h : 1m : 30s
KD5_ETIM_Warning	Stopped	Thread elapsed time exceeds critical threshold				0d / 0h : 15m : 0s
KDP_WTRE_Critical	Started	Time waiting for resource exceeds the critical threshold	✓			0d / 0h : 15m : 0s
KDP_WTRE_Warning	Stopped	Time waiting for resource exceeds the warning threshold				0d / 0h : 15m : 0s

ITMSUPER Provides Insight On Situation Usage

- Go to the Tivoli OPAL web site and download the ITMSUPER utility
- ITMSUPER provides details on what is happening in the ITM infrastructure
 - ▶ Details on what situations are started (how many situations and managed systems)
 - ▶ What situations are firing (and how often)
 - ▶ What situations are deployed but not firing

The screenshot shows the ITMSUPER Tool web interface. The main content area displays 'Situation Statistics HUB at SYSG:CMS'. It features a table with columns for system names and their associated statistics. The table is organized into several columns, each representing a different system or category. The 'SP22:CMS' column shows 1,773 seconds and 45 raised situations, with 36 error situations. Other columns include 'REMOTE_CE3', 'REMOTE_IBM', 'SP23:CMS', and 'SYSG:CMS'. The 'SYSG:CMS' column shows 0 raised situations and 0 error situations. The table lists various situations such as '_Z_ASRESRC20', '_Z_ICSF1', '_Z_ICSF2', '_Z_MOUNTS23', 'Crypto_CKDS_Access_Disabled', 'Crypto_CKDS_80PCT_Full', 'Crypto_Internal_Error', 'Crypto_Invalid_Master_Key', 'Crypto_Invalid_PKA_Master_Keys', 'Crypto_No_Coprocessors', 'Crypto_No_PCI_Coprocessors', 'Crypto_PCI_Unavailable', 'Crypto_PKA_Services_Disabled', and 'Crypto_PKA_Services_Disabled'. The interface also includes a 'Systems' tree on the left and a navigation menu at the top.

<http://catalog.lotus.com/wps/portal/topal>

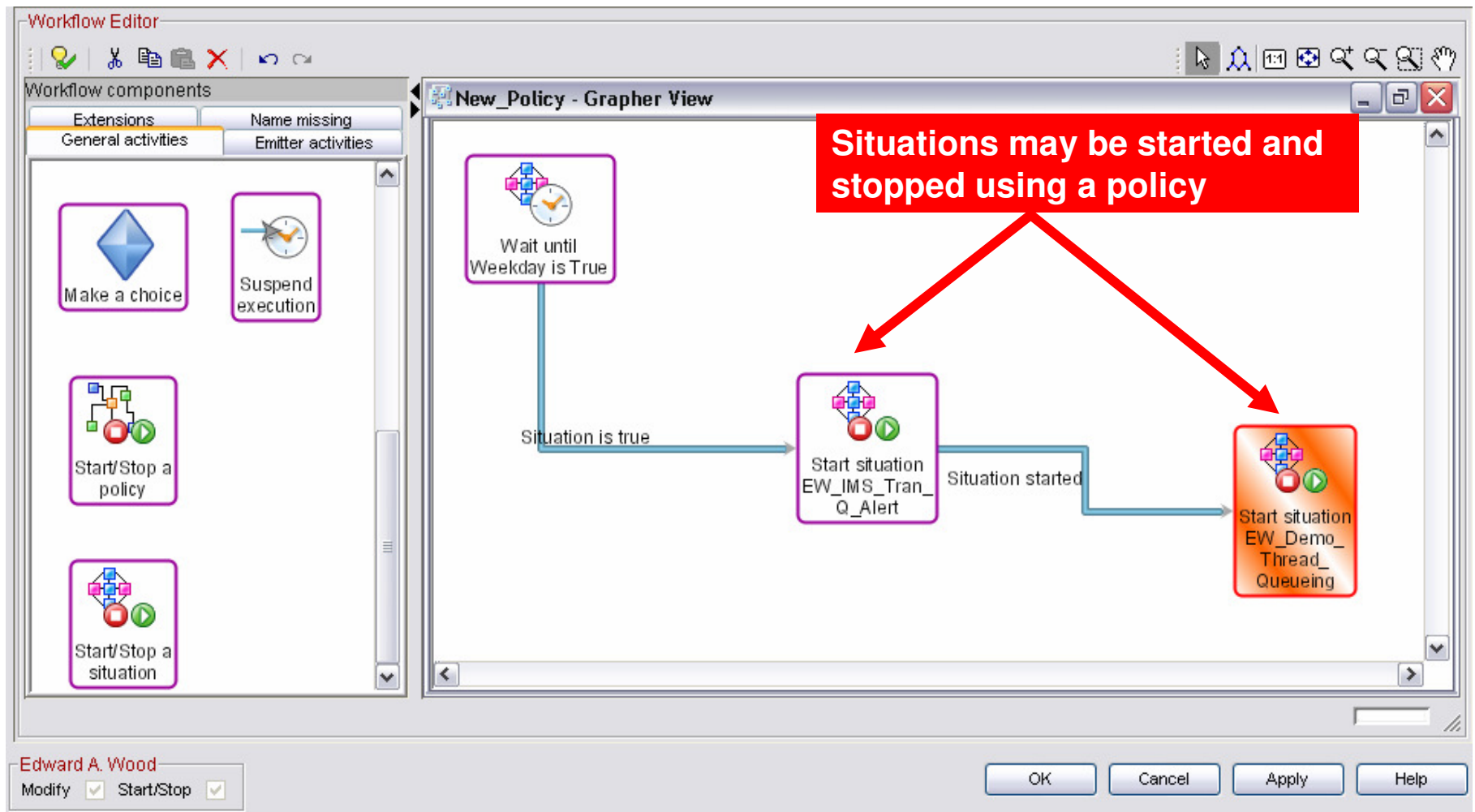
Eliminating The Noise

Time Of Day And Day Of Week Considerations

- Some alerts are sensitive to certain times of day or day of week considerations
 - ▶ This may be due to operational or off-hours processing concerns
 - ▶ Workloads will often vary during the day and during the week
 - ▶ Some issues are critical during prime time and not as critical off-hours
- Options for time of day/processing window challenges
 - ▶ Situations may be coded with time of day information built into the situation logic
 - This may work for a limited number of situations, but may add maintenance and limit the flexibility of the situations
 - ▶ Policies may be used to start/stop situations as needed based upon specified logic
 - Does not require coding in the underlying situations



Using A Policy To Manage Situations



Integrated Automation With SA for z/OS

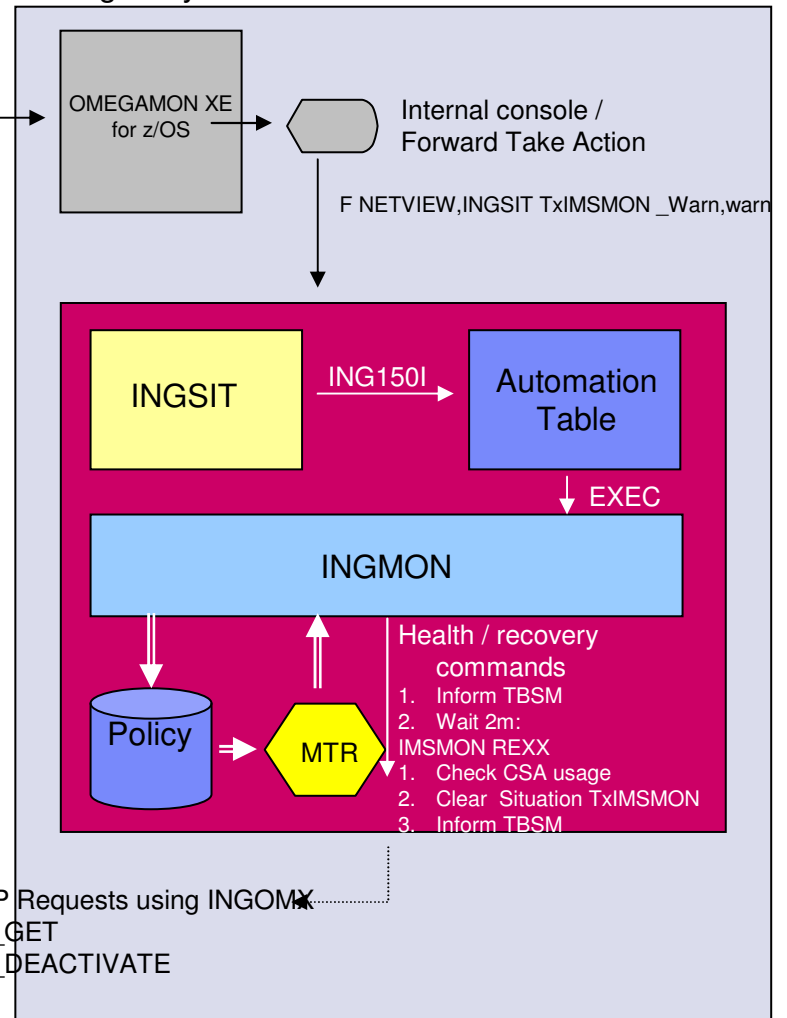
Situation: TxIMSMON

OMEGAMON XE for z/OS:
 If growth of "CSA Usage of IMS" exceeds threshold
 THEN
 Tell SA z/OS about this via the INGSIT command

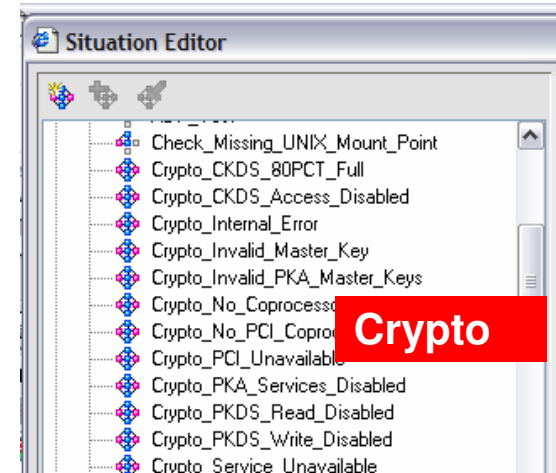
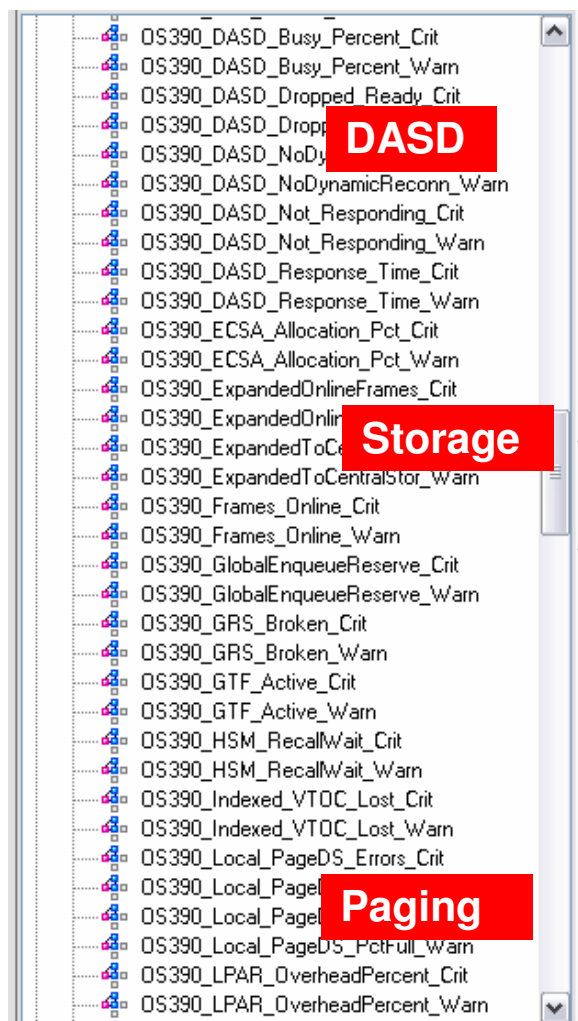
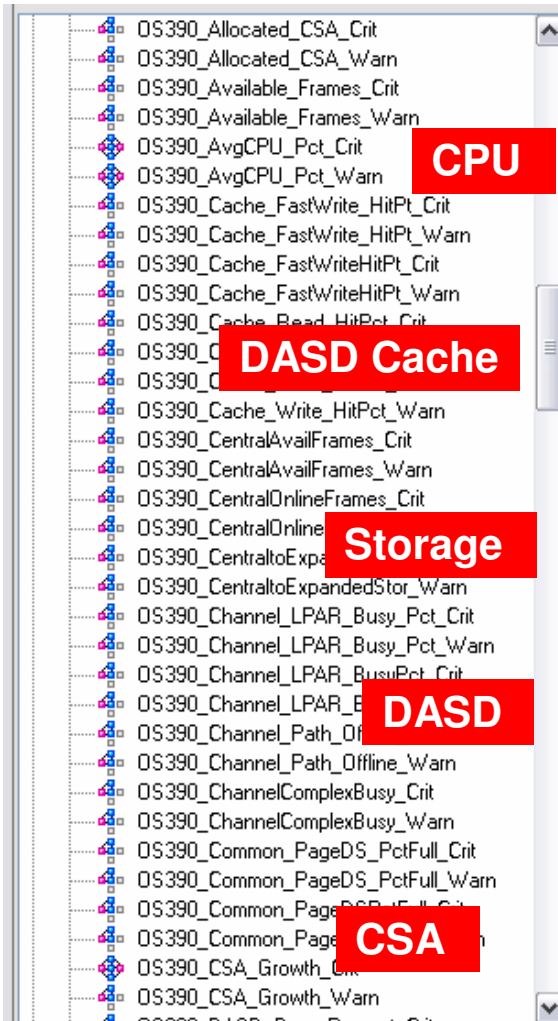
The screenshot shows the configuration interface for the TxIMSMON situation. It includes sections for:

- Action Selection:** Radio buttons for "System Command" (selected) and "Universal Message".
- System Command:** A text field containing "F NETVIEW,INGSIT TxIMSMON _Warn,warn" and an "Attribute Substitution..." button.
- If the condition is true for more than one monitored item:** Radio buttons for "Only take action on first item" (selected) and "Take action on each item".
- Where should the Action be executed (performed):** Radio buttons for "Execute the Action at the Managed System (Agent)" (selected) and "Execute the Action at the Managing System (TEMS)".
- If the condition stays true over multiple intervals:** Radio buttons for "Don't take action twice in a row (wait until situation goes false then true again)" (selected) and "Take action in each interval".

Managed System



OMEGAMON XE For z/OS V4.1 Product Provided Situations



Product provided situations provide a starting point and a means of migrating alerts from Omegamon Classic/CUA 3270 interface to the Tivoli Enterprise Portal

Recommendations

Use product provided situations as examples and a starting point

For large deployments create more meaningful situations

OMEGAMON XE For z/OS V4.1

Product Provided Situations - continued

Situation Editor

- CPU**
 - OS390_LPAR_Status_Crit
 - OS390_LPAR_Status_Warn
 - OS390_Max_ASIDs_in_Use_Crit
 - OS390_Max_ASIDs_in_Use_Warn
 - OS390_Migration_Rate_Crit
 - OS390_Migration_Rate_Warn
 - OS390_Network_ResponseTime_Crit
 - OS390_Network_ResponseTime_Warn
 - OS390_OLTEP_Active_Crit
 - OS390_OLTEP_Active_Warn
 - OS390_Outstanding_WTORs_Crit
 - OS390_Outstanding_WTORs_Warn
 - OS390_Page_Rate_Crit
 - OS390_Page_Rate_Warn
 - OS390_PageDSNotOperational_Crit
 - OS390_PageDSNotOperational_Warn
 - OS390_Physical_CPU_Crit
 - OS390_Physical_CPU_Warn
 - OS390_PLPA_PageDS_PctFull_Crit
 - OS390_PLPA_PageDS_PctFull_Warn
 - OS390_Real_Stor_Migrate_Age_Crit
 - OS390_Real_Stor_Migrate_Age_Warn
 - OS390_RMF_Not_Active_Crit
 - OS390_RMF_Not_Active_Warn
 - OS390_SMF_Not_Recording_Crit
 - OS390_SMF_Not_Recording_Warn
 - OS390_Syslog_Not_Recording_Crit
 - OS390_Syslog_Not_Recording_Warn
 - OS390_System_Page_Rate_Crit
 - OS390_System_Page_Rate_Warn
 - OS390_System_PageFaultRate_Crit
 - OS390_System_PageFaultRate_Warn
- Tape**
 - OS390_Tape_Dropped_Ready_Crit
 - OS390_Tape_Dropped_Ready_Warn
 - OS390_Tape_Mount_Pend_Time_Crit
 - OS390_Tape_Mount_Pend_Time_Warn
 - OS390_Tape_Not_Responding_Crit
 - OS390_Tape_Not_Responding_Warn
 - OS390_Tape_Permanent_Errors_Crit
 - OS390_Tape_Permanent_Errors_Warn
 - OS390_Tape_Temp_Errors_Crit
 - OS390_Tape_Temp_Errors_Warn
 - OS390_Undispatched_Tasks_Crit
 - OS390_Undispatched_Tasks_Warn
 - OS390_Unowned_Common_Stor_Crit
 - OS390_Unowned_Common_Stor_Warn
 - OS390_Unref_Interval_Cnt_Crit
 - OS390_Unref_Interval_Cnt_Warn
 - OS390_User_Host_Resp_Time_Crit
 - OS390_User_Host_Resp_Time_Warn
 - OS390_WJ_Alloc_Common_Storage_C
 - OS390_WTO_Buffers_Left_Crit
 - OS390_WTO_Buffers_Left_Warn
- TSO Resp**
 - USS_ENQ_Contention_Critical
 - USS_ENQ_Contention_Warning
 - USS_Excess_AS_UNIX_System_Time
 - USS_Excess_AS_UNIX_User_Time
 - USS_Excess_Kernel_CPU_Time
 - USS_Excess_Process_UNIX_Run_Time
 - USS_File_System_Free_Space_Crit
 - USS_File_System_Free_Space_Warn
 - USS_Logged_On_User_Idle
 - USS_Missing_inetd_Process
 - USS_Missing_Mount_Point
 - USS_MS603
 - USS_Quiesced_Processes_Crit
 - USS_Quiesced_Processes_Warn
 - USS_Shortage_of_Processes_Crit
 - USS_Shortage_of_Processes_Warn
 - USS_Unwanted_inetd_Process
 - USS_WAS_FileSystem_Low_DiskSpace
 - USS_WAS_Missing_WASDaemonProcess
 - USS_WAS_MissingHTTPDaemonProcess
- USS**
 - MVS_CFStruct_Status_Crit
 - MVS_CFStruct_Status_Warn
 - MVS_CFStructStat_FalseLock_Crit
 - MVS_CFStructStat_FalseLock_Warn
 - MVS_CFStructToMVS_Requests_Crit
 - MVS_CFStructToMVS_Requests_Warn
 - MVS_CFStructUsers_Connect_Crit
 - MVS_CFStructUsers_Connect_Warn
 - MVS_CFSsystemPaths_Busy_Crit
 - MVS_CFSsystemPaths_Busy_Warn
 - MVS_CFSsystems_Performance_Crit
 - MVS_CFSsystems_Performance_Warn
 - MVS_GRS_RespTime_Crit
 - MVS_GRS_RespTime_Warn
 - MVS_XCFGGroupMembers_Status_Crit
 - MVS_XCFGGroupMembers_Status_Warn
 - MVS_XCFSystemPaths_Warn
 - OS_CMD_CF_Systems_Perform_Crit
 - OS_CMD_DASD_Device_ContIdx_Warn
 - OS_CMD_WLM_Performance_Idx_Crit
 - Sysplex_DASD_Dev_ContIdx_Warn
 - Sysplex_DASDSys_VaryStatus_Warn
 - Sysplex_GlobalEnq_Wait_Crit
 - Sysplex_GlobalEnq_Wait_Warn
 - Sysplex_Workloads_PerfIdx_Crit
 - Sysplex_Workloads_PerfIdx_Warn
 - Sysplex_XCFGGroups_Warn
 - Sysplex_XCFSystems_Status_Crit
 - Sysplex_XCFSystems_Status_Warn
- Sysplex**
 - MVS_CFStruct_Status_Crit
 - MVS_CFStruct_Status_Warn
 - MVS_CFStructStat_FalseLock_Crit
 - MVS_CFStructStat_FalseLock_Warn
 - MVS_CFStructToMVS_Requests_Crit
 - MVS_CFStructToMVS_Requests_Warn
 - MVS_CFStructUsers_Connect_Crit
 - MVS_CFStructUsers_Connect_Warn
 - MVS_CFSsystemPaths_Busy_Crit
 - MVS_CFSsystemPaths_Busy_Warn
 - MVS_CFSsystems_Performance_Crit
 - MVS_CFSsystems_Performance_Warn
 - MVS_GRS_RespTime_Crit
 - MVS_GRS_RespTime_Warn
 - MVS_XCFGGroupMembers_Status_Crit
 - MVS_XCFGGroupMembers_Status_Warn
 - MVS_XCFSystemPaths_Warn
 - OS_CMD_CF_Systems_Perform_Crit
 - OS_CMD_DASD_Device_ContIdx_Warn
 - OS_CMD_WLM_Performance_Idx_Crit
 - Sysplex_DASD_Dev_ContIdx_Warn
 - Sysplex_DASDSys_VaryStatus_Warn
 - Sysplex_GlobalEnq_Wait_Crit
 - Sysplex_GlobalEnq_Wait_Warn
 - Sysplex_Workloads_PerfIdx_Crit
 - Sysplex_Workloads_PerfIdx_Warn
 - Sysplex_XCFGGroups_Warn
 - Sysplex_XCFSystems_Status_Crit
 - Sysplex_XCFSystems_Status_Warn

OMEGAMON XE For CICS V4.1 Product Provided Situations

The screenshot displays the 'Situation Editor' window with a list of CICSplex situations. The situations are grouped into several categories, each highlighted with a red label:

- Tasks:** Includes situations like CICSplex_Activity_Warning, CICSplex_AID_s_Critical, CICSplex_AID_s_Warning, CICSplex_AtClassMax_Critical, CICSplex_AtClassMax_Warning, CICSplex_AtMaxTCB_Critical, CICSplex_CICSCPUHigh_Critical, CICSplex_CICSCPUHigh_Warning, CICSplex_CICSCPULow_Critical, CICSplex_CICSCPULow_Warning, CICSplex_ClassMax_Critical, CICSplex_ClassMax_Warning, CICSplex_Corbaserver_Warning, CICSplex_CSML_delay_in_FCP, CICSplex_DB2Abort_Critical, CICSplex_DB2Abort_Warning, CICSplex_DB2Attached_Critical, CICSplex_DB2Attached_Warning, CICSplex_DB2MaxThreads_Critical, CICSplex_DB2MaxThreads_Warning, CICSplex_DB2Shutdown_Critical, CICSplex_DB2Shutdown_Warning, CICSplex_DB2ThreadHWM_Critical, CICSplex_DB2ThreadHWM_Warning, CICSplex_DB2ThreadUse_Critical, CICSplex_DB2ThreadUse_Warning, CICSplex_DB2Wait_Critical, CICSplex_DB2Wait_Warning, CICSplex_DBCTLAct_Critical, CICSplex_DBCTLAct_Warning, CICSplex_delay_in_Database, CICSplex_delay_in_MQSeries.
- CPU:** Includes CICSplex_Activity_Warning, CICSplex_AID_s_Critical, CICSplex_AID_s_Warning, CICSplex_AtClassMax_Critical, CICSplex_AtClassMax_Warning, CICSplex_AtMaxTCB_Critical, CICSplex_CICSCPUHigh_Critical, CICSplex_CICSCPUHigh_Warning, CICSplex_CICSCPULow_Critical, CICSplex_CICSCPULow_Warning.
- DB2:** Includes CICSplex_DB2Abort_Critical, CICSplex_DB2Abort_Warning, CICSplex_DB2Attached_Critical, CICSplex_DB2Attached_Warning, CICSplex_DB2MaxThreads_Critical, CICSplex_DB2MaxThreads_Warning, CICSplex_DB2Shutdown_Critical, CICSplex_DB2Shutdown_Warning, CICSplex_DB2ThreadHWM_Critical, CICSplex_DB2ThreadHWM_Warning, CICSplex_DB2ThreadUse_Critical, CICSplex_DB2ThreadUse_Warning, CICSplex_DB2Wait_Critical, CICSplex_DB2Wait_Warning.
- Journal:** Includes CICSplex_Function_Ship_delays, CICSplex_Held_RLS_Locks, CICSplex_Hist_Region_Control, CICSplex_Hist_Workload_Control, CICSplex_HostStatus_Warning, CICSplex_ICE_s_Critical, CICSplex_ICE_s_Warning, CICSplex_IDRateHigh_Critical, CICSplex_IDRateHigh_Warning, CICSplex_JournalDis_Critical, CICSplex_JournalDis_Warning, CICSplex_JournalMTOR_Critical, CICSplex_JournalMTOR_Warning, CICSplex_JVMClasscache_Warning, CICSplex_JVMProgram_Warning, CICSplex_LSQA_Critical, CICSplex_LSQA_Warning, CICSplex_LSRPool1Look_Critical, CICSplex_LSRPool1Look_Warning, CICSplex_LSRPool1Str_Critical, CICSplex_LSRPool1Str_Warning, CICSplex_LSRPool1Wait_Critical, CICSplex_LSRPool1Wait_Warning, CICSplex_LSRPool2Look_Critical, CICSplex_LSRPool2Look_Warning, CICSplex_LSRPool2Str_Critical, CICSplex_LSRPool2Str_Warning, CICSplex_LSRPool3Look_Critical, CICSplex_LSRPool3Look_Warning, CICSplex_LSRPool3Str_Critical, CICSplex_LSRPool3Str_Warning.
- TCPIP:** Includes CICSplex_SysplexEnq_Critical, CICSplex_SysplexEnq_Warning, CICSplex_TakingSDUMP_Critical, CICSplex_TakingSDUMP_Warning, CICSplex_TCPIP_Critical, CICSplex_TCPIPDis_Critical, CICSplex_TCPIPDis_Warning, CICSplex_TCPIPFail_Critical, CICSplex_TCPIPFail_Warning, CICSplex_TCPIPService_Warning, CICSplex_TCPIPWait_Critical, CICSplex_TCPIPWait_Warning, CICSplex_TDActStr_Critical, CICSplex_TDActStr_Warning, CICSplex_TDBuffer_Critical, CICSplex_TDBuffer_Warning, CICSplex_TDBuWait_Critical, CICSplex_TDBuWait_Warning, CICSplex_TDCIs_Critical, CICSplex_TDCIs_Warning, CICSplex_TDQueueLen_Critical, CICSplex_TDQueueLen_Warning, CICSplex_TDStrWait_Critical, CICSplex_TDStrWait_Warning, CICSplex_TDTigger_Critical, CICSplex_TDTigger_Warning, CICSplex_TODUpdate_Critical, CICSplex_TODUpdate_Warning, CICSplex_TotENQWaits_Critical, CICSplex_TotENQWaits_Warning, CICSplex_TranCPUtime_Critical, CICSplex_TranCPUtime_Warning, CICSplex_TranDumps_Critical, CICSplex_TranDumps_Warning.
- TD:** Includes CICSplex_TDBuffer_Critical, CICSplex_TDBuffer_Warning, CICSplex_TDBuWait_Critical, CICSplex_TDBuWait_Warning.
- Database:** Includes CICSplex_delay_in_MQSeries, CICSplex_delay_within_CICS, CICSplex_DJAR_Critical, CICSplex_DJAR_Warning, CICSplex_DLIDMB_Critical, CICSplex_DLIDMB_Warning, CICSplex_DLIEnq_Warning, CICSplex_DLIEnqAct_Critical, CICSplex_DLIEnqAct_Warning, CICSplex_DLIPSB_Critical, CICSplex_DLIPSB_Warning, CICSplex_DLIThread_Critical, CICSplex_DLIThread_Warning, CICSplex_DSAAvail_Critical, CICSplex_DSAAvail_Warning, CICSplex_DSAAHigh_Critical, CICSplex_DSAAHigh_Warning, CICSplex_DSALow_Critical, CICSplex_DSALow_Warning, CICSplex_DSASOS_Critical, CICSplex_DSASOS_Warning, CICSplex_EDSAAvail_Critical, CICSplex_EDSAAvail_Warning, CICSplex_EDSAHigh_Critical, CICSplex_EDSAHigh_Warning, CICSplex_EDSALow_Critical, CICSplex_EDSALow_Warning, CICSplex_EDSASOS_Critical, CICSplex_EDSASOS_Warning, CICSplex_ENQWaitCount_Critical, CICSplex_ENQWaitCount_Warning, CICSplex_ExitConn_Warning, CICSplex_ExitStart_Warning.

OMEGAMON XE For CICS V4.1 Product Provided Situations - continued

The screenshot shows the 'Situation Editor' window with a list of CICS situations. The situations are grouped into five categories, each highlighted with a red box and a label:

- OSCOR:** Includes situations like CICSplex_LSRPool8Str_Critical, CICSplex_LSRPool8Wait_Critical, CICSplex_MaxTask_Critical, CICSplex_MQBusyTCBs_Critical, CICSplex_MQInactive_Critical, CICSplex_MROAIDs_Critical, CICSplex_MROPctLink_Critical, CICSplex_OSCORHigh_Critical, CICSplex_OSCORLow_Critical, CICSplex_PagepoolSOS_Critical, CICSplex_PageRate_Critical, CICSplex_Performance_Index, CICSplex_ProcessType_Warning, CICSplex_RecMgr_Warning, CICSplex_RTAGroup_Warning, CICSplex_Service_Class_Deleted, CICSplex_ShuntedUOWs_Critical, CICSplex_StorViol_Critical, CICSplex_Sympathy_Degradation, CICSplex_Sympathy_Sickness, CICSplex_SysDumps_Critical, and CICSplex_SysDumpsHr_Critical.
- Storage:** Includes CICSplex_StorViol_Warning.
- Tran rate:** Includes CICSplex_TranRateHigh_Critical, CICSplex_TranRateHigh_Warning, CICSplex_TranRateLow_Critical, CICSplex_TranRateLow_Warning, CICSplex_TSAuxBuf_Critical, CICSplex_TSAuxBuf_Warning, CICSplex_TSAuxBufWait_Critical, CICSplex_TSAuxBufWait_Warning, CICSplex_TSAuxCl_Critical, CICSplex_TSAuxCl_Warning, CICSplex_TSAuxExhaust_Critical, CICSplex_TSAuxIO_Critical, CICSplex_TSAuxStr_Critical, CICSplex_TSAuxStr_Warning, CICSplex_TSAuxStrWait_Critical, CICSplex_TSAuxStrWait_Warning, CICSplex_UOW_DSNTail_Warning, CICSplex_UOW_Link_Warning, CICSplex_UOWENQFail_Critical, CICSplex_UOWENQFail_Warning, CICSplex_UOWForce_Critical, CICSplex_UOWForce_Warning, CICSplex_UOWShuntTime_Critical, CICSplex_UOWShuntTime_Warning, CICSplex_URIMAPDisCnt_Warning, CICSplex_URIMAPHostDis_Warning, CICSplex_URIMAPstatus_Warning, CICSplex_URIMAPUnmatch_Warning, CICSplex_VSAMDdataCA_Critical, CICSplex_VSAMDdataCA_Warning, CICSplex_VSAMDdataCl_Critical, CICSplex_VSAMDdataCl_Warning, CICSplex_VSAMDdataExt_Critical, and CICSplex_VSAMDdataExt_Warning.
- TS:** Includes CICSplex_TSAuxIO_Critical and CICSplex_TSAuxStr_Critical.
- VSAM:** Includes CICSplex_VSAMdataExt_Warning, CICSplex_VSAMNdxCA_Critical, CICSplex_VSAMNdxCA_Warning, CICSplex_VSAMNdxCl_Critical, CICSplex_VSAMNdxCl_Warning, CICSplex_VSAMNdxExt_Critical, CICSplex_VSAMNdxExt_Warning, CICSplex_VSAMRLSTimeout_Critical, CICSplex_VSAMRLSTimeout_Warning, CICSplex_VSAMStrUse_Critical, CICSplex_VSAMStrUse_Warning, CICSplex_VSAMStrWait_Critical, CICSplex_VSAMStrWait_Warning, CICSplex_VSAMWaitIO_Critical, CICSplex_VSAMWaitIO_Warning, CICSplex_VTAMOpen_Critical, CICSplex_VTAMOpen_Warning, CICSplex_Web_Service_Warning, CICSplex_WebEnabled_Critical, CICSplex_WebEnabled_Warning, CICSplex_WebInstall_Critical, CICSplex_WebInstall_Warning, CICSplex_WorkSetHigh_Critical, CICSplex_WorkSetHigh_Warning, CICSplex_WorkSetLow_Critical, and CICSplex_WorkSetLow_Warning.

OMEGAMON XE For CICS Recommendation - Customize KC2GLB Macro

----- MANAGE CICS GLOBAL DATA AREA(S) (ADCD) -----

- 1 Create/Update a GLB
For option 1 only: Suffix ==>
- 2 Update existing GLB definitions
- 3 Copy GLB definitions to RKANPARU
- 4 Migrate global data area(s)
- 5 Display/Print GLB HELP documentation

```

EDIT ----- CANDLET.XEGA.INSTDATA(KC2GLB) - 01.00----- COLUMNS 00001 00072
For in-context HELP: Place cursor on selected line then press F1
000077 *
000078 <GROUP_DEFINITIONS>
000086 <<GROUP>>
000087 GROUP_NUMBER=02
000088 GROUP_NAME=(TRAN GRP B* )
000089 GROUP_TYPE=TRAN
000090 RESPONSE_TIME_THRESHOLD=20
000091 *
000092 <<GROUP>>
000093 GROUP_NUMBER=03
000094 GROUP_NAME=(TRAN GRP C* )
000095 GROUP_TYPE=TRAN
000096 RESPONSE_TIME_THRESHOLD=20
000097 *
    
```

Use ICAT to manage RTA groups

Global Data Ar

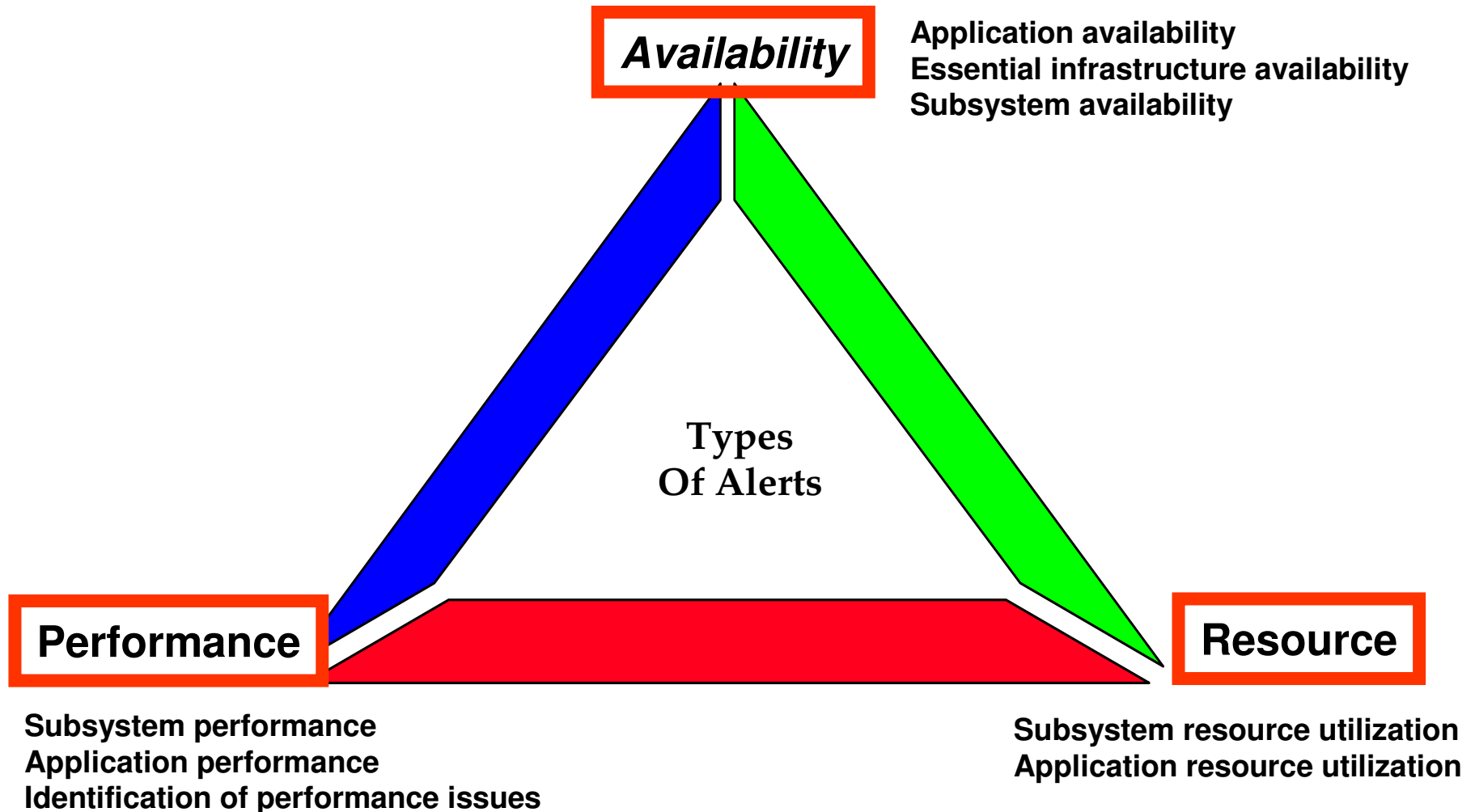
F1=Help F3=Back

OPTION ==>

The screenshot shows the ICAT software interface. At the top, there's a menu bar (File, Edit, View, Help) and a toolbar. A 'Navigator' pane on the left lists various analysis tools, with 'Response Time Analysis' selected. The main area displays a 'Current Response Profile' graph with 'Group Number' on the y-axis and 'Seconds' on the x-axis. Below the graph is a 'Response Time Analysis' table.

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	Response Time 3 Minutes Ago	Response Time 4 Minutes Ago	Response Time 5 Minutes Ago
MVA	CICCA001	2	Transaction	TRAN GRP C*	No	00:00:00	00:00:00.01	00:00:00	00:00:00	00:00:00	00:00:00

Categories Of Typical Situation Alerts



z/OS Examples - What Are The Resources? Key z/OS Resources That Need To Monitored

- z/OS CPU, zIIP/zAAP Processor, Storage
 - ▶ General CP utilization, zIIP and zAAP utilization
 - ▶ Storage, Paging, CSA utilization, ECSA utilization, SQA utilization
- z/OS Workload Manager (WLM)
 - ▶ WLM service classes, goals, performance index (PI)
- DASD and control unit performance and availability
 - ▶ DASD performance (MSR time)
- Sysplex level resources
 - ▶ CF processor utilization and availability
 - ▶ CF storage and structure utilization
 - ▶ CF link performance, utilization, and availability
- Key Subsystem and address spaces
 - ▶ Address space availability, Address space CPU utilization and paging activity



CPU Monitoring Example Using The Product Provided Situation As A Starting Point

Many product provided situations are single metric alert examples.

Recommendation is to make a copy and use more logic or add other metrics to make more useful.

In this example of a situation from the same table, the alert will fire if zIIP utilization is high or if a high percentage of work is spilling over to general CPs.

Save the situation under a user defined name. Do not edit the product provided situations (except to stop/start them).

Consider using the persistence option to filter out outliers

Advanced Situation Options

Condition	Average zIIP Percent	Average zIIP on CP Percent
1	>= 90	> 50
2		> 80
3		

General Suggestions On Product Provided Situations

- OMEGAMON XE For z/OS and OMEGAMON XE For CICS provide quite a few product provided hundreds of product provided situations
- Product provided situations provide simple examples and a starting point for the most common types of alerts required
 - ▶ For z/OS - z/OS CPU, zIIP/zAAP Processor, Storage, z/OS Workload Manager (WLM), DASD, Sysplex level resources, Key Subsystem and address spaces, Address space utilization
 - ▶ For CICS - CICS response time, transaction rate, File and Database activity, Temp storage and Transient Data Queues, CICS storage utilization, CICS availability, Java status, Network connectivity
- In general consider a “turn off/turn on” approach
 - ▶ Turn off PPS’s out of the box (example all the Crypto alerts)
 - ▶ Enable those PPS’s deemed useful
 - ▶ For other alerts use PPS’s as an example, make a copy and craft to the installation needs



zIIP Processor CPU Resource Utilization Alert

Alert When zIIP Utilization Is High For zIIP Dependent Workload

Use wild card functions to track key tasks

In this example the situation will fire if zIIP utilization is high for the given workload (in this case DB2 DDF) or if a high percentage of work is spilling over to general CPs.

	Job Name	IFA Percent	IFA on CP Percent
1	== DDF	> 80.0	> 40.0
2	== DDF		> 60.0
3			

Advanced Situation Options

Situation Persistence: Display Item

Situation Persistence

Consecutive true samples: 3

Consider using the persistence option to filter out outliers

Formula Capacity: 32%

State: Critical

Run at startup:

Another Resource Utilization Alert Alert When CSA/ECSA Utilization Grows Rapidly

Description
This alert will fire if CSA/ECSA is growing too quickly

	Area	Growth	In Use Percent
1	CSA	> 1024	> 60.0
2	ECSA	> 1024	> 70.0
3			

In Use Percent The amount of storage currently in use as a percentage of total storage. Valid value is a numeric in the range 0 to 2147483647.

Managed System An z/OS operating system in your enterprise that a Tivoli OMEGAMON

Situation Formula Capacity 27%

Sampling interval: 0 / 0 : 15 : 0 (ddd hh mm ss)

Sound: Enable critical.wav [Play] [Edit...]

State: Critical Run at startup

Workload Performance Alert

Alert When Workload Manager Managed Workloads Not Meeting Goals

In this example the situation will fire if the WLM PI for critical services classes is above 1 or if any high importance workload is above 1

	Service Class	Performance Index	Goal Importance
1	DB2DDF	> 1.00	
2	CICS	> 1.00	
3		> 1.00	== High

Consider using the persistence option to filter out outliers

Target WLM alerts to the most critical workloads, and tune out the outliers.

DASD Performance Alert

Alert When Critical DASD Devices Not Meeting Performance Goals

In this example the situation will fire certain VOLSERs are above a certain MSR level. Also, if a device has a high MSR and high I/O rate it will fire.

Consider I/O rate along with MSR to filter out outliers

Wildcard based on DASD VOLSER name to make alerts more meaningful

	Volume	Response	I/O Rate
1	abc == DB2	> 3.0	
2	abc == IMS	> 2.0	
3		>= 5.0	> 50

I/O Rate Number of I/Os per second to the device. Valid value is a 4-byte integer.

IOS Queue Time The average time, in milliseconds, that an I/O waits because the device is busy. Valid value is a 4-byte integer.

Situation Formula Capacity: 23%

State: **Critical**

Run at startup:

System Resource Performance Example

Monitor Key Coupling Facility Structure Performance

Situations for - Coupling Facility Structures Data for Sysplex

Alert if there is a high rate of activity. Also alert if there are many sync to async conversions (an indication of a potential bottleneck).
Also, alert for problem users.

Test

Formula

Synch to Async Con...

	Problem Users	Structure Type	Synch to Async Conversions per min	Synchronous Requests per minute
1		== Lock	> 1,000.0	
2	== 10			
3		== Lock	<input type="checkbox"/> <input type="checkbox"/>	> 10,000.0

Synch Async Convs Per Min Rate of synchronous operations that were converted to asynchronous requests for this structure during a one minute period. Valid value is a count that is expressed to one decimal place.

Done

Situation Formula Capacity 28%

Add conditions... Advanced...

System Resource Availability Example Monitor Coupling Facility Structures

**Alert if structures exceed a certain size.
Alert by structure name or type.**

Alert in structures have an error status.

Structure Name	Problem Users	Structure Type	Storage Size	Structure Status
abc == 8K			> 2000	
		== Cache	> 3000	
				== Failed
	== 1			

Storage Size Storage size currently allocated to the structure. Valid value is an integer in the range of 0 through 2147483647, and can include the use of the *AVG, *MAX, *MIN, or *SUM functions. The value is expressed in 4K pages for attribute purposes. 128 pages = 512.0 K bytes. An example is 128.

Situation Formula Capacity 30%

State: Critical

Essential Infrastructure Availability Example

Monitor Key Address Space Availability

Alert if a required address space is not available. For example if essential CICS region 'DEMORGN' is not found the alert fires.

List of tasks

This uses the 'not found' option and Omegamon XE for z/OS to monitor address space availability.

Note – Address spaces will often have availability windows based on standard processing practices. Use this type of alert in combination with policies to make it time/day sensitive.

CICS Examples - What Are The Resources?

Key CICS Resources That Need To Monitored

- CICS response time and transaction rate
 - ▶ Monitor CICS application response time by RTA group
 - ▶ Monitor transaction rate and throughput (high rate and low rate)
- CICS file and Database activity
 - ▶ VSAM file activity, string waits, LSR buffer pool performance, IMS DBCTL activity
- CICS Temp storage and Transient Data Queues
 - ▶ Monitor utilization and activity
- CICS storage utilization
 - ▶ DSA, EDSA, OSCOR utilization
- CICS availability
 - ▶ Java status, Network connectivity
- CICS address spaces
 - ▶ Address status and availability, address space CPU utilization, paging activity



Application Performance Example Situations To Monitor Response Time

Using boolean logic allows the alert to be application sensitive. This assumes that the global macro is customized to make meaningful RTA groups.

A single situation can handle multiple application groups, if needed.

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

Note – this is the RTA group name

Consider using the persistence option to filter out outliers

Situation Formula Capacity: 26%

State: **Critical**

Run at startup:

CICS Resource Utilization String Waits And LSR Buffer Pool Performance

Using boolean logic to set the LSR pool hit ratio as appropriate. If more than a certain number of tasks are having string waits then fire the alert.

	Pool ID	Lookaside Ratio	Tasks Waiting
1	== 1	< 90	
2	== 2	< 80	
3	== 3	< 70	
4		<input checked="" type="checkbox"/> ==	= 2

OMEGAMON CICS provides a large number of LSR pool alerts. Consider using Boolean logic to make them more useful.

Lookaside Ratio Indicates the percentage of VSAM read requests that were satisfied without initiating I/O because the Control Interval (CI) was already resident in the buffer pool. The value format is a percentage in the range of 0-100.

Origin Node The combination of z/OS System ID (SMFID) and CICS region name. The value

Situation Formula Capacity 39%

State: **Critical**

Run at startup:

CICS Resource Utilization

Temp storage and Transient Data Queues utilization

Alert if a given TS queue exceeds a certain number of items in the queue.

Alert if tasks are waiting on the TS queue.

Same technique can be applied to transient data queues.

	Queue ID	Queue Type	Items in Queue	Tasks Waiting
1	== QUEA	== Main	> 5	
2	== QUEB		> 10	
3				Tasks Waiting: 2

Waiting Indicates the number of tasks that are suspended pending access to the temporary storage queue. The value format is a positive integer with a maximum of four bytes.

Total Length Indicates the length in bytes of all the items in the temporary storage queue.

Situation Formula Capacity: 33%

State: **Critical**

Run at startup:

CICS Connection Availability Example

Monitor CICS Address Space TCP/IP Connectivity

Status of 'not equal' to enabled.

This situation will monitor the status of TCPIP connection to CICS. Look for failed or application waiting status.

Description
Critical threshold exceeded

Formula

	Web Interface Status	TCP/IP Listener Failed	TCP/IP Application Waiting
1	!= Enabled		
2		== Yes	
3			== Yes

TCP/IP Application Waiting Indicates whether or not the TCP/IP application is waiting. Values are: Yes and No.

TCP/IP Exit Not Enabled Indicates whether or not the TCP/IP user exit is enabled. Values are: Yes and No.

Situation Formula Capacity: 14%

State: **Critical**

CICS Address Space Performance Monitor CICS Address Performance And Utilization

Alert if CPU is high and transaction rate is high.

	CPU Utilization	Transaction Rate
1	> 40.0	> 1000
2	< 5.0	< 100
3		

Consider using the persistence option to filter out outliers

Optionally, alert if CPU is low and transaction rate is low. This may indicate a potential bottleneck somewhere else in the application.

Advanced Situation Options

Situation Persistence: Display Item:

Situation Persistence

Consecutive true samples: 3

OK Cancel Help

Sampling interval: 0 / 0 : 5 : 0
ddd hh mm ss

State: Critical

Run at startup:

CICS Application Performance

Monitor CICS Transaction Response And Highlight High DB Wait

Using the PPS CICSplex_delay_in_Database as an example, create an alert that will highlight poor response time due to high wait time in database (either IMS or DB2).

Average Response Ti...

	Performance Index	% Wait on DLI	% Wait on DB2	Transaction ID	Average Response Time
1	> 1.00	> 90		== ABC	> 00:00:02
2	> 1.00		> 90	> XYZ	> 00:00:02
3					>

Make the alert sensitive by tran code or WLM service class.

average time in milliseconds taken to interval. This average is calculated by adding the response time of each task within a service class and dividing the sum by the total number of completed tasks during the collection interval. The value format is a positive integer, maximum 4 bytes.

Situation Formula Capacity **57%**

Application Performance Example

Monitor IMS DBCTL Thread Performance With OMEGAMON XE For IMS

The screenshot shows the 'Situations for - IMS Transaction Summary' window. The 'Description' field contains 'IMS Threads Elapsed Time High'. The 'Formula' section shows a table with three rows, where the first row contains '> 5' under the 'Elapsed Thread Time' column. A red callout box points to this formula with the text 'Product provided situation example DBCTL thread elapsed time greater than 'n''. Below this, the 'Select conditions' dialog is open, showing a list of 'Attribute Item' options. A red callout box points to this list with the text 'Add additional logic to the situation including CICS job name, transaction id, DB I/O counts, and more'. The 'State' dropdown is set to 'Critical'.

Add additional logic to the situation including CICS job name, transaction id, DB I/O counts, and more

**Product provided situation example
DBCTL thread elapsed time greater than 'n'**

Summary

- Situations are an essential building block of the Tivoli Enterprise Portal
- Situations may be used to highlight performance and availability problems within z/OS or CICS
- Understanding the dynamics of how situations may be effectively built and deployed drives the relative benefits
- It is recommended to have a situation deployment strategy and methodology



Thank You!!

