There’s a new Sheriff in Town
CICS Policy Based Management

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Agenda

CICS policy-based management

Resources

Actions

Policy scope

Summary
POWER TO
THE SYSPROG!
“The Cart browse operation shouldn’t use more than 1 millisecond of CPU”
“I want to see a message if version 1.1 of the Order Update application allocates more than 1MB of storage”
“Abend any application running on the Retail Banking platform that tries to request any 24-bit storage”
Policies:

Control behaviour of apps and platforms
Define threshold conditions to manage user tasks
Automatically take action when a threshold is exceeded
Detect looping or runaway tasks
Phone plans
A policy is:

- Defined in a CICS bundle
- A condition and action pair: a rule
- Multiple rules per policy
- Multiple policies per bundle
Available actions

Issue a message: DFHMP3001
Emit an Event
Abort the task: Abend code AMPB or user specified
Emit an event

Name an EP adapter or EP adapter set
Same behaviour as CICS system events
Policy event can be sent to an async. non-transactional EP adapter
Abend the task

Transaction dump is taken by default

Suppress/request a sys. dump with
CEMT SET TRDUMPCODE|SYDUMPCODE
EXEC CICS SET TRANDUMPCODE|SYDUMPCODE

Handle the abend with EXEC CICS HANDLE ABEND
Rule types

Requests:
- Database 5.1
- File (delete, read, write...) 5.1
- Program (LINK) 5.1
- START 5.2
- Storage (24/31/64-bit, task/shared) 5.1
- Syncpoint 5.2
- TD Queue (READQ, WRITEQ) 5.2
- TS Queue bytes (main, AUX) 5.2

Time:
- CPU 5.1
- Elapsed 5.2
Define a threshold for no. of SQL requests
Includes requests issued in exits
Define a threshold for no. of FILE requests

Applies to a specific file command (e.g., READ)

Not cumulative

Counted regardless of success

Counted for user task in AOR if local or remote
Program

Define a threshold for no. of LINK requests
Includes INVOKE APPLICATION
Define a threshold for no. of START requests
Counted despite success:
XICREQ→IGNORE
XICERES→NOT AVAIL
Storage

Define a threshold for no. of STORAGE allocated

Includes all GETMAIN requests

Decremented with FREEMAIN (not for SHARED)
Syncpoint

Define a threshold for no. of SYNCPOINT requests

Rollback is included
Time

Define a threshold for no. of TIME consumed

CPU time
Check made when a task gives up control

Elapsed time
Check made when issuing EXEC CICS or invokes a TRUE
Transient data

Define a threshold for number of TRANSPORT DATA requests

Other products write to TD:
KE for diagnostic info.
TCP/IP socket interface for CICS
Temp. storage bytes

Define a threshold for amount of data written to TEMP STORAGE.

Both READ and REWRITE. REWRITE is total data size, not delta.
Temporary storage

Define a threshold for no. of TEMP. STORAGE requests

REWRITE TS is counted as a WRITEQ

Synchronous events to TS are counted
A problem has been detected and Windows has been shut down to prevent damage to your computer.

The problem seems to be caused by the following file: int15.sys

PAGE_FAULT_IN_NONPAGED_AREA

If this is the first time you've seen this stop error screen, restart your computer. If this screen appears again, follow these steps:

Check to make sure any new hardware or software is properly installed. If this is a new installation, ask your hardware or software manufacturer for any Windows updates you might need.

If problems continue, disable or remove any newly installed hardware or software. Disable BIOS memory options such as caching or shadowing. If you need to use Safe Mode to remove or disable components, restart your computer, press F8 to select Advanced Startup Options, and then select Safe Mode.
Policies do not apply to:

CICS system tasks
  Includes CPLT at systems initialization
All terminal initiated CICS supplied transactions
  Except CECI
All user tasks started by event processing
All non-terminal CICS supplied transactions
  Except:
    All web interface tasks
    All CICS MQ bridge tasks
    All CICS mirror transactions
    All Liberty initiated transactions
    All CICS pipeline tasks
Policy scope
Policy scope: Operation

PROGRAM 5.2
URIMAP 5.2
TRANSACTION 5.3 Open Beta
### Attributes

Type here to filter on Name and CICS Name

<table>
<thead>
<tr>
<th>Name</th>
<th>CICS Name</th>
<th>Value</th>
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<tbody>
<tr>
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<td>DSNNAME01</td>
<td>CCHPOOLE.DEMO.POLICY.ROUTER.V110</td>
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<tr>
<td>Data Set Name 08</td>
<td>DSNNAME08</td>
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</table>

${Variable Substitution}$
The following changes are necessary to perform the refactoring.

Changes to be performed

- Update CICS resource and properties files
  - APPLIB
    - Create file /addProgramRouter.resources/variables.properties
    - variables.properties - addProgramRouter.resources

Resolve with a properties file
Find Policy Rules for Operation "Invoke_App1" - 3 results - 2:36:16 PM

- T71_Region
  - Task Storage Requested
    - 31 bit
      - > 1 Message APP1POL1 Rule_1
  - File Access Requests
    - READ
      - > 100 Abend code: AMPB PLATPOL1 Rule1p
  - Database Requests
    - > 500 Message REGPOL1 Rule_SQL
CICS TS v5.3 Open Beta

**New Policy Rules**
- Name Counter Server
  - GET COUNTER\|DCOUNTER
- Temporary Storage
- Support for Shared TS
- WebSphere MQ
  - Number of MQ requests
- IMS
  - Number of DBCTL calls
CICS Policy Based Management

Allow you to set thresholds on the resources that your applications are allowed to consume
Allow you the ability to notify, to react, or to ABEND rogue tasks
Allow you to define the scope of your policy rules
Give you capabilities to protect and control your CICS systems
Questions?
Credits

Phone: https://www.flickr.com/photos/highwaysengland/17185230756/
Exceptions: https://www.flickr.com/photos/billjacobus1/2482521750/