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

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SHARE is an independent volunteer-run information technology association that provides education, professional networking and industry influence.

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

Google
12:35
Facebook
YouTube
Flickr
Google+
LinkedIn
Twitter
Pinterest
Yammer
WordPress
Blogger
Tango
Skype
Flipboard
Tumblr
Bump
Foursquare

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

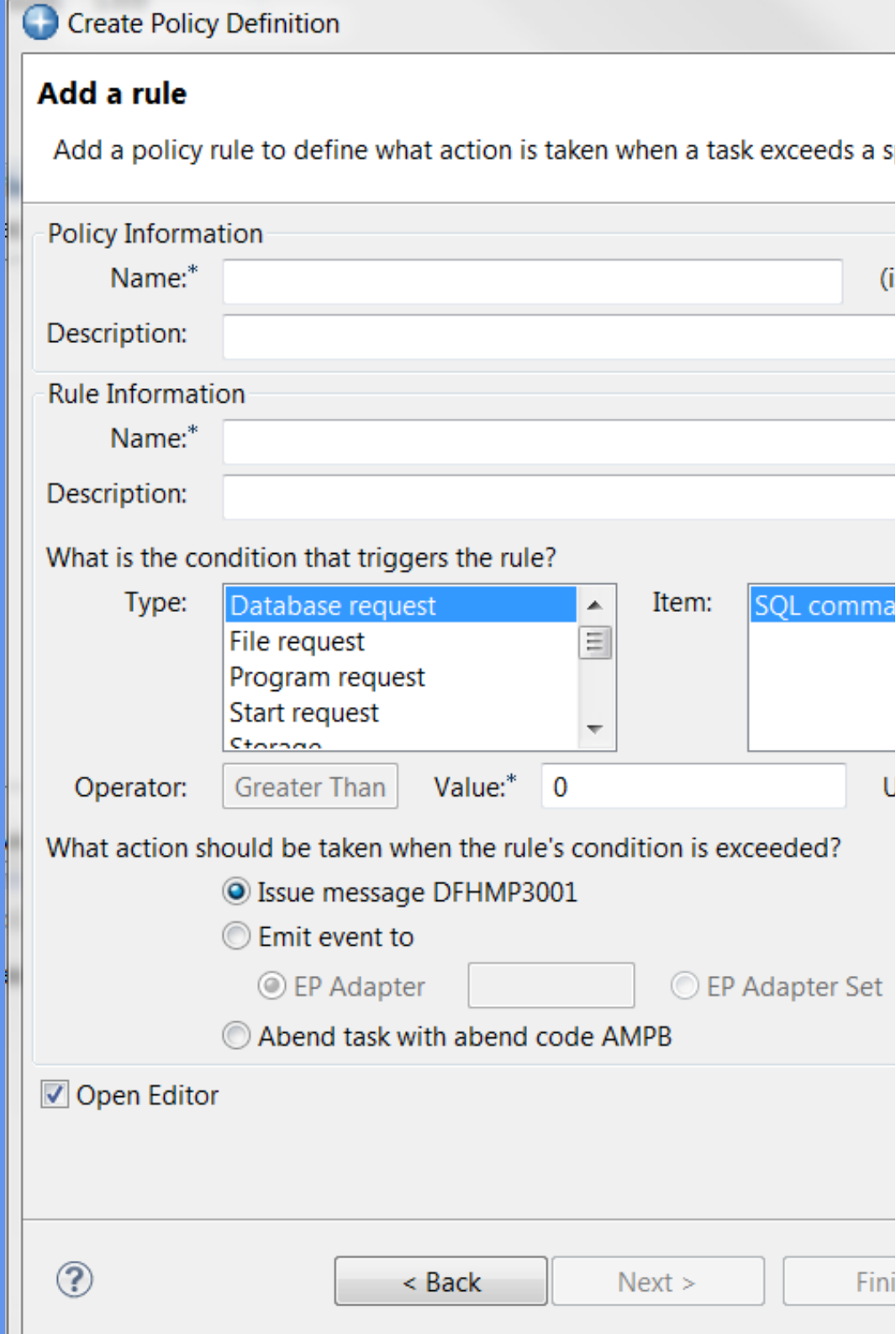
Requests:
- Database *5.1*
- File (delete, read, write…) *5.1*
- Program (LINK) *5.1*
- START *5.2*
- Storage (24/31/64-bit, task/shared) *5.1*
- Syncpoint *5.2*
- TD Queue (READQ, WRITEQ) *5.2*
- TS Queue bytes (main, AUX) *5.2*

Time:
- CPU *5.1*
- Elapsed *5.2*

Database

Define a threshold for no. of SQL requests

Includes requests issued in exits



File

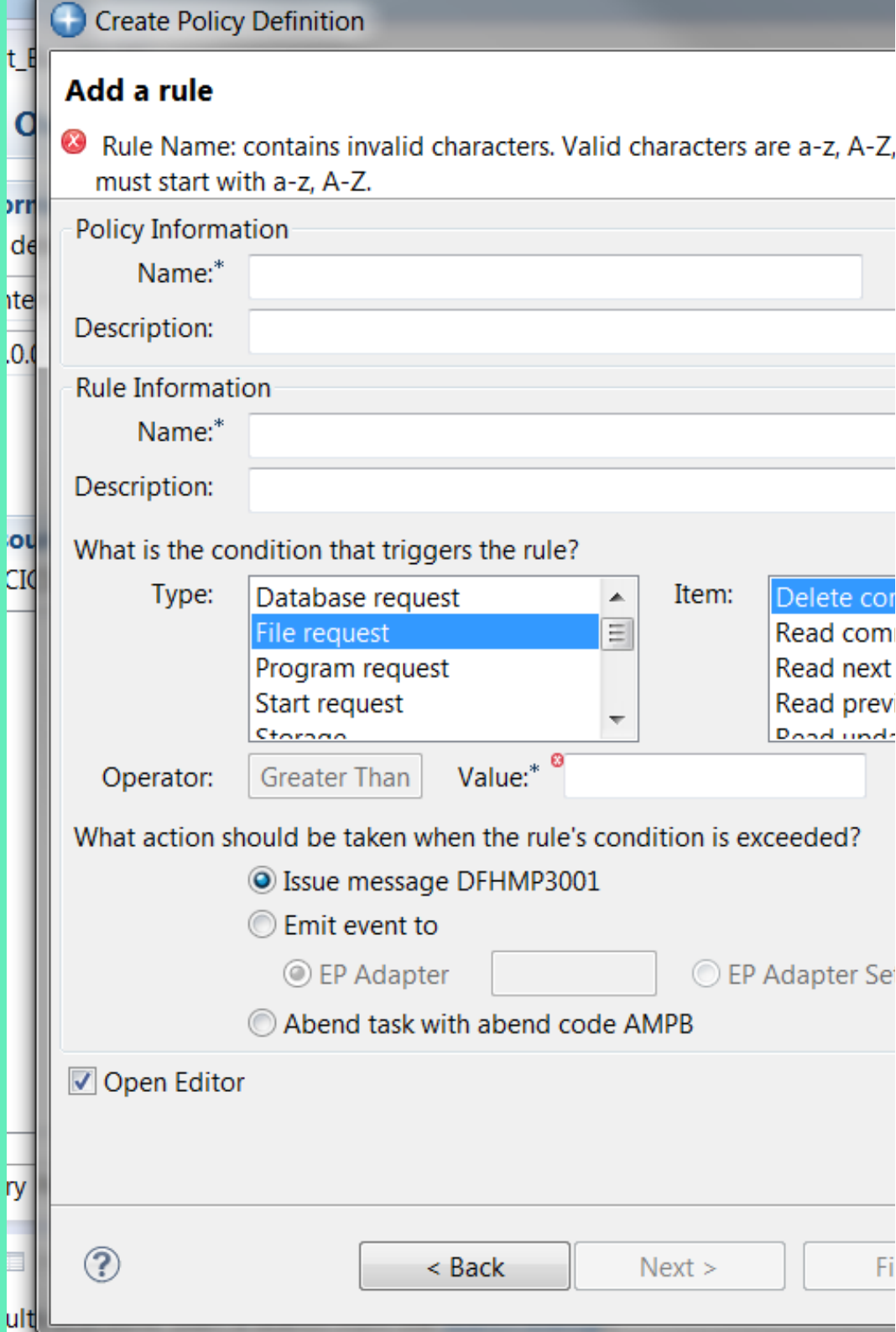
Define a threshold for no. of FILE requests

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

Not cumulative

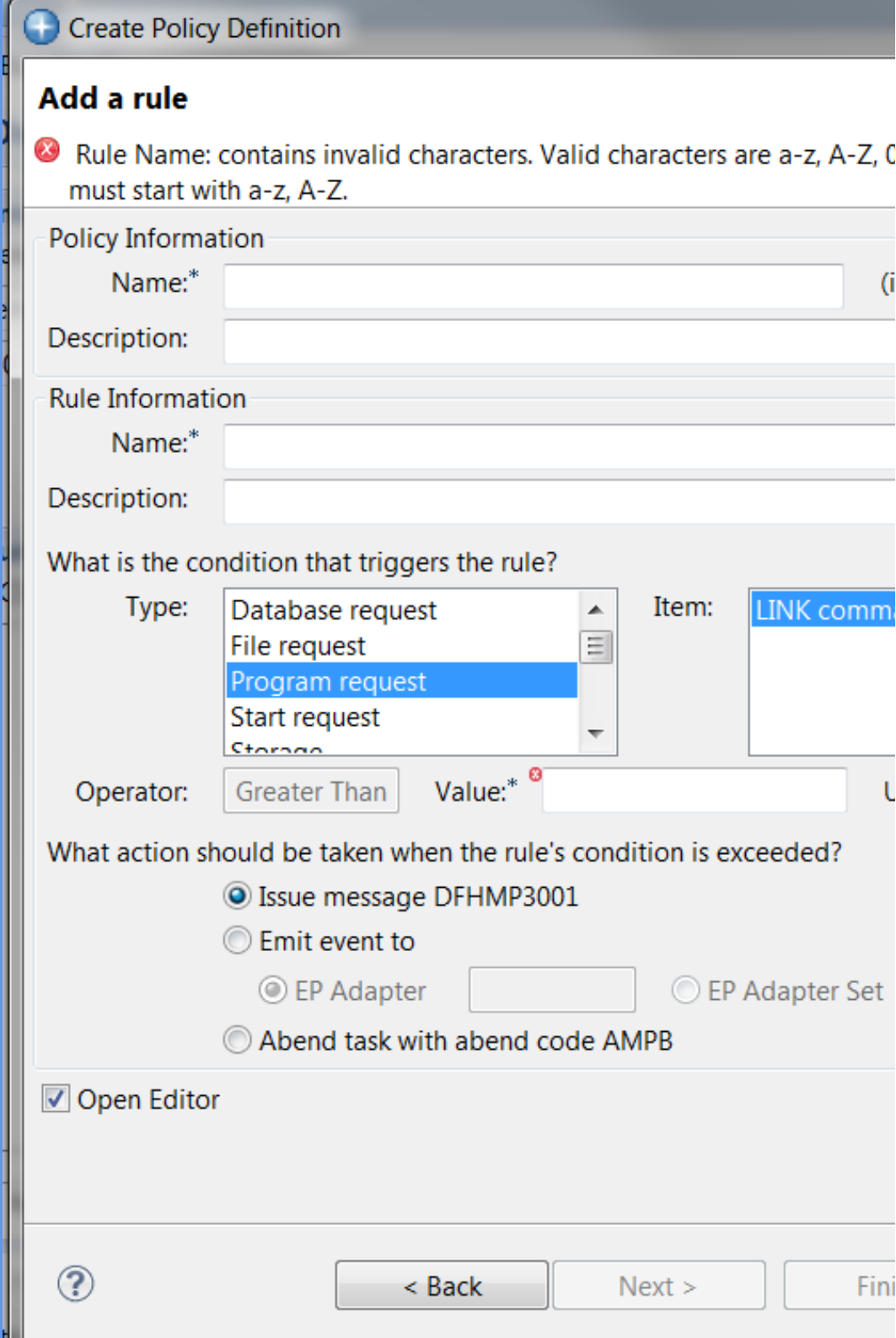
Counted regardless of success

Counted for user task in AOR if local or remote



Program

Define a threshold for no. of LINK requests Includes INVOKE APPLICATION



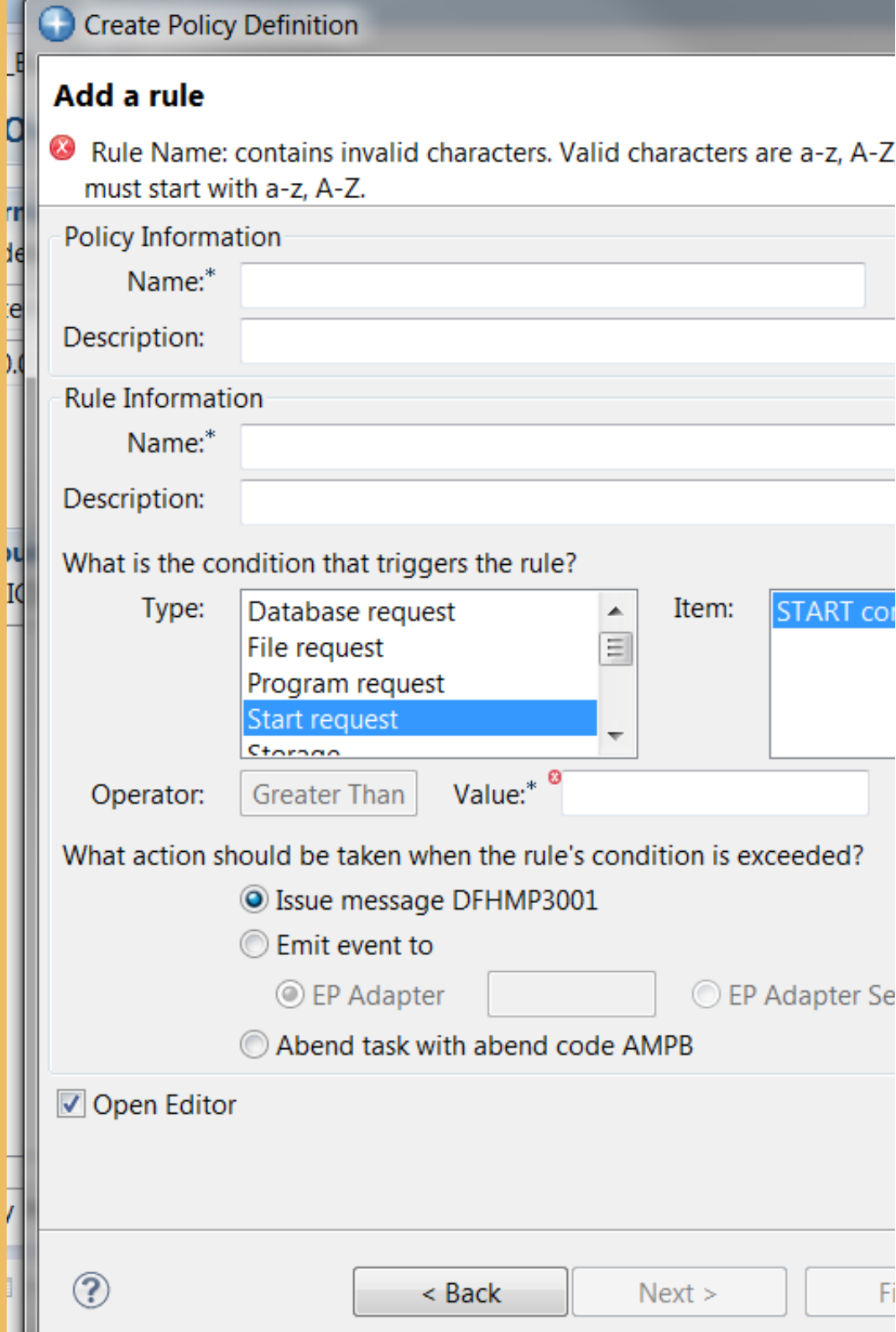
Start

Define a threshold for no. of START requests

Counted despite success:

XICREQ→IGNORE

XICERES→NOT AVAIL

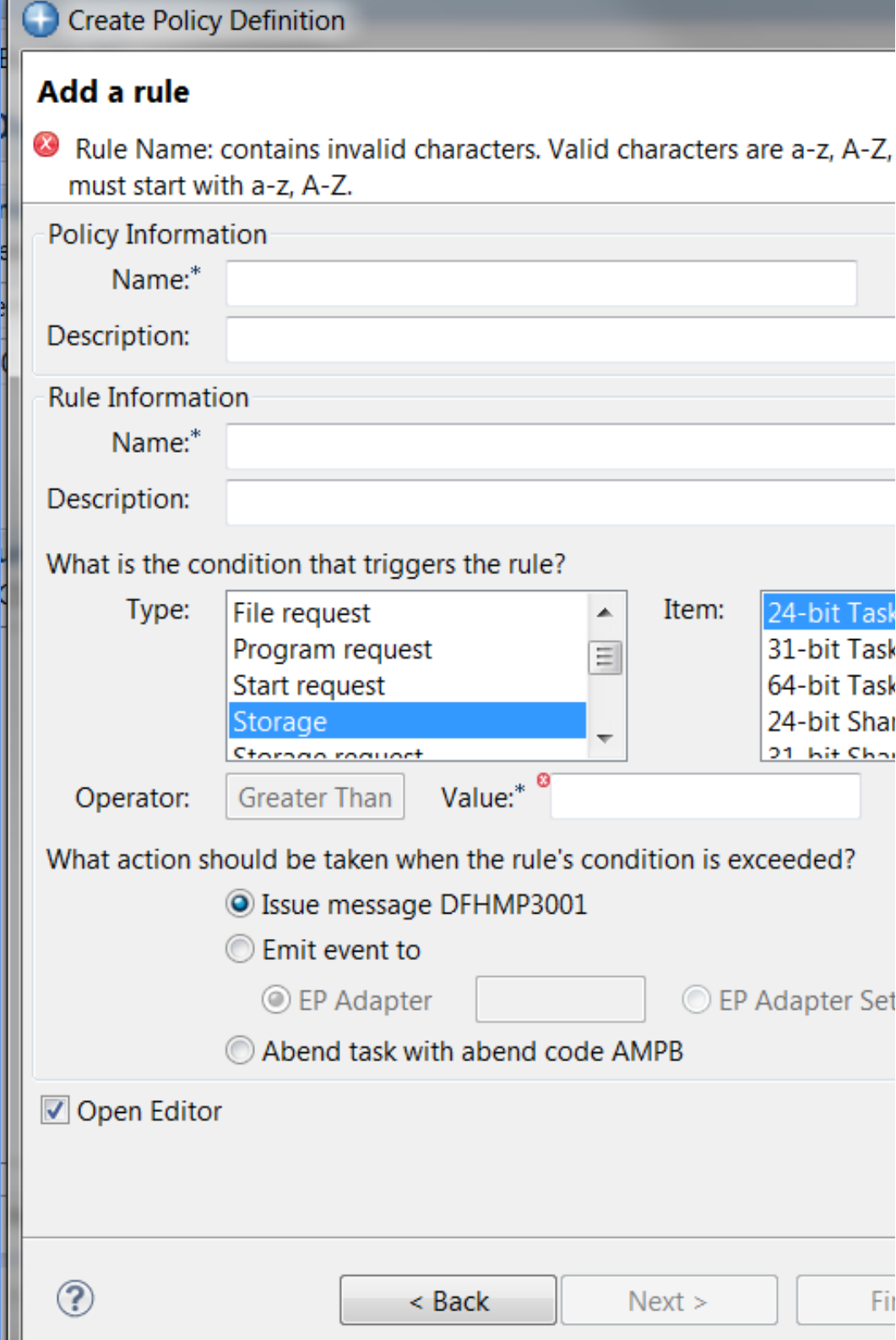


Storage

Define a threshold for no. of STORAGE allocated

Includes all GETMAIN requests

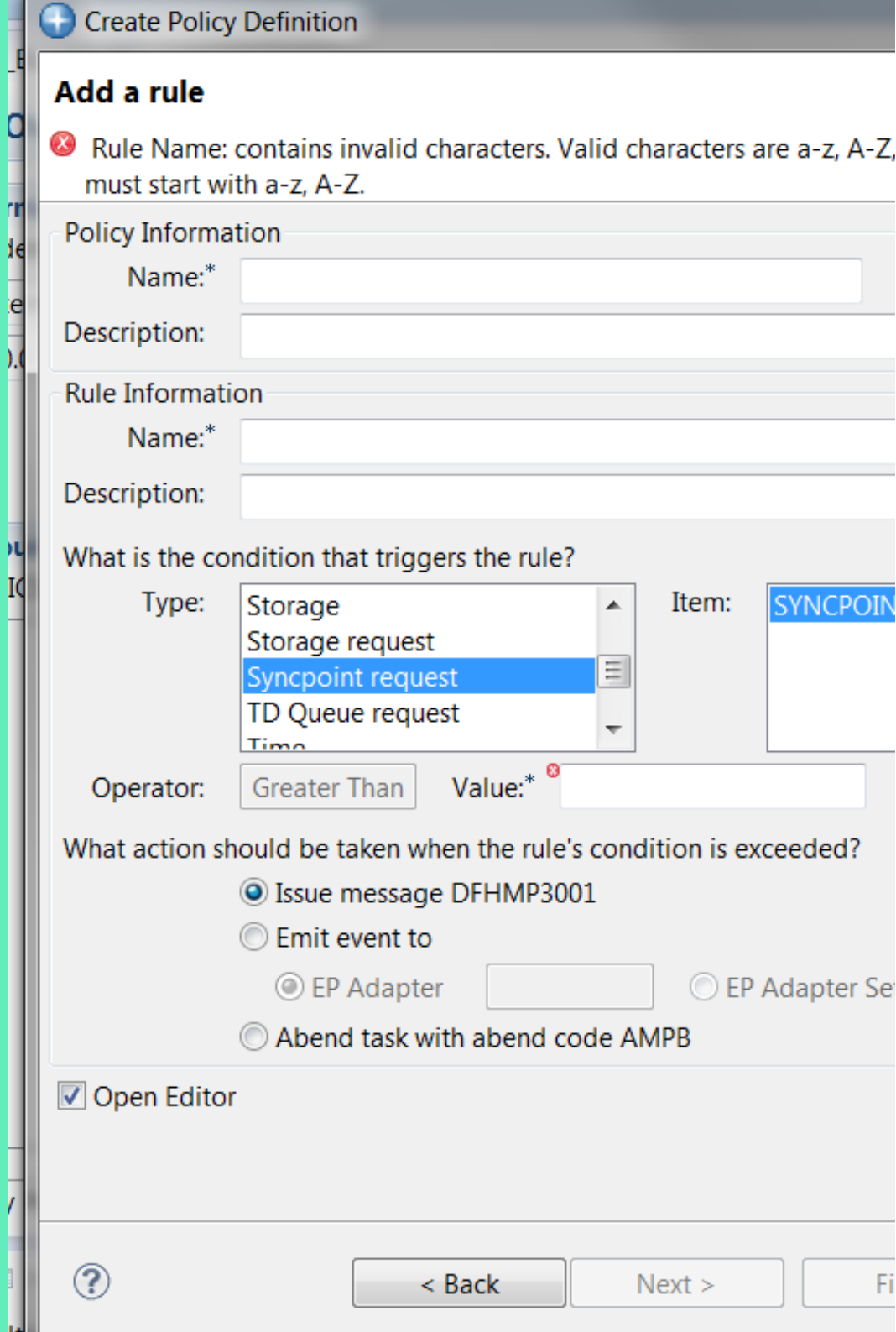
Decremented with FREEMAIN (not for SHARED)



Syncpoint

Define a threshold for no. of SYNCPOINT requests

Rollback is included



Time

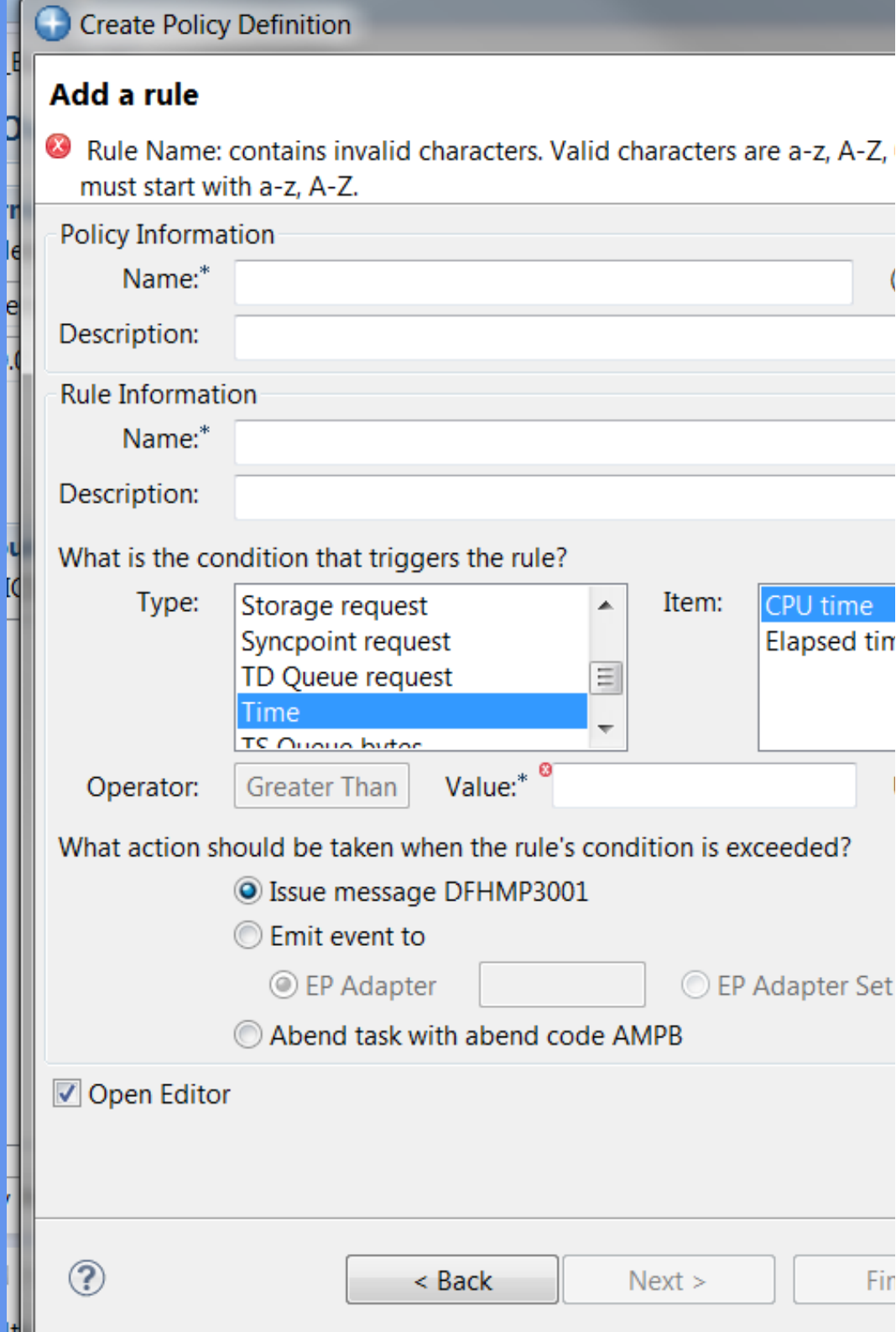
Define a threshold for no. of TIME consumed

CPU time

Check made when a task gives up control

Elapsed time

Check made when issuing EXEC CICS or invokes a TRUE



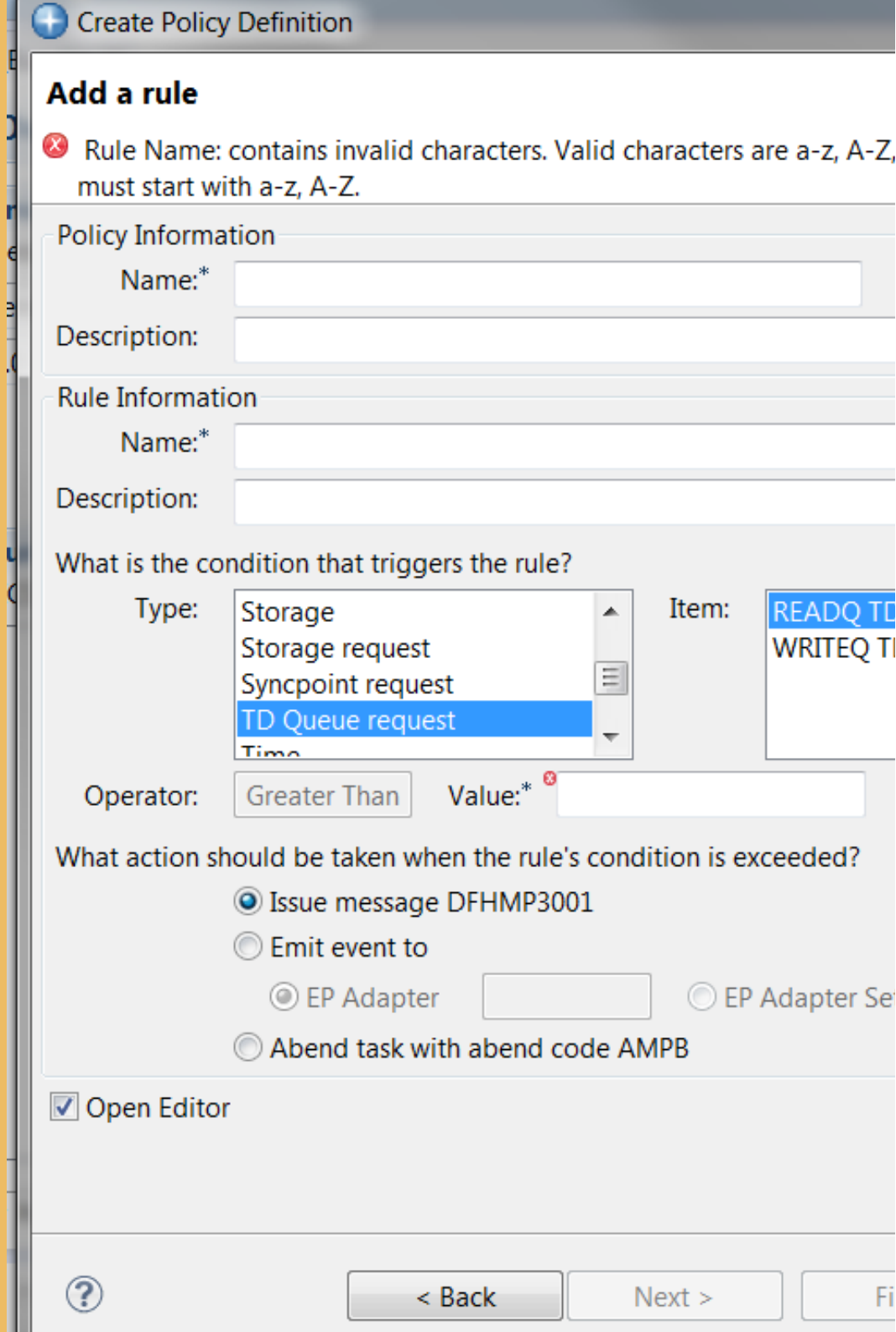
Transient data

Define a threshold for no. of TRANSIENT DATA requests

Other products write to TD:

KE for diagnostic info.

TCP/IP socket interface for CICS

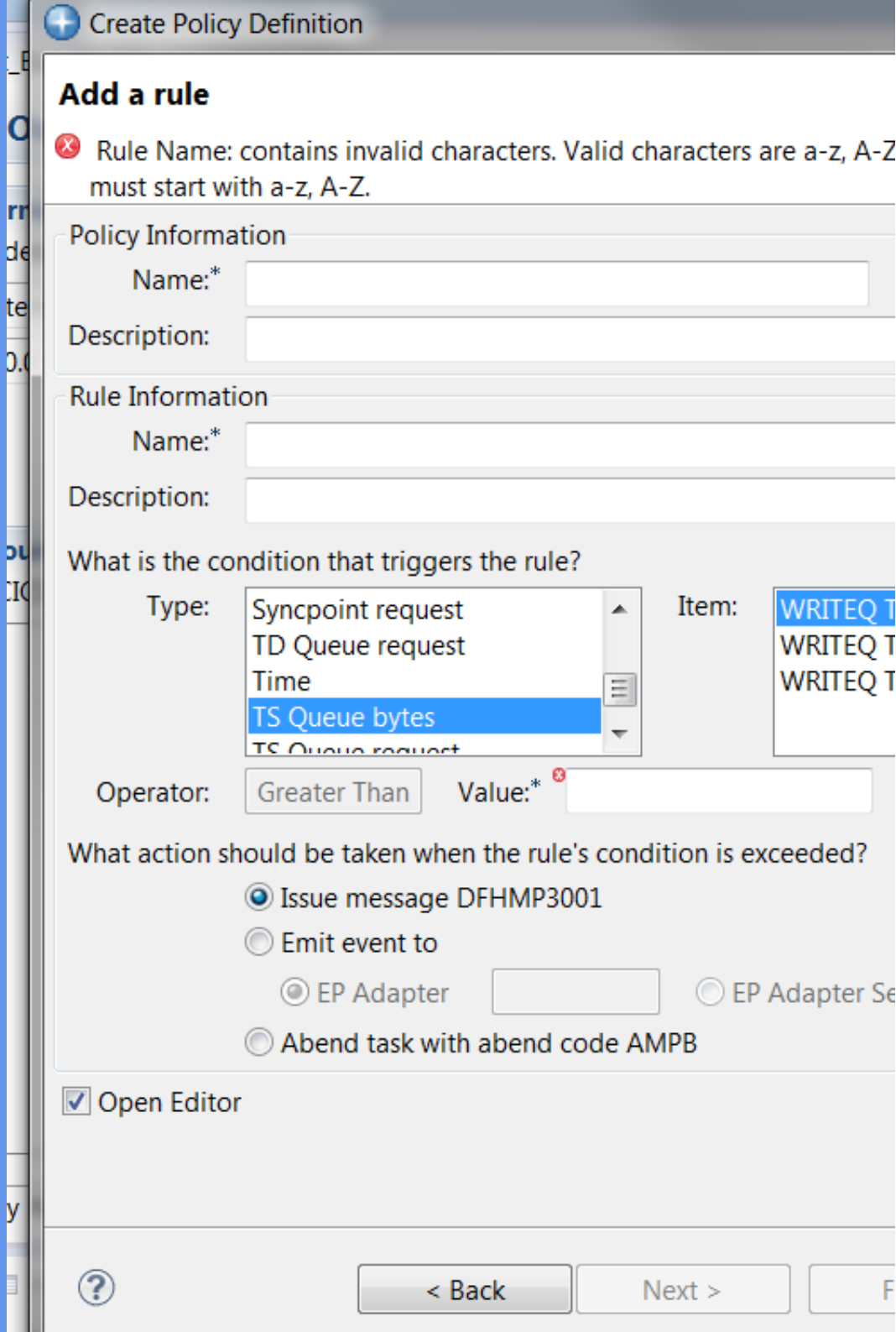


Temp. storage bytes

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

Both READ and REWRITE

REWRITE is total data size, not delta

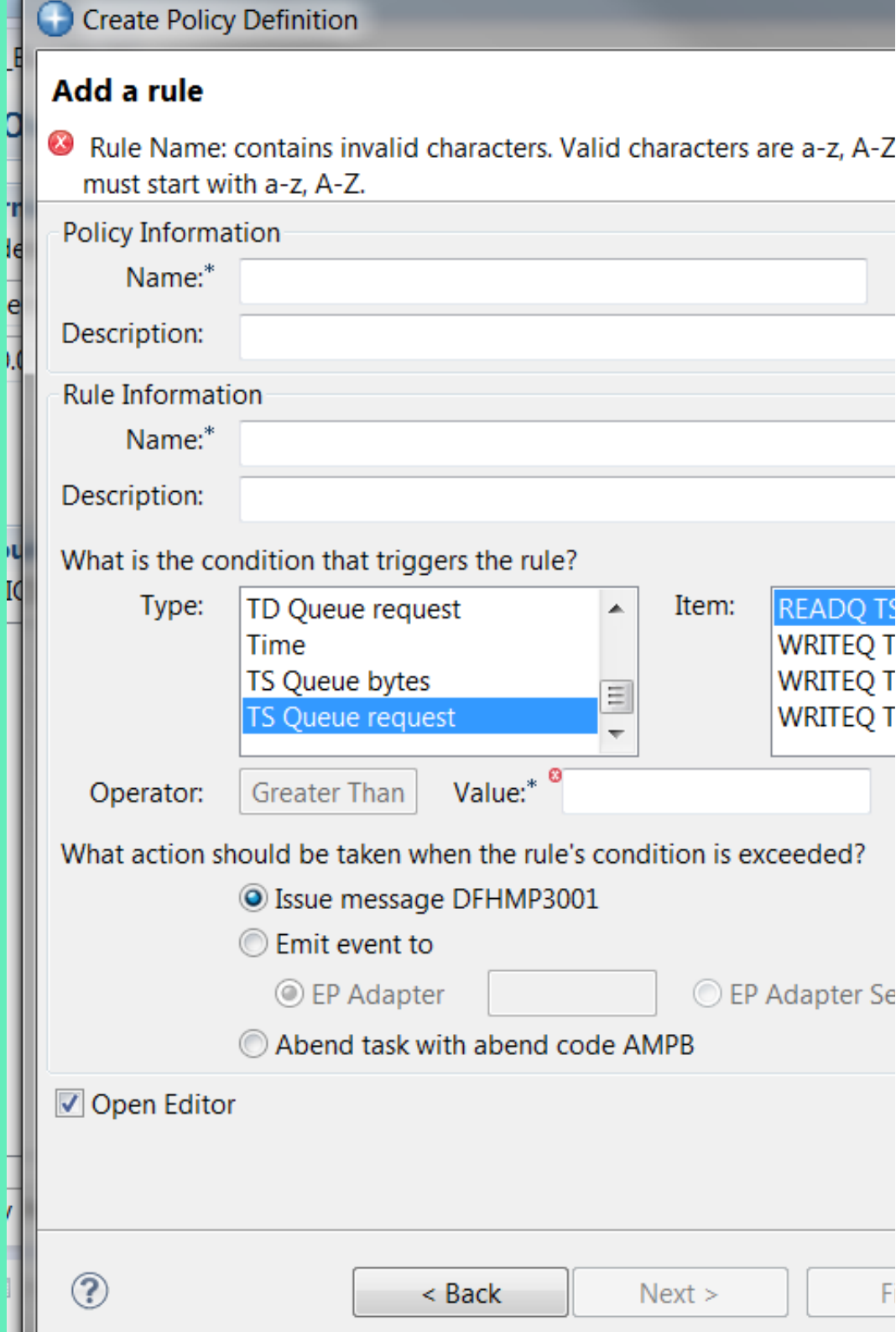


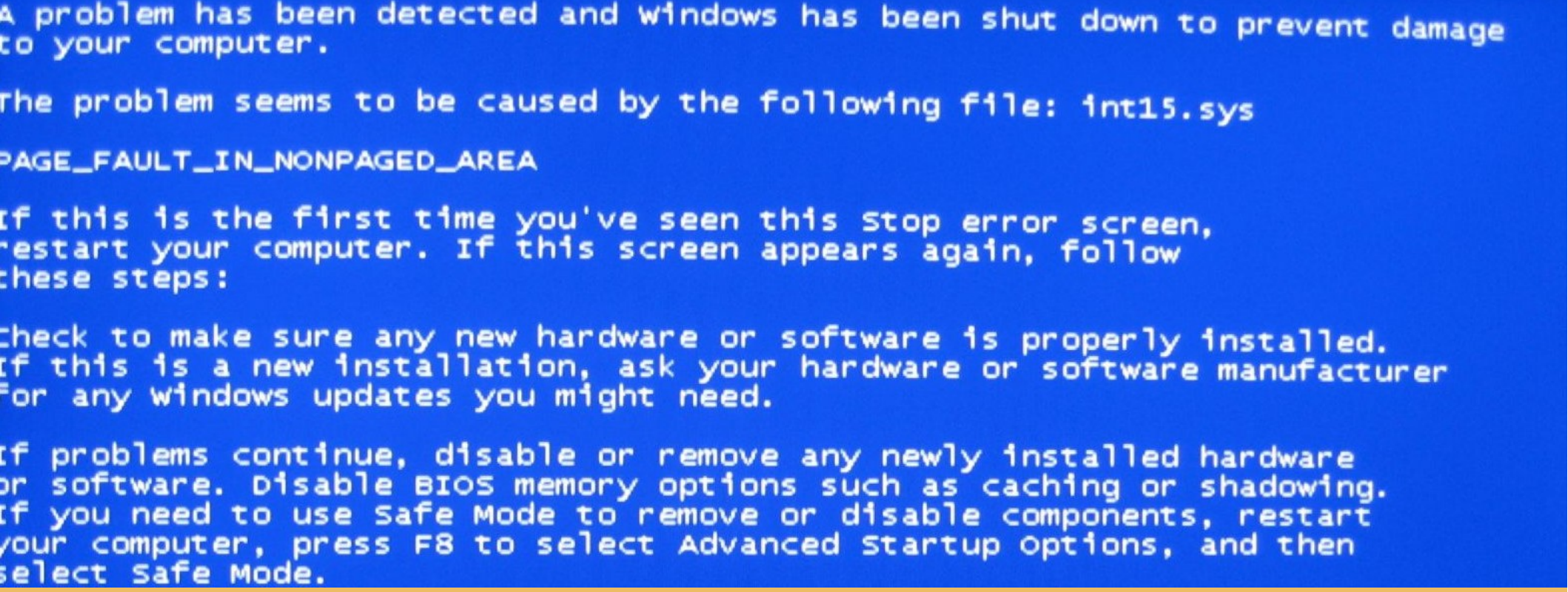
Temporary storage

Define a threshold for no. of TEMP.STORAGE requests

REWRITE TS is counted as a WRITEQ

Synchronous events to TS are counted



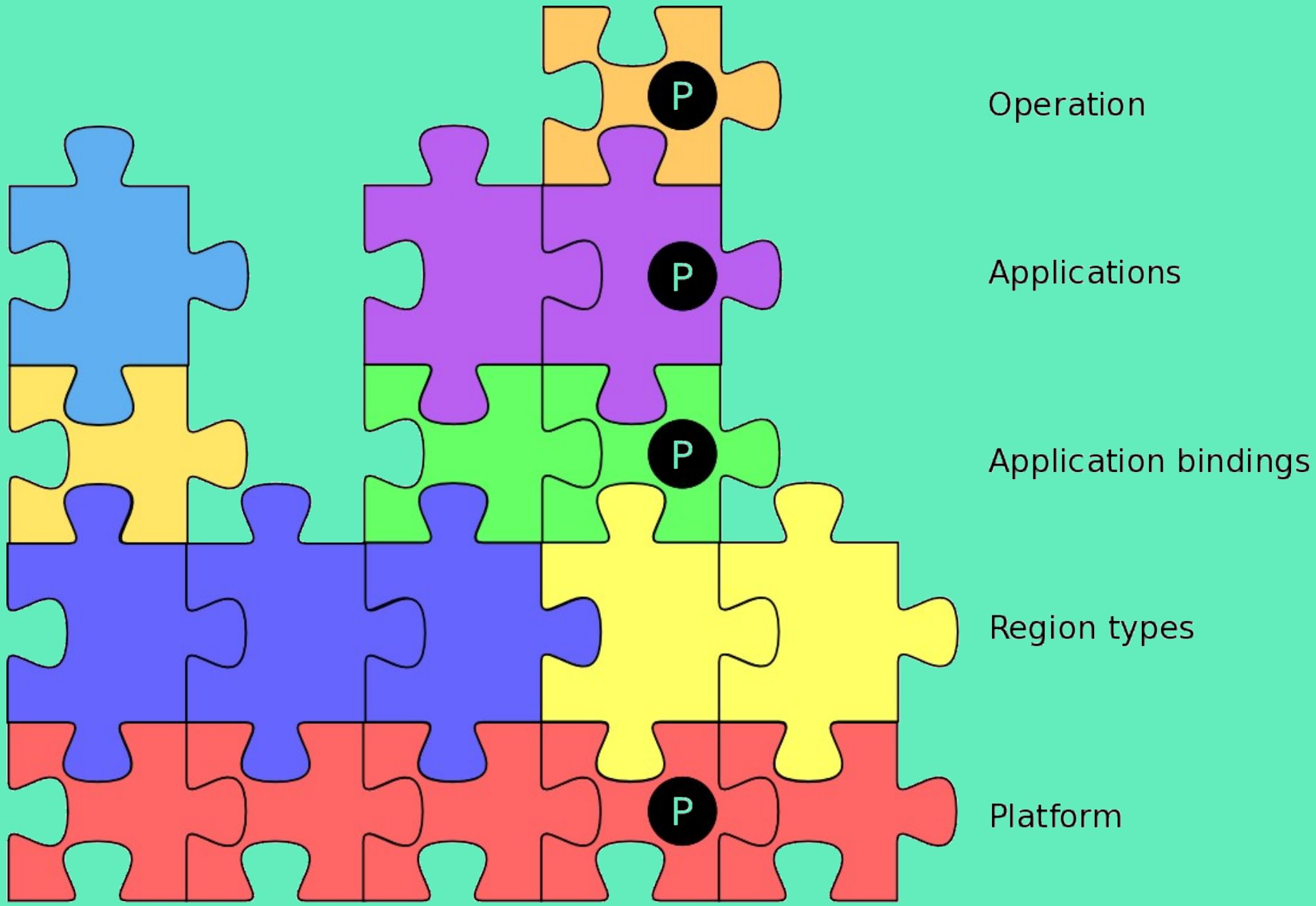


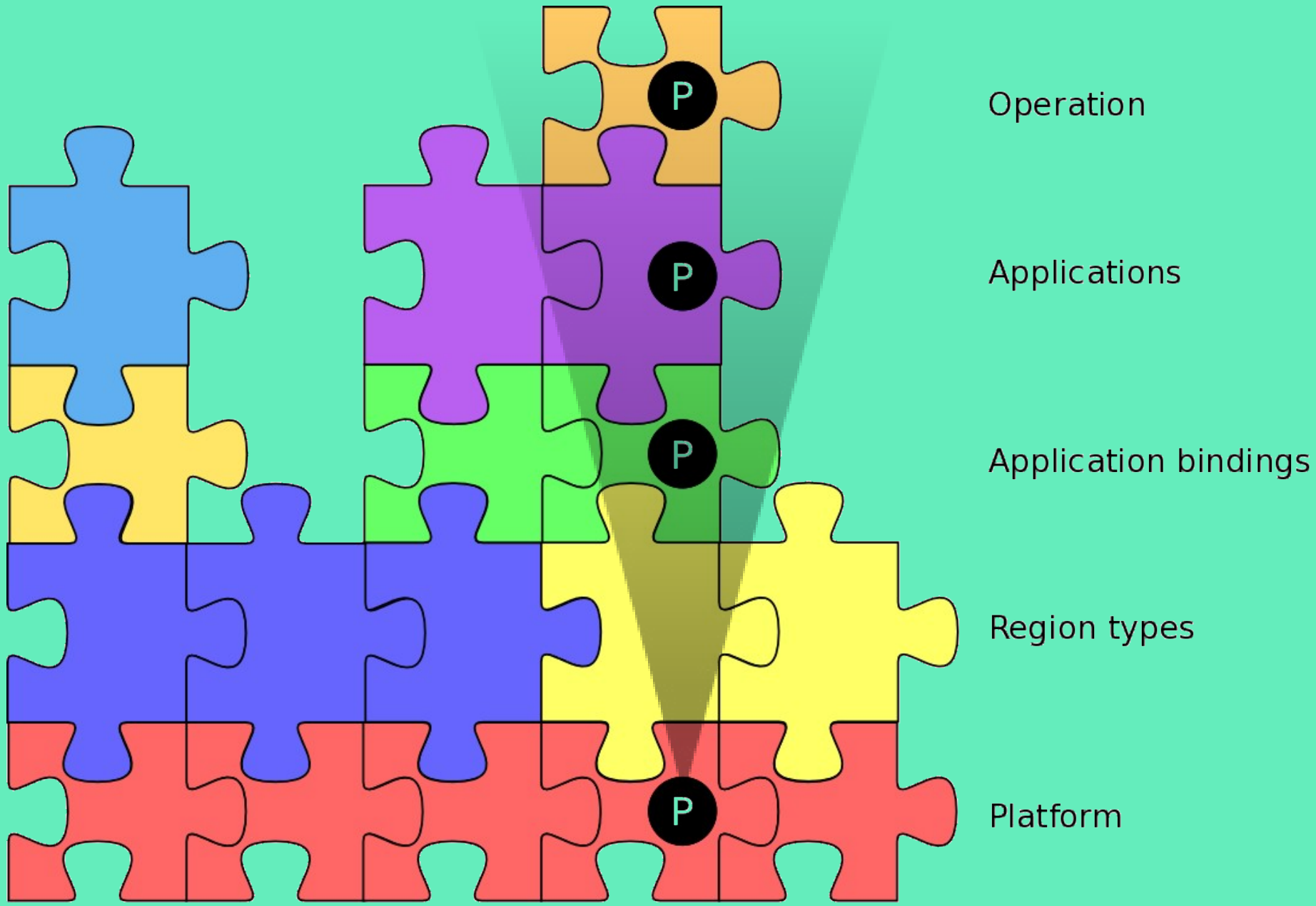
Policy Exceptions

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

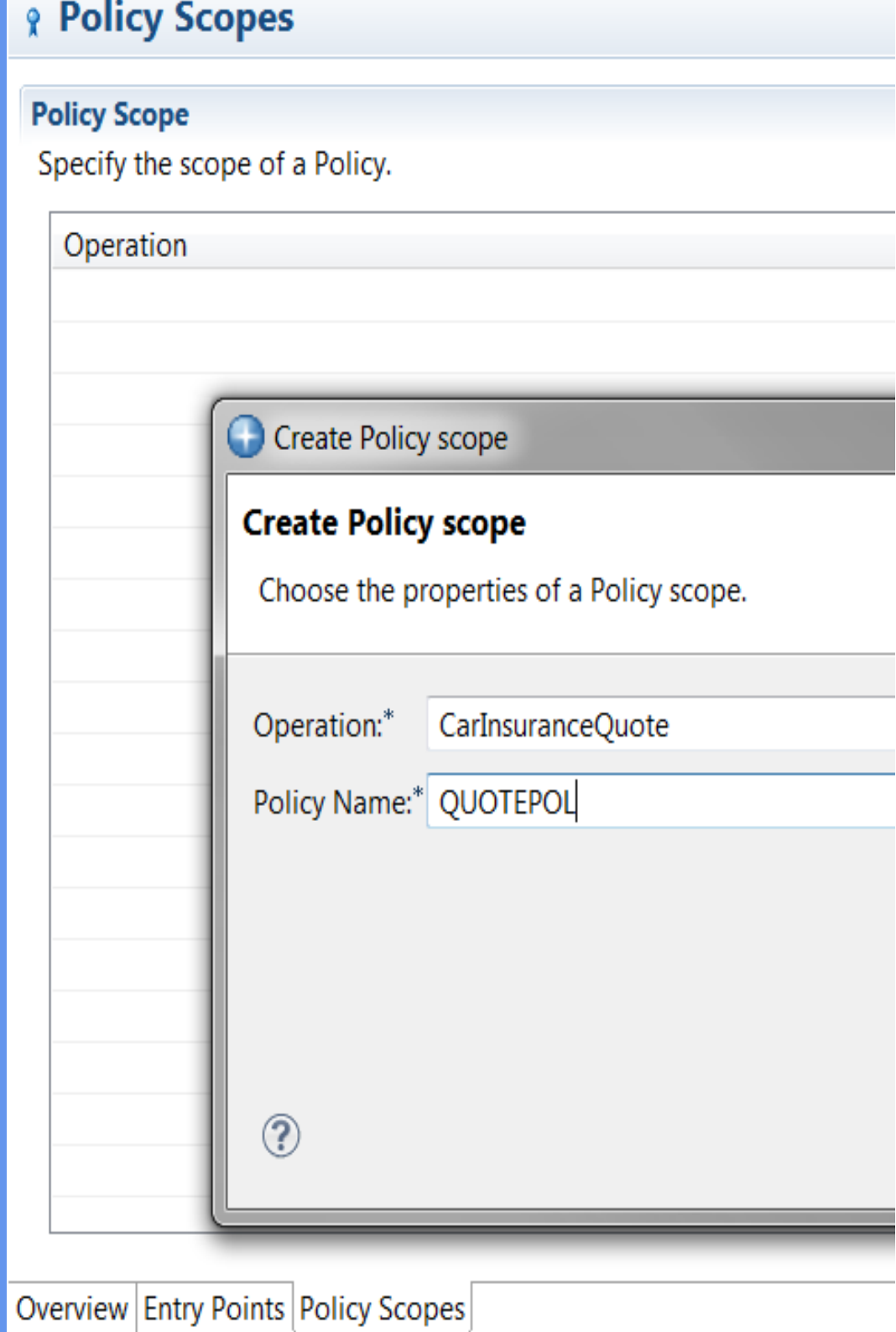
Policy scope

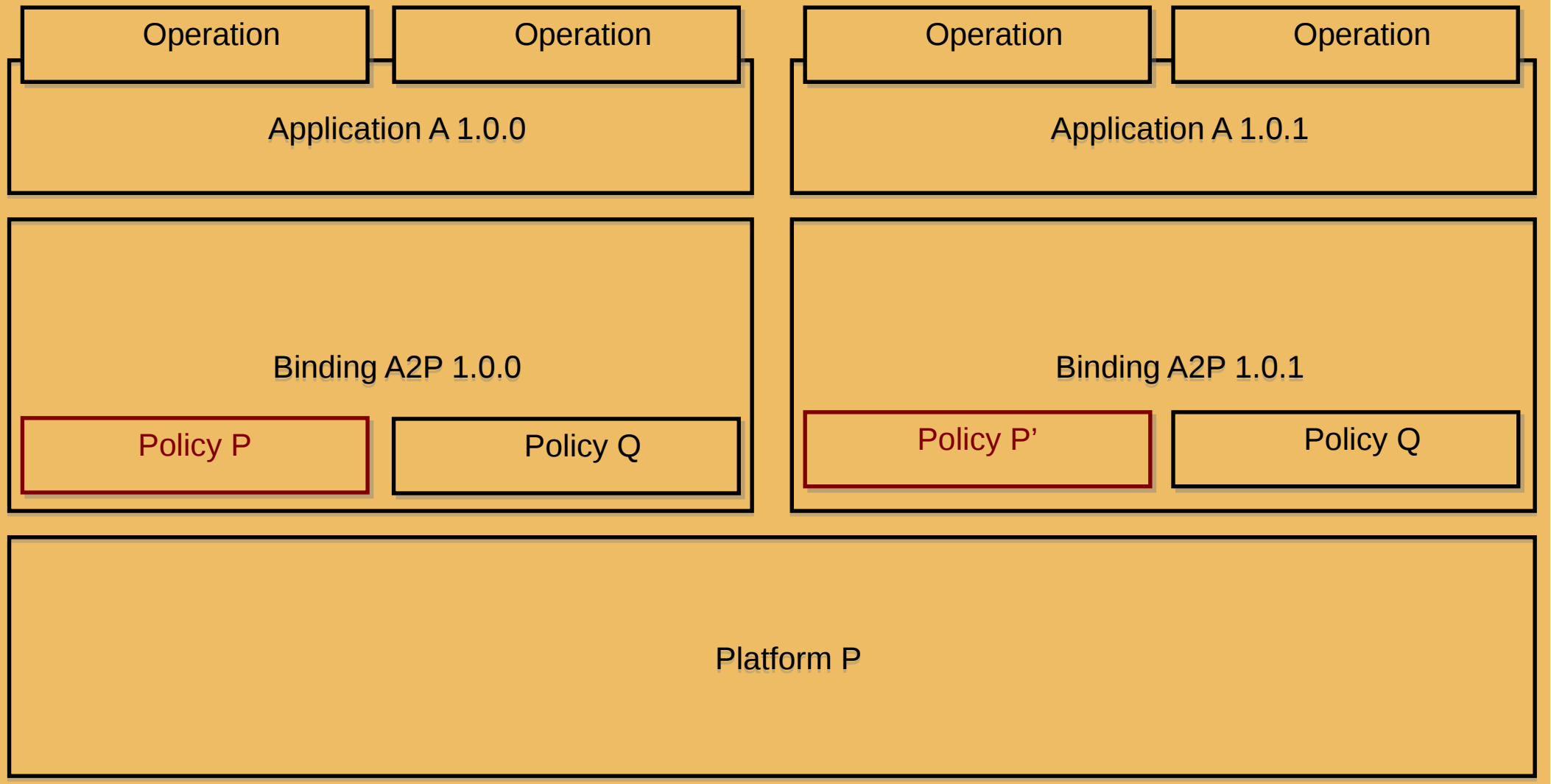

P
P
P
P
Operation
Applications
Application bindings
Region types
Platform

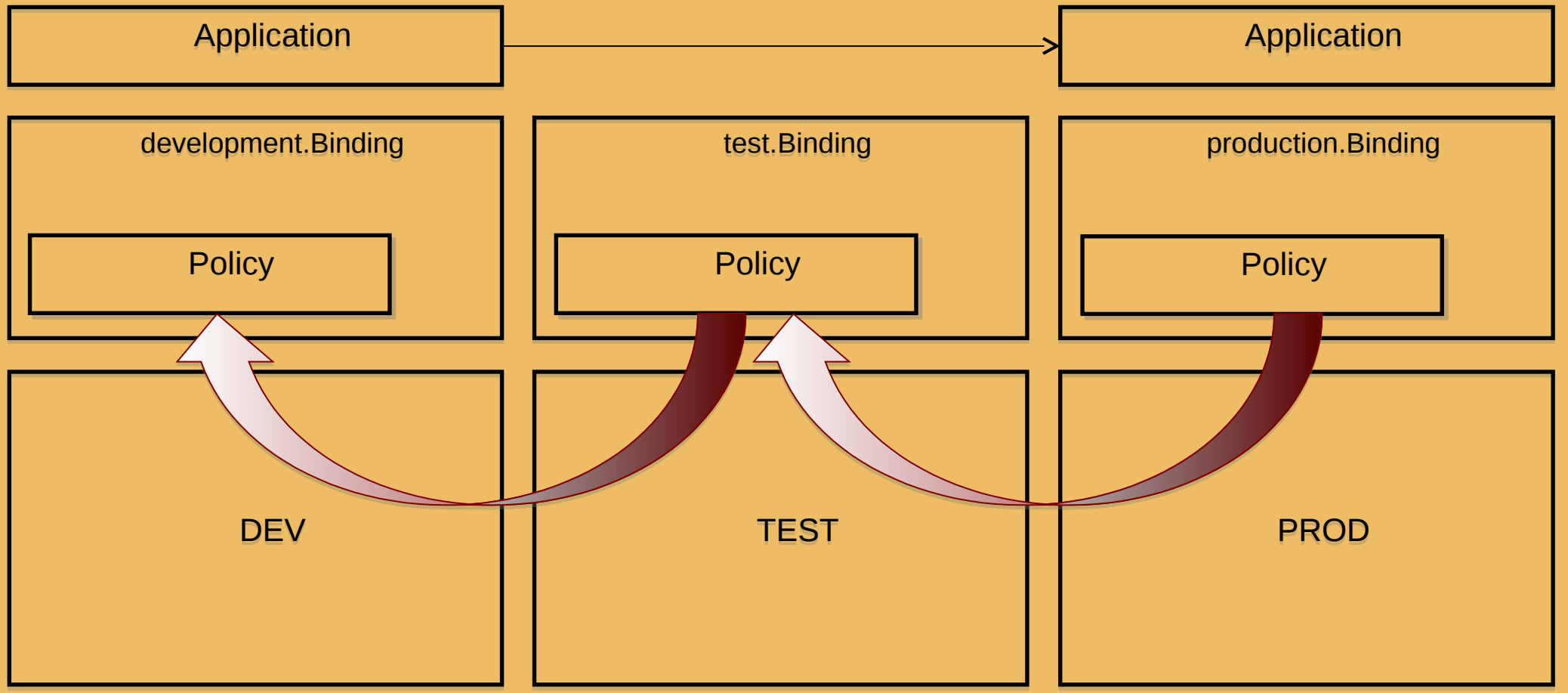

P
P
P
P
Operation
Applications
Application bindings
Region types
Platform

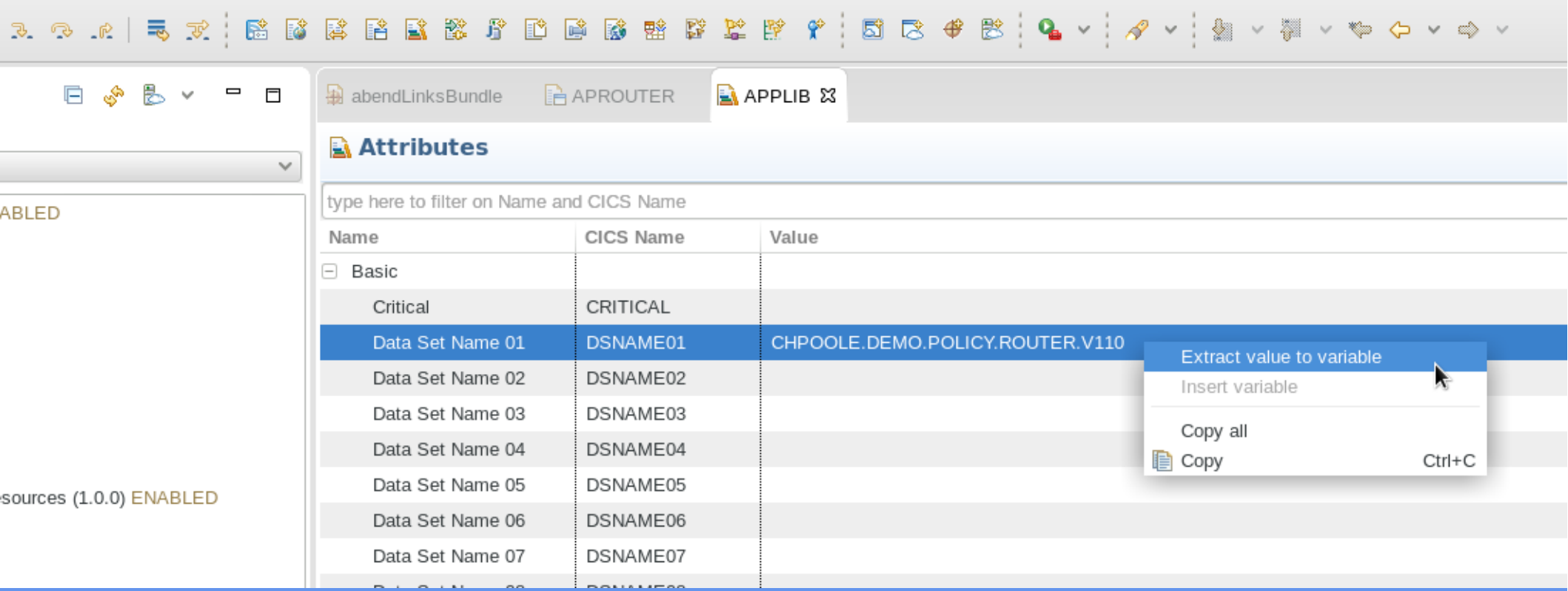
Policy scope: Operation

PROGRAM *5.2*
URIMAP *5.2*
TRANSACTION
5.3 Open Beta

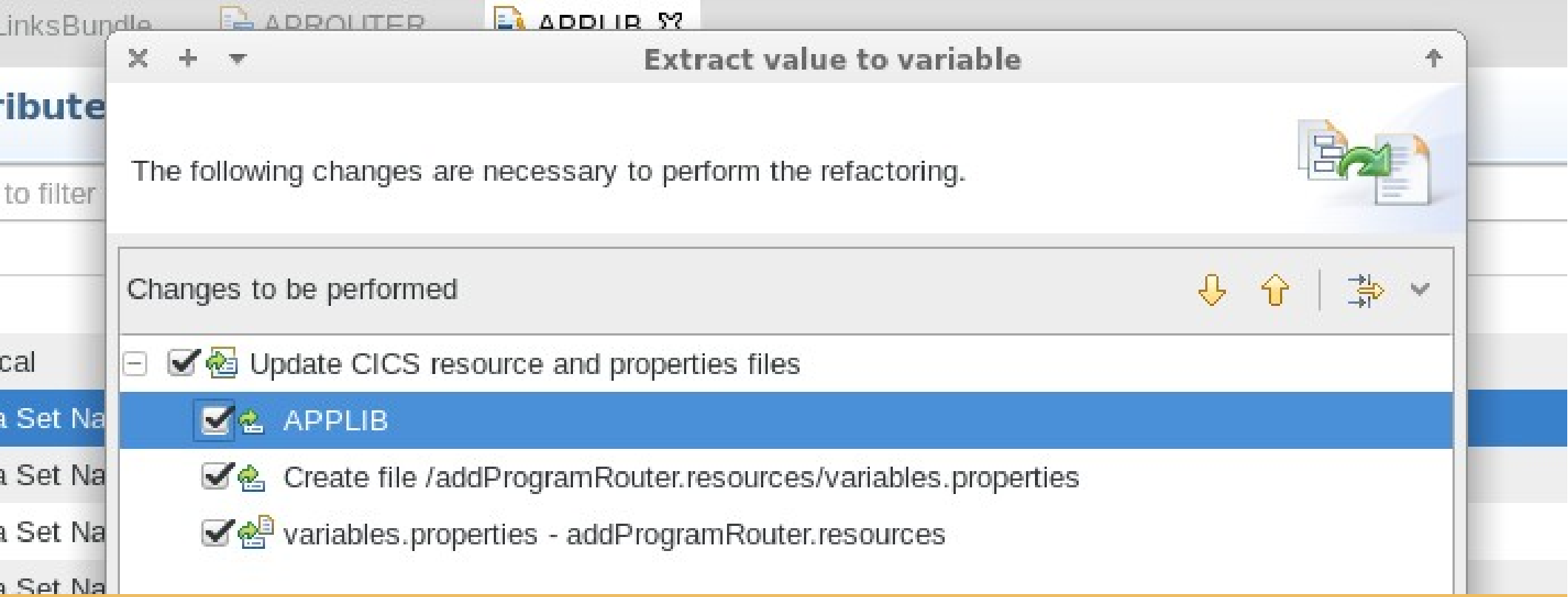



Operation
Operation
Application A 1.0.0
Operation
Operation
Application A 1.0.1
Binding A2P 1.0.0
Policy P
Policy Q
Binding A2P 1.0.1
Policy P’
Policy Q
Platform P


Application
Application
development.Binding
test.Binding
production.Binding
Policy
Policy
Policy
DEV
TEST
PROD

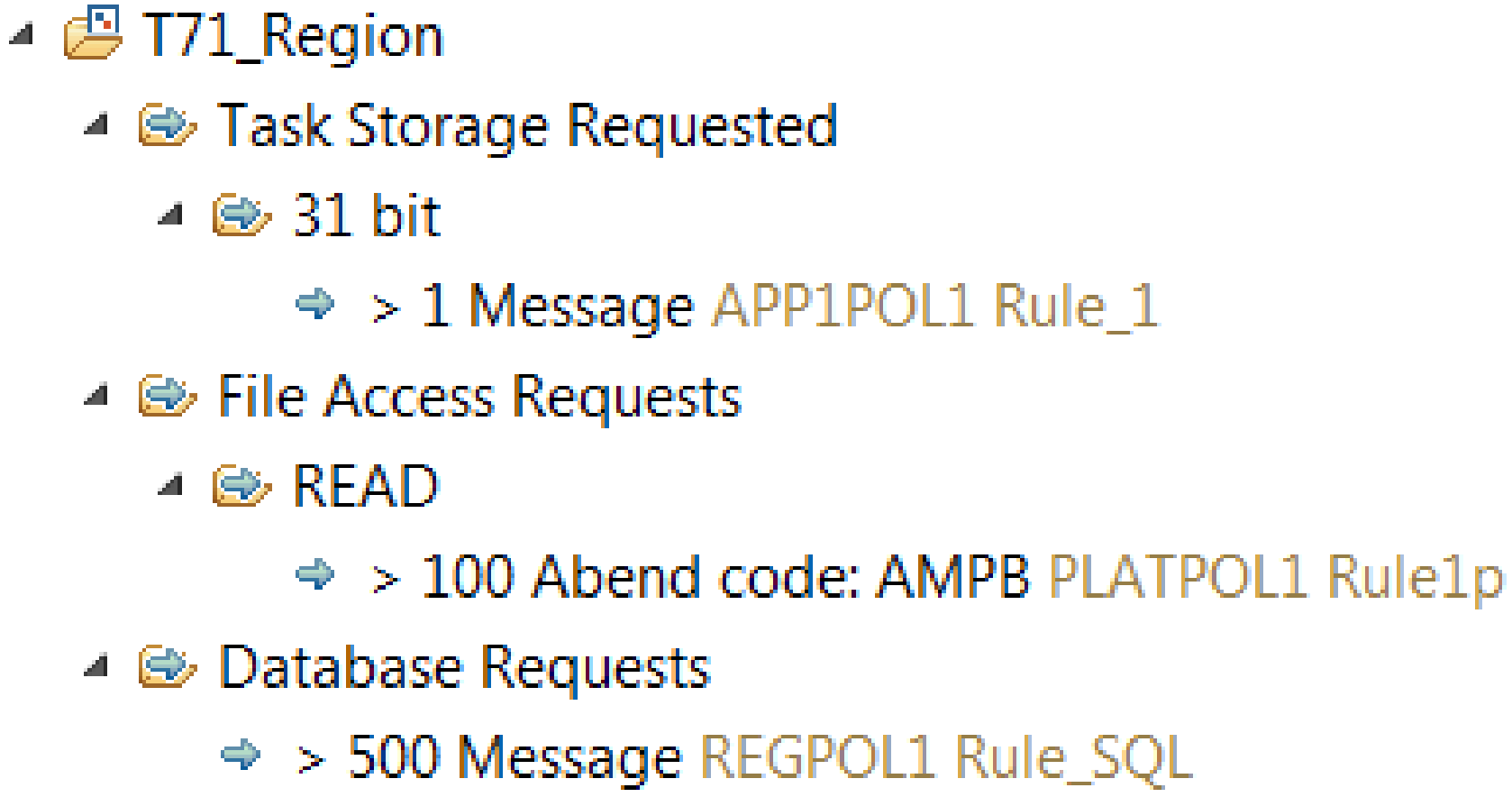


${Variable Substitution}



Resolve with a properties file

Find Policy Rules for Operation "Invoke_App1" - 3 results - 2:36:16 PM



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/