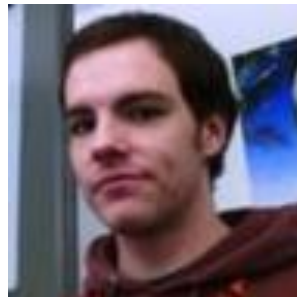


16572: You Asked, We Delivered: Workload Management in the CICS Explorer

Ezriel Gross – Circle Software



Stewart Francis - IBM



Eric Higgins - IBM



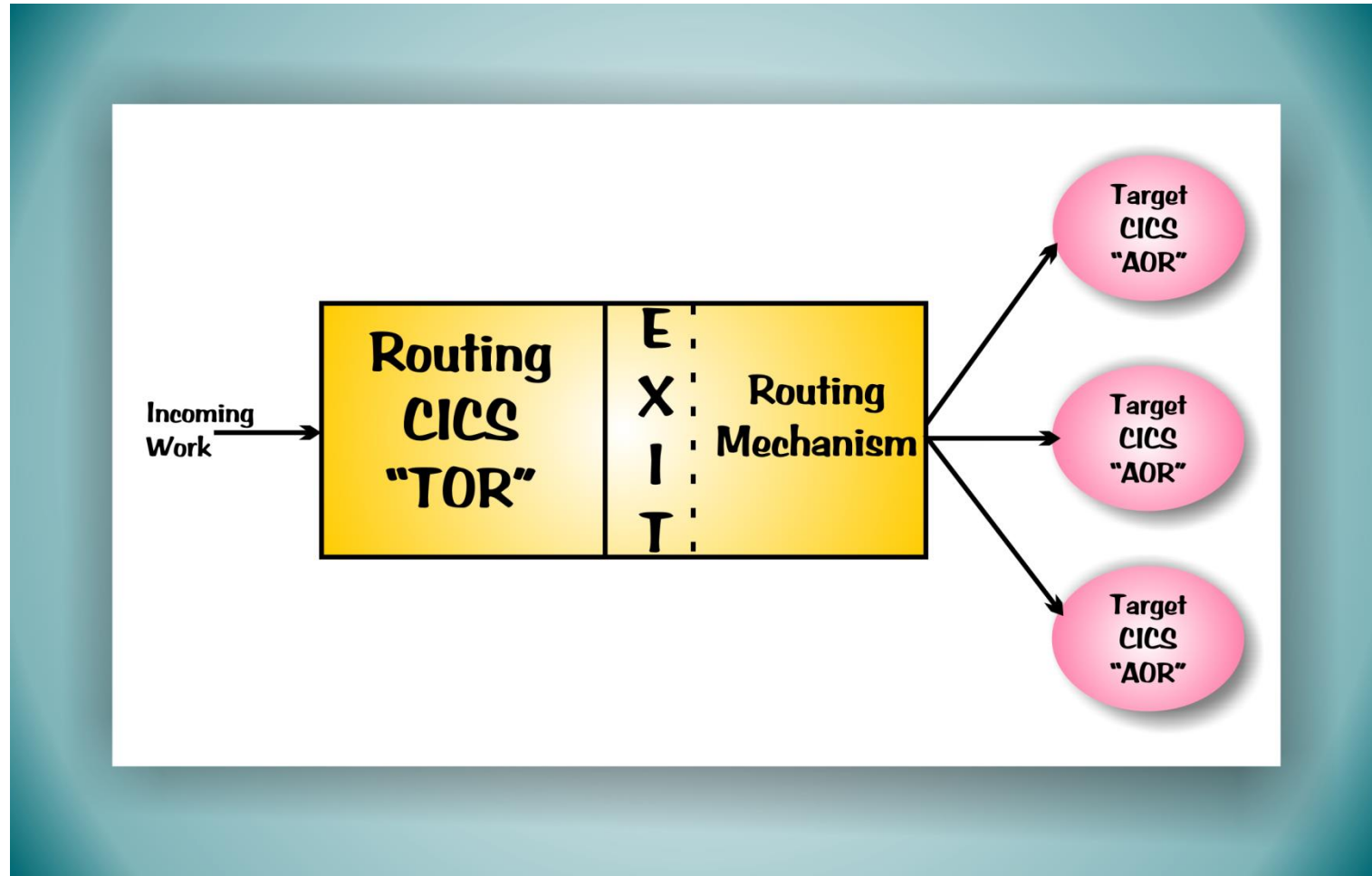
#SHAREorg



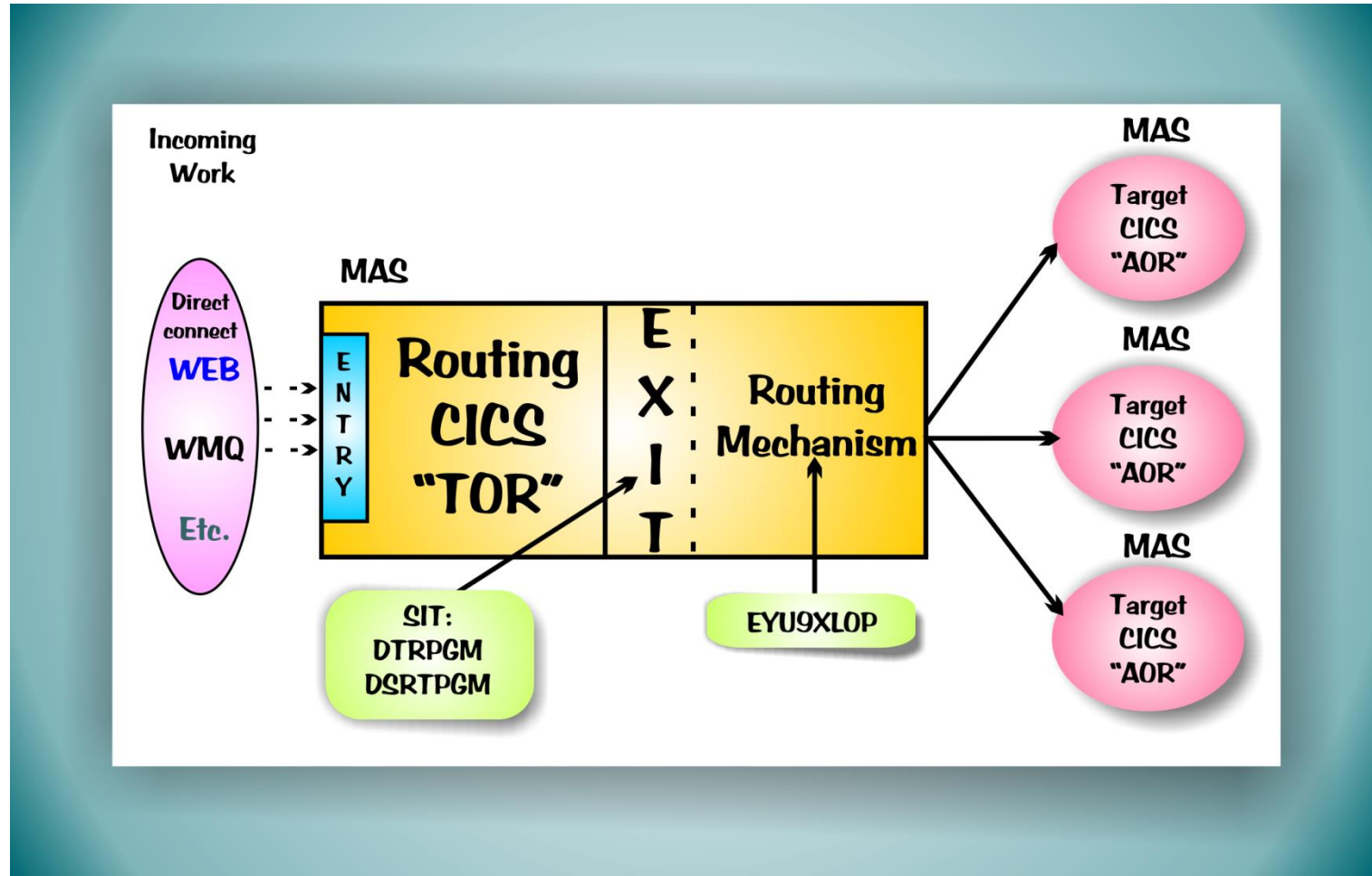
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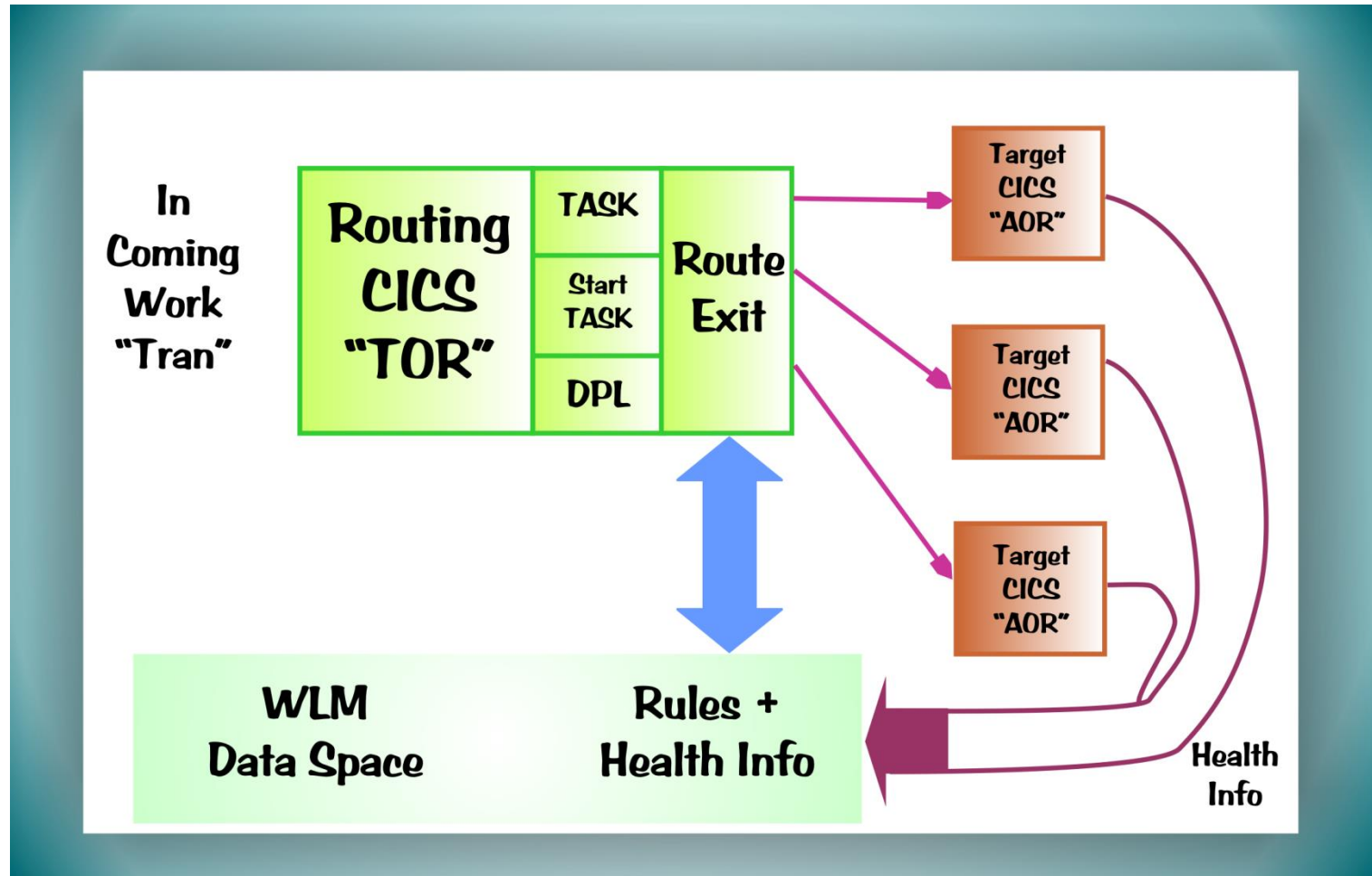
Dynamic Transaction Routing



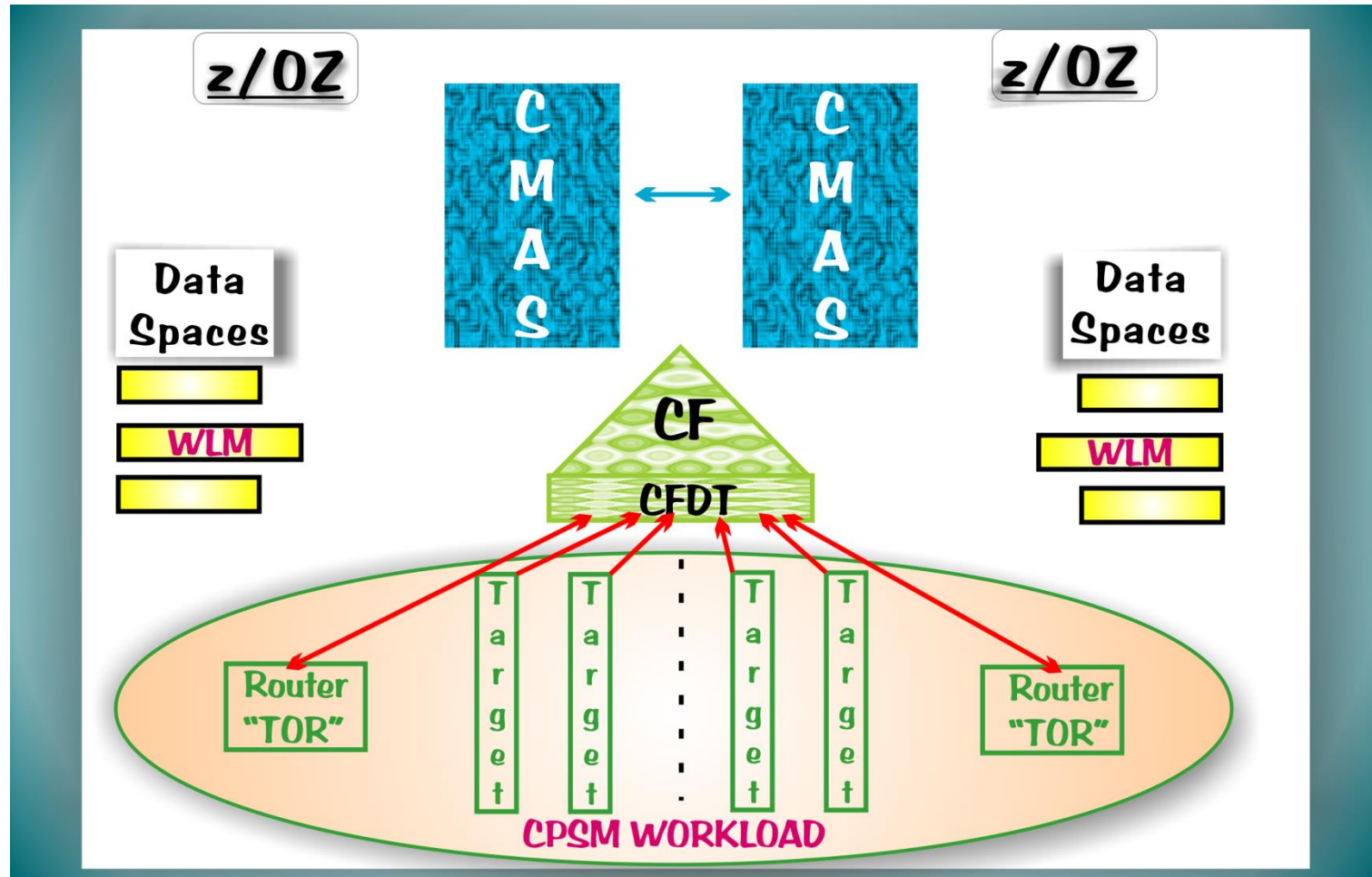
CPSM Routing



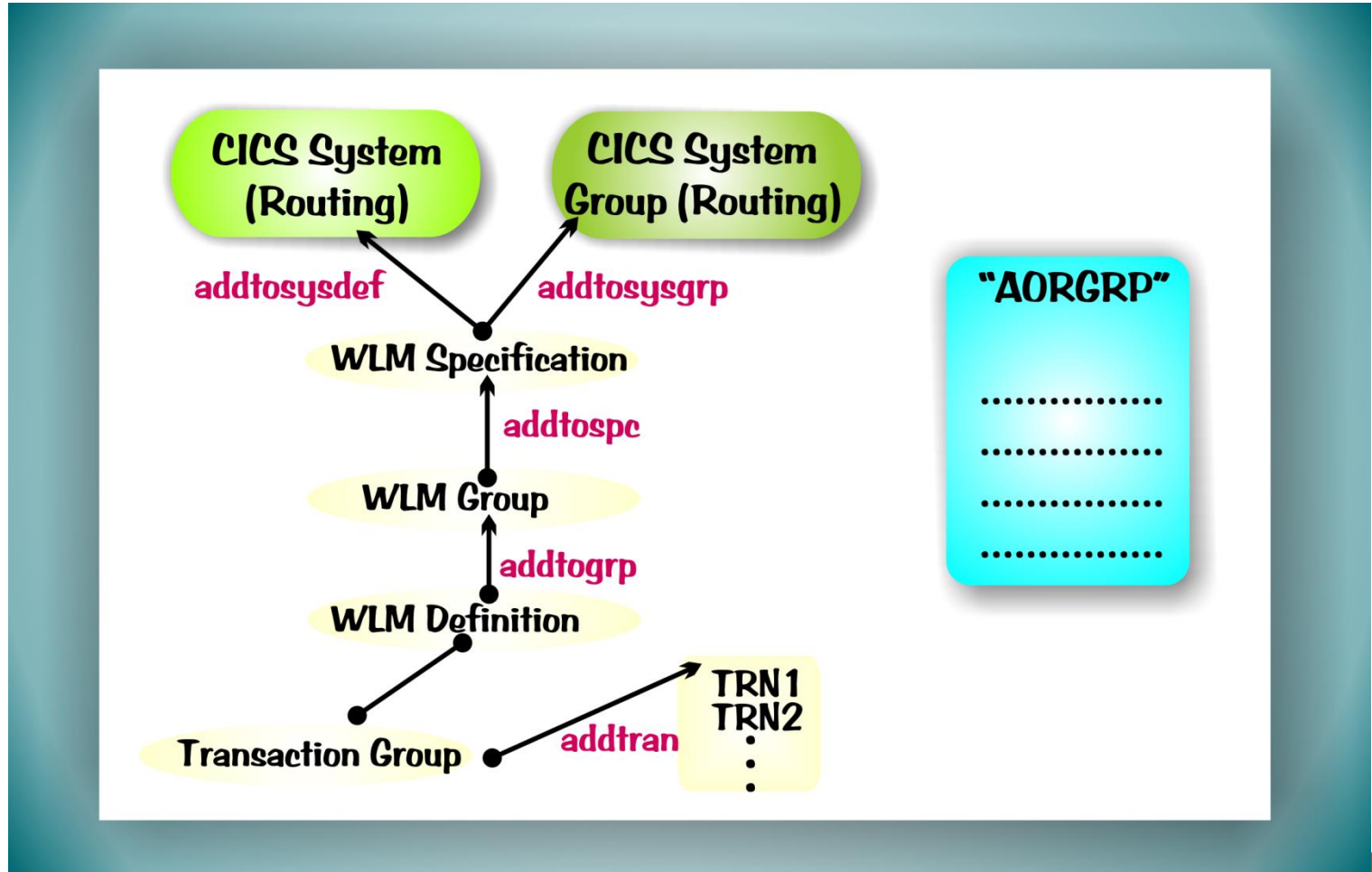
WLM Overview



Enhanced WLM



WLM Definition Hierarchy



WLM Administration View

Workload manager administration views

CMAS context:






Context:

Scope:

Definitional views

- [Specifications](#)  ←
- [Groups](#) 
- [Definitions](#) 
- [Transaction group definitions](#) 

Associated views

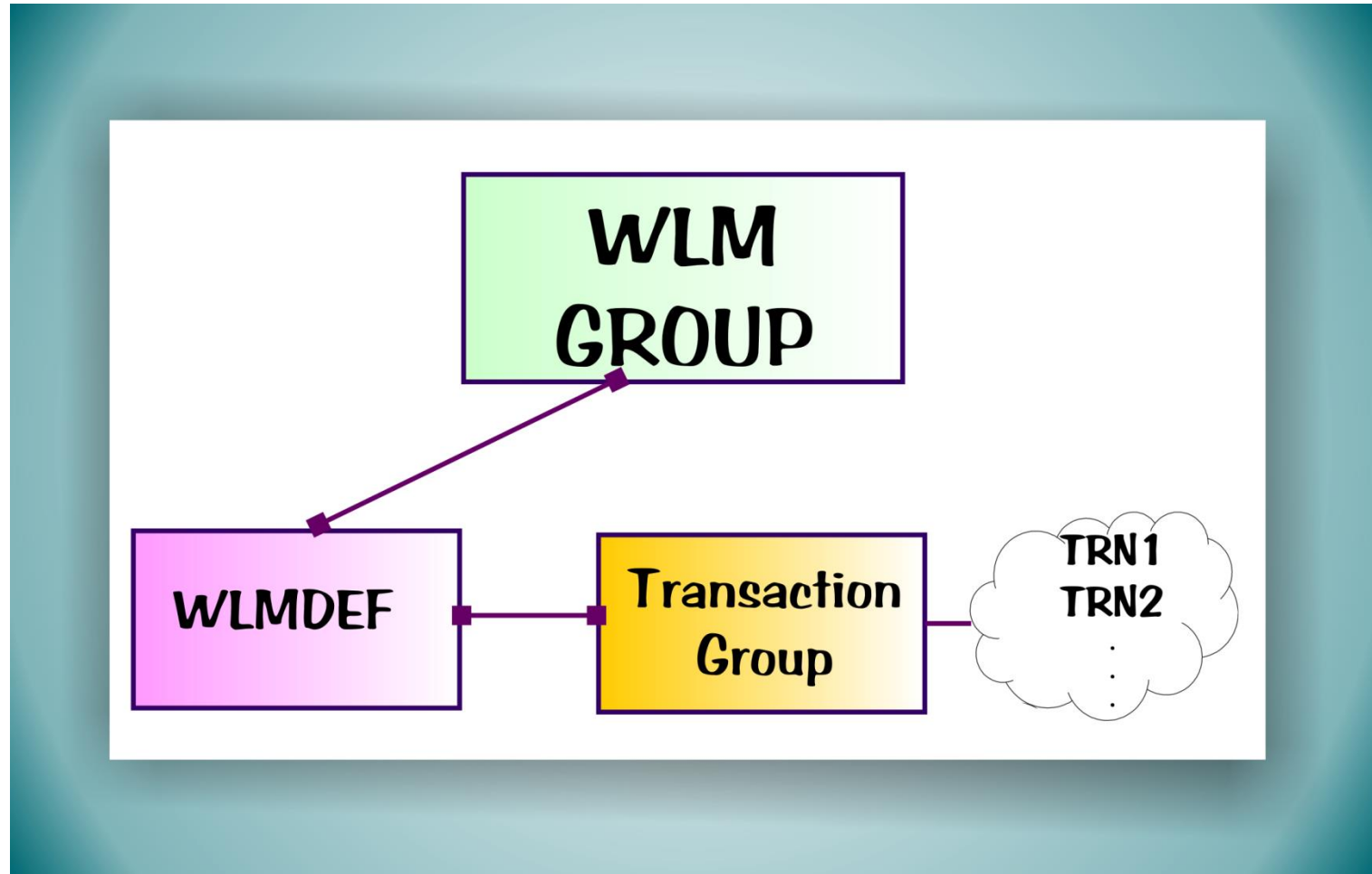
- [Specifications to system links](#) 
- [Specifications to system group links](#) 
- [WLM groups in specifications](#) 
- [Definitions in WLM groups](#) 
- [Transactions in transaction groups](#) 

WLM Specification

WLM specifications



| | |
|---------------------------------------|---|
| Name | <input checked="" type="checkbox"/> TEST1 |
| Description | <input checked="" type="checkbox"/> First test of WLM spec <small>Aa</small> |
| Default affinity relationship | <input checked="" type="checkbox"/> N_a ▾ |
| Default affinity lifetime | <input checked="" type="checkbox"/> N_a ▾ |
| Primary search criterion | <input checked="" type="checkbox"/> Userid ▾ |
| Automatic affinity creation option | <input type="checkbox"/> N_a ▾ |
| Default target scope | <input checked="" type="checkbox"/> AORGRP <small>✎</small> |
| RTA event | <input type="checkbox"/> <input type="text"/> <small>✎</small> |
| Acceptable level of abend probability | <input checked="" type="checkbox"/> 0 |
| Acceptable abend load threshold | <input checked="" type="checkbox"/> 0 |
| Algorithm type | <input checked="" type="checkbox"/> Queue ▾ <div style="border: 1px solid black; padding: 2px; display: inline-block;"><ul style="list-style-type: none">GoalQueueInqueueIngoal</div> |
| Perform 'Create'? | <input type="button" value="No"/> <input type="button" value="Yes"/> |

WLM Definitions – Affinities / Separation



WLM definitions

[EYUVC1315](#) Attribute, 'AORSCOPE', has been successfully updated.

| | |
|--|--|
| Workload management definition | <input checked="" type="checkbox"/> TESTDEF |
| Description | <input checked="" type="checkbox"/> First test WLM def Aa |
| Transaction group | <input checked="" type="checkbox"/> TRANGRP1  |
| Terminal LU name | <input checked="" type="checkbox"/> * |
| User ID | <input checked="" type="checkbox"/> RSMINS1 |
| BTS process type | <input checked="" type="checkbox"/> * |
| Scope name of set of target systems | <input checked="" type="checkbox"/> MAS9  |

Perform 'Create'?

No

Yes

WLM Transaction Groups

Transaction group definitions

| | |
|---------------------------------------|--|
| Name | <input checked="" type="checkbox"/> TRANGRP1 |
| Description | <input checked="" type="checkbox"/> Test TRAN GRP def Aa |
| Transaction group status | <input checked="" type="checkbox"/> Active |
| Primary search criterion | <input checked="" type="checkbox"/> Userid |
| Affinity relationship | <input checked="" type="checkbox"/> Userid |
| Affinity lifetime | <input checked="" type="checkbox"/> Pconv |
| Automatic affinity creation | <input checked="" type="checkbox"/> Yes |
| RTA event | <input type="checkbox"/> <input type="text"/> |
| Acceptable level of abend probability | <input checked="" type="checkbox"/> 0 |
| Acceptable abend load threshold | <input checked="" type="checkbox"/> 0 |
| Algorithm type | <input checked="" type="checkbox"/> Goal <div style="border: 1px solid black; padding: 2px; display: inline-block;"><ul style="list-style-type: none">GoalQueueLnqueueLngoal</div> |
| Perform 'Create'? | <input type="button" value="No"/> <input checked="" type="button" value="Yes"/> |

CPSM workload management is highly **flexible**

Flexibility comes at the expense of accessibility

CICS Explorer 5.2 provides an **intuitive UI for administering and monitoring CPSM workload management**

... without sacrificing any of the flexibility?

Compatibility



Backward compatible to CICS TS 4.1

Works with existing workloads

Requires CMCI to update

Demo

Create a workload specification

New Workload Specification

Create Workload Specification

Enter a value for Target Scope.

*
CICSplex:*

Name:*

Description:

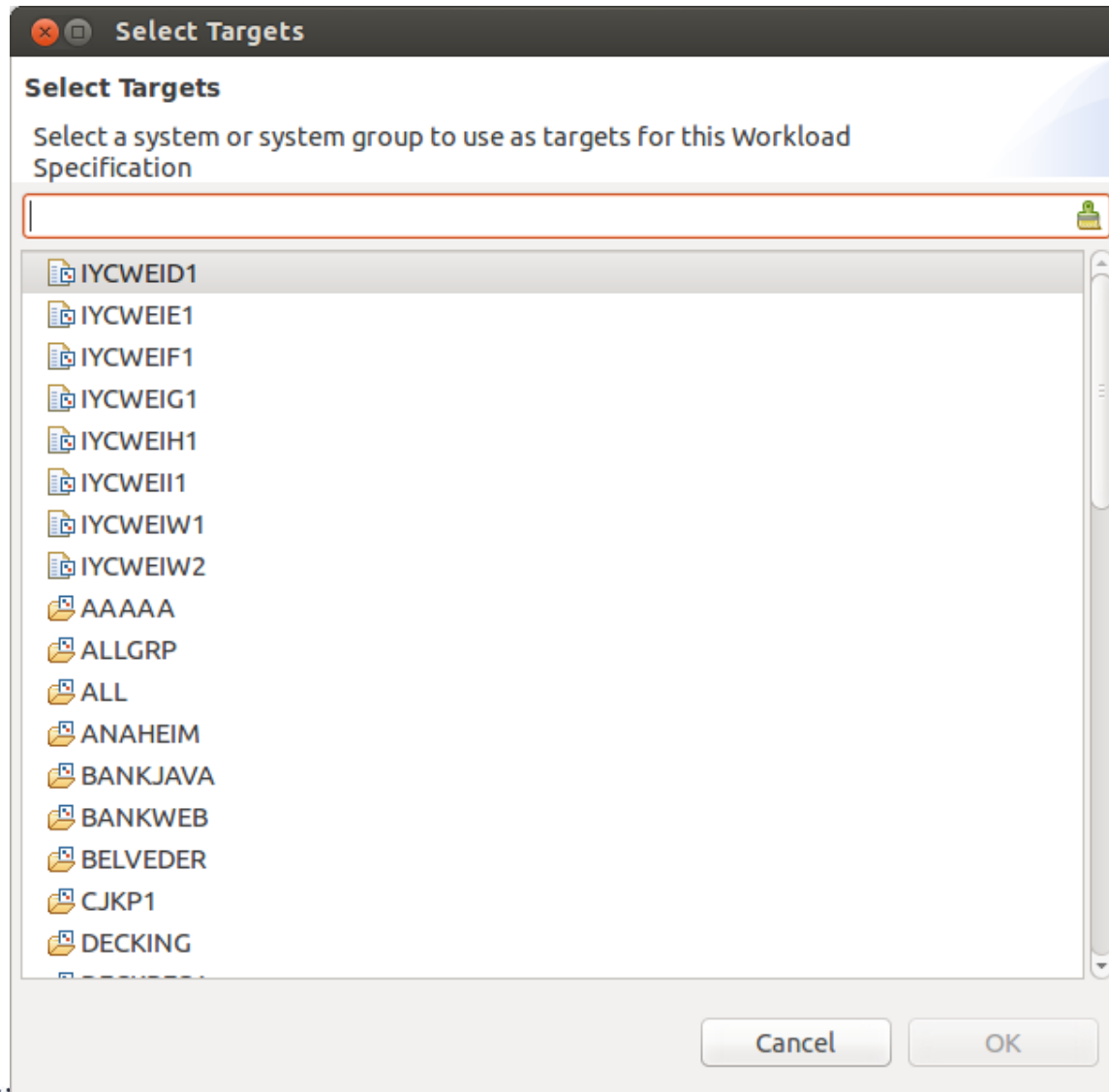
Target Scope:*

Primary Criterion:*

Algorithm:*

Open editor

Browse for a default target scope



Edit a workload specification

Workload Specification (DEMO) ✕

DEMO

Description: My Demo Workload

Routers + ?

Rules + ?

Targets ?

Targets:* DEMOGRP1 Browse...

Algorithm: GOAL

Primary criterion: LUNAME

Event:

Affinities ?

These transactions establish affinities

Relationship: LUNAME

Lifetime: PCONV

Automatically create affinities

Abends ?

These transactions have abend thresholds

Threshold: 98%

Critical: 99%

Routing rules for workload separation

Rules

+ [?] [?] [?]

- Default rule
- > Rule 20

Targets

[?]

Targets:*

Terminal LU name: *

User ID: *

BTS process type: *

Transactions

[?]

No transactions are specifically identified for routing. This means these workload separation rules will apply to all transactions. To apply these rules to specific transactions, select an existing transaction group, or define a new one.

Using transaction groups

Rules + [Icons] ?

- Default rule
- > **Rule 20**

Targets ?

Targets:* DECKING [Browse...]

Terminal LU name: *

User ID: *

BTS process type: *

Transactions [Close] ?

Name:

Description: Transaction group 9

Transactions: Type name to add [Add] [Browse...] [Remove]

Algorithm: INHERIT [v]

Primary criterion: LUNAME [v]

Status: ACTIVE [v]

Event:

Affinities ?

These transactions establish affinities

Relationship: LUNAME [v]

Complete your session evaluations online at www.SHARE.org/Seattle-Eval

Show more detail

Rules + [Print] [Help]

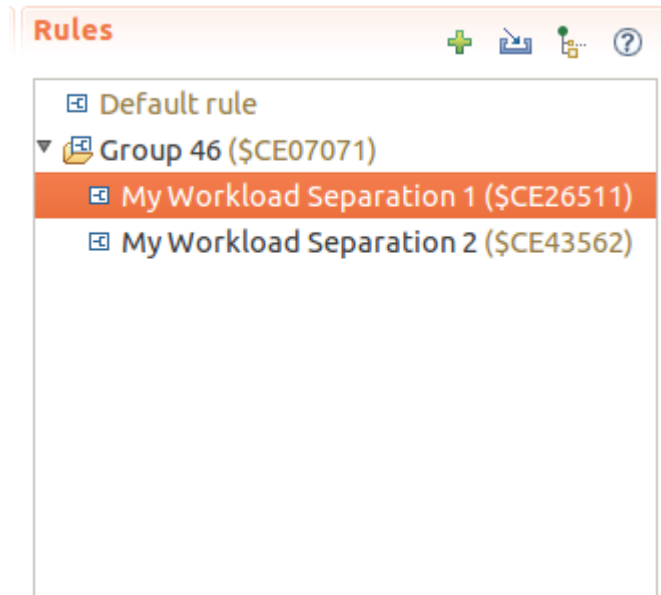
- [-] Default rule
- [-] My Workload Separation 1
- [-] My Workload Separation 2**



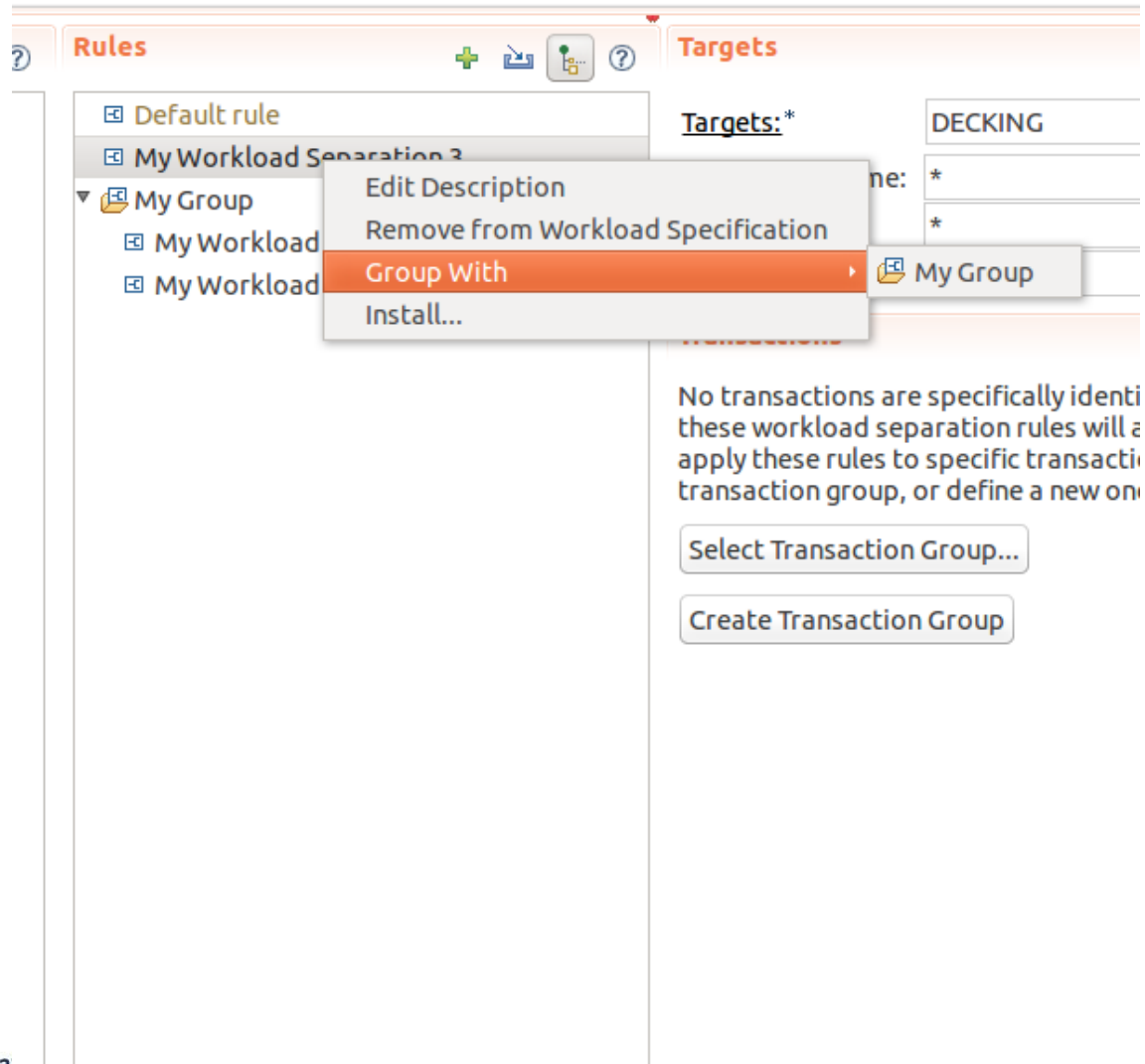
Rules + [Print] [Help]

- [-] Default rule
- [-] Group 46 (\$CE07071)
 - [-] My Workload Separation 1 (\$CE26511)
- [-] Group 47 (\$CE82383)
 - [-] My Workload Separation 2 (\$CE43562)**

Organize rules into groups



Organize rules into groups



Rules

- Default rule
- My Workload Separation 3
- My Group
 - My Workload
 - My Workload

Targets

Targets:*

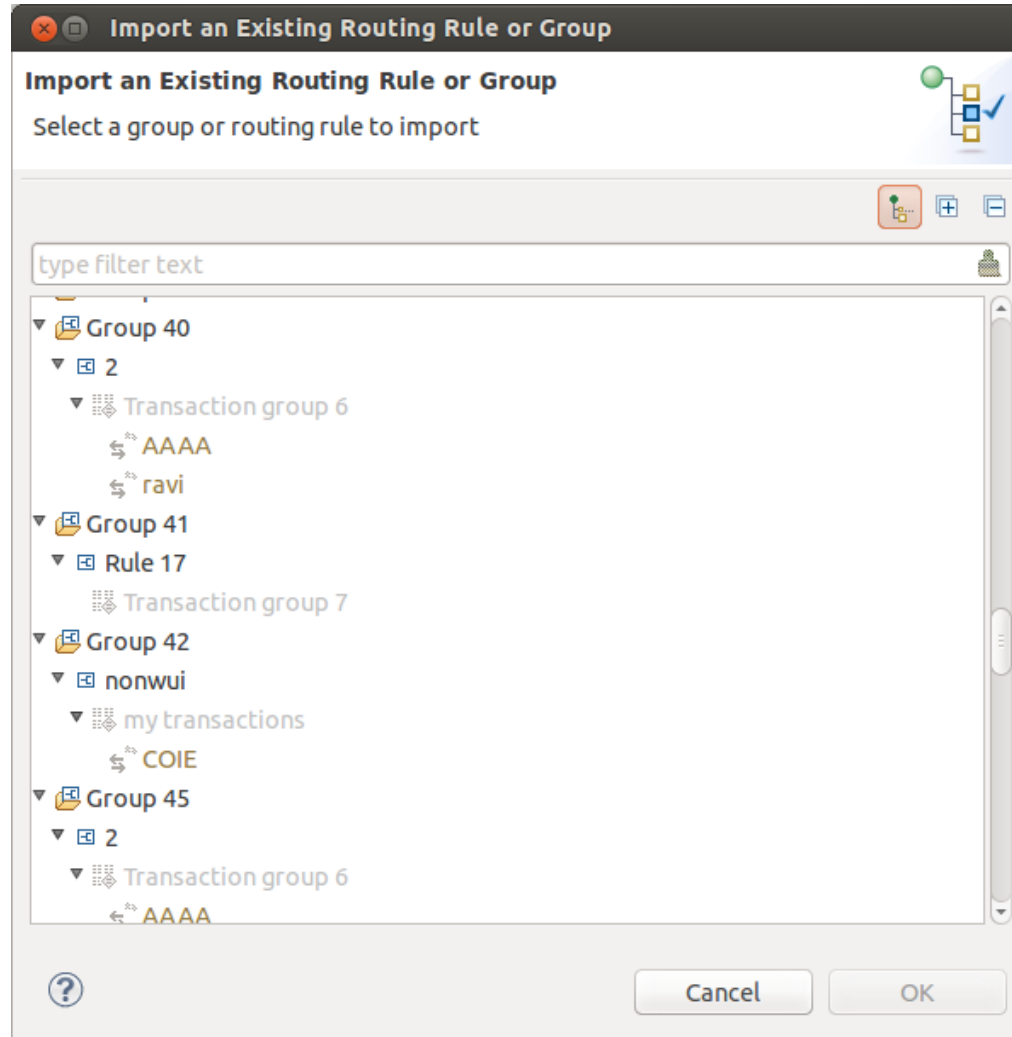
| |
|---------|
| DECKING |
| ne: * |
| * |

No transactions are specifically identified in these workload separation rules will apply these rules to specific transaction groups, or define a new one.

Select Transaction Group...

Create Transaction Group

Import rules from existing workloads



Reconcile errors

*Workload Specification (DEMO) ✖

↔ **DEMO** Invalid value for attribute: Target scope

Description: My Demo Workload

Routers [Add] [Help]

Rules [Add] [Import] [Export] [Help]

- Default rule
- My Workload Separation 3
- My Group
 - My Workload Separation 1
 - My Workload Separation 2

Targets [Help]

Targets:* [Browse..]

Terminal LU name: *

User ID: *

BTS process type: *

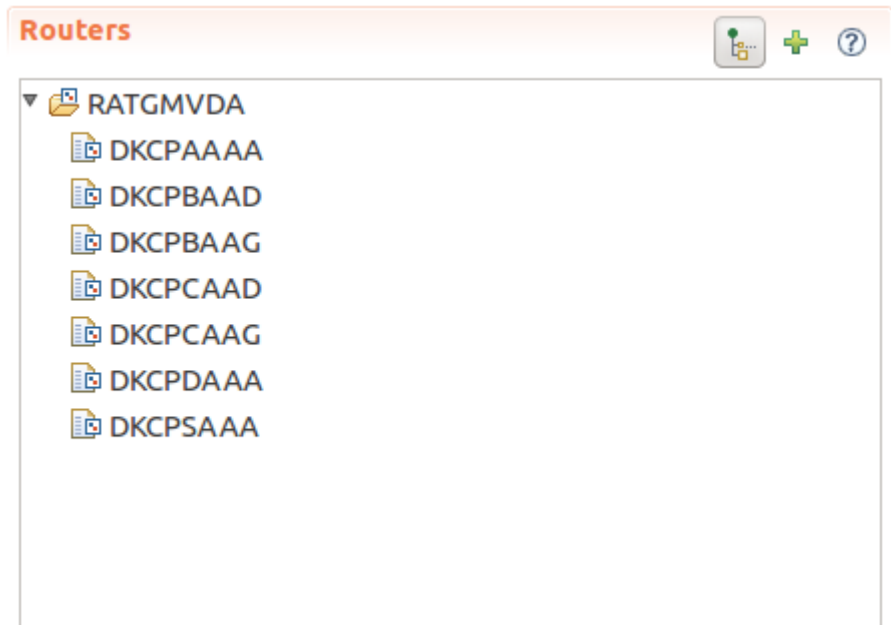
Transactions [Help]

No transactions are specifically identified for routing. This means these workload separation rules will apply to all transactions. To apply these rules to specific transactions, select an existing transaction group, or define a new one.

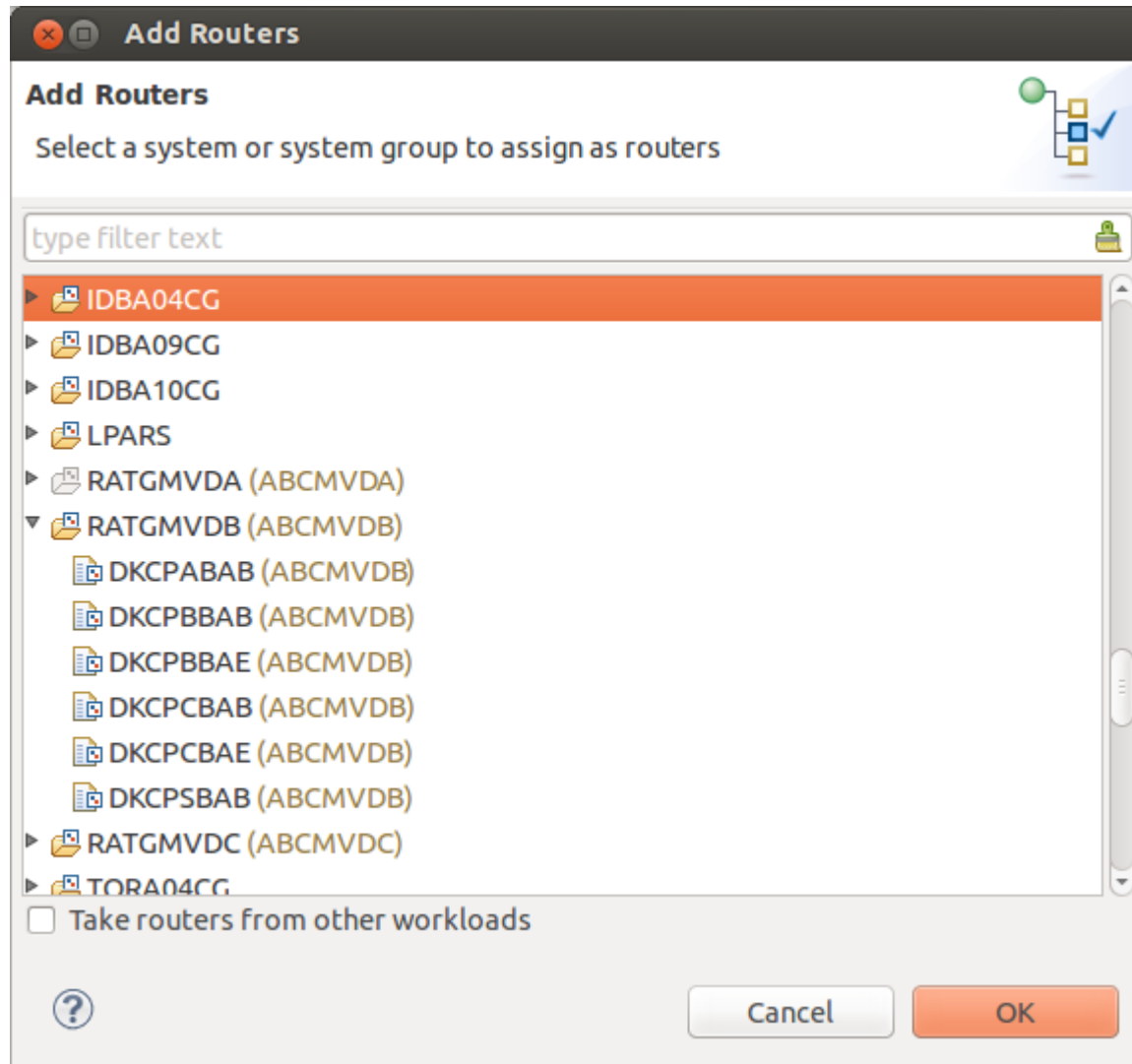
Select Transaction Group...

Create Transaction Group

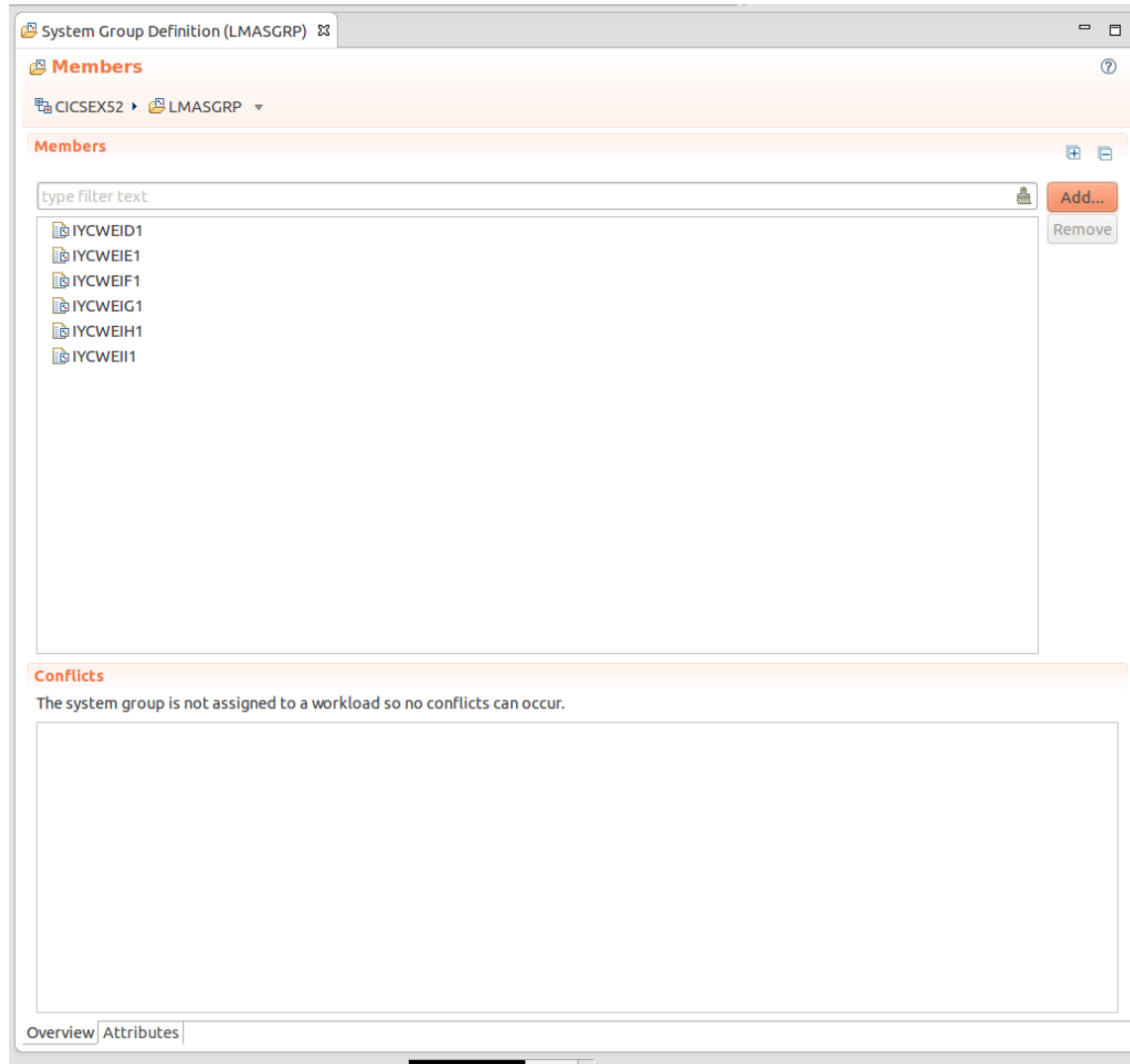
Define routers



Select regions to associate as routers



Edit system groups



The screenshot shows a web application window titled "System Group Definition (LMASGRP)". The main content area is divided into two sections: "Members" and "Conflicts".

Members Section:

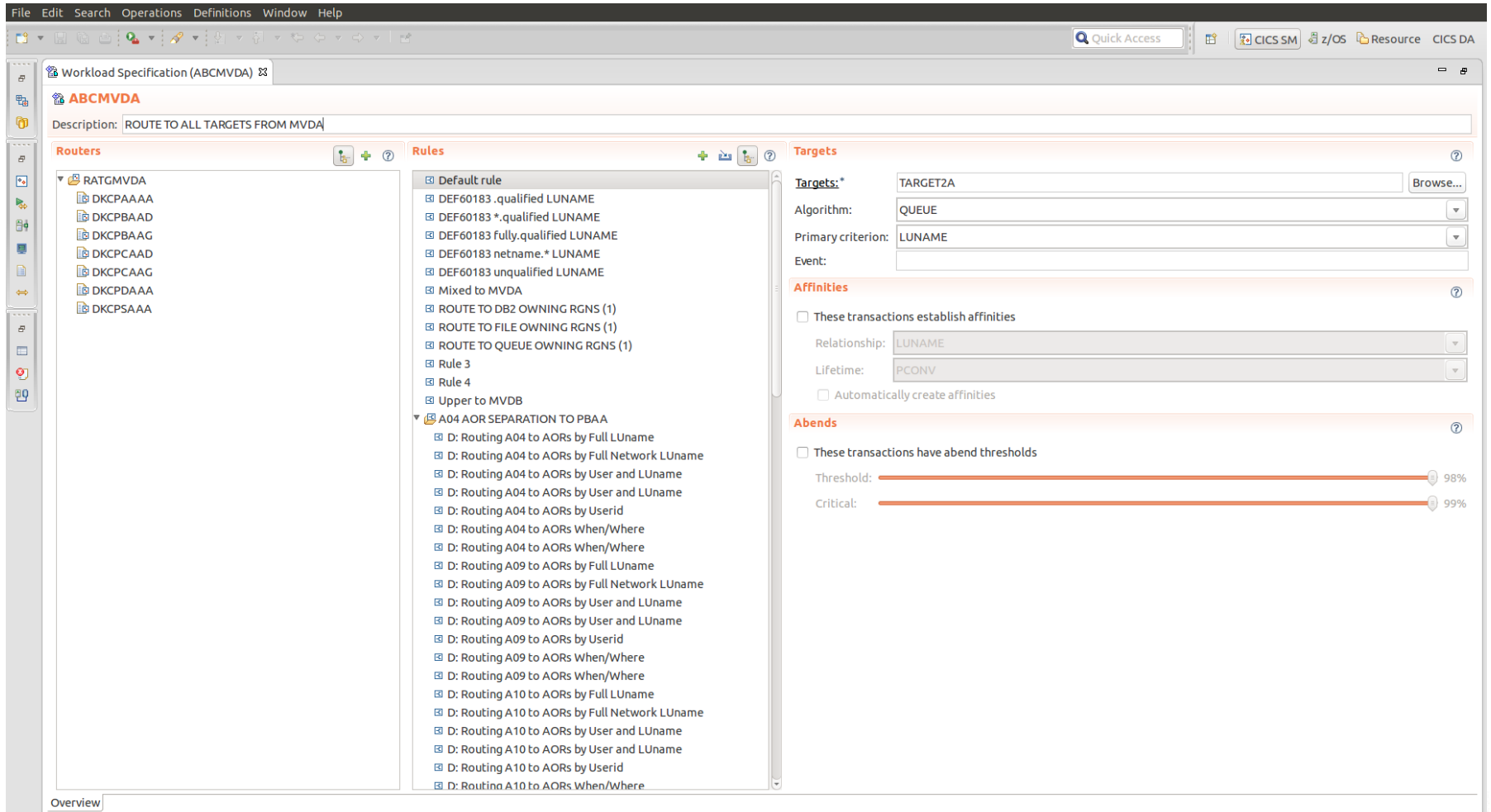
- Navigation: "CICSEX52" > "LMASGRP"
- Header: "Members" with a search icon.
- Filter: A text input field labeled "type filter text" with a search icon.
- Buttons: "Add..." (orange) and "Remove" (grey).
- List of Members:
 - IYCWEID1
 - IYCWEIE1
 - IYCWEIF1
 - IYCWEIG1
 - IYCWEIH1
 - IYCWEI11

Conflicts Section:

- Header: "Conflicts"
- Text: "The system group is not assigned to a workload so no conflicts can occur."
- Empty list area below the text.

At the bottom, there are tabs for "Overview" and "Attributes".

It scales!

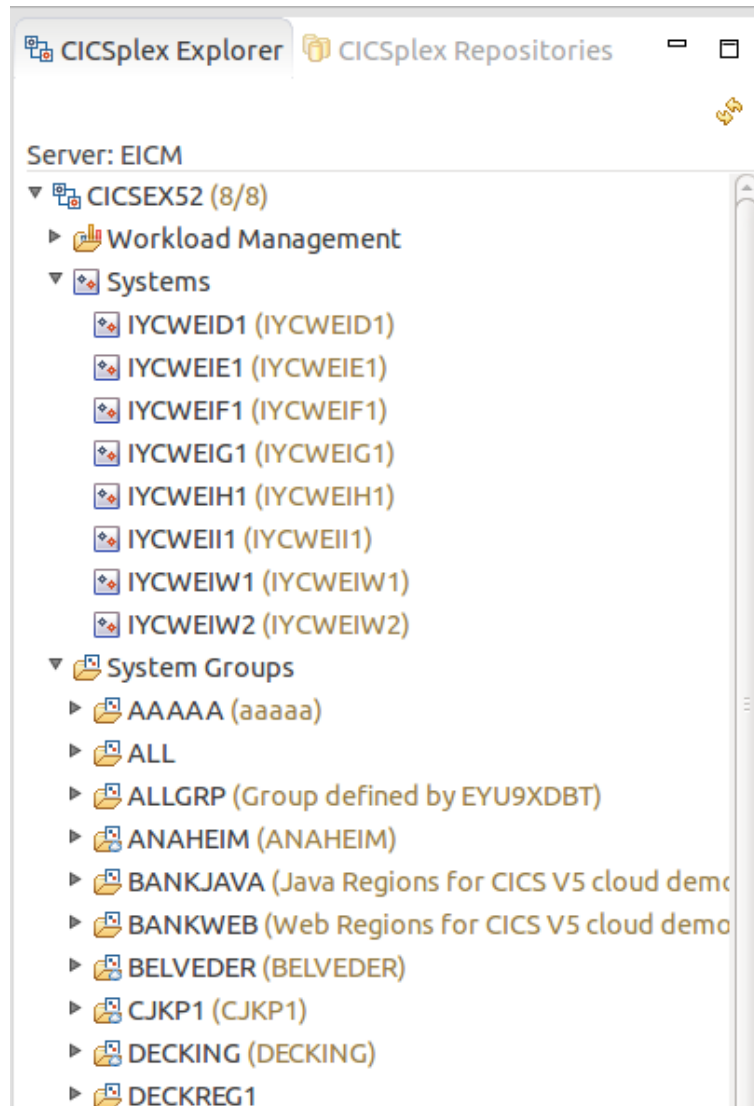


The screenshot displays a network configuration application window titled "Workload Specification (ABCMVDA)". The interface is divided into several panes:

- Routers:** A tree view showing a hierarchy starting with "RATGMVDA", which includes sub-items like "DKCPAAAA", "DKCPBAAD", "DKCPBAAG", "DKCPCAAD", "DKCPCAAG", "DKCPDAAA", and "DKCPSAAA".
- Rules:** A list of rules including "Default rule", "DEF60183.qualified LUNAME", "DEF60183 *.qualified LUNAME", "DEF60183 fully.qualified LUNAME", "DEF60183 netname.* LUNAME", "DEF60183 unqualified LUNAME", "Mixed to MVDA", "ROUTE TO DB2 OWNING RGNS (1)", "ROUTE TO FILE OWNING RGNS (1)", "ROUTE TO QUEUE OWNING RGNS (1)", "Rule 3", "Rule 4", "Upper to MVDB", and a large group "A04 AOR SEPARATION TO PBAA" containing numerous routing rules for A04 and A09.
- Targets:** Configuration fields for "Targets:*" (set to "TARGET2A"), "Algorithm:" (set to "QUEUE"), and "Primary criterion:" (set to "LUNAME").
- Affinities:** A section with a checkbox "These transactions establish affinities" and fields for "Relationship:" (set to "LUNAME") and "Lifetime:" (set to "PCONV").
- Abends:** A section with a checkbox "These transactions have abend thresholds" and two sliders for "Threshold:" (set to 98%) and "Critical:" (set to 99%).






















The bottom status bar shows "50M of 70M" and "winmvsda:22602".

CICSplex Explorer grouping



Complete your session evaluations online at www.SHARE.org/Seattle-Eval

View active workloads

- ▼  CICSEX52 (8/8)
 - ▼  Workload Management
 - ▼  DEMO EICM (ACTIVE)
 - ▼  Routers
 -  IYCWEIG1
 -  IYCWEIW2
 - ▼  Routing rules
 - ▶  Default routing
 - ▶  asd (\$CE73446)
 - ▼  nonwui (\$CE47146)
 - ▼  Targets (2)
 -  IYCWEIH1 (ACTIVE)
 -  IYCWEII1 (ACTIVE)
 - ↔ Transactions
 - ▶  OTHER EICM (ACTIVE)
 -  ACCT
 -  EMPTY
 -  EXPWRK1
 -  EXPWRK2
 -  TESTWL
 -  TESTWLM
 -  ZEMWSPEC

Examine router statistics

Default routing (DEMO) ⌵

Targets ?

CICSEX52 ▸ DEMO ▾

▼ **Details**

Targets: DEMOGRP1

Target Distribution Factors

Target Region: ▶ ✕ ▼

CNX0211I Context: CICSEX52. Resource: WLMAWAOR. 2 (filtered) records collected at 1 Aug 2014 22:26:38

| Target Re | Status | Contact S | Routing L | MAXTASK | Task Cour | Health Sh | Health St | Health Du | Health M |
|-----------|--------|-----------|-----------|---------|-----------|-----------|-----------|-----------|----------|
| IYCWEIW1 | ACTIVE | N_A | 4 | 500 | 75 | NO | NO | NO | NO |
| IYCWEIW2 | ACTIVE | N_A | 4 | 500 | 75 | NO | NO | NO | NO |

Target Statistics

Target Region: ▶ ✕ ▼

CNX0211I Context: CICSEX52. Resource: WLMATARG. 2 records collected at 1 Aug 2014 22:26:38

| Target Re | Reporting | Optimizat | Optimizat | Routing W | Routing L | Task Load | Task Load | Route Sel | Route Ab |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|
| IYCWEIW1 | IYCWEICM | INACTIVE | DISABLED | 880 | 4 | 0 | 60 | 0 | 0 |
| IYCWEIW2 | IYCWEICM | INACTIVE | DISABLED | 880 | 4 | 0 | 60 | 0 | 0 |

Targets Transactions Attributes

Complete your session

Examine router statistics

Default routing (DEMO) ⌵

Targets ?

CICSEX52 ▸ DEMO ▾

▼ **Details**

Targets: DEMOGRP1

Target Distribution Factors

Target Region: ▶ ✕ ▼

CNX0211I Context: CICSEX52. Resource: WLMAWAOR. 2 (filtered) records collected at 1 Aug 2014 22:26:38

| Target Re | Status | Contact S | Routing L | MAXTASK | Task Cour | Health Sh | Health St | Health Du | Health M |
|-----------|--------|-----------|-----------|---------|-----------|-----------|-----------|-----------|----------|
| IYCWEIW1 | ACTIVE | N_A | 4 | 500 | 75 | NO | NO | NO | NO |
| IYCWEIW2 | ACTIVE | N_A | 4 | 500 | 75 | NO | NO | NO | NO |

Target Statistics

Target Region: ▶ ✕ ▼

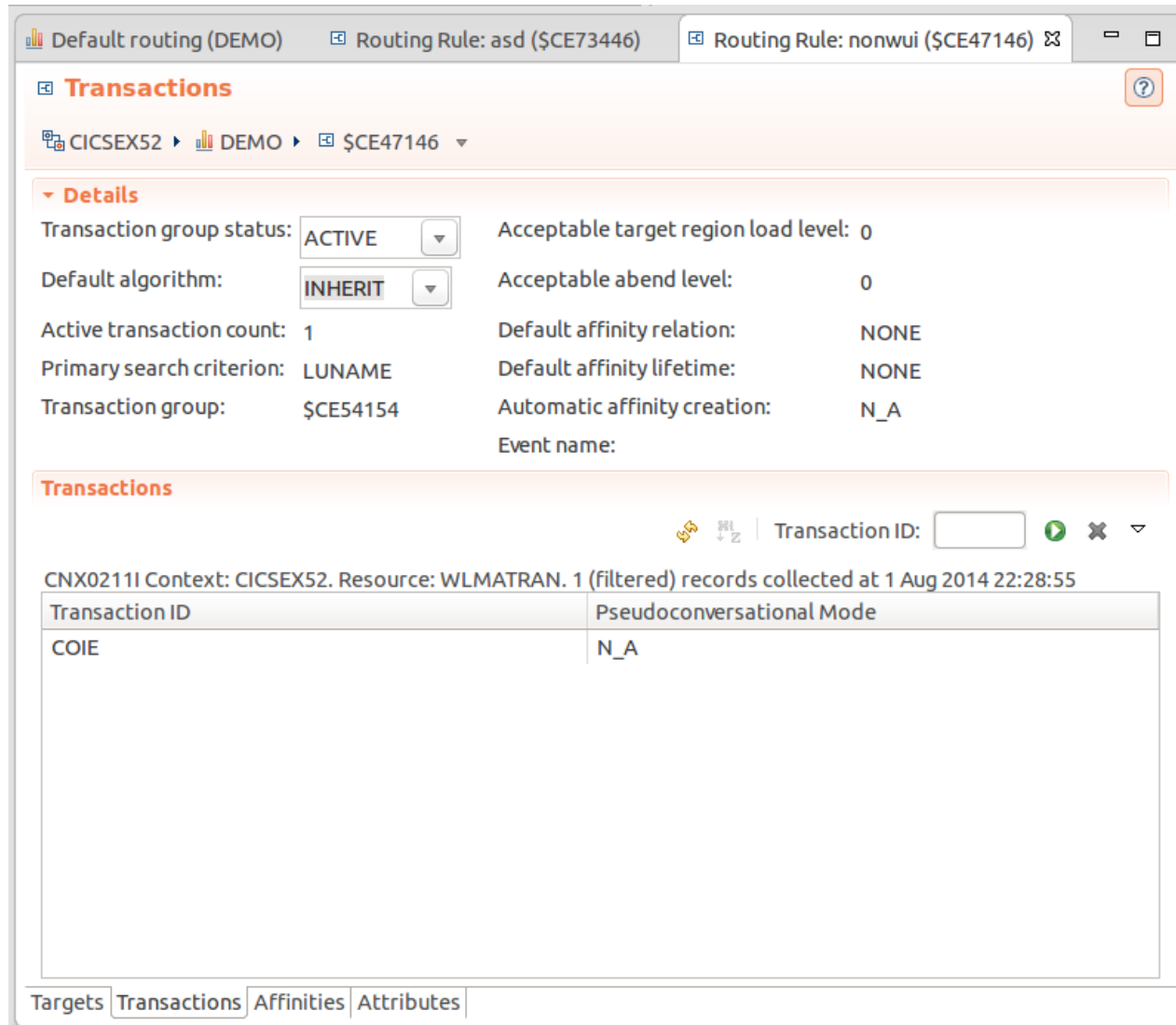
CNX0211I Context: CICSEX52. Resource: WLMATARG. 2 records collected at 1 Aug 2014 22:26:38

| Target Re | Reporting | Optimizat | Optimizat | Routing W | Routing L | Task Load | Task Load | Route Sel | Route Ab |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------|
| IYCWEIW1 | IYCWEICM | INACTIVE | DISABLED | 880 | 4 | 0 | 60 | 0 | 0 |
| IYCWEIW2 | IYCWEICM | INACTIVE | DISABLED | 880 | 4 | 0 | 60 | 0 | 0 |

Targets Transactions Attributes

Complete your session

Active transaction groups



Default routing (DEMO) Routing Rule: asd (\$CE73446) Routing Rule: nonwui (\$CE47146)

Transactions

CICSEX52 ▸ DEMO ▸ \$CE47146 ▾

Details

Transaction group status: ACTIVE Acceptable target region load level: 0
Default algorithm: INHERIT Acceptable abend level: 0
Active transaction count: 1 Default affinity relation: NONE
Primary search criterion: LUNAME Default affinity lifetime: NONE
Transaction group: \$CE54154 Automatic affinity creation: N_A
Event name:

Transactions

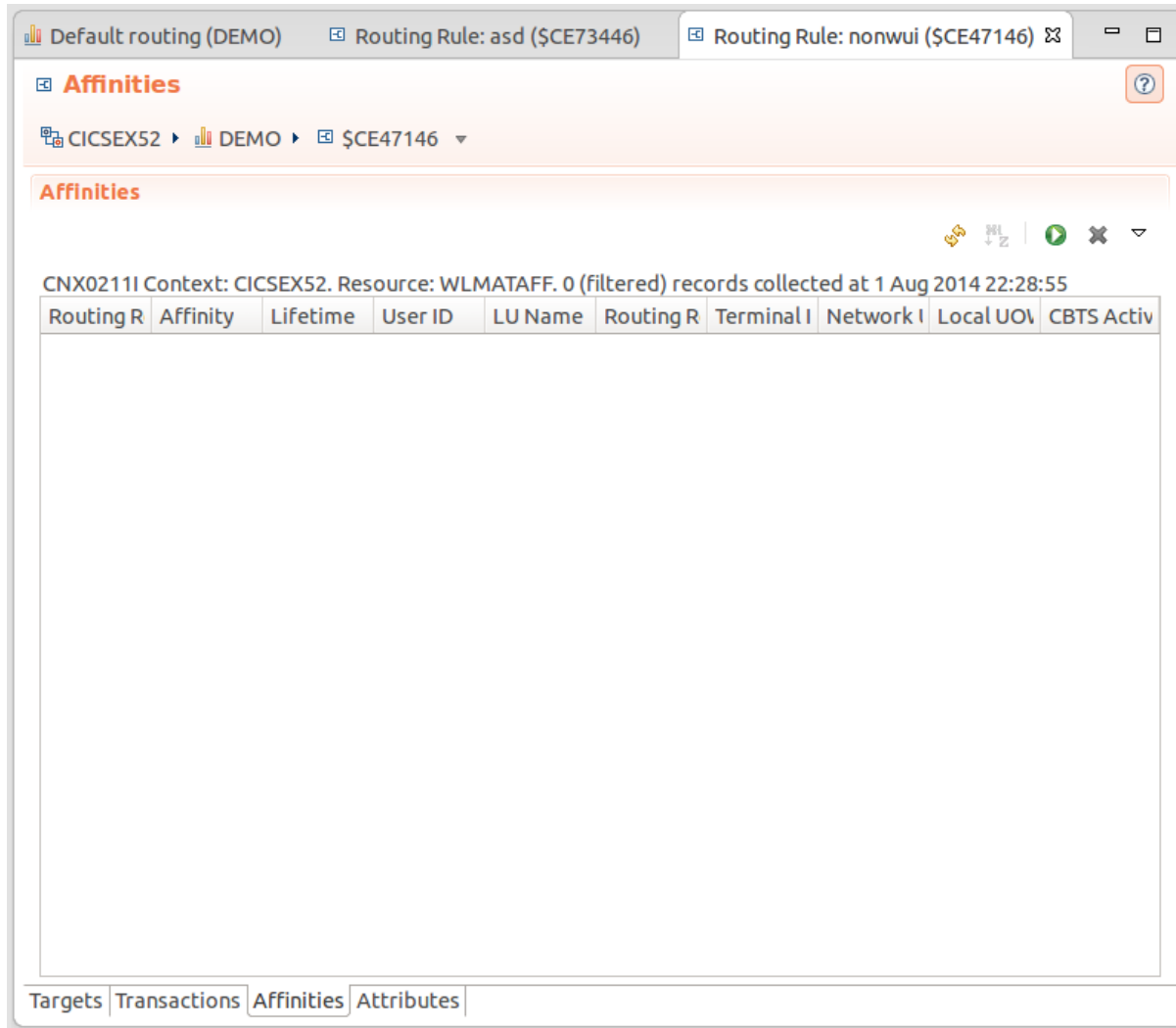
Transaction ID:

CNX0211I Context: CICSEX52. Resource: WLMATRAN. 1 (filtered) records collected at 1 Aug 2014 22:28:55

| Transaction ID | Pseudoconversational Mode |
|----------------|---------------------------|
| COIE | N_A |

Targets Transactions Affinities Attributes

Active affinities



Default routing (DEMO) Routing Rule: asd (\$CE73446) Routing Rule: nonwui (\$CE47146)

Affinities

CICSEX52 > DEMO > \$CE47146

Affinities

CNX0211I Context: CICSEX52. Resource: WLMATAFF. 0 (filtered) records collected at 1 Aug 2014 22:28:55

| Routing R | Affinity | Lifetime | User ID | LU Name | Routing R | Terminal I | Network I | Local UOV | CBTS Activ |
|-----------|----------|----------|---------|---------|-----------|------------|-----------|-----------|------------|
|-----------|----------|----------|---------|---------|-----------|------------|-----------|-----------|------------|

Targets Transactions Affinities Attributes

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