CICS V5:
A new platform for mobile applications

Speaker Name and Title

Session Agenda

- **CICS Portfolio Overview**

- **What is a platform?**
  - The challenge of multiple CICS regions

- **Cloud style capabilities of CICS**

- **Discovery and provisioning with CICS Deployment Assistant**

- **CICS Platforms**

- **PD Tools**

- **What about batch?**

IBM

CICS Transaction Server continues to power the planet

- CICS TS is the world's premier enterprise class transaction processor

- CICS TS enables customers to create and maintain a competitive advantage

- CICS TS continues to deliver innovative and essential new technologies

Large scale business critical workloads, some > 1bn transactions per day

Many of the worlds largest companies run their business on CICS

CICS web services is the most widely adopted CICS feature in recent history

Focus on solving three key customer challenges

- Ongoing operational pressure to drive down costs and improve efficiency

- Increased business pressure to deliver faster and with greater agility

- Ability to manage and exploit the rapidly changing technology landscape

Operation Efficiency:
Controlling cost

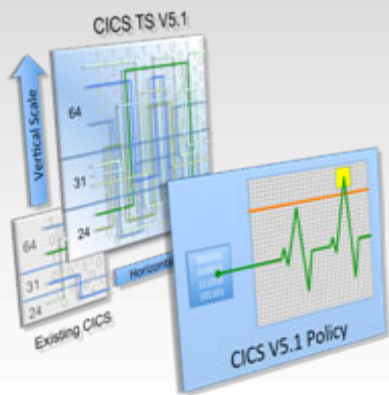*Service Agility:*
Deliver results faster

Cloud Enablement:
A long term investment

The new CICS Transaction Server V5.1 delivers…

100+ requirements satisfied!

Operational Efficiency

- *Greater capacity* - achieve cost savings through consolidation
- *Managed operations* - reduce cost and risk through automation
- *Increased availability* - reduce the need for planned downtime
- *Deeper insight* - improve decision making and audit readiness
- *Modern batch* – manage your batch window
- *Security integration* – reducing the cost and complexity of security
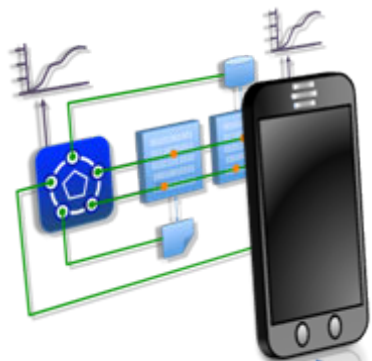
Service Agility

Entitled Feature Packs

- *First-class applications* - create agile services from existing assets
- *First-class platforms* - create agile service delivery platforms
- *Modern interfaces* - build rich web experiences for critical applications
- *Foundational enhancements* - extend core capabilities
- *Mobile extensions* – simplified integration with mobile devices
- *Dynamic Scripting* – enterprise class composite web applications

Over 150 ISV applications supporting CICS V5.1

… with Cloud Enablement

consistent with the IBM Cloud Computing strategy
positions customers for the next transformational era in technology
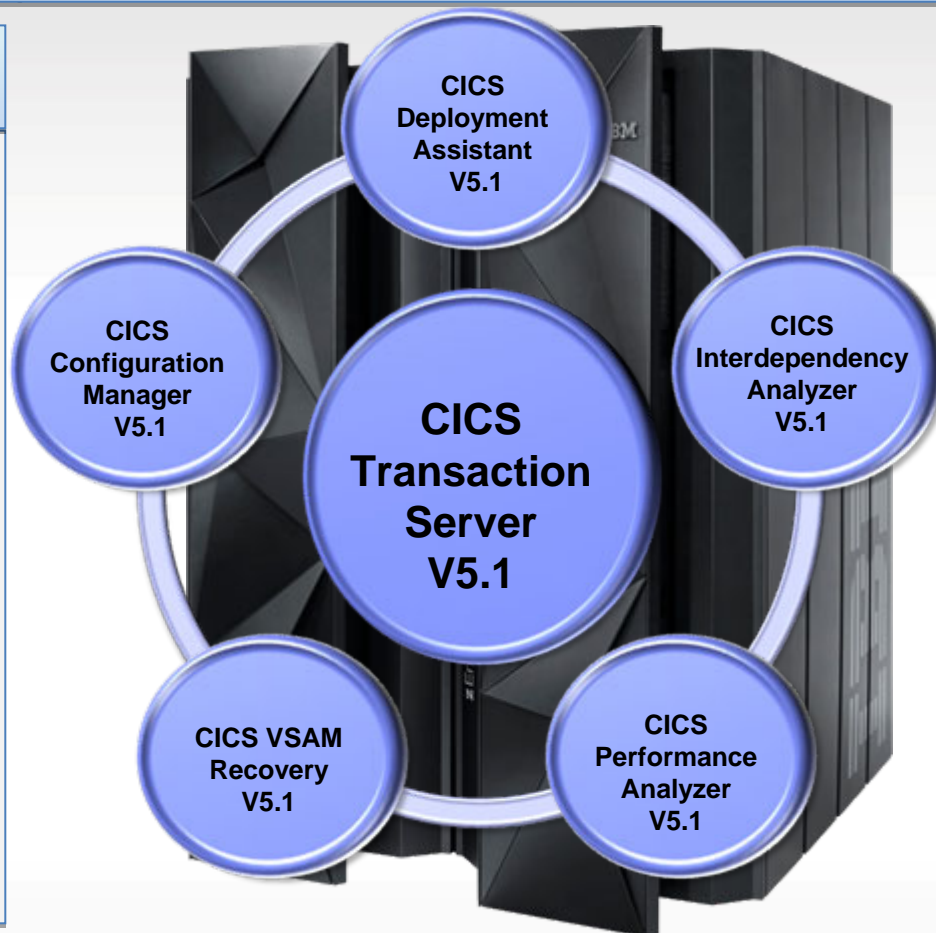moves towards a cloud oriented service delivery platform

Upgrade and integrated core foundational tools suite - Five core CICS Tools – Day one CICS TS V5.1 exploitation

Fully integrated with CICS TS & CICS Explorer

Discovery and visualization aids insight into application and platform dependencies

- Automation speeds service delivery and ensures standardization and governance

- Modern, integrated user interfaces lower skills barrier

- Day-1 exploitation of CICS TS V5.1 new capabilities reduces time to value

- Five core tools support and extend the CICS runtime

CICS Deployment Assistant V5.1

CICS Configuration Manager V5.1

CICS Interdependency Analyzer V5.1

CICS Transaction Server V5.1

CICS VSAM Recovery V5.1

CICS Performance Analyzer V5.1

Once upon a time life was simple

| CICS Region |
| Applications |

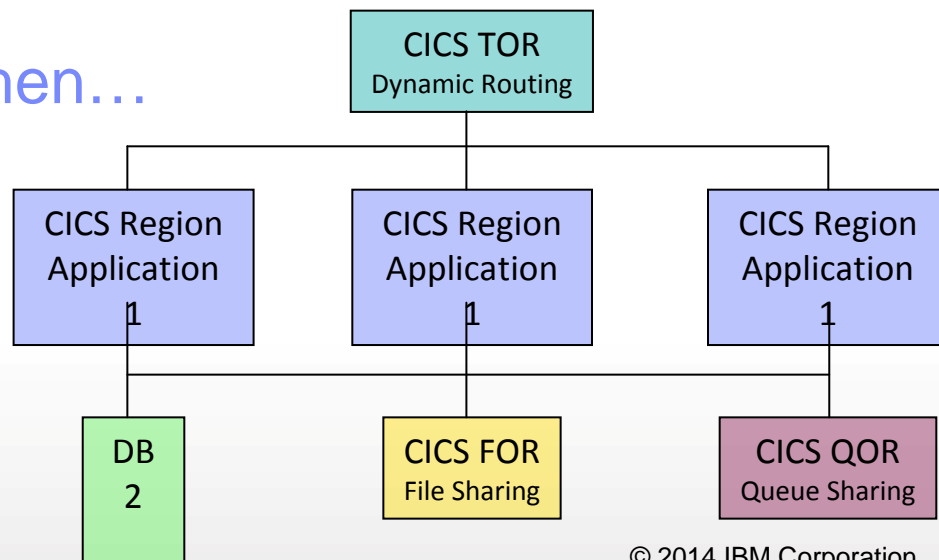## Then we had to split regions due to Virtual Storage Constraint

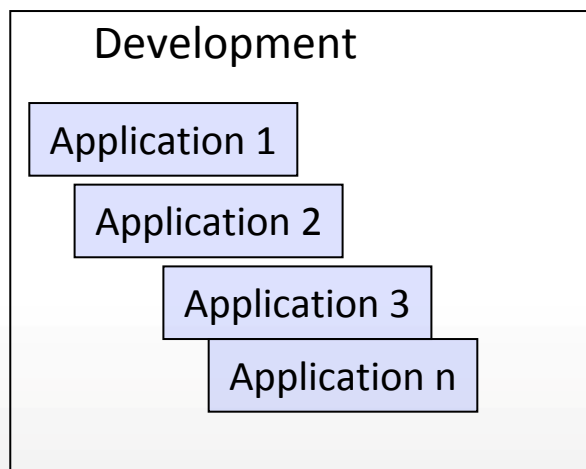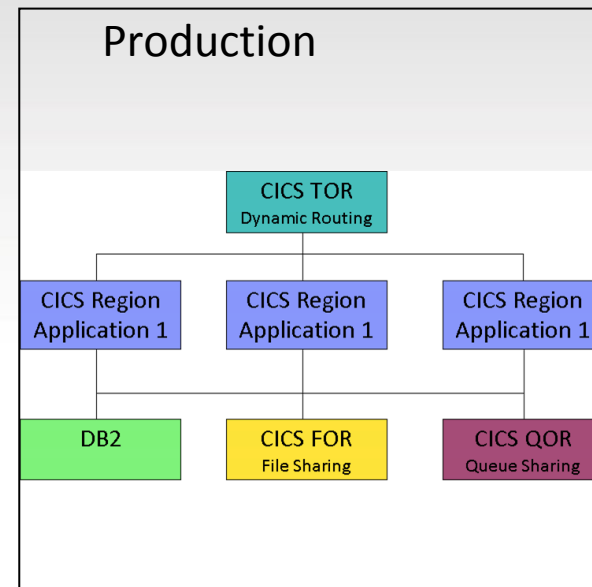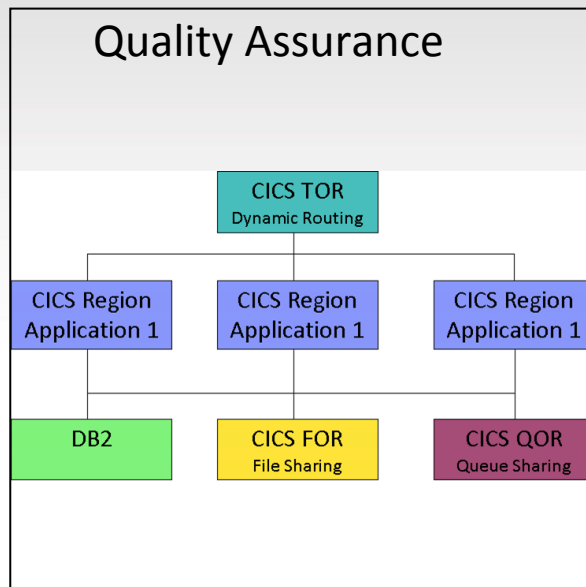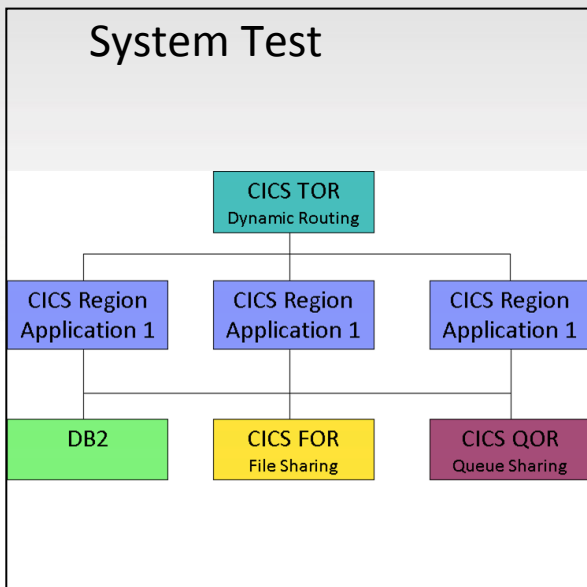| CICS Region Application 1 | CICS Region Application 2 | CICS Region Application 3 |

Then applications required higher availability

And then…
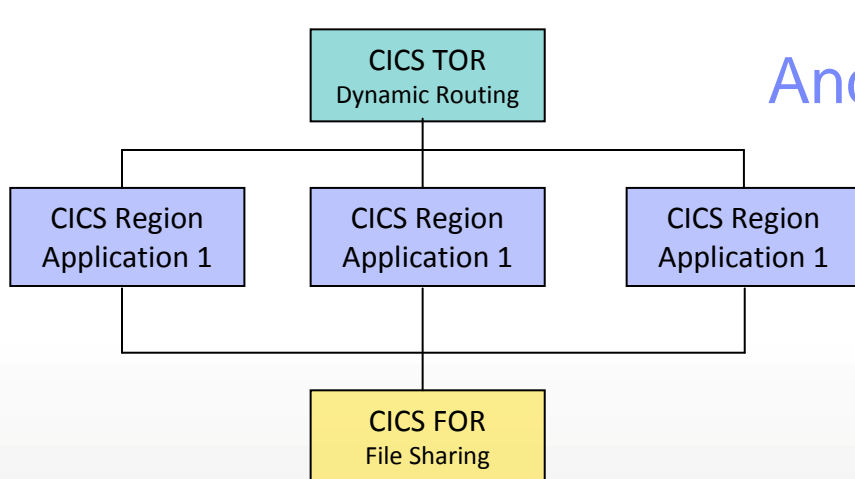
© 2014 IBM Corporation

And we added even more regions

And then along came Cloud…

CICS TS and System z provide cloud style benefits

How do we make CICS applications and management more agile?

*"How can I deploy **applications** in CICS more easily?"*

Broad Network Access

CICS put SOA at its core, delivering greater integration and connectivity across the enterprise

Resource Pooling

CICS is a first-class resource manager built to efficiently manage system and application resources

*"How can I better manage my CICS **platform**?"*

Measured Service
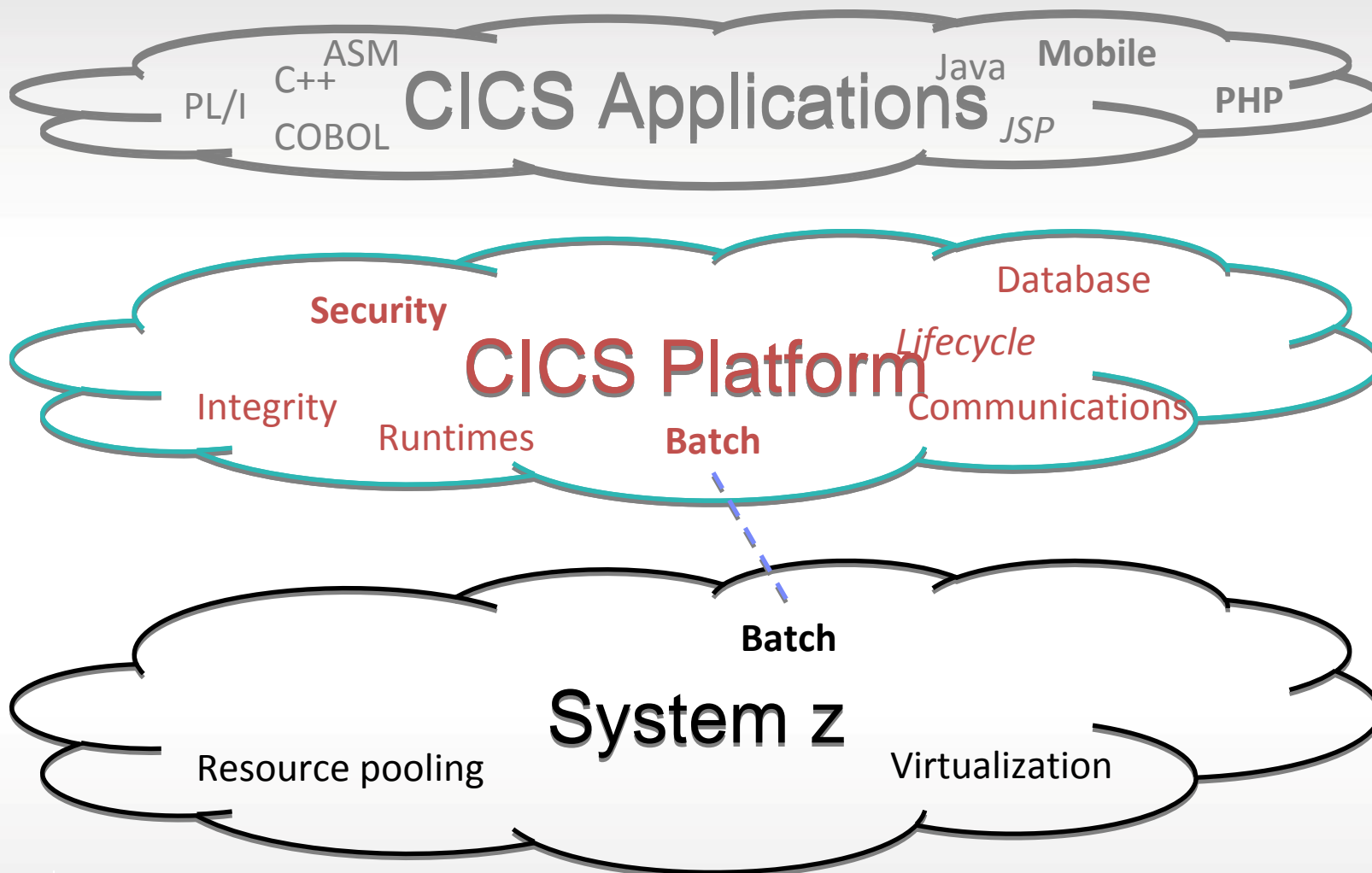
CICS has extensive monitoring and statistics to enable customers to understand the cost of their applications running in CICS

On-demand Self Service

CICS Explorer and the collection of portfolio tools enable a greater degree of automation

Rapid Elasticity

CICS WLM, combined with z/OS, enables CICS to rapidly respond to fluctuating workload demands

System z and z/OS

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CICS – A middleware platform, with cloud characteristics

- **Cloud service models**

CICS Applications
ASM
C++
PL/I
COBOL
Java
Mobile
JSP
PHP

CICS Platform
Security
Database
Lifecycle
Integrity
Communications
Runtimes
Batch

System z
Batch
Resource pooling
Virtualization

We want simplicity again, but now there's more to worry about!

Insurance Platform

Car Insurance Application	Life Insurance Application	Health Insurance Application	Mobile Insurance Application

CICS before Platform as a Service…
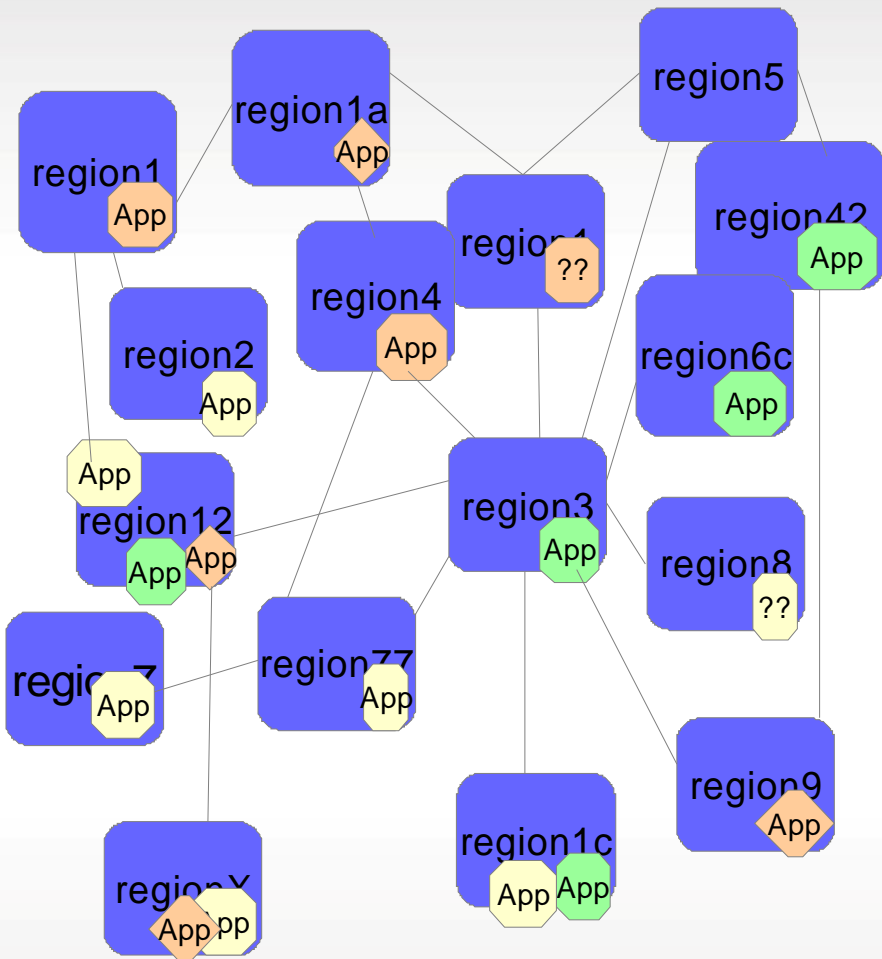
before...

CICS after Platform as a Service…

before...
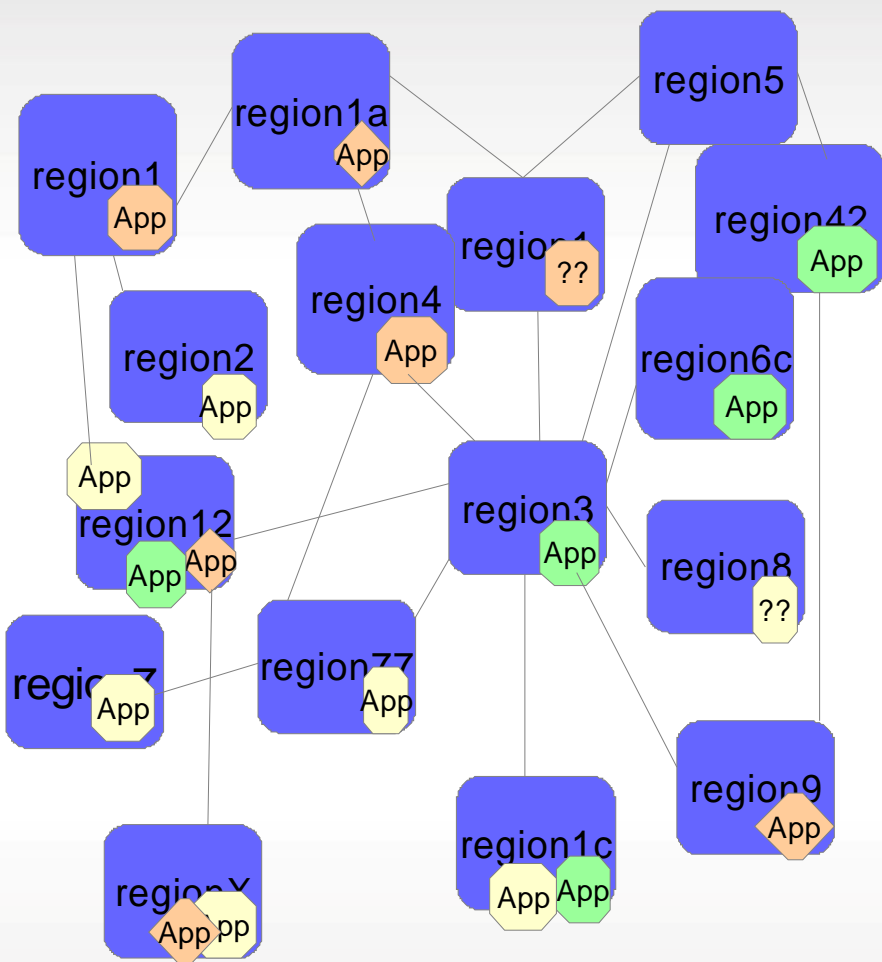
... after

CICS Applications

- CoreBanking
- Transfers
- Dividends

CICS Platform

InboundWebGateway:
- region1, region2, region3
- CoreAOR
  - region1a, region1c, region 6c, region 5
- TransfersAOR
  - region77, region42, region7
- DataAccess
  - region1c, region6c

CICS Platform as a Service

- ## What is a CICS Platform?

  - A grouping of selected CICSPlex SM managed regions
    - Consists of different region types
      - e.g. TOR, AOR, FOR
    - Deploy, manage and control the platform as a single entity
      - CPSM System Group (CSYSGRP) used to represent a single region type

- ## What is a CICS Region Type?

  - A grouping of like regions where an application can be deployed
    - Part of the Platform Definition

CICS Platform as a Service

- **An example of a CICSPlex and a Platform**

PRODPLEX

Platform: Production.Insurance

consists of Region Types

TORS
AORS
FORS

Production.Insurance

| TORS |
| TOR1 | TOR2 |

| AOR1 | AOR2 | AORS |
| AOR3 | AOR4 |

| FORS |
| FOR1 | FOR2 |
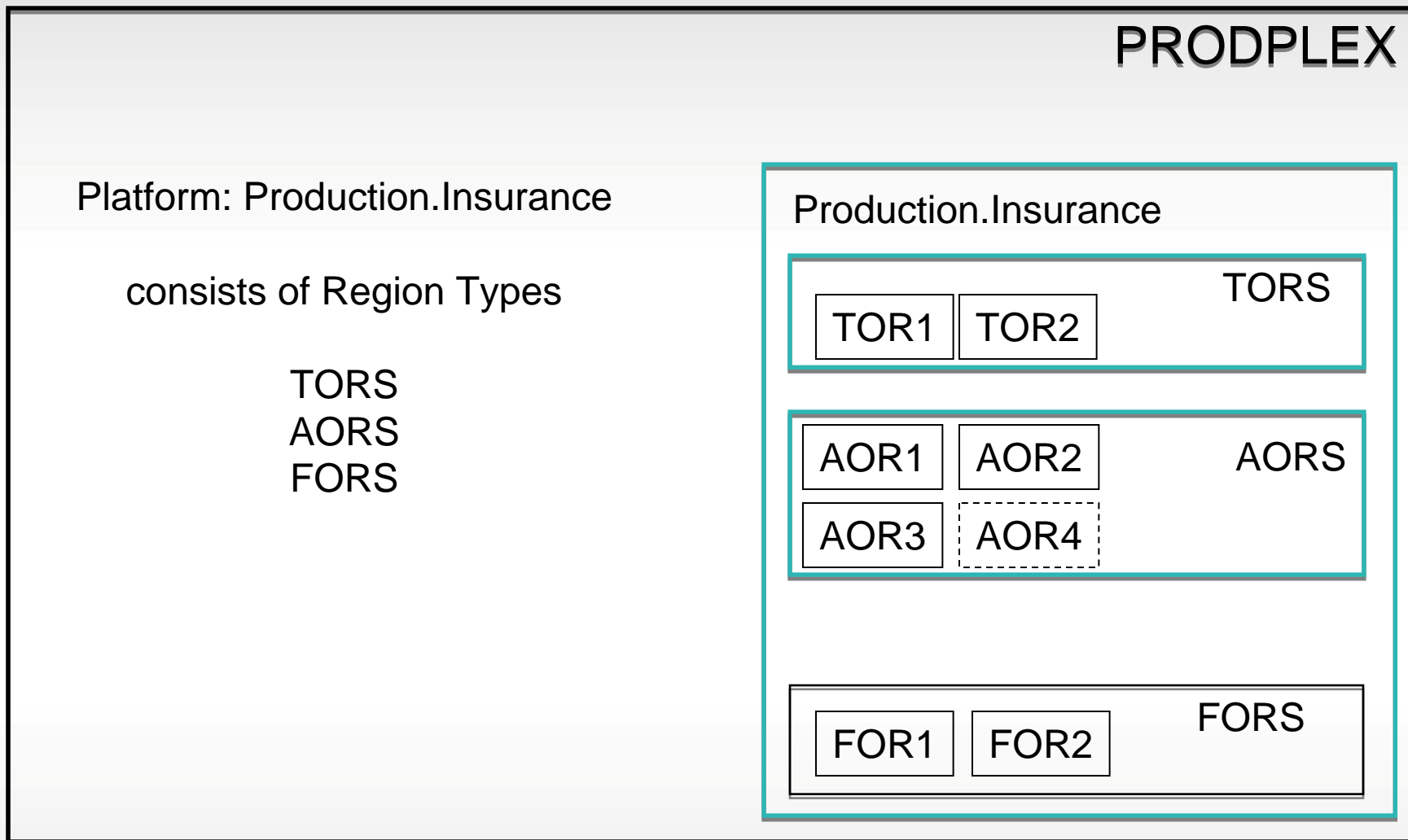
What is running on your System z ?
Who knows how to obtain this information?

- **Skills**
  - Who knows what the current system topology looks like?
    - Who has the skills to discover the current topology?
    - Where is the knowledge?

- **Efficiently obtaining topology information**
  - Reporting

- **Time to value and Return on your investment**
  - Discovery

- **Where are your investments?**
  - What address spaces are executing in your Sysplex?
    - What are all these address spaces?
    - What could be affecting your MLC?
  - Which MVS images are my CICS assets executing within?
  - What is connected to what?

CICS Deployment Assistant for z/OS

What is it?

- A tool to help provision the CICS Environment, providing discovery and visualization features that provide insight into the overall CICS Eco-system.

What's its value?

- Topology Visualization

- Simplify tasks, save time, and reduce risk

- Automate many complex provisioning activities

- Significantly reduce the time required to validate CICS topology

How does it enhance the management of CICS?

- Discovery and modelling of CICS systems and applications

- Deployment perspective integrates with CICS Explorer advanced topology visualization

- Automated creation, deployment, customization, and control of CICS regions

- Edit files, submit JCL, view output

- Simplify tasks, save time, and reduce risk

Why is this tool important?

- Improved speed to market

- Reduced chance of failure

- Controlled, governed deployment

- Optimize hardware resources

- Plan for mergers and acquisitions

- Help with understanding applications

- Reduce ongoing life cycle costs for managing new CICS systems

CICS PROVISIONING

Why use CICS DA ?

Discovery

- **Discover your Sysplex and CICS assets**

- **Visualize the assets graphically as well as their interconnections**

  - truly understand your CICS topology

  - understand which sub-systems are running where, and how they are interconnected

- **Discovery data exporting for reporting**

  - make informed decisions involving your CICS environment

- **Web-style tagging of discovered entities**

  - Customize how you view your environment

Deployment

- **Clone CICS regions**

  - automated facility for cloning regions

  - quicker and less risk than manual activity

- **Plexify an unmanaged CICS region**

  - automated facility to add regions to CICSPlex SM

- **Create a CPSM environment**

  - use Models and cheat sheets

- **Create a new CICS region**

  - provides standard method for creating new regions

CICS Deployment Assistant V5.1…
Discovery

Tree View
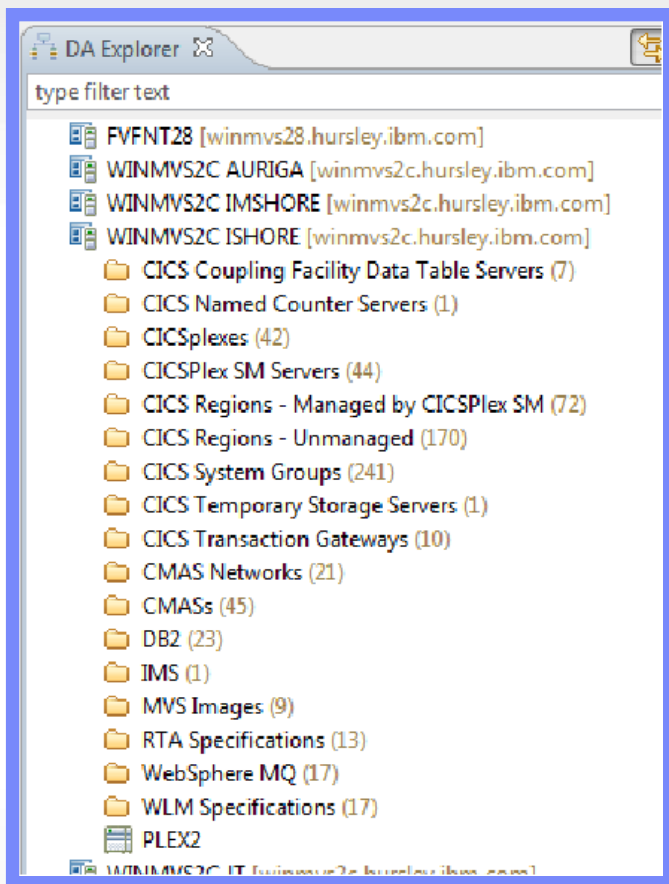
Graphical Visualization
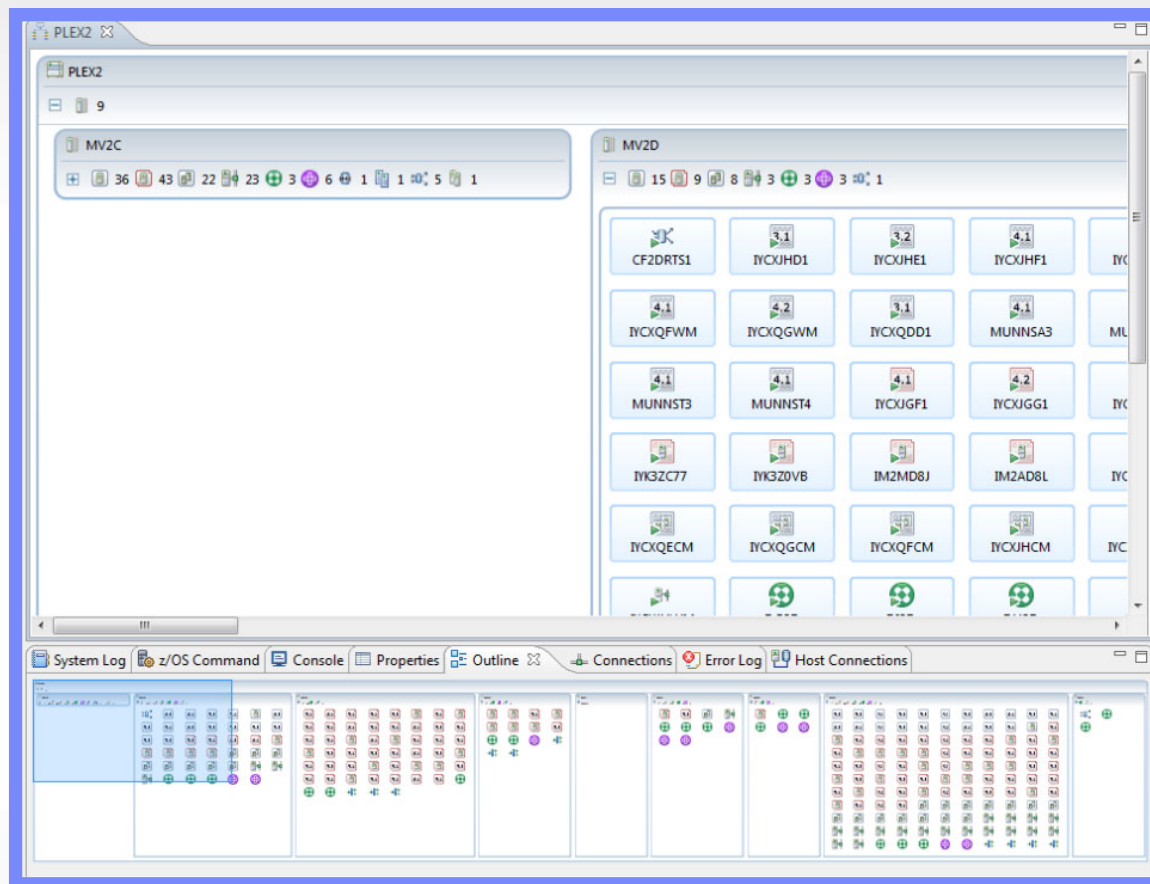
CICS Deployment Assistant V5.1…
Discovery

Scoped connections view
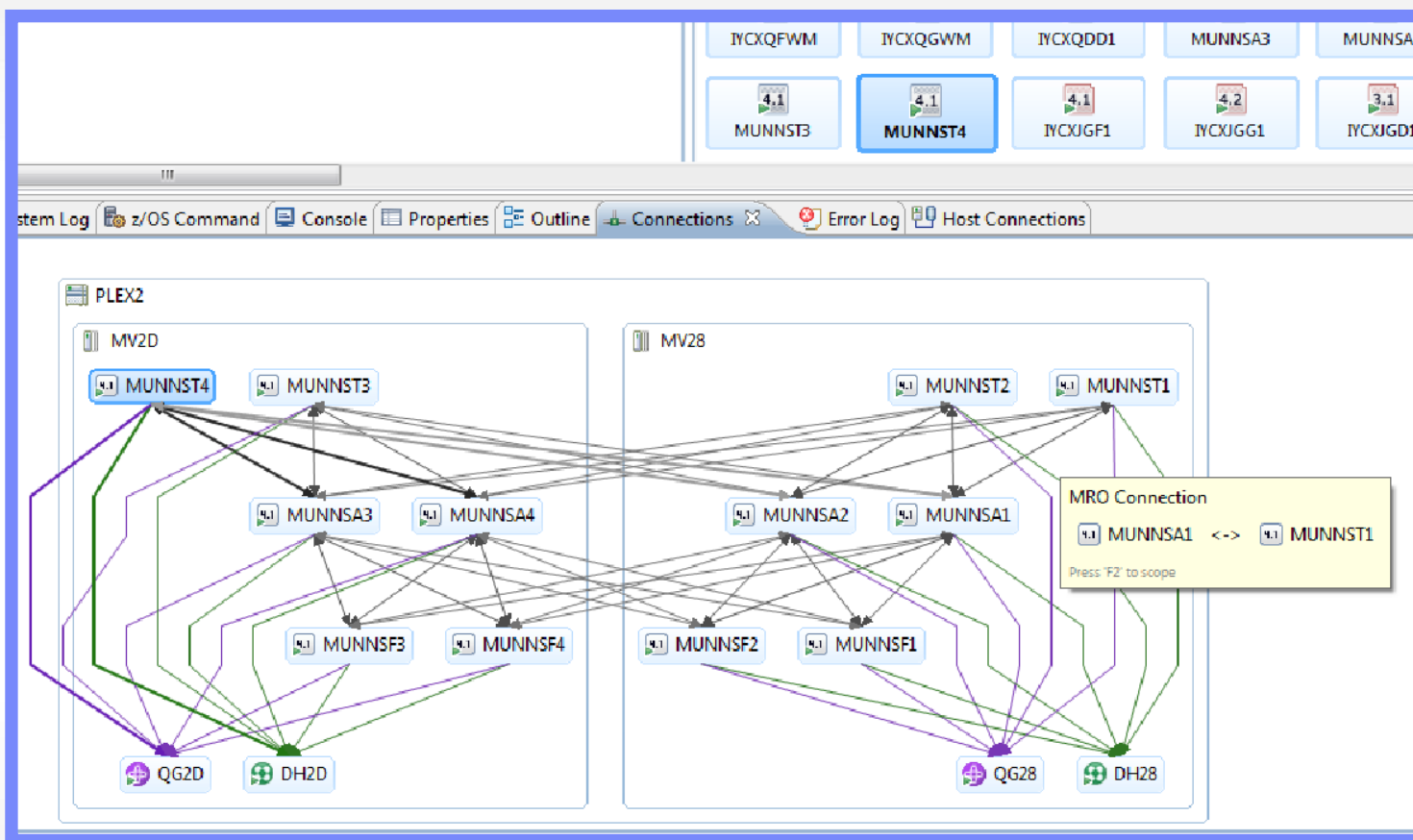
CICS Deployment Assistant V5.1…
Editors and Tagging

- **Editors**
  - Provides base level of information about discovered entities
    - Shows
    - Start/Stop policies
    - Tags
    - Job name
    - User ID
    - Connections
    - MVS Image

- **Tagging**
  - Manual Web2.0 style tagging on discovered entities
    - Aids reporting and visualization filtering

CICS Deployment Assistant V5.1…
"Managed CICS Region" Editor
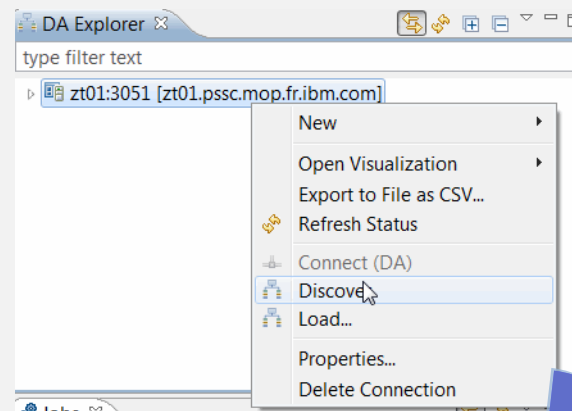
DA - Clone a managed region

IBM

DA - Plexify your unmanaged regions

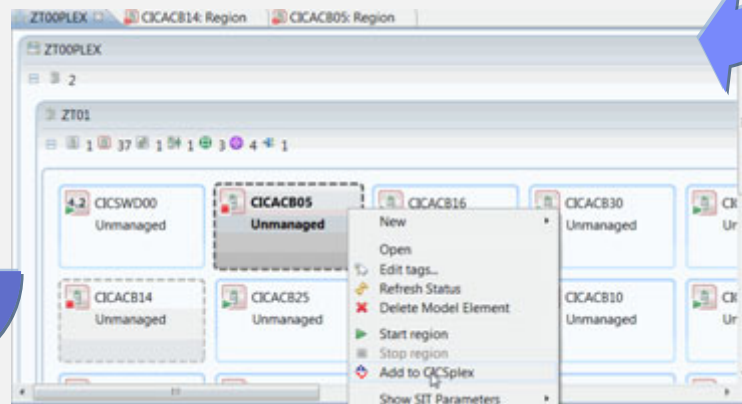### *Benefits*

- 3 steps to a managed region
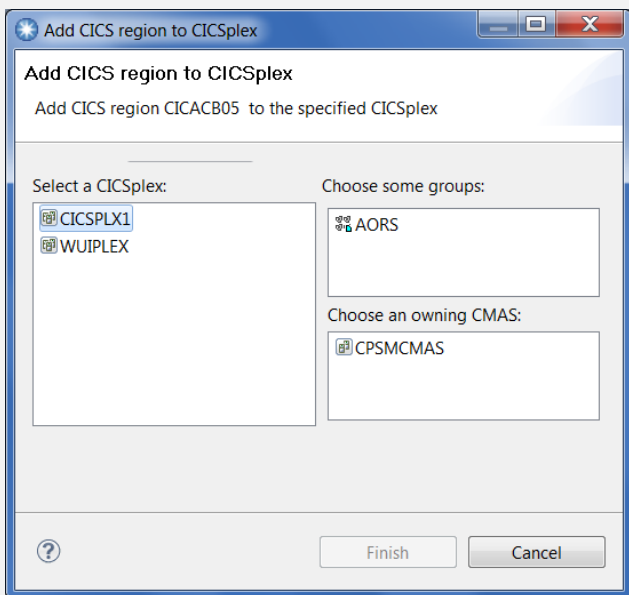
- Manage your region from the CICS SM Explorer perspective

Discover

DA Explorer

type filter text

▷ zt01:3051 [zt01.pssc.mop.fr.ibm.com]

New
Open Visualization
Export to File as CSV...
Refresh Status
Connect (DA)
Discover
Load...
Properties...
Delete Connection

Visualize

Unmanaged regions

Manage

Add CICS region to CICSplex

Add CICS region to CICSplex

Add CICS region CICACB05 to the specified CICSplex

Select a CICSplex:
- CICSPLX1
- WUIPLEX

Choose some groups:
- AORS

Choose an owning CMAS:
- CPSMCMAS

Finish   Cancel

CICS Deployment Assistant V5.1
Reporting from the DA model
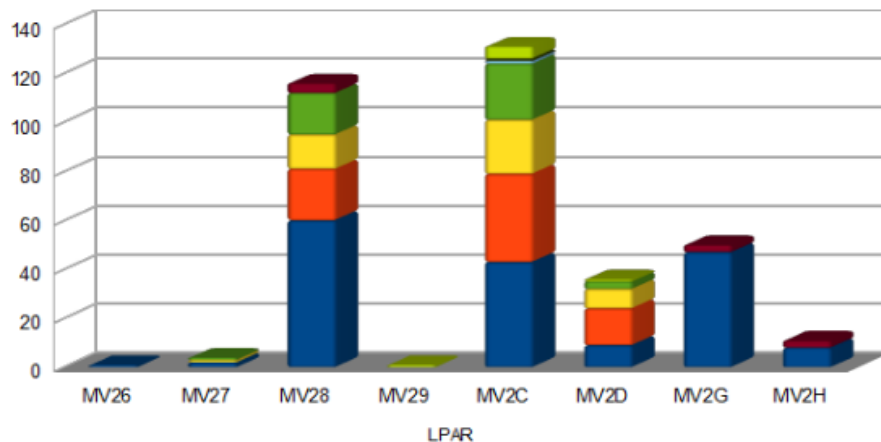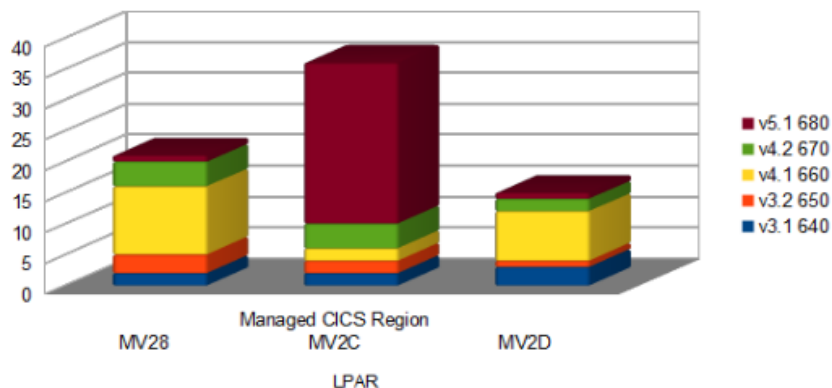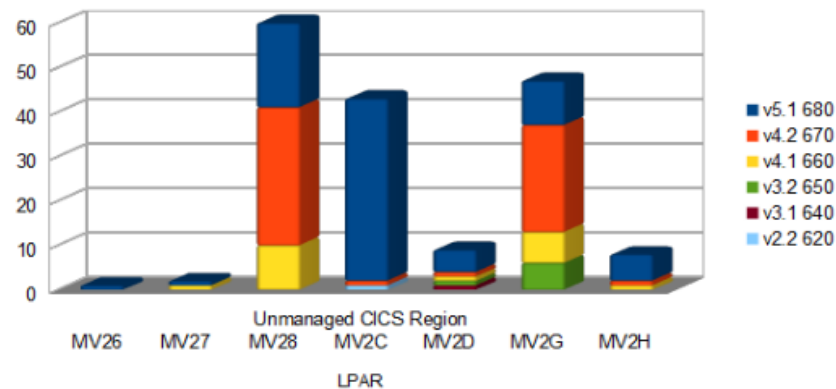
CICS Deployment Assistant V5.1

What's new in CICS DA V5.1…	*CICS DA enables you to…*

What's new in CICS DA V5.1…

- Enriched discovery of over 30 entities
- Improved visualization with tagging and filtering
- Connections view with scoping
- Export model for external reporting
- CICS TS V5.1 upgrade cheat sheet
- Tagging and filtering of model elements
- New navigators
- Clone JCL improvements
- IPv6 support
- Virtual IP addressing support
- Serviceability enhancements

CICS DA enables you to…

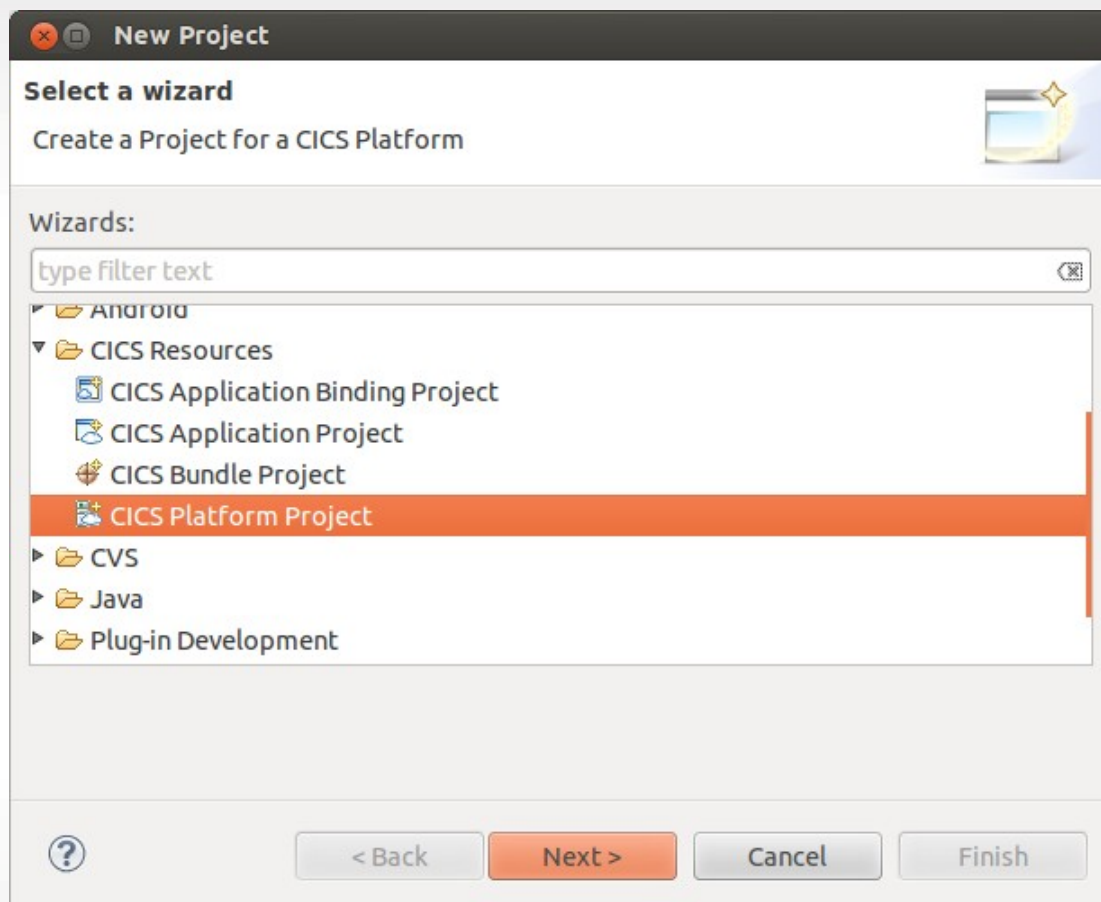- Visualize and manage your CICS topology
- Discover existing regions and sub-systems
- Automation creates new CICSplex
- Plexify and clone CICS regions
- Start and stop a CICS region
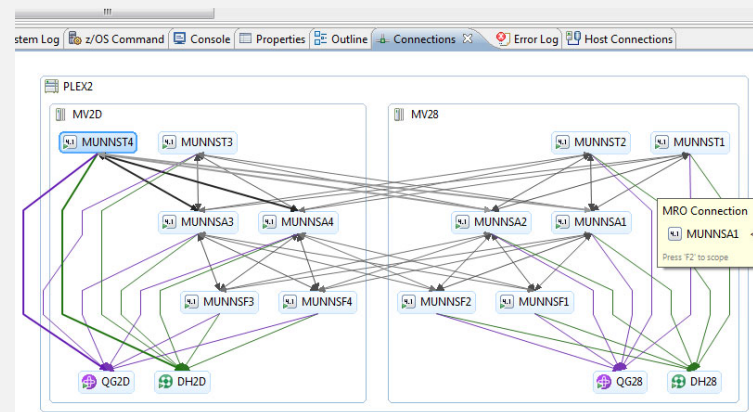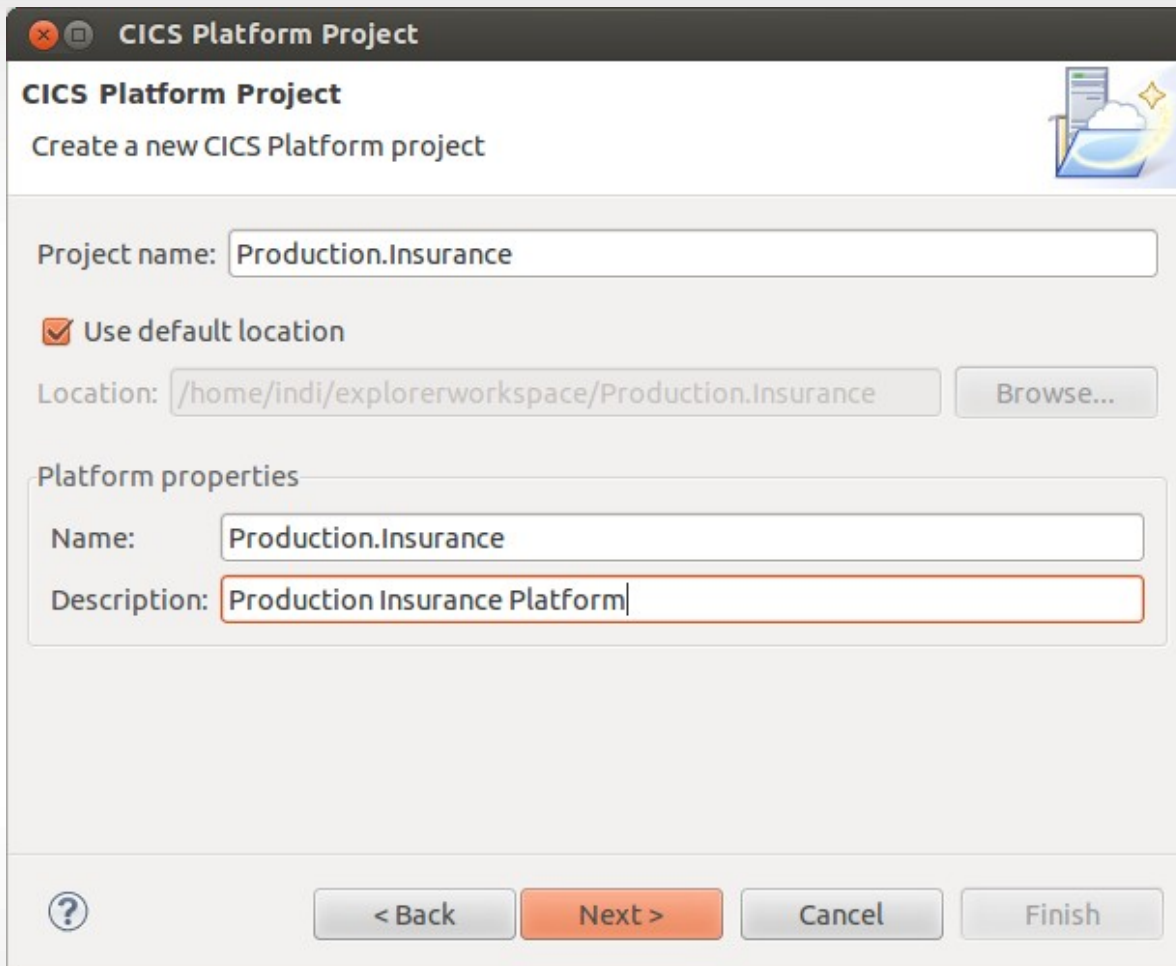
Define the Platform from the bottom up

- **Create a new Platform Project**

Define the Platform…

- **Name the Platform Bundle Project**

Define the Platform…

- **Specify the Region Types included in this Platform**

Define the Platform…

- **Export the Platform Project to zFS**
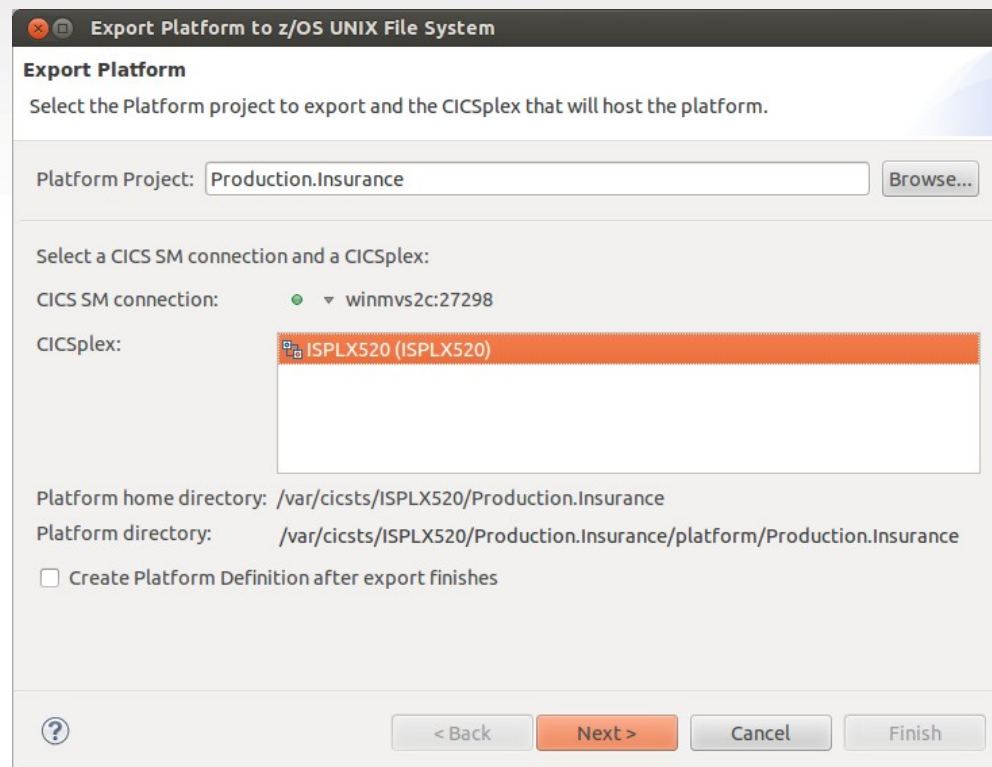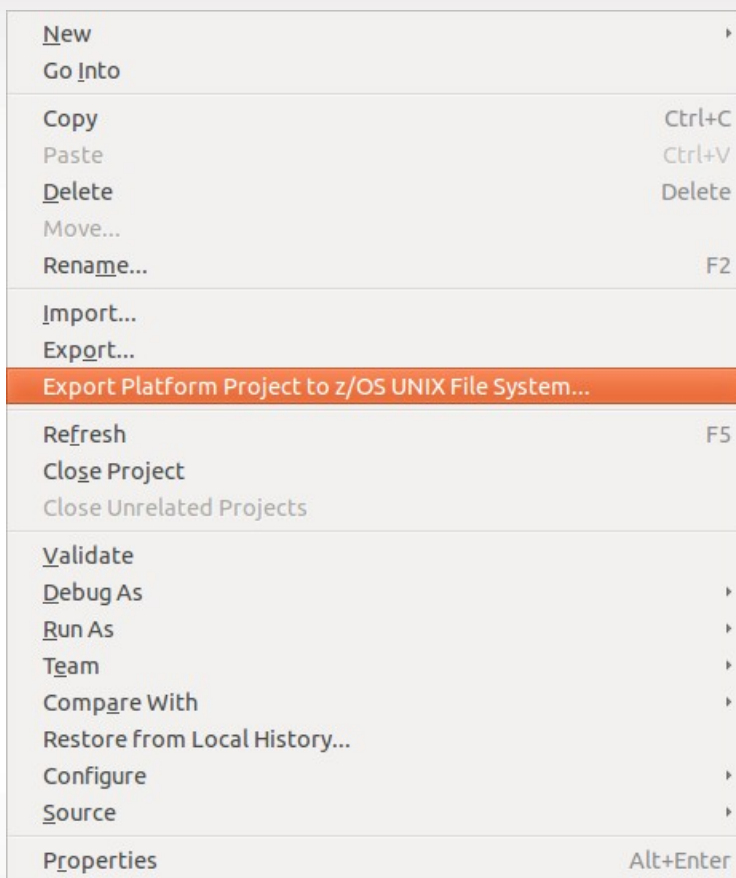
Define the Platform…

- **Create and install the Platform Project**

Define the Platform…

- **View the Platform in the Cloud Explorer**
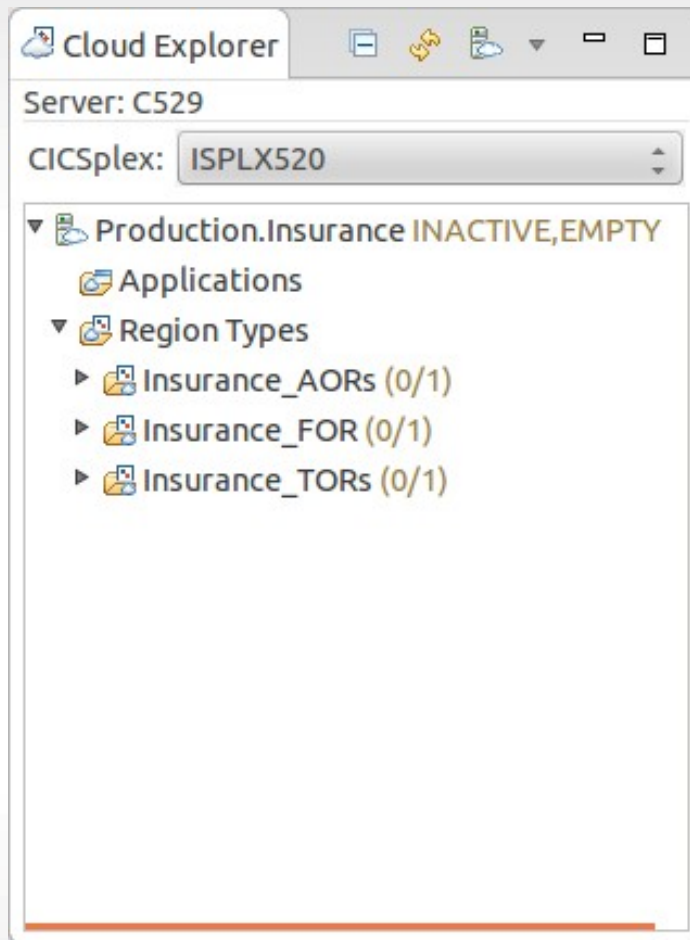
What happens when System z applications experience "health issues"?

- **What types of issues could arise?**
  - Exceptions / Abends
    - Are they data related issues?
    - Could they be logic related issues
  - Response Time / Application Performance
    - Is the issue in System, Data Management, or Application Modules ?
    - Is there a coding issue in the application?

- **Is there a "value" assessed to downtime on your applications?**
  - Currency –
  - Slow Response Time to a customer Query

- **How do you resolve / find the problems?**
  - What was running in the address space?
    - How did the application get invoked?
    - What statement experienced the problem?
    - What was the value of the data items in the statement that had a problem?
  - What resources are being consumed?

Fault Analyzer for z/OS

What is it?

- A robust problem determination tool that helps you discover why applications fail.

What's its value?

- Does not require application recompile
- Significantly reduce the time required to identify / resolve CICS application failures
- Matches exception / abend to source statement

How does it enhance the CICS environment?

- Captures channel and container to assist in resolving CICS Web-services applications
- Detects storage violations
- Knowledgably about duplicate dumps in CICS regions
- Formatted Trace Table analysis
- Simplify tasks, save time, and reduce risk

Why is this tool important?

- All inclusive Language support
- All inclusive Environment support
- Messages and Code Explanations
- Detailed reports on program failure
- Help with understanding application failure
- Reduce the amount of time to resolve an application exception

Problem Determination
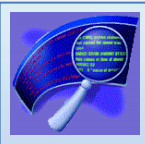
Fault Analyzer for z/OS V13.1

What's new in Fault Analyzer V13.1…

- Information about concurrently running CICS

  - CICS Tasks

  - CICS Task Storage Allocations

- Optionally exclude CICS Trace entries

- Transaction abend analysis on CICS OPEN TCB's

- Support of CICS/TS V5.1

- Same look and feel between Web and Eclipse interfaces

Fault Analyzer enables you to…

- Support for Transaction and System Abends
- Automatic formatting of CICS Control Blocks
- Mapping to Application Source Code
- CICSPlex Support
- Integrated into the CICS Explorer

Figure 4: Fault Analyzer GUI Plug-in with CICS Explorer
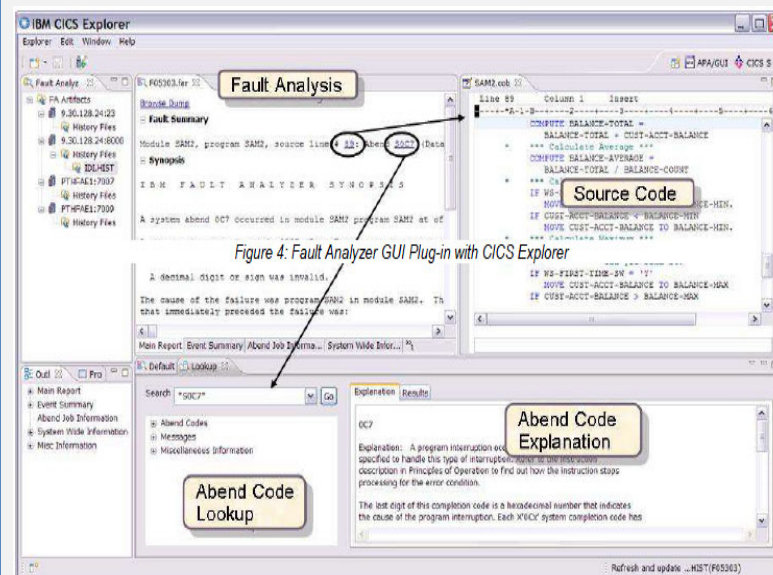
Application Performance Analyzer for z/OS

What is it?

- A application performance measurement tool designed to appeal to a wide audience.

What's its value?

- Does not require application recompile

- Significantly reduce the time required to identify CICS application resource consumption

- Benchmark comparisons to quickly locate variations in measurements

- Pro-active and Re-active analysis – integration with IBM Omegamon-type products

How does it enhance the CICS environment?

- Allows measurements of multiple CICS Address Spaces

- Measurement can be "triggered" – i.e. Batch starting a CICS Transaction

- Multiple levels of CICS measurements – general, timing statistics, counts, etc.

Why is this tool important?

- All inclusive Language support

- All inclusive Environment support

- Set invocation Thresholds

- Detailed reports with drill down from high-level all the way to program source code

- No application impact in any environment – runs as fast / slow as the system allows

- Reduce the amount of time to identify application resource consumption

Problem Determination
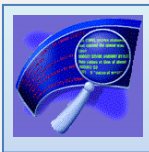
Application Performance Analyzer for z/OS V13.1

What's new in Application Performance Analyzer V13.1…

- Filtering criteria for CICS information
    - CICS Timing Statistics
    - CICS Detailed Counts
- Identification of Remote file in DASD reports
- Websphere reports identify CICS distributed program link calls
- Support of CICS/TS V5.1

Application Performance Analyzer enables you to…

- Monitor CICS Region(s), named Transactions, up to 16 Transaction Groups , or Terminal IDs
- Separate and Integrated reports for CICS and other sub-system activity (DB2, IMS, Adabas, MQ, etc)
- Mapping to Application Source Code
- Integrated into the CICS Explorer
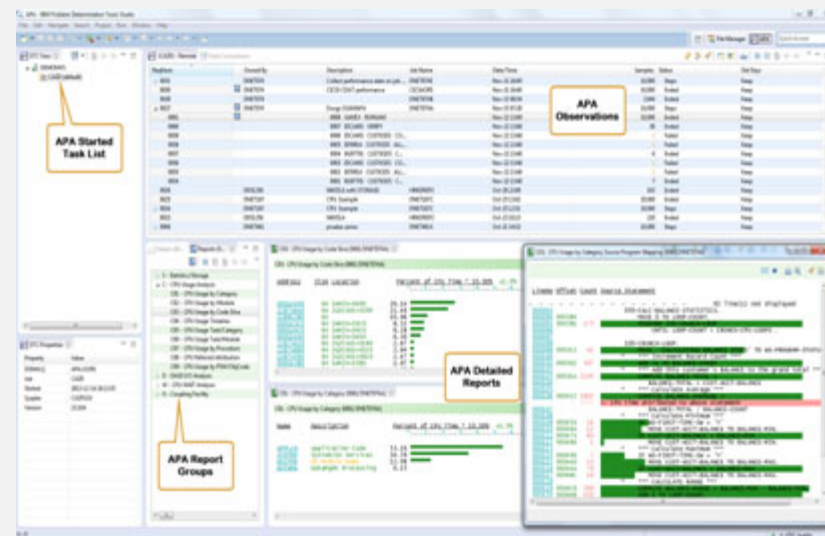
Summary

- **The challenge of multiple CICS regions**
  - Life started out simple and became more complex

- **CICS – A middleware platform, with cloud characteristics**
  - Create platforms from the bottom up to manage existing topologies
  - Create platforms from the top down for new platform deployments

- **CICS Platforms and Deployment Assistant**
  - Life is becoming simple again

Try it now
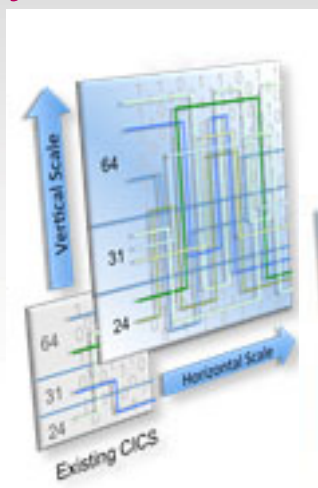
CICS Transaction Server V5.2 Open Beta

New features available!

Delivers more dynamic, flexible CICS application deployment.

Faster and more reliable CICS platform deployment.

Policy-based management of CICS applications and platforms.

Better vertical and horizontal scaling

64-bit addressing, thread safe, and higher maximum CICS tasks.

More exploitation of industry standards,

XML, Java, and TCP/IP.

Includes more core transaction processing capability

email notifications, identity propagation, API, and enhanced events.

Provides more comprehensive monitoring and statistics to improve operational metrics.

CICS TS V5.2 Open Beta Available now!

CICS Resources

Find out more

Register for Impact 2014 today
-30 CICS related sessions
- 2 Labs
-Meet CICS Technical specialists
-Hear about the latest CICS V5 Portfolio release
-http://www-01.ibm.com/software/websphere/events/impact/registration.html

CICS Smart Seminars

Arrange a customized CICS agenda at your location and hear about the CICS

topics you want to hear about. Contact your local IBM representative or send an

Email to cicssem@uk.ibm.com

CICS Developer Trial

CICS Developer Trial V5.1

Operational Efficiency and Service Agility with Cloud Enablement

- • V5.2 Available in 2014
- • No charge trial, fixed expiry date
- • Does not start SVC period
- • For non-production environments
- • Available through IBM ShopzSeries
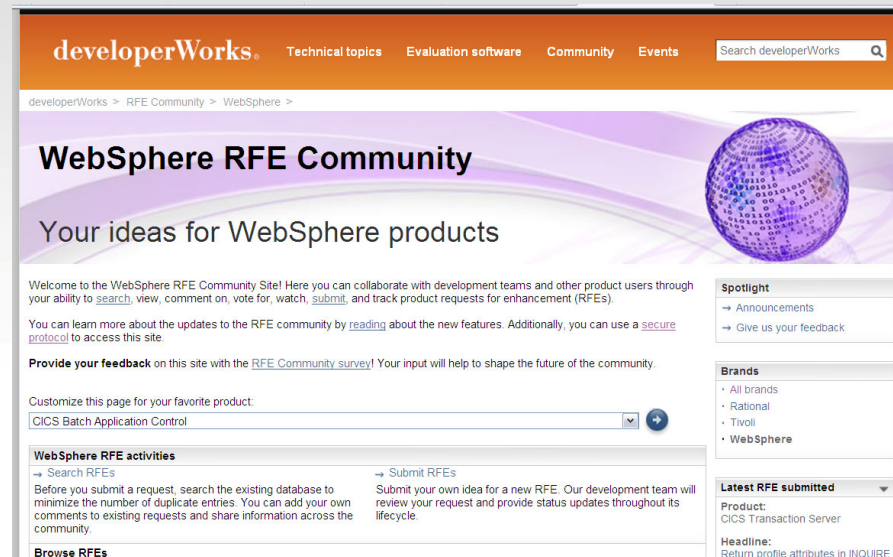- • PID 5655-Y30

Based on CICS TS V5.1

- (with restrictions)

- • Performance
- • Capacity
- • License

http://www-03.ibm.com/software/products/en/cics-ts-devtrial

Raising new requirements with RFE

- **You can now raise and track requirements using the new IBM RFE system for**

  - CICS Transaction Server

  - CICS Explorer

  - TXSeries

  - WXTR

  - IBM CICS Tools

  - CICS Transaction Gateway

  - PD Tools

- **All previous FITS requirements have been processed, and either be transferred to RFE or closed and returned**

- **All brands https://www.ibm.com/developerworks/rfe/ - select Brand: WebSphere**

- **WebSphere only https://www.ibm.com/developerworks/rfe/?BRAND_ID=181**

- **Select Product Family: Transaction Processing - for CICS Transaction Server, TXSeries, and WXTR**

- **Select Product Family: Enterprise Tooling - for the CICS Tools, CICS Transaction Gateway, and PD Tools**

- **Raise CICS Explorer base requirements against the Explorer component of CICS TS.**

- **Raise plug-in requirements against the Explorer component of related product.**

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f facebook.com/IBMCICS

twitter.com/IBM_CICS

You Tube youtube.com/cicsfluff

You Tube youtube.com/cicsexplorer

twitter.com/IBM_System_z

dW CICS Explorer Forum
ibm.com/developerworks/forums/forum.jspa?forumID=1475&start=0

CICS-L list Forum
listserv.uga.edu/archives/cics-l.html

www.ibm.com/cics

Key documents

- **Analyst papers**

  - Lustratus Research - New project platform section for CICS Users
    ftp://public.dhe.ibm.com/software/htp/cics/pdf/Lustratus_Research_Paper_New_project_platform_selection_for_CICS_users.pdf

  - Branham Group: IBM CICS Tools: Unrealized Productivity Gains and True Cost Savings
    ftp://public.dhe.ibm.com/software/htp/cics/tools/IBM_CICS_Tools_Whitepaper_2009.pdf

  - Software Strategies: IBM z/OS Problem Determination Tool Suite Leads Again
    https://www14.software.ibm.com/webapp/iwm/web/preLogin.do?lang=en_US&source=swg-rszswg

- **IBM Redbooks**

  - [CICS Transaction Server from Start to Finish](#), SG24-7952-00

  - [Implementing IBM CICS JSON Web Services for Mobile Applications, SG24-8161-00](#)

  - [Smarter Banking with CICS Transaction Server](#), SG24-7815-00

  - [Implementing Event Processing with CICS](#), SG24-7792

  - [CICS and SOA: Architecture and Integration,](#) SG24-5466-06

  - [Implementation of Popular Business Solutions with CICS Tools](#), REDP-4824-00

  - [Threadsafe considerations for CICS](#), SG24-6351-04

  - [Architects guide to CICS on System z](#), SG24-8067-00

  - [IBM CICS and the JVM server: Developing and Deploying Java Applications](#), SG24-8038

Next Session

§ CICS V5 *Applications agility*

- **Application Packaging**
  - Bundles
  - Application Projects

- **Application Deployment**
  - Bindings
  - Appdef

- **Modernization and the Liberty web container**