An introduction to…

…CICS Tools

Updated: Thursday, 15 November 2012

Preface

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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…

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*

100+ requirements satisfied!

Service Agility

- *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

… *with Cloud Enablement*

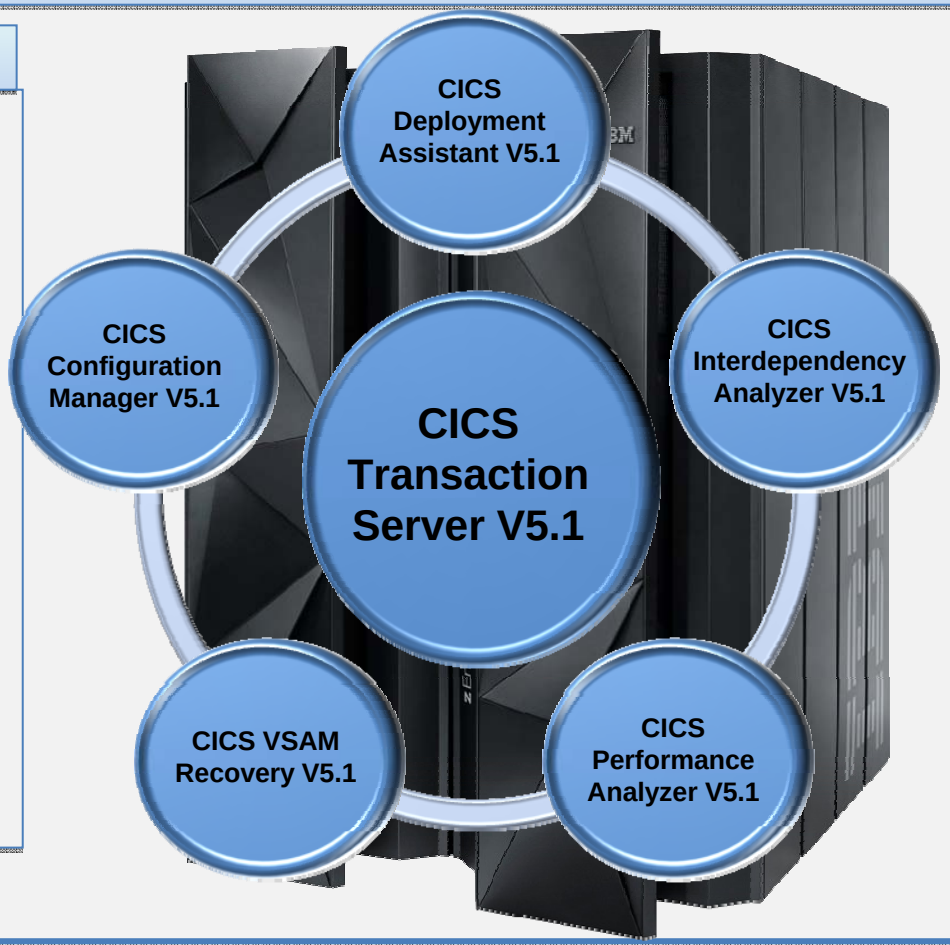
consistent with the IBM Cloud Computing strategy
positions customers for the next transformational era in technology
moves towards a cloud oriented service delivery platform

CICS Tools enhance Operation Efficiency & Service Agility

Five core foundational CICS Tools – updated to exploit CICS TS V5.1

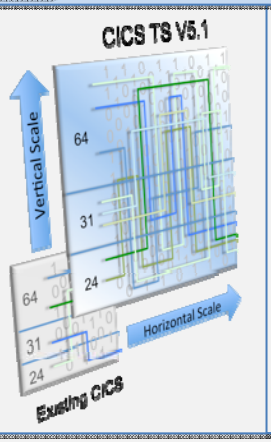
Fully integrated with CICS TS & CICS Explorer

- **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**



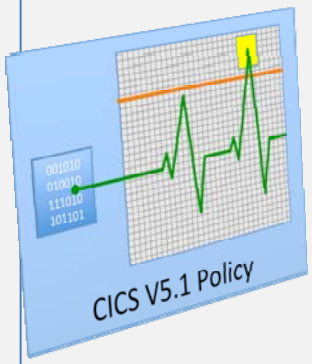
CICS Tools V5.1 - Driving Operational Efficiency

Greater Capacity



Maximize CPU savings with threadsafe analysis

Managed Operations

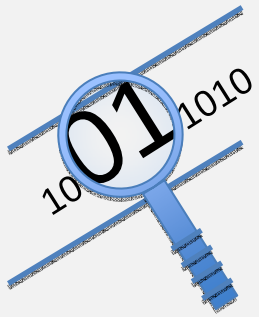


Reduce cost and risk through automation

Increased Availability

Reduce the need for planned downtime

Deeper Insight



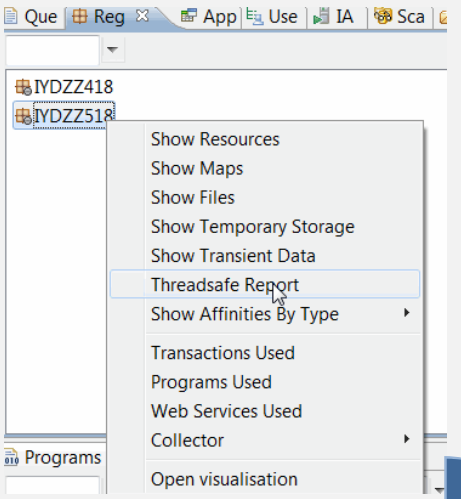
Improve decision making and system performance

Drive a threadsafe report from the CICS IA plug-in

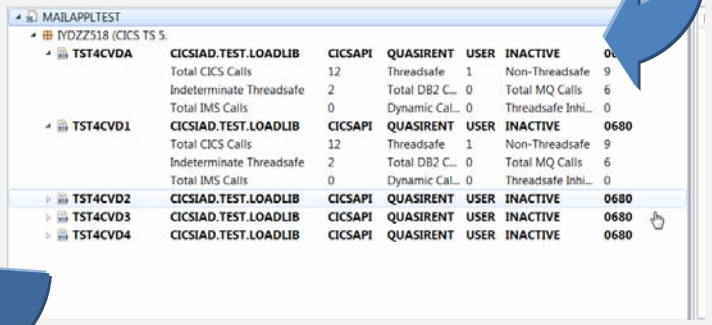
Benefits

- Understand threadsafe issues by program
- Run the report against the latest level of CICS

Run threadsafe report by region



View Summary



Save as HTML report

Comma...	Function	Type	Object	Offset	Use cou...	Threadsafe	Inhibitor
MQ	CLOSE	QUEUE	CSQ4SAMP.MAILMGR.JAM...	000063...	2	Y	
CICS	IGNORE	CONDITION		000049...	2	Y	N
MQ	INQUIRE	QUEUE	CSQ4SAMP.MAILMGR.JAM...	000065...	7	Y	
CICS	LINK	PROGRAM	TST4CVD2	00005A...	2	I	N
CICS	LINK	PROGRAM	TST4CVD4	00005B...	1	I	N
MQ	OPEN	QUEUE	CSQ4SAMP.MAILMGR.JAM...	000062...	2	Y	
CICS	RECEIVE	MAP	CSQ4VD0	00004E...	2	N	N
CICS	RECEIVE	MAP	CSQ4VD1	00005C...	5	N	N
CICS	RECEIVE	MAPSET	CSQ4VDM	00004E...	2	N	N
CICS	RECEIVE	MAPSET	CSQ4VDM	00005C...	5	N	N
CICS	SEND	MAP	CSQ4VD0	00004E...	2	N	N
CICS	SEND	MAP	CSQ4VD1	00005B...	5	N	N
CICS	SEND	MAPSET	CSQ4VDM	00004E...	2	N	N
CICS	SEND	MAPSET	CSQ4VDM	00005B...	5	N	N
CICS	SEND	TEXT	SEND TEXT	00004D...	2	N	N

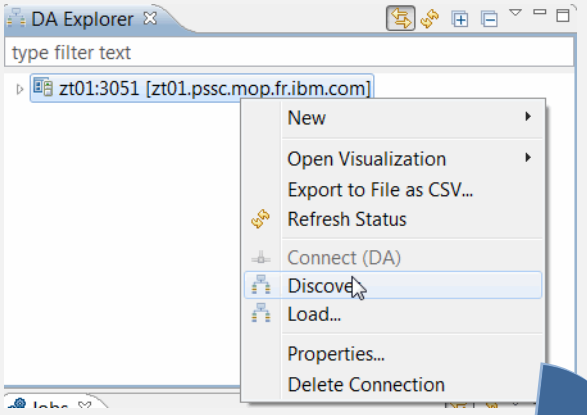
View detail by program

Plexify your unmanaged regions with CICS DA

Benefits

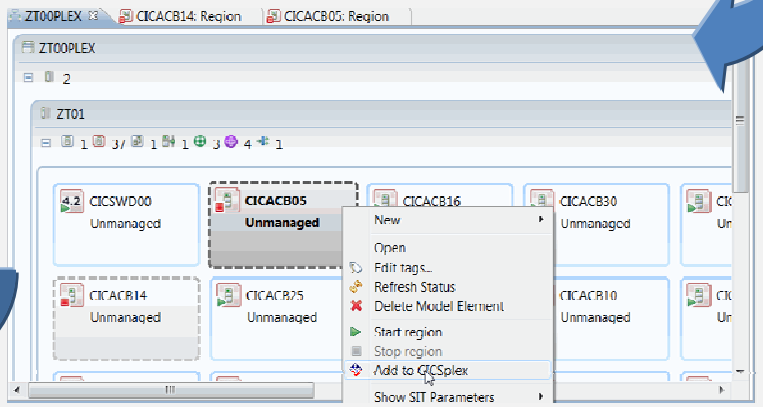
- 3 steps to a managed region
- Manage your region from the CICS SM Explorer perspetive

Discover

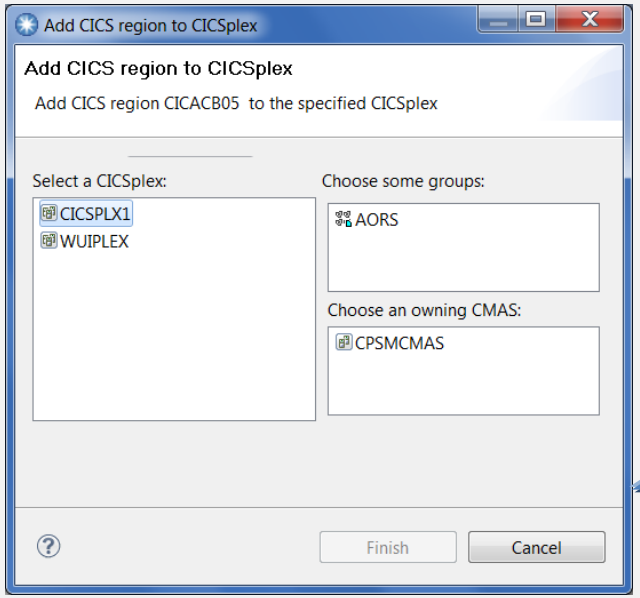


Visualize

Unmanaged regions



Manage

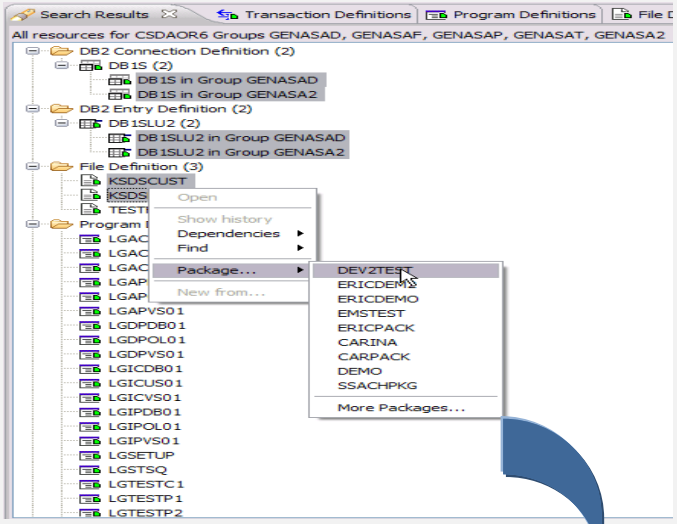


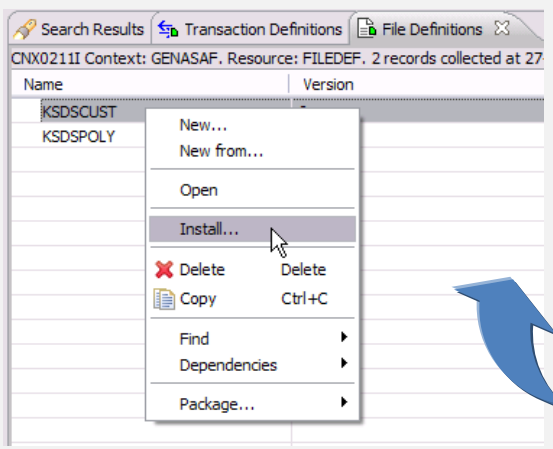
Speed CICS resource definition lifecycle mgt with CICS CM

Scenario

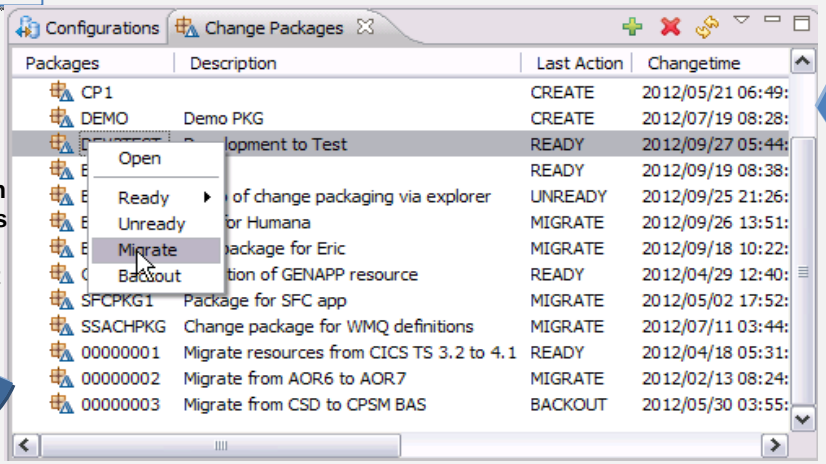
- Create Change Package
- Add resources
- Migrate Change Package
  - Can include transformation and approval
- Install resources in Target environment
- Less error prone promotion of resources
- Full audit trail and backout capability

Change package created for resources in Development repository





Install definitions in CICS regions on test environment



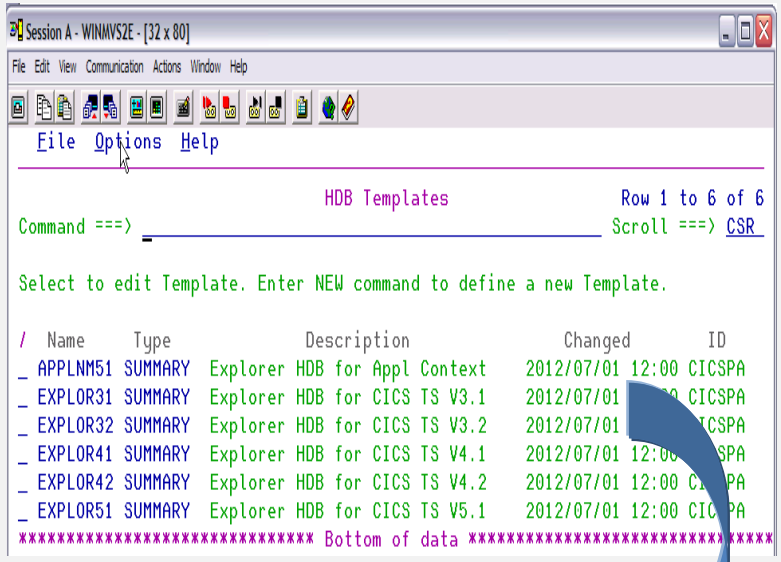
Change package migrated to test environment

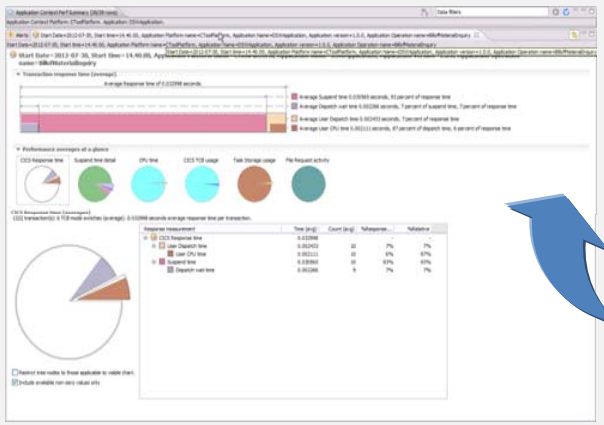
CICS PA gives Platform and Application Performance insight

Scenario

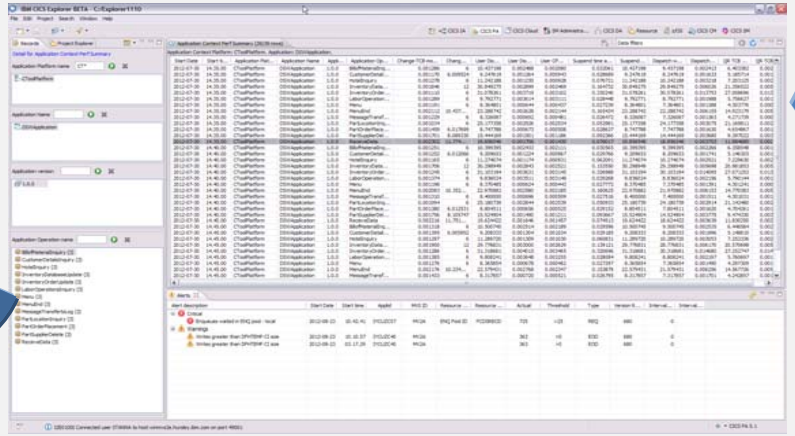
- Summarize CICS performance data at application and transaction level
- Drill down into details such as CPU, Response time, Storage and TCB usage
- Data filtering to analyze specific transactions and operations
- Statistics alerts
- Simplify analysis of large volumes of data
- Identify performance bottlenecks promptly

Summarize and export application and transaction data to DB2





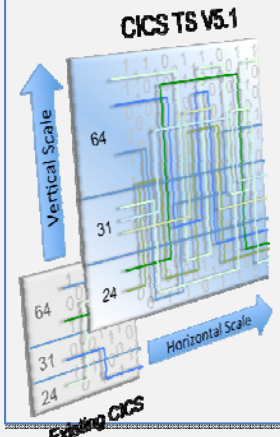
Drilldown to transaction or operation



Detailed performance and statistics analysis with data filtering

CICS Tools V5.1 Helping To Drive Operational Efficiencies

Greater Capacity

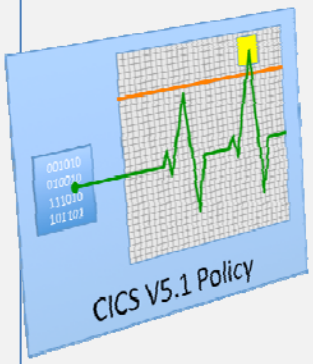


Objective: Achieving highest levels of performance optimization

CICS Deployment Assistant identifies consolidation candidates and its wizards quickly deploy consolidated region structure

CICS Performance Analyzer and CICS Interdependency Analyzer identify threadsafe candidates and CICS Performance Analyzer measures threadsafe and consolidation savings

Managed Operations



Objective: Determining the right thresholds and values

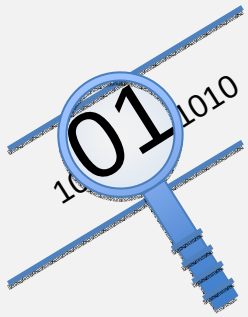
CICS Performance Analyzer level SLA analysis and resource usage reports can be used to establish thresholds for Policies for regions, Applications, and Platforms

Increased Availability

Objective: Improving availability to support near continuous operations

CICS VSAM Recovery replication logging for batch VSAM complements CICS TS support of the GDPS-Active-Active availability

Deeper Insight



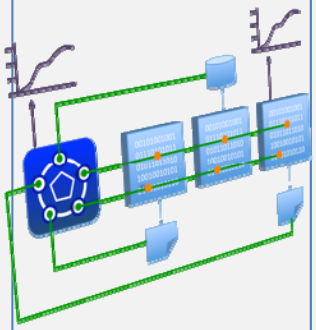
Objective: Increasing application intelligence for business value

CICS Interdependency Analyzer adds insight into Application structure

CICS Performance Analyzer reports specialty engine actual and potential usage

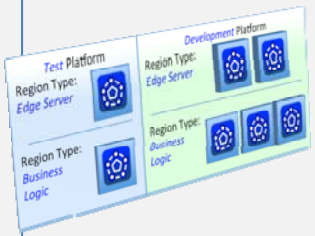
CICS Tools V5.1 - Increasing Service Agility

First-class Applications



Create agile services from existing assets

First-class Platforms

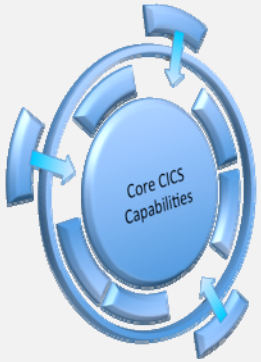


Create agile service delivery platforms

Modern interfaces

Integrated and customizable tooling with rich visualization

Foundational Enhancements



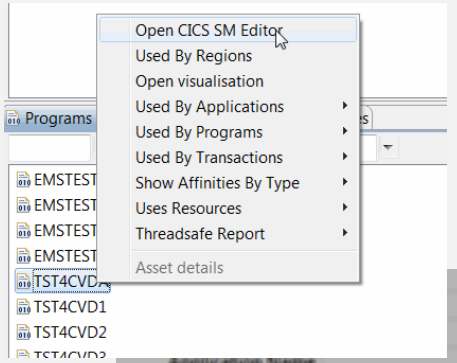
Extend core capabilities

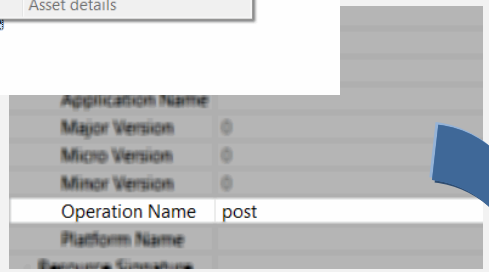
Using CICS IA data to define Applications in CICS TS 5.1

Benefits

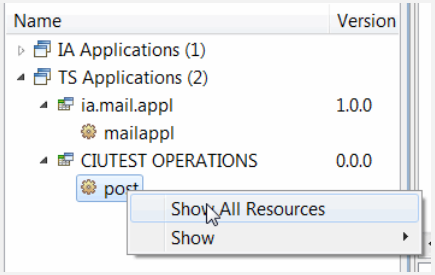
- Upfront knowledge of resources required to define an Application Bundle

Open CICS SM Editor and assign an entry point

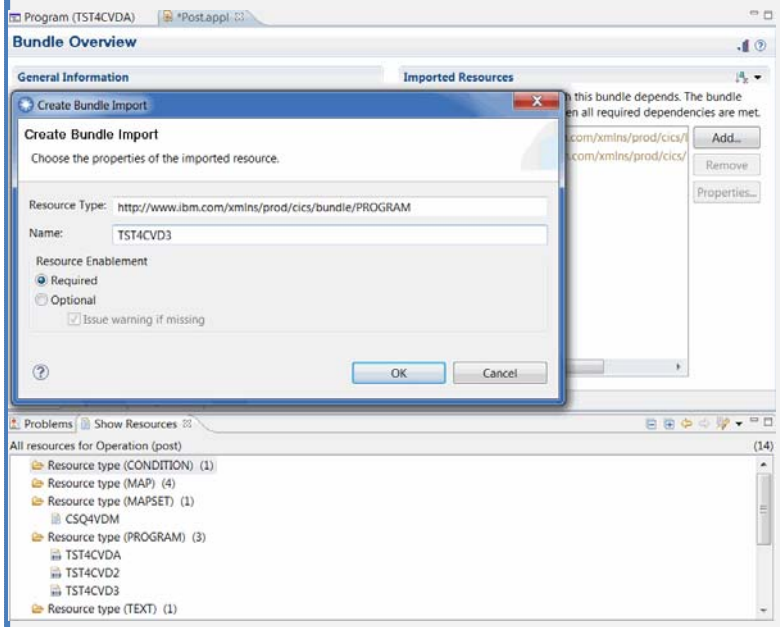




Collect and load data into DB2



Define bundle using IA information



CICS PA gives Platform and Application Performance insight

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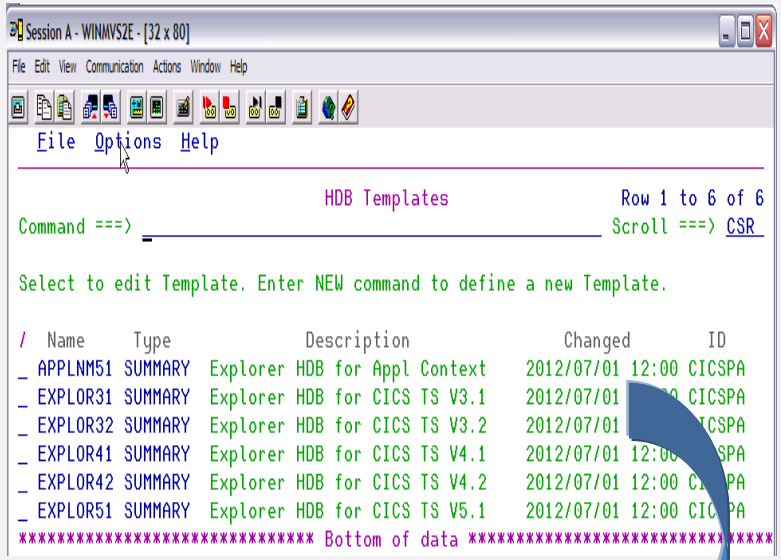
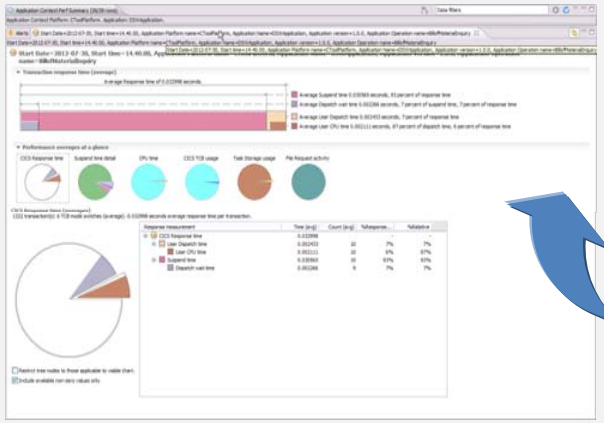
Summarize and export application and transaction data to DB2





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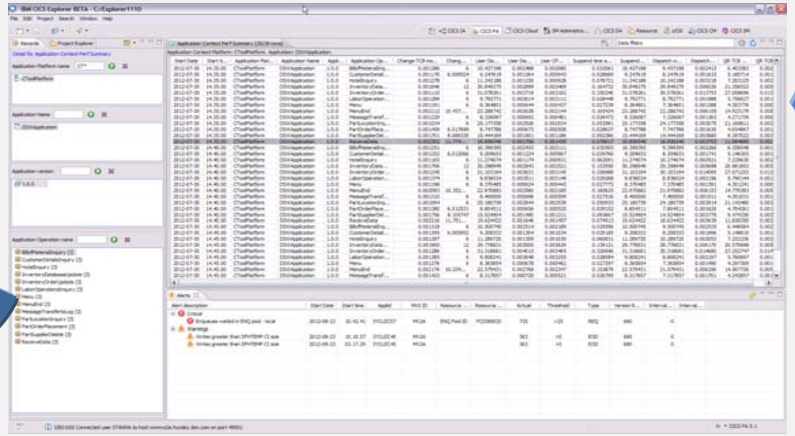
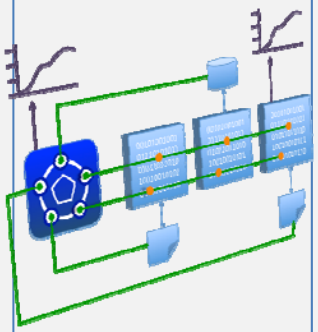


Detailed performance and statistics analysis with data filtering

CICS Tools V5.1 : Increasing Service Agility

First-class Applications



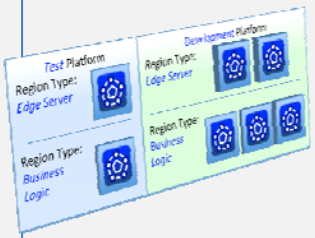
Objective: Leveraging application support to add new levels of agility

CICS Performance Analyzer views simplify Application performance analysis

CICS Interdependency Analyzer can track, analyze, and help create new Applications

CICS Configuration Manager supports new Application definitions

First-class Platforms



Objective: Leverage platform support to reduce infrastructure costs

CICS Deployment Analyzer automates creation of new Platforms

CICS Performance Analyzer can isolate Platform performance issues

CICS Configuration Manager manages Platform definitions

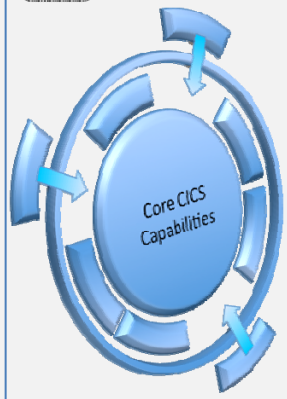
Modern Interfaces

Objective: Investment protection beyond traditional applications

CICS Performance Analyzer measures performance of JSPs and servlets

CICS Interdependency Analyzer analyzes CICS resource relationships of new JSPs and servlets

Foundational Enhancements



Objective: Faster time to market using latest runtime capabilities

CICS Interdependency Analyzer queries helps to upgrade applications for CICS TS V5.1

CICS Deployment Assistant cheat-sheets help to upgrade regions for CICS TS V5.1

Summary

- If you are running applications on CICS and other z/OS sub-systems
- You need
  - Service agility
  - Operational efficiency
- Your experience will be enhanced with CICS Tools V5.1 from IBM

Product details

CICS Deployment Assistant for z/OS V5.1

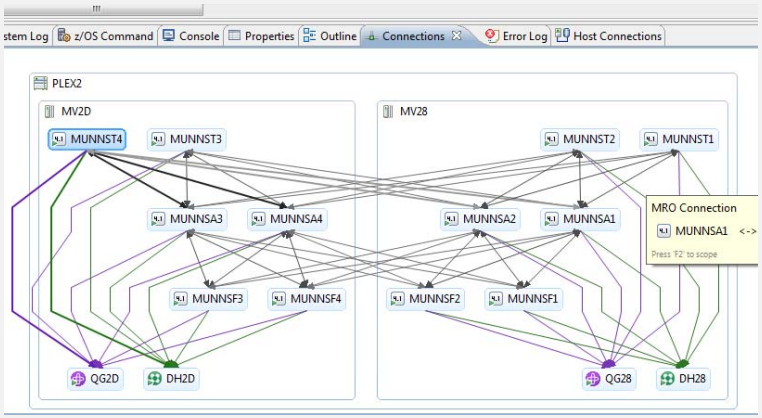
The power of discovery

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 sus-systems
- Automation creates new CICSplex
- Plexify and clone CICS regions
- Start and stop a CICS region



CICS Interdependency Analyzer for z/OS V5.1

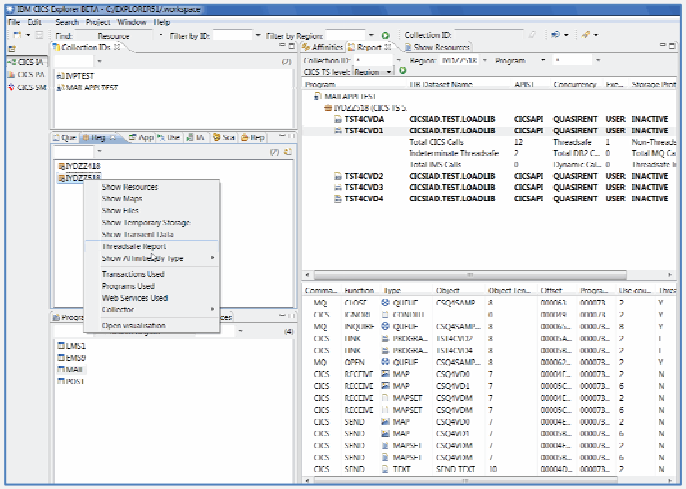
Application insight

What's new in CICS IA V5.1…

- Support for CICS Transaction Server V5.1, including enhanced business application analysis
- New threadsafe analysis plug-in view and report
- Improved installation and configuration
- DB2 data lifecycle management
- Native SQL language stored procedures
- Graphical visualization view of resources

CICS IA enables you to…

- Identify threadsafe / non-threadsafe programs
- Isolate and remove affinities
- Speed CICSPlex® SM workload management
- Advanced CICS command flow analysis
- Highlight CICS web service candidates



CICS Performance Analyzer for z/OS V5.1

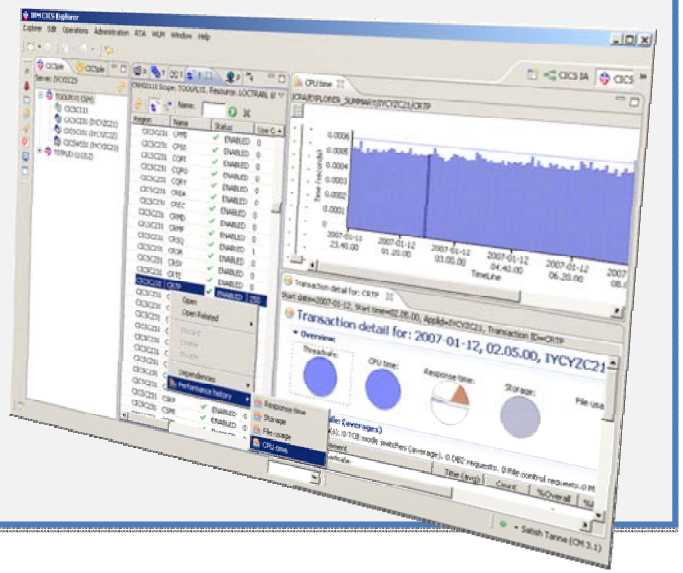
Performance insight

What's new in CICS PA V5.1…

- CICS TS V5.1 – support for new metrics
- Application, Platform, and Policy
- Plug-in enhancements:
  - Application centric view
  - Customizable sheet views
  - Suspend time reporting
  - Easy navigation to key reports and alerts
- SMF logstream support
- Batch statistics reporting for CICS TG
- Improved management of PA data loaded to DB2
- CPU totals on MQ reports
- SMF data processing performance improvements

CICS PA enables you to…

- Comprehensive Performance Reporting and Analysis for CICS including DB2, WebSphere MQ, and MVS System Logger
- Understand trends and develop capacity plans
- View statistics and create statistical alerts



CICS Configuration Manager for z/OS V5.1

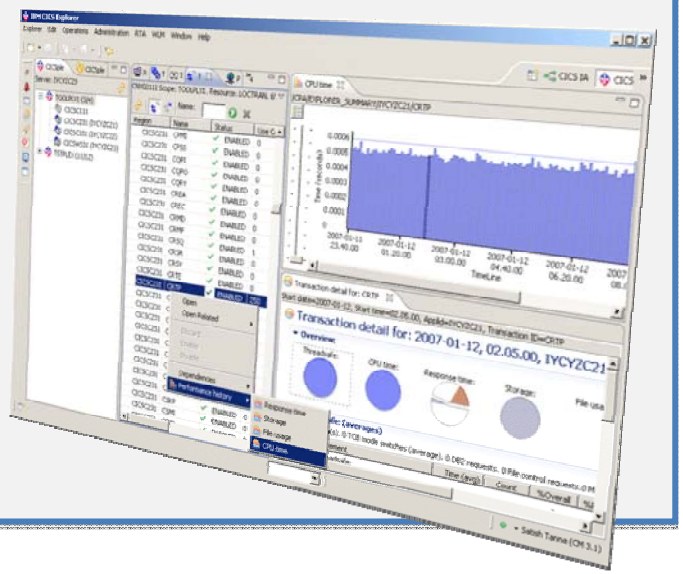
The value of control

What's new in CICS CM V5.1…

- Application, Platform, and Policy resources
- Enhanced plug-in with Packaging and Deployment Analysis
- Sort in Package view and Ready list
- ADD/REMOVE CSD group to/from LIST during Migrate operation
- Option to automatically remove empty Groups from CSD List
- SSL support for plug-in connection
- Audit trail for Install and NewCopy

CICS CM enables you to…

- Manage changes throughout the life-cycle
- Create reports to identify redundant definitions, show resource relationships, and change management history
- Manage audit, back-out and change authorizations



CICS VSAM Recovery for z/OS V5.1

Reduce the risk to your data

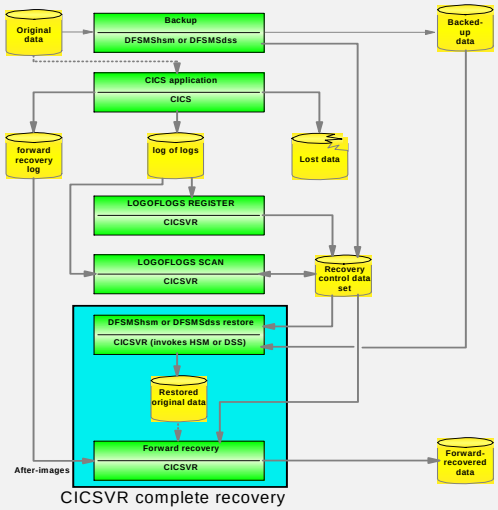
What's new in CICS VR V5.1…

- Replication logging in support of the GDPS-Active-Active availability solution
- Batch logging enhancements
- Batch backout improvements
- Migration utility enhancements
- Logstream printing and other usability enhancements

CICS VR enables you to…

- Supports backups created by Backup-While-Open (BWO)
- Automate recovery
- Test forward recovery and backout
- Produce disaster recovery reports

CICS TS and CICSVR



CICSVR complete recovery

CICS Transaction Gateway V9.0

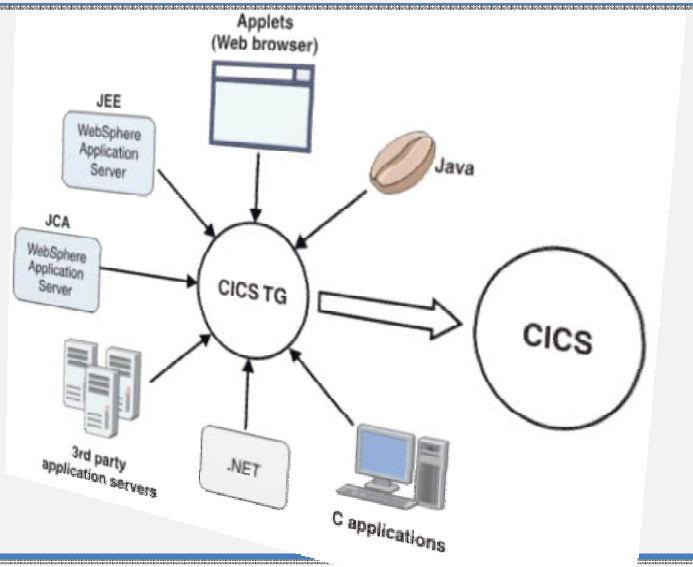
Open integration and modernization

What's new in CICS Transaction Gateway V9.0…

- Java 7 support for client applications
- Increased vertical scaling on z/OS
- SSL connectivity for 3-tier topologies
- Connection-level time-out with IPIC
- 64-bit support for ECI V2 and ESI V2
- ECI V2 support for asynchronous calls.
- End-to-end transaction tracking
- Simplified DSS configuration
- Statistics recording with CICS TG for MP

CICS Transaction Gateway provides…

- Proven connectivity—distributed platforms integrate with any CICS server
- Skills match for today—bridges the skill gap
- Secure, scalable, and highly available connectivity

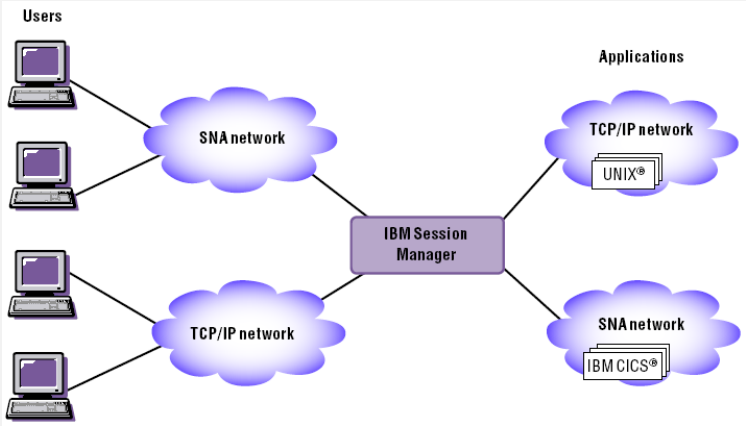


IBM Session Manager for z/OS V3.2

Simple, secure session-management

What's new in …

- Updated plug-in with administration perspective
- Simplified pass-ticket support
- Load RACF classes into data spaces
- Improved DUMP GDG facility
- Customer-driven enhancements



CICS …

- Access multiple z/OS systems from a single 3270 terminal - SNA and TCP/IP
- Session recovery across the Sysplex
- Centralized administration
- Rexx-like scripting language
- Log-off procedures
- Security checking and Audit logging
- Benefits to helpdesk and operations
- Spy function
- Broadcast messages
- Demo function helps staff training

IBM Problem Determination Tools Version 12.1

Tools to address your z/OS Development or System Programming needs

What's new in PD Tools V12.1

- New **IBM Problem Determination Tools Studio** pre-packaged with plug-ins
- File Manager DB2 and CICS plug-in
- Initial Workload Simulator plug-in
- Enhanced integration and synergy amongst PD Tools, CICS Explorer and/or IMS Explorer taking advantage of newly announce common z/OS Explorer capabilities
- CICS TS 4.2, IMS V12, MQ 8.1 updates to ensure synchronization with latest subsystems
- Improved Java support in APA and FA

PD Tools provides …

- Five tools addressing z/OS problem resolution needs - Debug Tool, Fault Analyzer, File Manager, Application Performance Analyzer and Workload Simulator
- Subsystem and language support traversing z/OS provided in a timely manner when subsystems and languages are updated
- Improved TCO with full function tools at competitive price

IBM CICS Explorer® V5.1

Enhanced!

Session and user views, Configuration, Broadcast, User and Admin commands

ISM

New!

Migrated file view

VT

Daemon & Connection Status & Test

TG

Threadsafe, File, CPU, Response & Wait analysis, Statistics, Alerts, Graphical and Sheet views

PA

Deployment, Discovery, Visualization, Cloning, Automation & Control

DA

Enhanced!

Execution Tree
Dependencies
Queries
Command Flow

IA

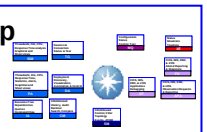
CRUD, Install, History, Backout, Audit, Search, Compare, Packaging

CM

IMS DB mgt

IMS Explorer

Develop
Test



RDz

Enhanced!

CRUD, Install, Control, Filter, Sort, Topology, Events, ATOM, Java, WLM, Txn Tracking, Copy/Paste, Cloud, Web apps

SM

z/OS Connections,
z/OS Datasets,
zFS Files, JES

z/OS Explorer

CICS TS, IMS, DB2, MQ, z/OS

Configuration
Status
Control, Test

MQ

Status
Situations
Topology

XE

Manipulate, browse z/OS data sets, z/FS, VSAM, MQ, CICS, DB2

FM

CICS, IMS, DB2, & z/OS Abend Reporting & Diagnosis

FA

CICS, IMS, DB2, & z/OS Application Debugging

DT

CICS, IMS, DB2, & z/OS Observation Requests & Reporting

APA

3270 application performance testing

WSIM

Complete PD Tools workbench

PD Studio

New!

SM	CICS Transaction Server
IA	CICS Interdependency Analyzer
PA	CICS Performance Analyzer
CM	CICS Configuration Manager
DA	CICS Deployment Assistant
TG	CICS Transaction Gateway
ISM	IBM Session Manager
VT	CICS VAM Transparency

APA	Application Performance Analyzer
FA	Fault Analyzer
DT	Debug Tool
FM	File Manager
WSIM	Workload Simulator
MQ	WebSphere MQ
XE	OMEGAMON XE for CICS
RDz	Rational Developer for System z

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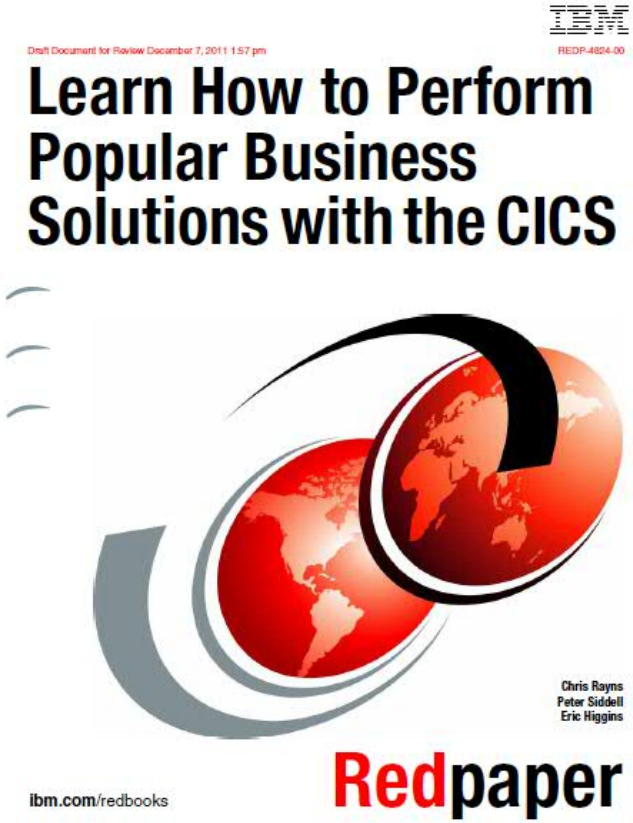
GENAPP – SupportPac and Redpaper

- GENAPP is available to customers as SupportPac CB12, at no extra cost
  - Download from http://www-01.ibm.com/support/docview.wss?rs=1085&uid=swg24031760
- There is a paper based on GENAPP with scenarios in this new IBM Redpaper
  - Download from http://www.redbooks.ibm.com/abstracts/redp4824.html?Open



GENAPP will be updated in December 2012 to exploit new CICS TS V5.1 features

Google CICS or check us out at:

ibm/developerworks/cicsdev

facebook.com/IBMCICS

twitter.com/IBM_CICS

youtube.com/cicsfluff

youtube.com/cicsexplorer

ibm.com/cics

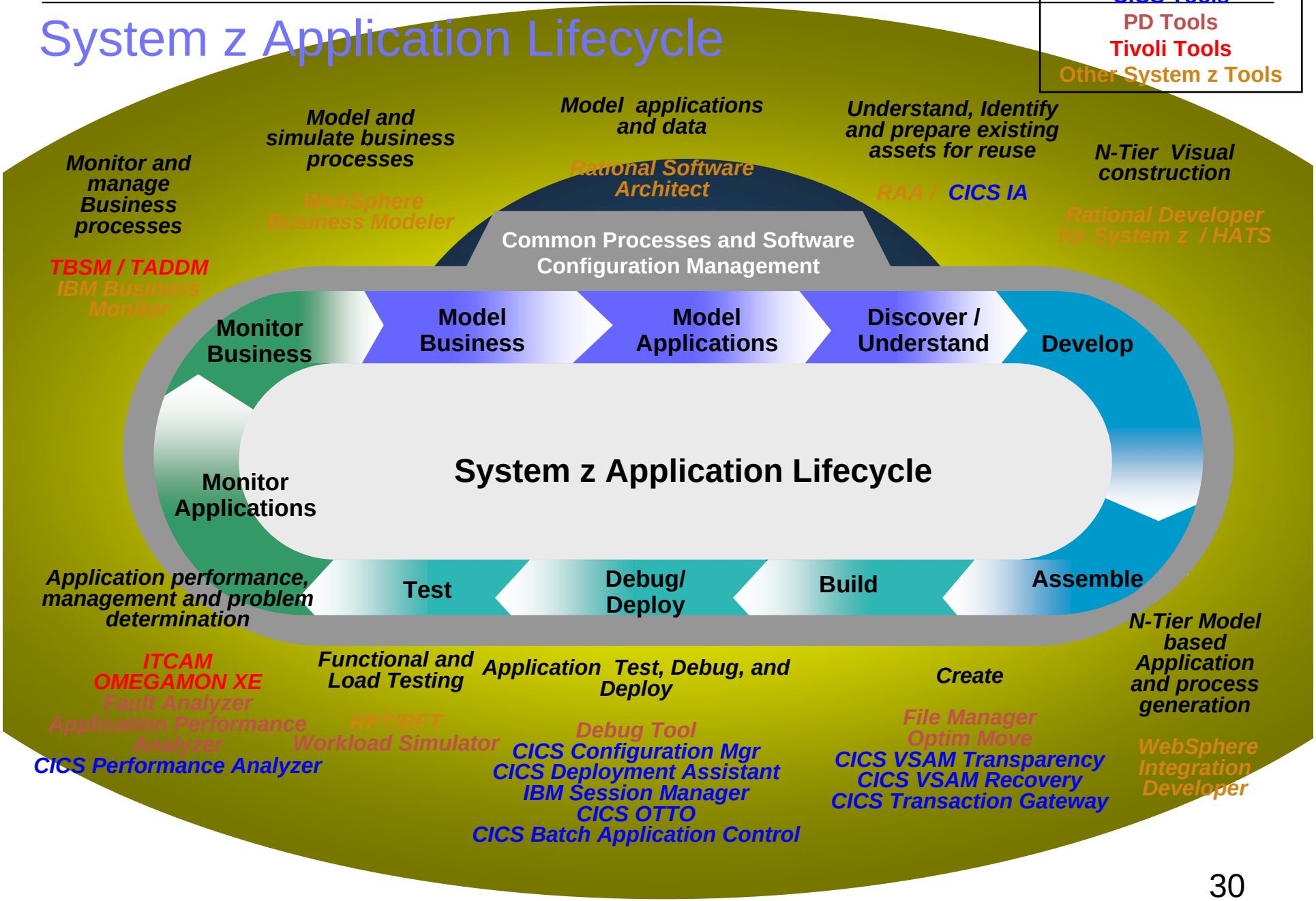
twitter.com/IBM_System_z

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

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

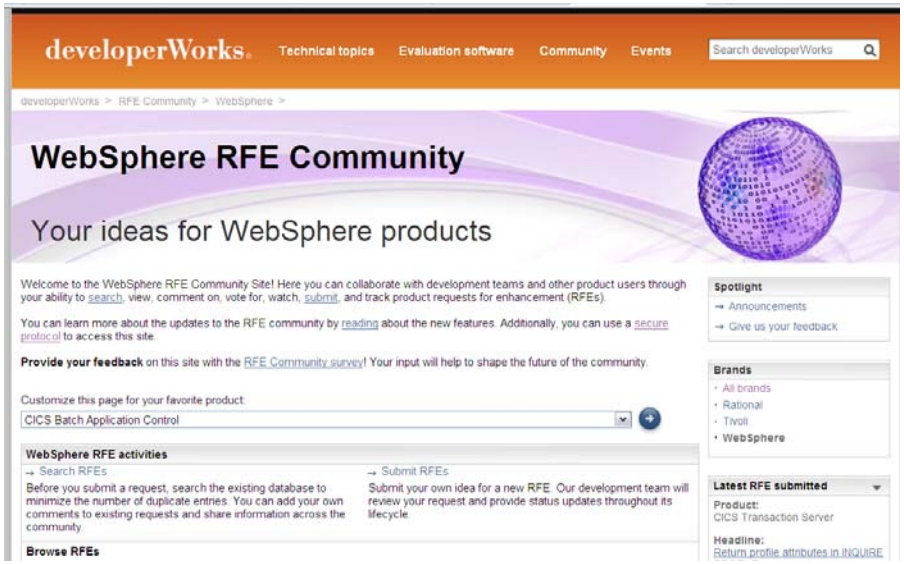
System z Application Lifecycle

CICS Tools
PD Tools
Tivoli Tools
Other System z Tools



Raising new requirements with RFE

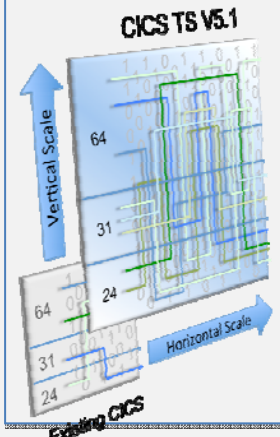
- **You can now raise and track requirements using the new IBM RFE system for**
  - CICS Transaction Server
  - CICS Explorer
  - TXSeries
  - WXTR
  - IBM CICS Tools
  - CICS Transaction Gateway
  - PD Tools



- Existing FITS requirements are currently being processed, and will 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.

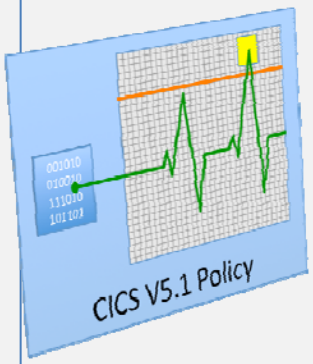
Driving Operational Efficiency

Greater Capacity



- Use CICS IA and CICS PA to determine the threadsafe readiness of programs, plan region consolidation etc
- zIIP-eligible CICS IA stored procedures and zAAP-eligible CICS DA server can save MLC $s

Managed Operations

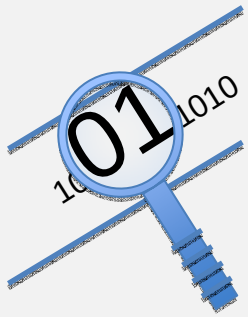


- CICS CM supports all new resource definitions in both CSDs and BAS for TSV5.1 and below
- Improved CICS IA and CICS PA data management reduces space requirements and simplifies tasks
- CICS PA provides Application- and Platform-level SLA analysis and resource usage reports
- CICS DA includes automated cloning and CICSPlex SM provisioning wizards
- CICS CM Packaging perspective avoids UI-switching

Increased Availability

- CICS VR adds replication logging support for Active-Standby and Active-Query configurations
- Use CICS IA to minimize the impact of routine application maintenance for the end user

Deeper Insight

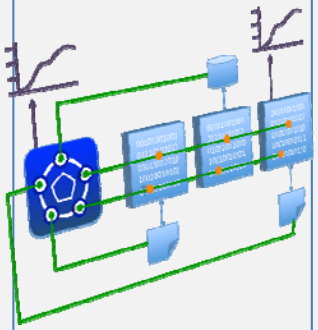


- Enriched discovery in CICS DA and CICS IA enables broader and deeper insight
- CICS PA processes SMF performance and statistics data providing reports for all new metrics in CICS TS V5.1
- CICS PA *Wait analysis* helps resolve performance problems
- CICS DA model can be exported for external analysis and reporting
- CICS CM deployment analysis reports avoid potentially costly surprises

CICS Tools V5.1

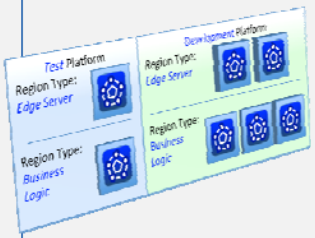
Increasing Service Agility

First-class Applications



- CICS CM helps manage new Application definitions
- New CICS PA views simplify Application performance analysis and
- CICS IA tracks, analyzes, and helps create CICS TS Applications

First-class Platforms



- CICS CM helps manage new Platform definitions
- CICS DA automates creation of new CICS platforms
- Discover and manage your CICS topology and applications with CICS DA and CICS CM
- Analyze Applications and isolate Platform performance bottlenecks with CICS PA

Modern Interfaces

- CICS DA active graphical visualization the CICS topology - tags and filters enable custom views
- Visualization and charts are now available for the metrics introduced in TS V5.1
- Customizable sheet views in CICS PA allow customers to see data *their way*

Foundational Enhancements

- New CICS DA server delivers faster discovery and better governance
- 64 bit enablement
- CICS DA IPv6 and virtual IP addressing support extends usage to modern networks
- CICS IA Global Work Area above the 31 bit line