

Tooling-up for the mobile world

CICS Tools V5.2

Client presentation



Last updated: Thursday, 25 September 2014

Systems of Record

With >10 billion connected mobile devices, you need a platform that provides...



Scalability

scale to handle the huge number of transactions

Reliability

deliver proven mobile end-to-end integration

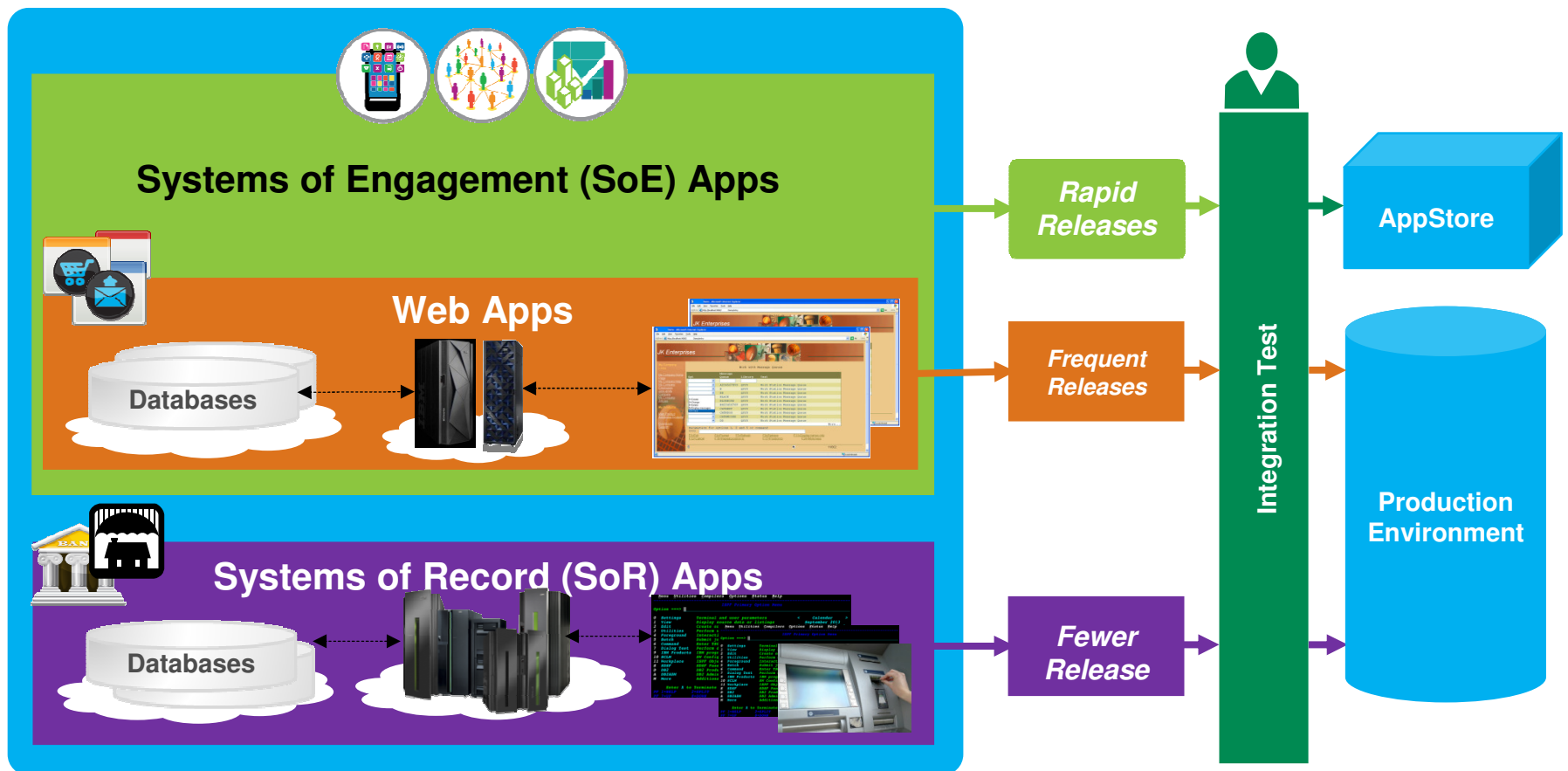
Security

ensure that your customer data is protected

Integrate with CICS on System z

Today's Systems landscape

Bringing together the people, processes, and tools across the entire software delivery lifecycle – spanning mobile to mainframe platforms



CICS TS and CICS Tools V5 Vision



Service Agility

Runtime support for production ready web applications.

Integration with mobile applications.

Facilitate the modernization of CICS-based systems of record.



Operational Efficiency

Increased system capacity and capability to achieve more with less.

Automatic control of critical resources using policies.

Optimize applications, systems, and processes to achieve more with less.



Cloud Enablement

Simplified system management and rapid application deployment.

On premise pattern based cloud deployment.

Support CICS cloud initiatives to simplify system management and rapid application deployment.

Service Agility

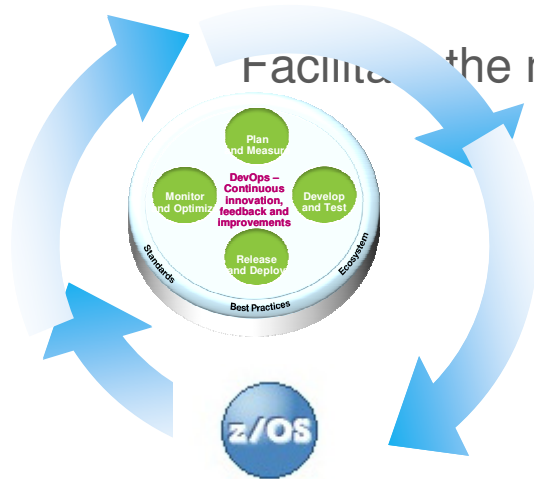
1

Facilitate the modernization of CICS-based systems of record

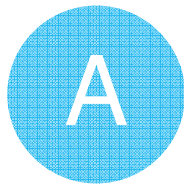


Three steps to Service Agility

Facilitate the modernization of CICS-based systems of record



IBM z/OS Tools
IBM z/OS Explorer

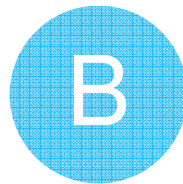


Step 1

Adopt a collaborative **DevOps** approach with **integrated tooling** to respond to new dynamics

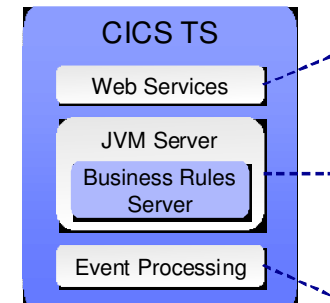


CICS DA
CICS IA
CICS PA
CICS CM

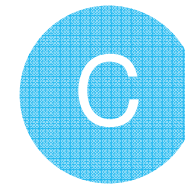


Step 2

Mobile- and service-enable application assets to extend access to new channels



CICS IA, RAA
CICS PA
CICS CM



Step 3

Event- and rule-enablement to deliver data analytics from dynamic applications

IBM DevOps assists agile software delivery

Adopt a collaborative DevOps approach to seize market opportunities and reduce time to customer feedback



Leverage common tools to build enterprise applications



Integrated tooling to respond to mobile dynamics



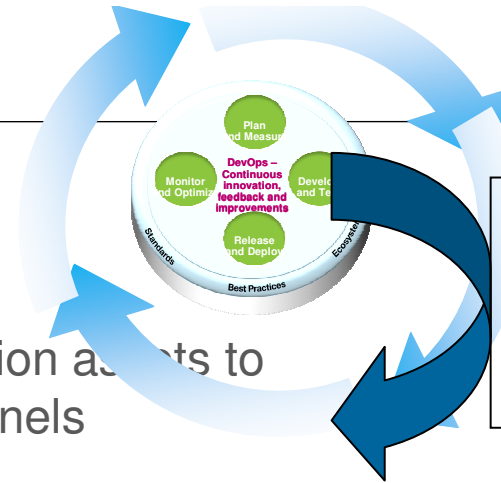
- IBM CICS Tools
- IBM Problem Determination Tools
- IBM Rational Developer for the Enterprise
- IBM Rational Team Concert
- IBM Worklight
- IBM z/OS Explorer
- IBM Enterprise COBOL, PL/I, C/C++

Enabling you to...

- Leverage a common, integrated Eclipse-based environment for development, systems, and operations
- Access broad coverage of runtimes, languages, compilers, and platforms
- Access via cloud-based environments like SmartCloud Enterprise+ (SCE+)
- Create agile mobile and web services from new and existing CICS assets

Mobile-enablement – the basics

Mobile- and service-enable application assets to extend access to new channels



Mobile CICS is as easy as A-B-C - so why do we need DevOps?

```

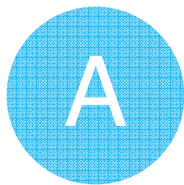
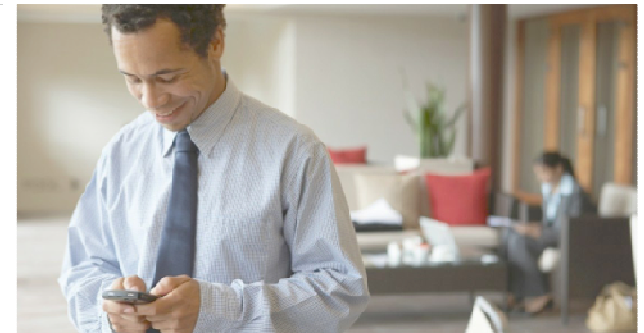
{
  "schema": "http://json-schema.org/draft-04/schema#",
  "description": "Request schema for the STPROG1 JSOM interface",
  "type": "object",
  "properties": {
    "STPROG1operation": {
      "type": "object",
      "properties": {
        "small_record_for_webservice": {
          "type": "object",
          "properties": {
            "st_ip_conn": {
              "type": "object",
              "properties": {
                "cid": {
                  "type": "string"
                }
              }
            }
          }
        }
      }
    }
  }
}

```

```

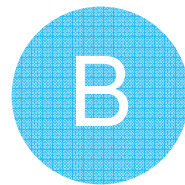
function getCustomerDetails(custNum) {
  var pathURL = "GENAPP/getCustomerDetails";
  var request=
  {
    "LGICUS@10operation": {
      "ca" : {
        "ca_request_id" : "@11CUS",
        "ca_return_code" : "00",
        "ca_customer_num" : custNum,
        "ca_num_policies" : ""
      }
    }
  };
}

```



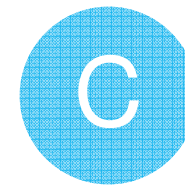
Step 1

DFHLS2JS to generate the JSON artefacts for the target CICS service.



Step 2

Mobile developer uses JSON schema to build a Worklight adapter.

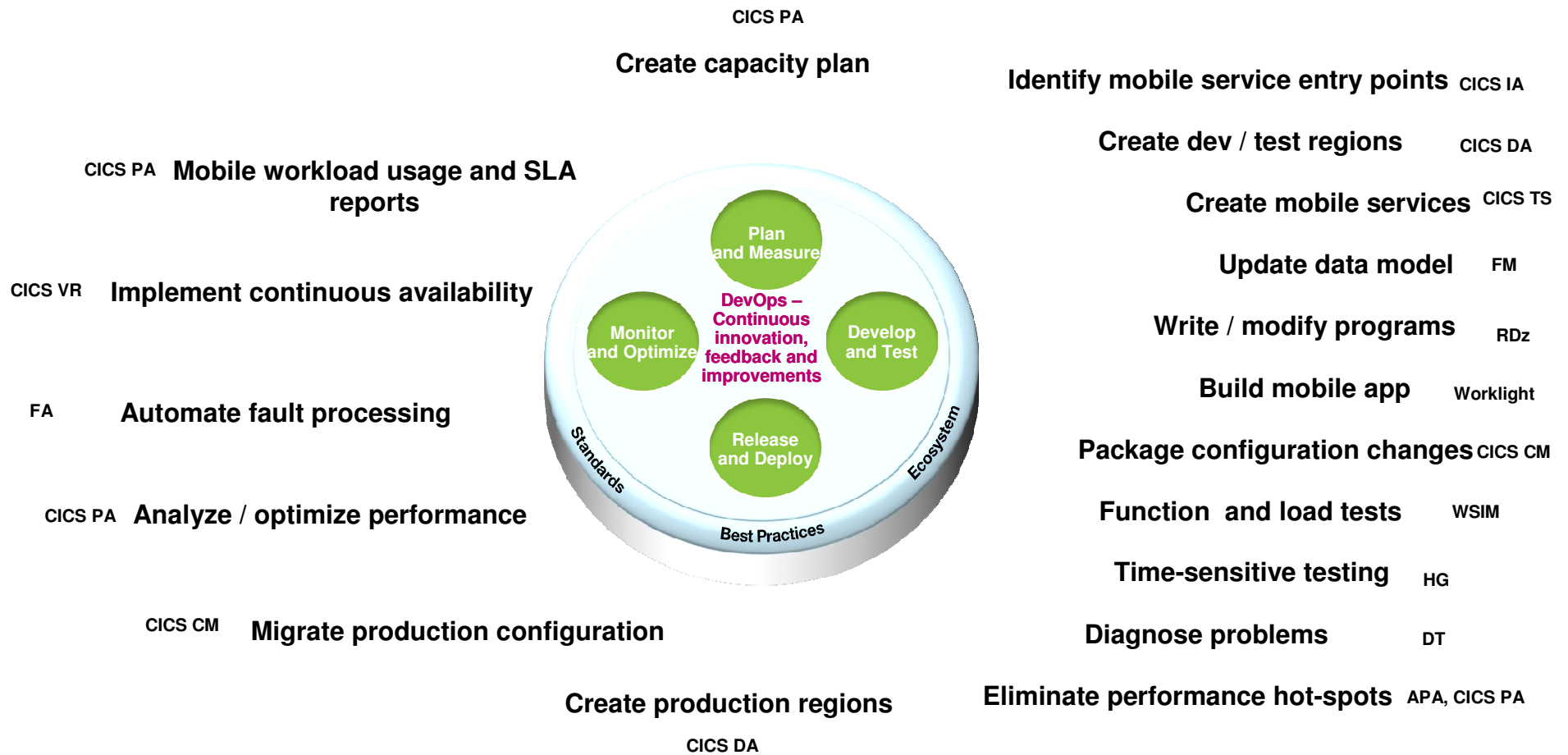


Step 3

Frontend mobile developer calls the Worklight adapter which calls the service hosted in CICS.

Mobile-enablement – The full picture

Mobile- and service-enable application assets to extend access to new channels



Operational Efficiency

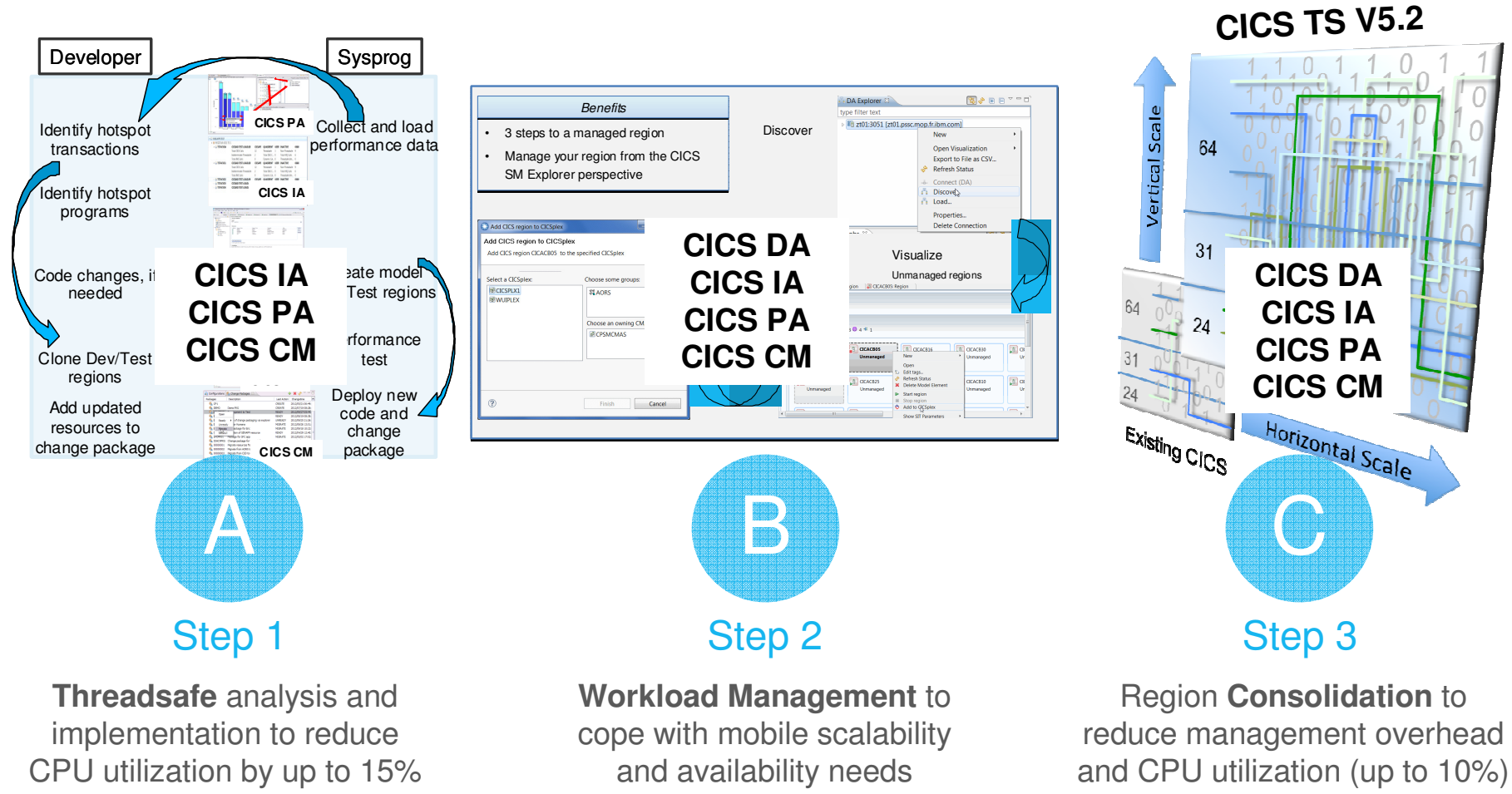


Optimize applications, systems, and processes to achieve more with less.



Three steps to Operational Efficiency

Optimize applications, systems, and processes to achieve more with less

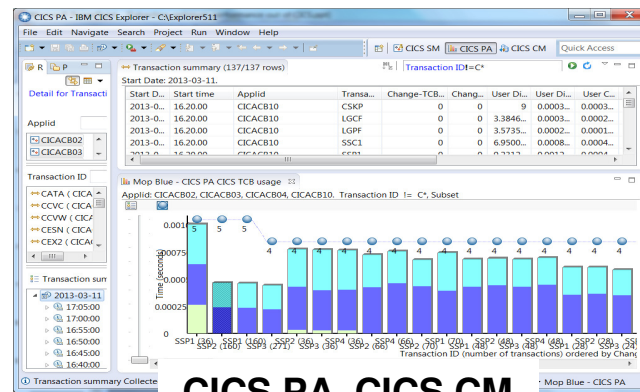


CICS workload management

Workload Management to cope with mobile scalability and availability needs



CICS Explorer
CICS DA, CICS CM



CICS PA, CICS CM

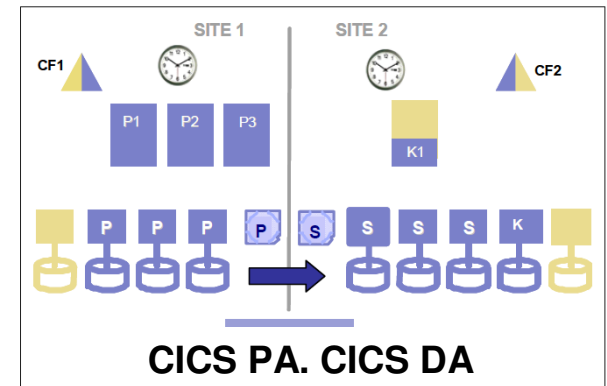
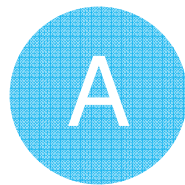


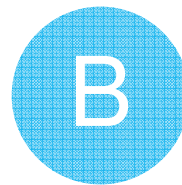
Figure 3-

CICS PA, CICS DA
CICS CM, CICS VR



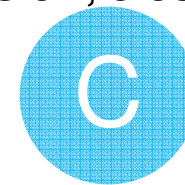
Step 1

Implement **single point of control** with CICSplex System Manager and CICS Explorer



Step 2

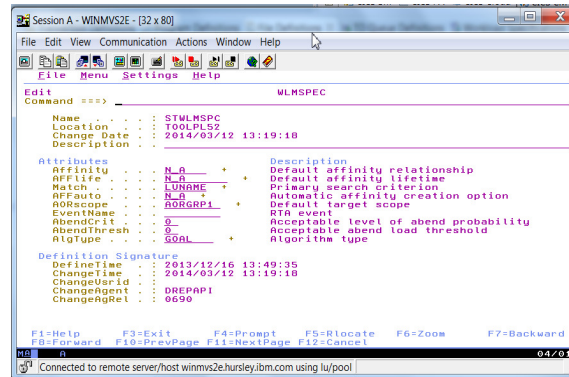
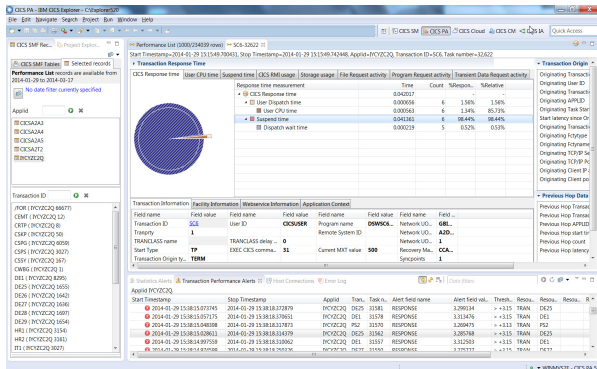
Implement **performance** workload management



Step 3

Implement **availability** workload management

Performance workload management



CICS Performance Analyzer
Transaction Profiling

PKCF0001 Printed at 13:54:44 8/02/2013 Report Data from 17:24:42 7/31/2013 to 18:29:59 7/31/2013 Page 1
Baseline Data from 16:17:32 7/31/2013 to 16:44:59 7/31/2013

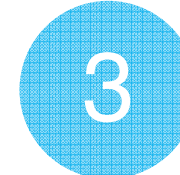
Tran	Report	#Tasks	Response Time	Dispatch Time	User CPU	Suspend	Dis/Maint	FC Wait	PCAWM	IR Wait	SC410M	SC310M	Count
DE1	Report	1308	1097	2532	0032	-0564	-0009	0000	0	0050	2572	129457	
DE1	Baseline	3628	0888	0433	0023	-0425	-0008	0000	0	0442	2205	155273	
DE1	Delta	-2320	+0208	+0099	+0008	+0109	+0000	0000	0	+0108	+367	+4184	
DE1	Change#	+51.95	+23.52	+23.04	+37.80	+51.00	+01.27	0.00	0.00	+51.40	+15.44	+21.49	
SC1	Report	12	-0175	0082	0017	-0093	-0005	0000	0	-0084	5008	142950	
SC1	Baseline	44	-0893	-0425	-0038	-0467	-0015	0000	0	-0444	2588	233438	
SC1	Delta	-32	-0717	-0343	-0020	-0374	-0009	0000	0	-0358	-2419	-90486	
SC1	Change#	-72.73	-80.33	-80.69	-53.43	-80.03	-44.00	0.00	0.00	-80.65	+93.48	-28.76	
PS2	Report	18	-0463	0221	0033	-0243	-0008	0000	0	0230	2432	271772	
PS2	Baseline	20	-0259	0239	0038	-0259	-0011	0000	0	0232	2188	237816	
PS2	Delta	-2	-0204	-0017	-0005	-0028	-0003	0000	0	-0022	+243	+13465	
PS2	Change#	-10.00	-9.94	-7.33	-13.73	-10.50	-26.20	0.00	0.00	-9.91	+11.11	+5.22	
INCT	Report	6	0556	0275	0043	0280	0003	0000	0	0275	2432	301853	
ITI	Report	4	-2208	1091	0063	-1117	-0004	0000	0	-1102	2504	96276	
ITI	Baseline	4	-1482	0741	0150	-0740	-0002	0000	0	0737	2508	96276	
ITI	Delta	0	+0726	+0349	-0129	+0376	+0002	0000	0	+0364	-24	0	
ITI	Change#	0.00	+48.99	+47.11	-66.94	+50.90	+102.00	0.00	0.00	+49.39	-35	0.00	



Understand current performance



Implement an adaptable workload management system



Validate the results

Performance workload management: *Understand*

The screenshot displays the IBM CICS Explorer Performance List interface. The main window shows a detailed view of a transaction's performance metrics. A pie chart on the left visualizes the response time components, with 'Suspend time' being the dominant factor. The table below the chart provides the following data:

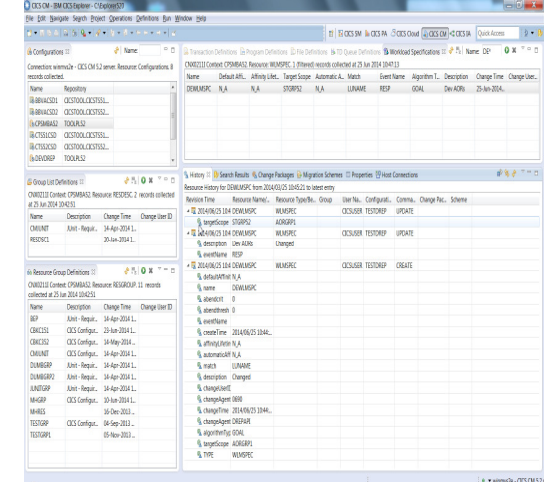
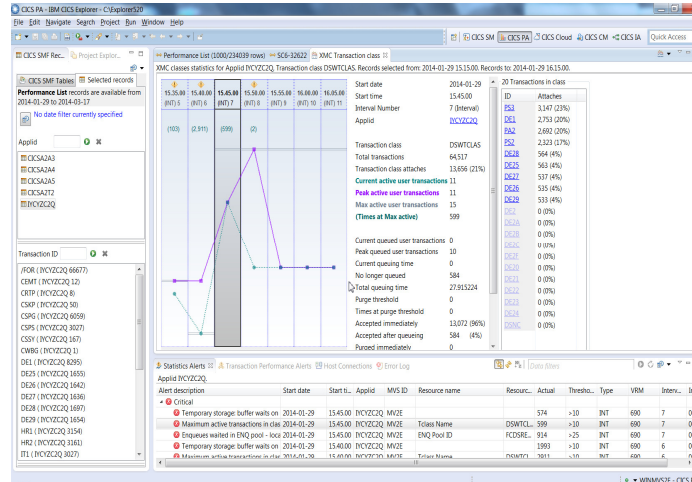
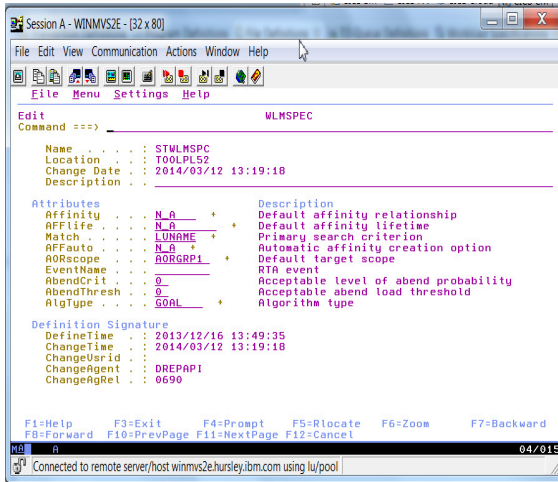
Response time measurement	Time	Count	%Respon...	%Relative
CICS Response time	0.042017	-	-	-
User Dispatch time	0.000656	6	1.56%	1.56%
User CPU time	0.000563	6	1.34%	85.73%
Suspend time	0.041361	6	98.44%	98.44%
Dispatch wait time	0.000219	5	0.52%	0.53%

Below the pie chart, the 'Transaction Information' tab is active, showing details for Transaction ID SC6, User ID CICSUSER, and Program name DSWSC6. Other fields include Tranprty (1), TRANCLASS name, Start Type (TP), and Transaction Origin by (TERM).

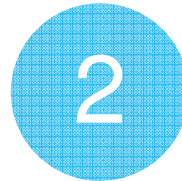
The bottom of the interface shows a list of 'Transaction Performance Alerts' for the Applid IVCYZC2Q, with columns for Start Timestamp, Stop Timestamp, Applid, Tran..., Task n..., Alert field name, Alert field val..., Thresh..., Resou..., and Resou... The table contains several rows of alert data, including response times and resource usage.

Understand the current system performance through *CICS PA's* CPU, Response Time & Storage **summary reports**; creating a baseline to measure against.

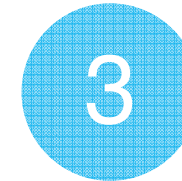
Performance workload management: *Implement*



Using *CICS CM* configure WLM definitions and create transformation rules and packages to enable **controlled** management of AOR scope to cope with increased workload



Online monitoring tools can detect a spike in workload and issue a *CICS CM* batch job to **update** the WLM spec



The same process can back-out the changes when workload is **normalized**. *CICS CM* creates a **full audit trail** of the changes



Performance workload management: *Validate*

V5R1

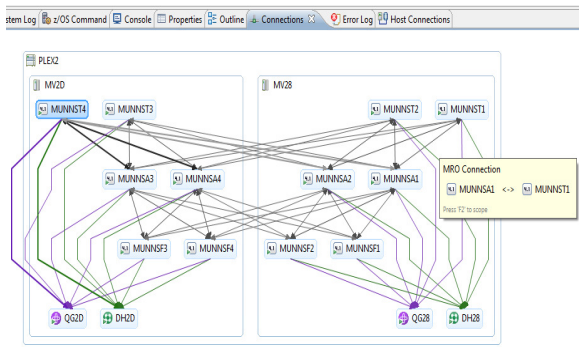
CICS Performance Analyzer
Transaction Profiling

PROF0001 Printed at 13:54:44 8/02/2013 Report Data from 17:24:42 7/31/2013 to 18:29:59 7/31/2013 Page 1
 Baseline Data from 16:17:32 7/31/2013 to 16:44:59 7/31/2013

Tran		#Tasks	Avg Response Time	Avg Dispatch Time	Avg User CPU Time	Avg Suspend Time	Avg Dispatch Wait Time	Avg FC Wait Time	Avg FCAMR Count	Avg IR Wait Time	Avg SC24UHM Count	Avg SC31UHM Count
DE1	Report	1308	.1097	.0532	.0032	.0564	.0009	.0000	0	.0550	2572	159457
DE1	Baseline	3628	.0888	.0433	.0023	.0455	.0008	.0000	0	.0442	2205	155273
	Delta	-2320	+.0208	+.0099	+.0008	+.0109	+.0000	.0000	0	+.0108	+367	+4184
	Change%	-63.95	+23.52	+23.04	+37.80	+24.00	+10.27	.00	.00	+24.40	+16.64	+2.69
SC1	Report	12	.0175	.0082	.0017	.0093	.0005	.0000	0	.0086	5008	142952
SC1	Baseline	44	.0893	.0425	.0038	.0467	.0015	.0000	0	.0444	2588	233438
	Delta	-32	-.0717	-.0343	-.0020	-.0374	-.0009	.0000	0	-.0358	+2419	-90486
	Change%	-72.73	-80.33	-80.69	-53.63	-80.03	-64.50	.00	.00	-80.65	+93.48	-38.76
PS2	Report	18	.0463	.0221	.0033	.0241	.0008	.0000	0	.0230	2432	271272
PS2	Baseline	20	.0509	.0239	.0038	.0269	.0011	.0000	0	.0252	2188	257806
	Delta	-2	-.0046	-.0017	-.0005	-.0028	-.0003	.0000	0	-.0022	+243	+13465
	Change%	-10.00	-9.04	-7.33	-13.73	-10.55	-26.20	.00	.00	-8.91	+11.11	+5.22
NACT	Report	6	.0556	.0275	.0043	.0280	.0003	.0000	0	.0275	2432	301853
IT1	Report	4	.2208	.1091	.0063	.1117	.0004	.0000	0	.1102	2504	96276
IT1	Baseline	4	.1482	.0741	.0192	.0740	.0002	.0000	0	.0737	2528	96276
	Delta	0	+.0726	+.0349	-.0129	+.0376	+.0002	.0000	0	+.0364	-24	0
	Change%	.00	+48.99	+47.11	-66.94	+50.90	+102.00	.00	.00	+49.39	-9.5	.00

Validate the new managed environment's performance through the use of *CICS PA's* comparison reports with the baseline.

Availability workload management

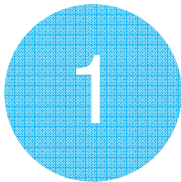


A screenshot of a 'Clone a CICS region' dialog box. It contains the following fields and text:

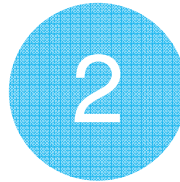
- It is recommended that applid and MAS name match
- New APPLID: IVDZEJ09
- New CICS Sysid: EJ09
- New MAS Name: REDDVA43
- New Description: Region cloned from REDDVA42 by CICS DA
- Specify the start policy for your new CICS region.
 - Data Set: USER.PROCLIB (with a 'Browse' button)
 - Member Name: REDDVA43

Buttons at the bottom include '< Back', 'Next >', 'Finish', and 'Cancel'.

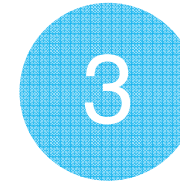
A screenshot of a 'CICS Performance Analyzer Transaction Profiling' report. The report shows performance data for various transactions (Tran) including DE1, SC1, PS2, BACT, and IT1. The data is presented in a table with columns for #Tasks, Avg Response Time, Avg Dispatch Time, Avg User CPU Time, Avg Suspend Time, Avg Wait Time, Avg FC Wait Time, PC90th, IR Wait, SC90th, and SC310th. Each transaction row includes Report, Baseline, Delta, and Change# values.



Understand the system & application's performance and topology

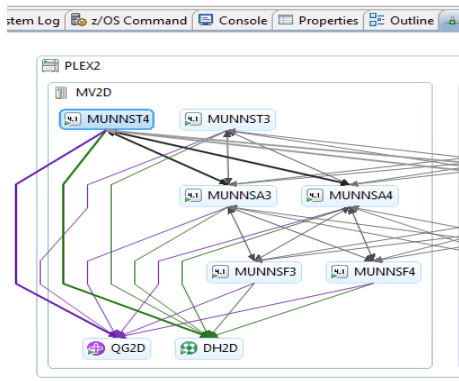


Extend the environment and **implement** workload management definitions



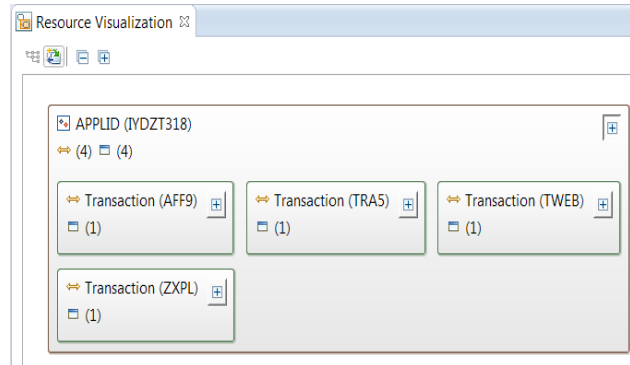
Validate the results

Availability workload management: *Understand*



1

CICS DA allows you to understand the current **system topology**



2

CICS IA details the **application architecture** and can list **dependencies & affinities**. Affinities that cannot be resolved can be grouped into CICSplex SM **TRANGRPs**.

Response time measurement	Rate	Count	Min	Max	Average
DB Connect time	DBCON	6	1.9%	1.9%	1.9%
User Check time	USERCHK	6	1.0%	1.0%	1.0%
Supervisor time	SUPVSR	6	96.4%	96.4%	96.4%
Dispatch wait time	DISPATCH	5	0.5%	0.5%	0.5%

3

CICS PA can create a **performance baseline** through CPU, Response Time & Storage **summary reports**.

Availability workload management: *Implement*

2

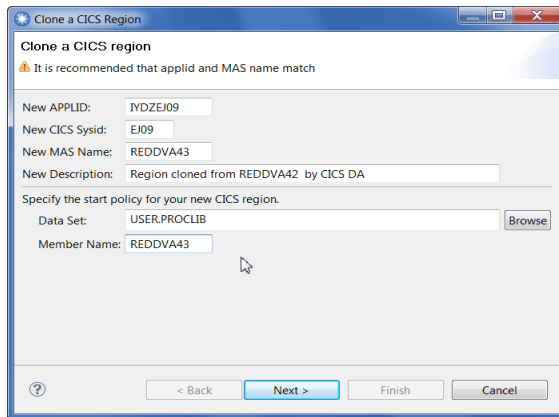
Implement WLM definitions in *CICS CM* which can include the **TRANGRPs** created through *CICS IA*'s affinity analysis.

```

Administrate Utilities Tools List View Help
CICSVR VSAM sphere list Row 1 to 3 of 3
Command ==>
Select one or more VSAM spheres, then select an action.
N Use default parameters for selected spheres
S VSAM sphere Scan time (Local) RR bit
- CICSUSR.VSRI1.CICSDM01.CVR.LAB 14.160 12:28:36 N
CICSUSR.VSRI1.CICSDM01.DFHCS0 14.160 12:28:36 N
CICSUSR.VSRI1.CICSDM01.PART1.DFHCS0 14.160 12:28:36 N
***** Bottom of data *****
    
```

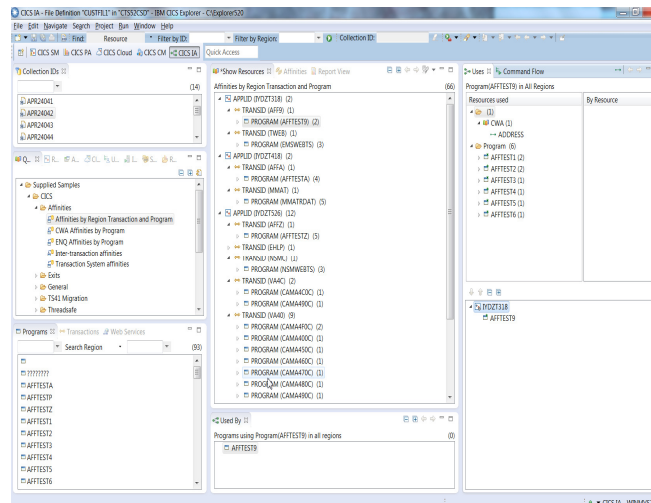
3

Ensure resource availability by using *CICS VR* to forward recover resources if a problem occurs. *CICS CM* can verify resources are appropriately enabled for this.



1

Extend the current system through *CICS DA*'s clone functionality.



Availability workload management: *Validate*

V5R1

CICS Performance Analyzer
Transaction Profiling

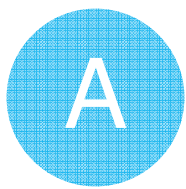
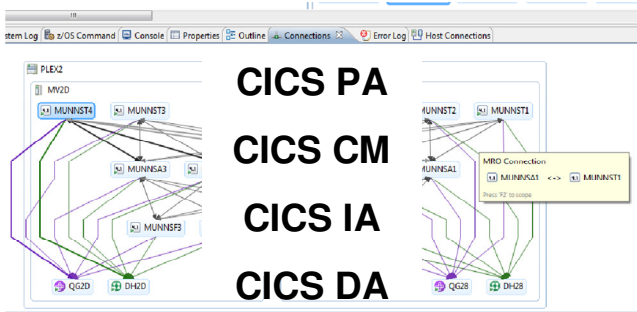
PROF0001 Printed at 13:54:44 8/02/2013 Report Data from 17:24:42 7/31/2013 to 18:29:59 7/31/2013 Page 1
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DE1	Baseline	3628	.0888	.0433	.0023	.0455	.0008	.0000	0	.0442	2205	155273
	Delta	-2320	+.0208	+.0099	+.0008	+.0109	+.0000	.0000	0	+.0108	+367	+4184
	Change%	-63.95	+23.52	+23.04	+37.80	+24.00	+10.27	.00	.00	+24.40	+16.64	+2.69
SC1	Report	12	.0175	.0082	.0017	.0093	.0005	.0000	0	.0086	5008	142952
SC1	Baseline	44	.0893	.0425	.0038	.0467	.0015	.0000	0	.0444	2588	233438
	Delta	-32	-.0717	-.0343	-.0020	-.0374	-.0009	.0000	0	-.0358	+2419	-90486
	Change%	-72.73	-80.33	-80.69	-53.63	-80.03	-64.50	.00	.00	-80.65	+93.48	-38.76
PS2	Report	18	.0463	.0221	.0033	.0241	.0008	.0000	0	.0230	2432	271272
PS2	Baseline	20	.0509	.0239	.0038	.0269	.0011	.0000	0	.0252	2188	257806
	Delta	-2	-.0046	-.0017	-.0005	-.0028	-.0003	.0000	0	-.0022	+243	+13465
	Change%	-10.00	-9.04	-7.33	-13.73	-10.55	-26.20	.00	.00	-8.91	+11.11	+5.22
NACT	Report	6	.0556	.0275	.0043	.0280	.0003	.0000	0	.0275	2432	301853
IT1	Report	4	.2208	.1091	.0063	.1117	.0004	.0000	0	.1102	2504	96276
IT1	Baseline	4	.1482	.0741	.0192	.0740	.0002	.0000	0	.0737	2528	96276
	Delta	0	+.0726	+.0349	-.0129	+.0376	+.0002	.0000	0	+.0364	-24	0
	Change%	.00	+48.99	+47.11	-66.94	+50.90	+102.00	.00	.00	+49.39	-.95	.00

Validate the new managed environment's performance through the use of *CICS PA's* comparison reports with the baseline.

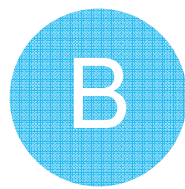
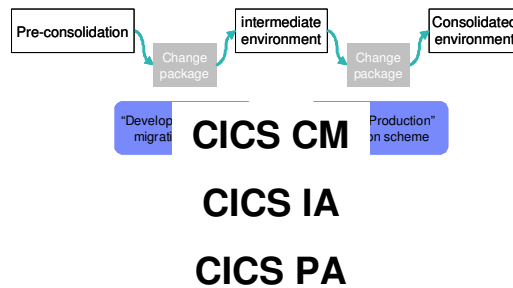
Consolidation

Region Consolidation to reduce CPU utilization (up to 10%) and management overhead



Step 1

Analysis and planning



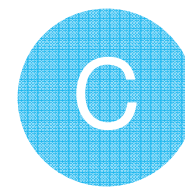
Step 2

Implementation & tuning

VSR1M0 CICS Performance Analyzer Transaction Profiling

PROF001 Printed at 13:54:44 8/02/2012 Report Data from 15:24:42 7/31/2012 to 16:29:59 7/31/2012 Page 1 Baseline Data from 16:17:32 7/31/2012 to 16:44:59 7/31/2012

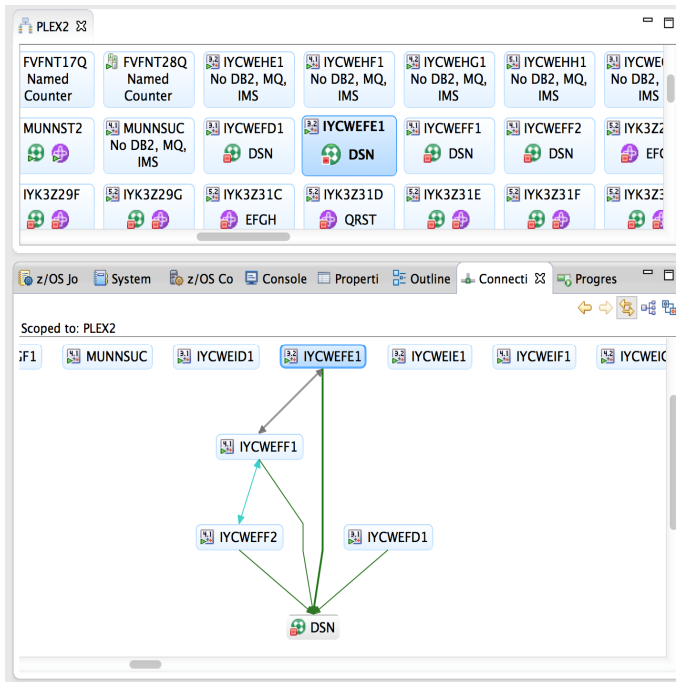
Tran	#Tasks	Avg Response Time	Avg Dispatch Time	Avg User CPU Time	Avg Suspend Time	Avg DispWait Time	Avg FC Wait Time	Avg I/R Wait Time	Avg SC24ORW Count	Avg SC31ORW Count	Avg SC31ORW4 Count
DEI Report	1308	1597	0532	0032	0564	0009	0000	0	0.550	2572	159457
DEI Baseline	3628	0888	0433	0023	0455	0008	0000	0	0.442	2205	155273
DEI Delta	-2320	+0208	+0099	+0008	+0109	+0000	0000	0	+0108	+367	+4184
DEI Changept	-63.95	+23.52	+23.04	+37.80	+24.00	+10.27	00	.00	+24.40	+16.64	+5.69
FAP Report	12	0175	0082	0017	0093	0005	0000	0	0.086	5008	142952
FAP Baseline	44	0893	0472	0000	0000	0000	0000	0	0.444	2588	233438
FAP Delta	-32	-0717	-0000	-0000	-0000	-0000	-0000	0	-0.358	+2419	-90486
FAP Changept	-72.73	-80.33	-80	0000	0000	0000	0000	00	-80.65	+23.48	-38.76
FAP3 Report	18	0463	021	0000	0000	0000	0000	0	0.230	2432	271372
FAP3 Baseline	20	0509	021	0000	0000	0000	0000	0	0.252	2188	257806
FAP3 Delta	-2	-0046	-0000	0000	0000	0000	0000	0	-0.022	+243	+13465
FAP3 Changept	-10.00	-8.04	-7	0000	0000	0000	0000	00	-8.91	+11.11	+5.22
SBA1 Report	6	0556	0275	0043	0280	0003	0000	0	0.275	2432	301853
OE11 Report	4	2208	1091	0063	1117	0004	0000	0	1.102	2504	96276
OE11 Baseline	4	1482	0741	0192	0740	0002	0000	0	0.737	2528	96276
OE11 Delta	0	+0726	+0349	-0129	+0376	+0002	0000	0	+0364	-24	0
OE11 Changept	.00	+48.99	+47.11	-66.94	+50.90	+102.00	00	.00	+49.39	-30	0.00



Step 3

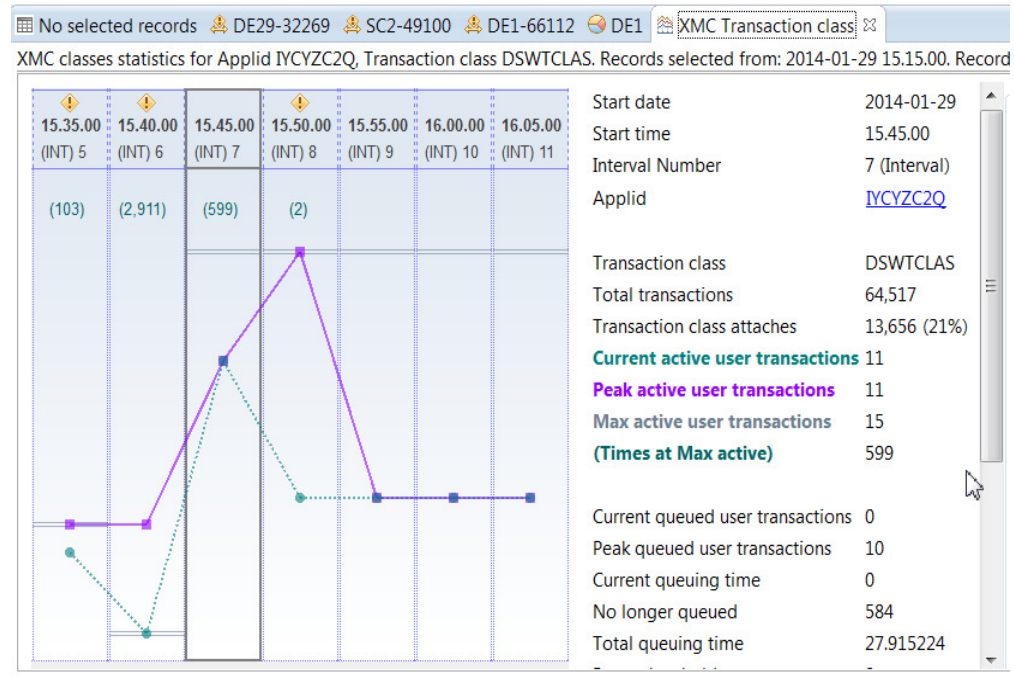
Validation

Analysis and Planning: System



1

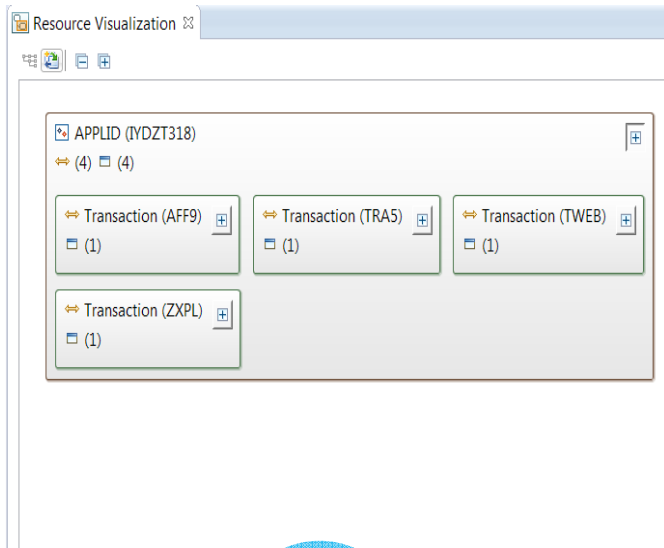
Discover the system **topology** with *CICS DA* to help understand system **Architecture** and **Availability** considerations



2

Analyse CICS **utilization** of CPU and Storage with *CICS PA* to assist with scalability and performance considerations

Analysis and Planning: Applications



1

Use *CICS DA* and *CICS IA* to understand the **Architecture** and **Availability** of applications

2

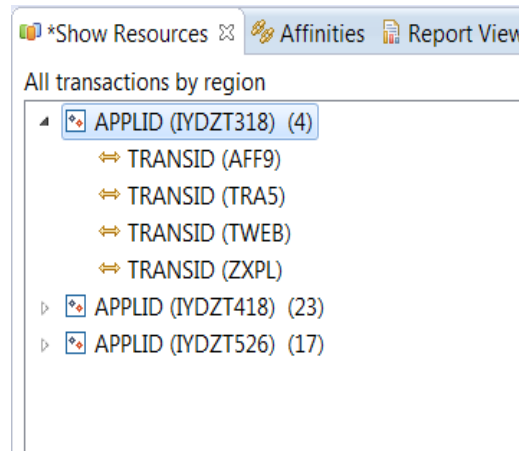
CICS CM and *CICS IA* shine the light on **Resource dependencies**

The screenshot shows a table with columns: Alert description, Start date, Start ti..., and Applid. The table lists several critical alerts related to temporary storage, maximum active transactions, and enqueue waits.

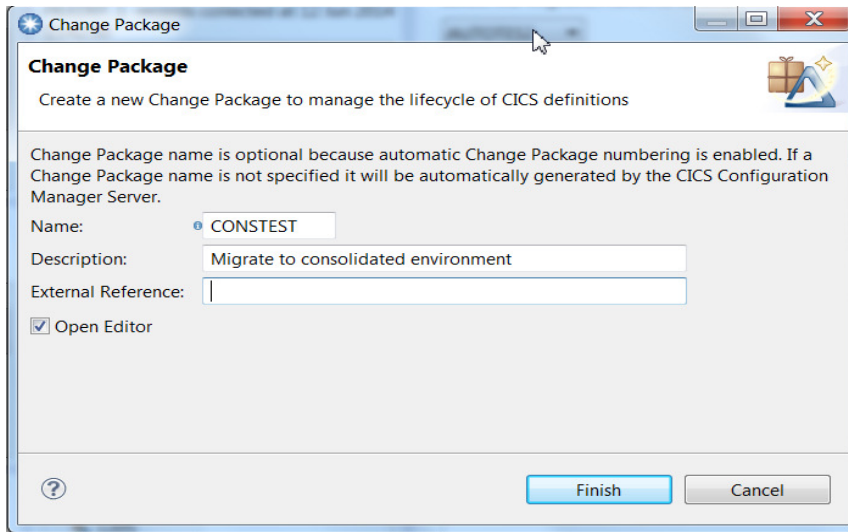
Alert description	Start date	Start ti...	Applid
⚠ Critical			
⚠ Temporary storage: buffer waits on	2014-01-29	15.45.00	IYCYZC2Q I
⚠ Maximum active transactions in clas	2014-01-29	15.45.00	IYCYZC2Q I
⚠ Enqueues waited in ENQ pool - loca	2014-01-29	15.45.00	IYCYZC2Q I
⚠ Temporary storage: buffer waits on	2014-01-29	15.40.00	IYCYZC2Q I
⚠ Maximum active transactions in clas	2014-01-29	15.40.00	IYCYZC2Q I
⚠ Enqueues waited in ENQ pool - loca	2014-01-29	15.40.00	IYCYZC2Q I
⚠ Temporary storage: buffer waits on	2014-01-29	15.35.00	IYCYZC2Q I
⚠ Maximum tasks reached	2014-01-29	15.35.00	IYCYZC2Q I
⚠ Maximum active transactions in clas	2014-01-29	15.35.00	IYCYZC2Q I
⚠ Enqueues waited in ENQ pool - loca	2014-01-29	15.35.00	IYCYZC2Q I

3

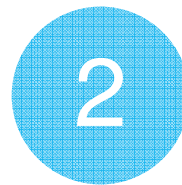
Measure the **performance** using statistics and alerts in *CICS PA*



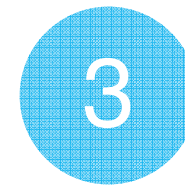
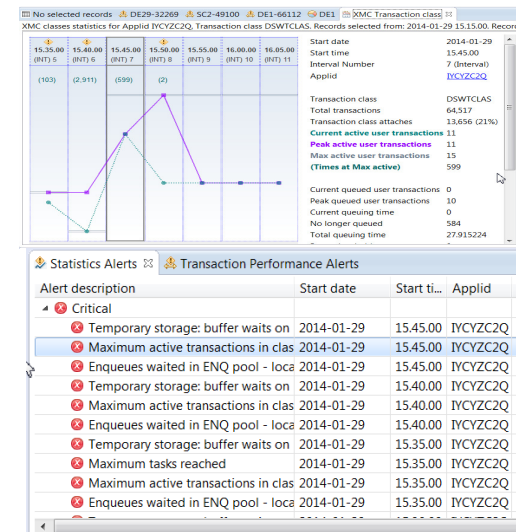
Implementation and Testing



Create a **resource package** based on Information from *CICS CM* and *CICS IA*



Ready and **migrate** the package to the target consolidated environment



Test the system and **tune** based on *CICS PA* alerts and statistics

Validation

V5R1 CICS Performance Analyzer Transaction Profiling

PROF0001 Printed at 13:54:44 8/02/2013 Report Data from 17:24:42 7/31/2013 to 18:29:59 7/31/2013 Page 1
 Baseline Data from 16:17:32 7/31/2013 to 16:44:59 7/31/2013

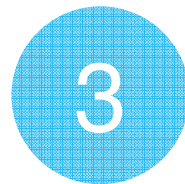
Tran		Avg #Tasks	Avg Response Time	Avg Dispatch	Avg User CPU	Avg Suspend	Avg Dispatch Wait	Avg FC Wait	Avg ECAMR	Avg IR Wait	Avg SC24UHW	Avg SC31UHW
DE1	Report	1308	.1097	.0532	.0032	.0564	.0009	.0000	0	.0550	2572	139457
DE1	Baseline	3628	.0888	.0433	.0023	.0455	.0008	.0000	0	.0442	2205	155273
	Delta	-2320	+.0208	+.0099	+.0008	+.0109	+.0000	.0000	0	+.0108	+367	+4184
	Change%	-63.95	+23.52	+23.04	+37.80	+24.00	+10.27	.00	.00	+24.40	+16.64	+2.69
SC1	Report	12	.0175	.0082	.0017	.0093	.0005	.0000	0	.0086	5008	142952
SC1	Baseline	44	.0893	.0425	.0038	.0467	.0015	.0000	0	.0444	2588	233438
	Delta	-32	-.0717	-.0343	-.0020	-.0374	-.0009	.0000	0	-.0358	+2419	-90486
	Change%	-72.73	-80.33	-80.69	-53.63	-80.03	-64.50	.00	.00	-80.65	+93.48	-38.76
PS2	Report	18	.0463	.0221	.0033	.0241	.0008	.0000	0	.0230	2432	271272
PS2	Baseline	20	.0509	.0239	.0038	.0269	.0011	.0000	0	.0252	2188	257806
	Delta	-2	-.0046	-.0017	-.0005	-.0028	-.0003	.0000	0	-.0022	+243	+13465
	Change%	-10.00	-9.04	-7.33	-13.73	-10.55	-26.20	.00	.00	-8.91	+11.11	+5.22
NACT	Report	6	.0556	.0275	.0043	.0280	.0003	.0000	0	.0275	2432	301853
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IT1	Baseline	4	.1482	.0741	.0192	.0740	.0002	.0000	0	.0737	2528	96276
	Delta	0	+.0726	+.0349	-.0129	+.0376	+.0002	.0000	0	+.0364	-24	0
	Change%	.00	+48.99	+47.11	-66.94	+50.90	+102.00	.00	.00	+49.39	-.95	.00

- IBM Lab benchmark demonstrated...*
- Consolidate 30 regions down to 10*
 - Decrease CPU usage by 10%*
 - Reduce the management burden by 2/3*
 - Maintain the same workload*

CICS PA can create **comparisons** of the previous baseline performance and the current system

*Test conducted under lab conditions – For further information contact IBM

Cloud Enablement



Support CICS cloud initiatives to simplify system management and rapid application deployment.

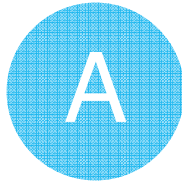


Three steps to Cloud enablement

Support CICS cloud initiatives to simplify system management and rapid application deployment.

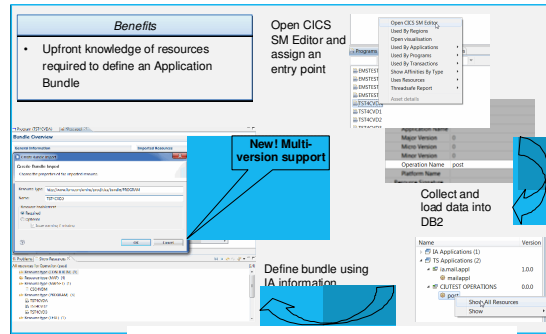


CICS IA
CICS CM

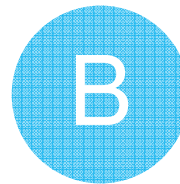


Step 1

Analysis and definition of CICS cloud **Applications**

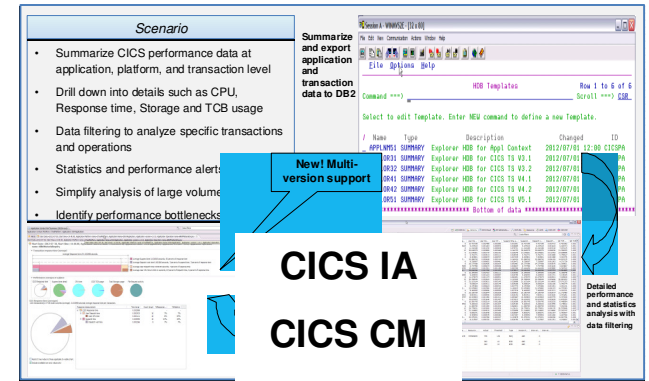


CICS DA, CICS IA
CICS CM, CICS PA

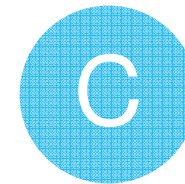


Step 2

Plan and build CICS cloud **Platforms**



CICS IA
CICS CM
CICS PA



Step 3

Deploy and manage CICS cloud **Applications and Platforms**

Solution Packs for CICS and z/OS

CICS Optimization Solution Pack for z/OS V5.2 (Just refreshed)

Quickly optimize performance and availability of CICS systems and applications with CICS Interdependency Analyzer, CICS Deployment Assistant, CICS Performance Analyzer, CICS Configuration Manager

CICS Modernization Solution Pack for z/OS V5.2 (Just refreshed)

Understand deployed CICS application and system resources, connect from non-mainframe devices, and create CICS infrastructure to support the increased workload with CICS Interdependency Analyzer, CICS Deployment Assistant, CICS Transaction Gateway for z/OS

Upgrade from standalone products using trade-ups

IBM Problem Determination Solution Pack for z/OS V1.1 (4Q refresh)

Cost effective problem analysis for z/OS sub-systems and languages with both GUI & 3270 interface with File Manager, Fault Analyzer, Debug Tool for z/OS, Workload Simulator, Hour Glass, Data Set Commander

IBM Problem Determination Testing Solution Pack for z/OS V1.1 (4Q refresh)

Reduce testing time, improve application reliability and user diagnosis capabilities, and improving user's ability to regulate and monitor testing activities with Debug Tool, Workload Simulator, Hour Glass

IBM Problem Determination Modernization Solution Pack for z/OS V1.1

Address your problem analysis needs and provides tools that decrease development time, improve performance and reliability and reduce diagnosis time with Application Performance Analyzer, Debug Tool, Fault Analyzer, File Manager © 2014 IBM Corporation

Client Resources

- Web pages updated for V5.2 and V9.1 – translated versions available
 - <http://ibm.com/cics/tools>
- Updated datasheets on web pages
- Announcement letters – CICS TS V5.2 [link](#), CICS Tools V5.2 [link](#), CICS TG V9.1 [link](#)
- Launch presentations and replays – CICS community – CICS V5.2 launch wiki page
- Analyst report: IBM CICS Tools: Discovery and Optimization for the Next Generation [link](#)
- Prezi: [Threadsafty & Consolidation - extracting optimum performance from CICS](#)
- Social media
 - Catch up with CICS on Facebook at [CICS Hursley](#) or [WebSphere and CICS Support](#)
 - Check out our CICS videos on [YouTube](#)
 - Follow IBM_CICS on [Twitter](#)
<http://www.ibm.com/support/docview.wss?uid=swg21384915> or
 - See multiple channels by using the [CICS Social Media Aggregator](#).
 - [CICS and WebSphere Support Blog](#)
- Subscribe to
 - [Quarterly Support Newsletter](#) for CICS Transaction Server and CICS Tools
 - CICSbuzz <http://www-01.ibm.com/software/htp/cics/enews/>

CICS Transaction Gateway V9.1



Resources & Support - CICS TG V9.1

CICS TG Version 9.1 Announcement letter ENUS214-263



<https://ibm.biz/cicstg91announce>

IBM CICS Transaction Gateway V9.1 delivers mobile integration, connectivity modernization, and security enhancements

IBM United States Software Announcement 214-263
July 1, 2014

CICS TG V9.1 - on-line IBM Knowledge Centers

Scenario sections provide useful example topologies with configuration details

CICS TG for z/OS V9.1

http://www.ibm.com/support/knowledgecenter/SSZHJ2_9.1.0

CICS Transaction Gateway for Multiplatforms 9.1.0 > welcome

CICS Transaction Gateway for Multiplatforms Version 9 Release 1

CICS® Transaction Gateway delivers access to CICS applications through standards-based interfaces, with little or no change to CICS systems and applications. CICS Transaction Gateway for Multiplatforms delivers scalable, multi-user access to CICS Transaction Server for z/OS, CICS TS for VSE, TXSeries, and CICS TS for i and is ideal for less demanding environments or those managed by non-mainframe system administrators.

CICS Transaction Gateway for Multiplatforms V9.1 builds on the extended scalability, application interoperability, and flexible, secure topologies delivered in previous releases.

CICS TG for Multiplatforms V9.1 and CICS TG Desktop Edition V9.1

http://www.ibm.com/support/knowledgecenter/SSZHFx_9.1.0

IBM Resources

- Launch presentations and replays – CICS community – CICS V5.2 wiki page
- CICS V5.2 Messaging Guide – to be available on wiki
- Impact presentations with CICS V5.2 content – to be available on wiki
- Sales plays and kits (to be updated for V5.2)
 - CICS New Workload – [link](#)
 - CICS and PD Tools – [link](#)
 - CICS TS – [link](#)
 - CICS Tools – [link](#)
 - PD Tools Family master sales [link](#)

CICS Tools V5.2 Product details

CICS Interdependency Analyzer for z/OS V5.2



Application insight

What's new in CICS IA V5.2?

- Support for CICS® Transaction Server V5.2
- Enhanced cloud application analysis
- New resource use and dependencies by platform
- New visualization of TCB, region, and application switches
- New plug-in view for Program Details
- New affinity analysis in the plug-in
- New Dependency collection sampling technique
- Deeper thread-safe analysis

CICS IA enables you to...

- Visualize application flow and structure
- Identify mobile and web service candidates
- Identify threadsafe / non-threadsafe programs
- Isolate and remove affinities
- Speed CICSplex® SM workload management
- Advanced CICS command flow analysis

Command	Function	Type	Object	Object Len	Offset	Program	Use	Qual	Inst
MQ	CLIST	CF	CFMAMP	8	000001	000071	3		Y
CICS	INITIAL	CF	CONFMTL	3	000001	000071	3		Y
MQ	INQUIRE	CF	CQUCMP	8	000038	000071	8		Y
CICS	EXEC	CF	CFMAMP	8	000001	000071	3		Y
LIB	LINK	CF	CFMAMP	8	000038	000071	2		Y
MQ	SEND	CF	CQUCMP	8	000038	000071	2		Y
CICS	RECORD	CF	CQUCMP	7	000038	000071	6		Y
CICS	INITIAL	CF	CONFMTL	3	000001	000071	3		Y
LIB	LINK	CF	CQUCMP	7	000038	000071	0		Y
CICS	SEND	CF	CQUCMP	7	000038	000071	2		Y
LIB	SEND	CF	CQUCMP	7	000038	000071	4		Y
LIB	SEND	CF	CONFMTL	3	000001	000071	2		Y
LIB	SEND	CF	CQUCMP	7	000038	000071	0		Y
LIB	SEND	CF	CONFMTL	3	000001	000071	2		Y

CICS Deployment Assistant for z/OS V5.2



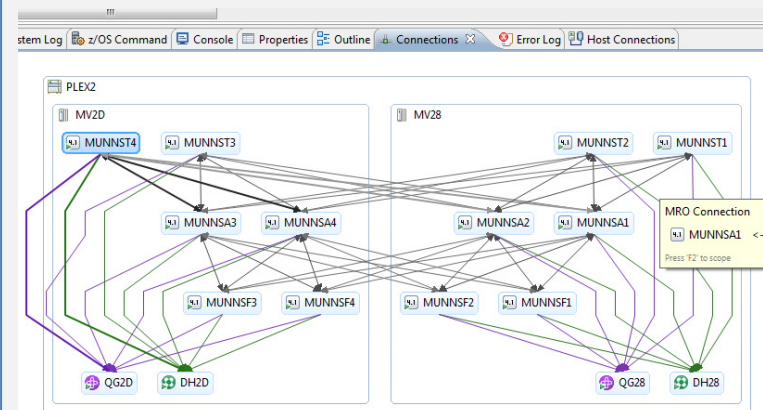
The power of discovery

What's new in CICS DA V5.2?

- Support for IBM CICS Transaction Server V5.2
- New RESTful API to access model
- Cloning of unmanaged and cross-logical partition (LPAR) regions
- New Comparison view
- New TCP/IP usage report.

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
- Share model with other applications



CICS Performance Analyzer for z/OS V5.2



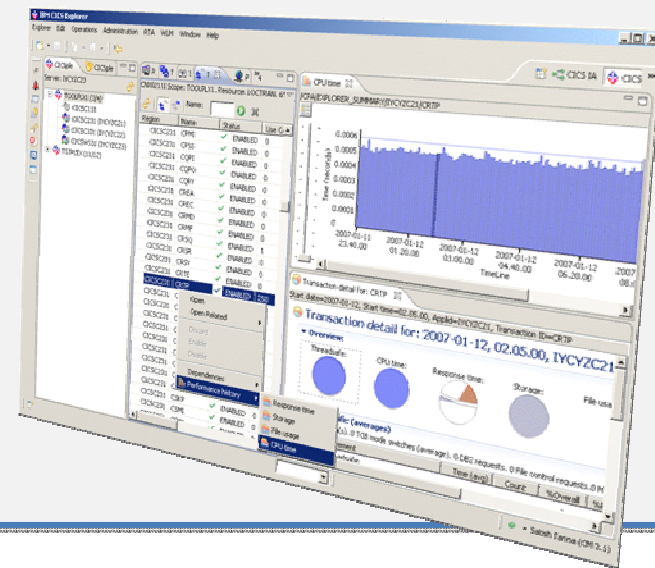
Performance insight

What's new in CICS PA V5.2?

- IBM CICS Transaction Server V5.2 support
- Performance summary reports for platforms and applications
- Multi-version analysis of dynamic mobile applications
- Reporting, visualization, statistics alerts and analysis enhancements
- Transaction Performance Alert plug-in view
- Visualization of the performance of individual transactions

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 V5.2



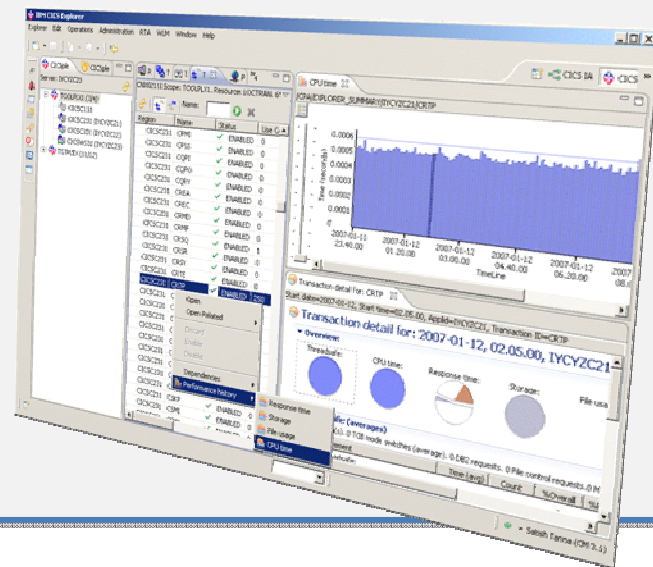
The value of control

What's new in CICS CM V5.2?

- Plug-in support for migration schemes
- New deployment analysis from plug-in
- New support for IBM CICSplex SM topology and workload management definitions
- New support for NIST SP800-131A security standard
- New migration of TCPIP SERVICE and IPCONN definitions for high availability connections

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 V5.2

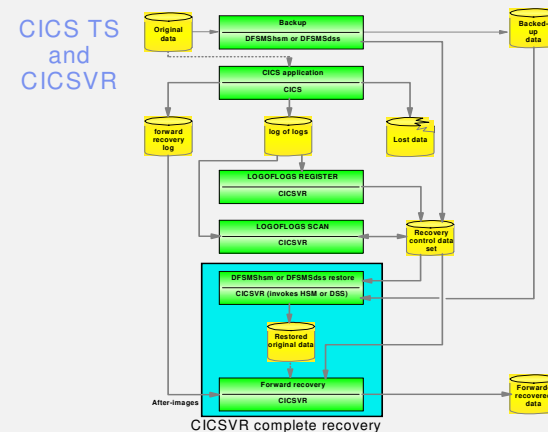
Reduce the risk to your data

What's new in CICS VR V5.2?

- CICS Transaction Server for z/OS V5.2 support
- Migration and coexistence enhancements
- Message and report enhancements
- Scavenger and registration 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
- Implement continuous availability solution



IBM Problem Determination Tools V13



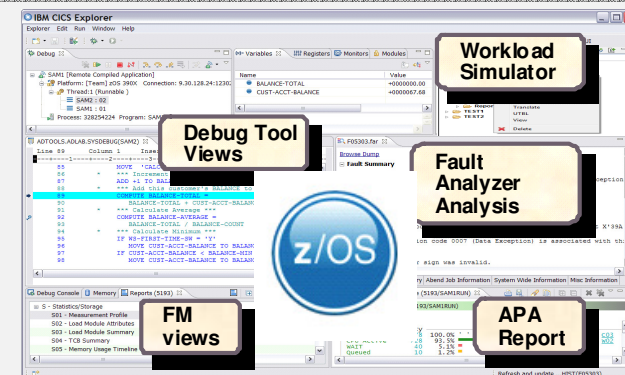
Tools to address your z/OS Development or System Programming needs

What's new in PD Tools V13?

- New **IBM Problem Determination Tools Studio** pre-packaged with plug-ins
- Significant improvements to Debug Tool, Fault Analyzer, File Manager, Application Performance Analyzer, Workload Simulator, HourGlass , and Data Set Commander
- Support for z/OS V2.1, DB2 V11, IMS V13, CICS TS 5.1, WASz 8.5, COBOL V5.1, Enterprise PLI V4.4, C/C++ for z/OS V2.1, Java V7, and RD/z V9.0
- Java enhancements for APA, DT and FA allowing PD Tools to work in a “mixed mode” environments

PD Tools provides ...

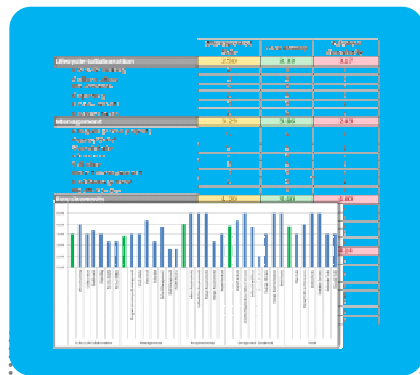
- Five tools addressing z/OS problem resolution needs - Debug Tool, Fault Analyzer, File Manager, Application Performance Analyzer and Workload Simulator
- Subsystem and language support traversing z/OS provided in a timely manner when subsystems and languages are updated
- Improved TCO with full function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



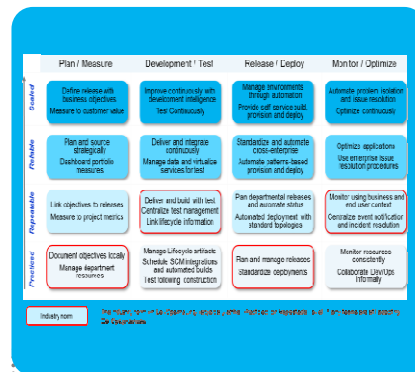
Scenarios

Prescription for DevOps adoption

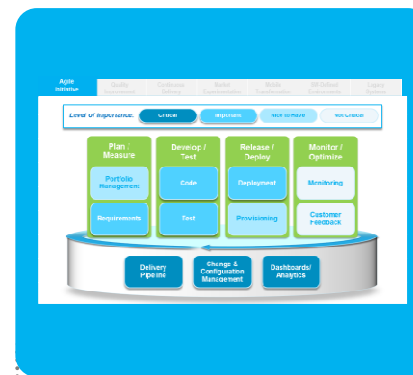
A maturity model approach: identify **pain points**, assess **current capabilities**, produce a heat map of **focus areas**, and establish a **roadmap** for execution



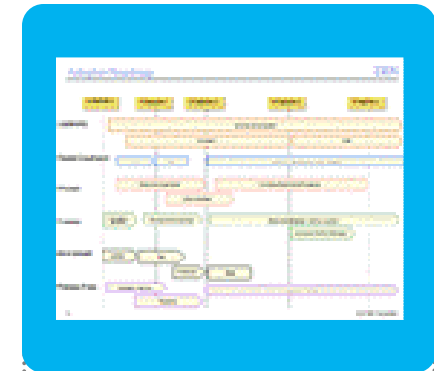
Identify key pain points in the delivery process



Assess current capabilities using the DevOps maturity model



Produce heat maps of capability gaps and areas of improvement to determine priority



Establish a roadmap with milestones and execution timelines



Using CICS IA data to identify mobile entry points

Benefits

- Upfront knowledge of resources required to define an Application Bundle

Open CICS SM Editor and assign an entry point

A screenshot of a context menu in the CICS SM Editor. The menu items include: Open CICS SM Editor, Used By Regions, Open visualisation, Used By Applications, Used By Programs, Used By Transactions, Show Affinities By Type, Uses Resources, Threadsafe Report, and Asset details. The 'Open CICS SM Editor' option is highlighted.

New! Multi-version support

A screenshot of the 'Create Bundle Import' dialog box in the CICS SM Editor. The 'Resource Type' is set to 'http://www.ibm.com/xmlns/prod/cics/bundle/PROGRAM'. The 'Name' field contains 'TST4CVD3'. Under 'Resource Enablement', 'Required' is selected. There is a checkbox for 'Issue warning if missing' which is checked. 'OK' and 'Cancel' buttons are at the bottom.

Define bundle using IA information

A screenshot of a table showing application details. The table has columns for 'Application Name', 'Major Version', 'Micro Version', 'Minor Version', 'Operation Name', and 'Platform Name'. The 'Operation Name' is 'post'.

Collect and load data into DB2

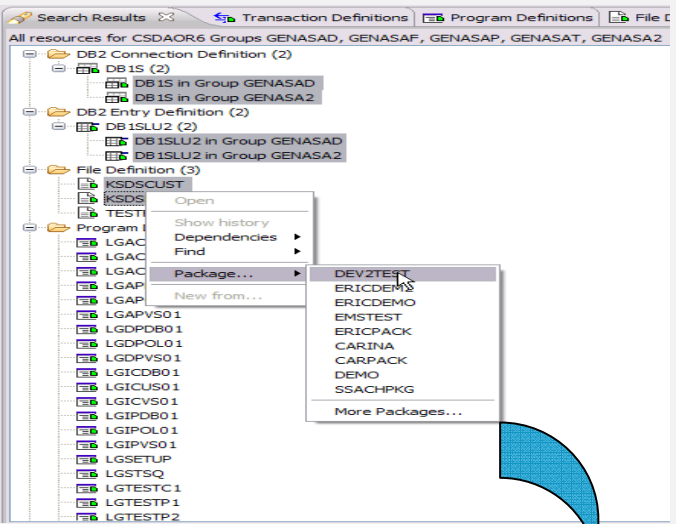
A screenshot of a tree view showing application bundles. The tree is organized into 'IA Applications (1)' and 'TS Applications (2)'. Under 'TS Applications (2)', there are 'ia.mail.appl' (version 1.0.0), 'mailappl', and 'CIUTEST OPERATIONS' (version 0.0.0). Under 'CIUTEST OPERATIONS', there is a 'post' resource. A context menu is open over the 'post' resource with options 'Show All Resources' and 'Show'.

Package and migrate CICS resource definitions with CICS CM

Scenario

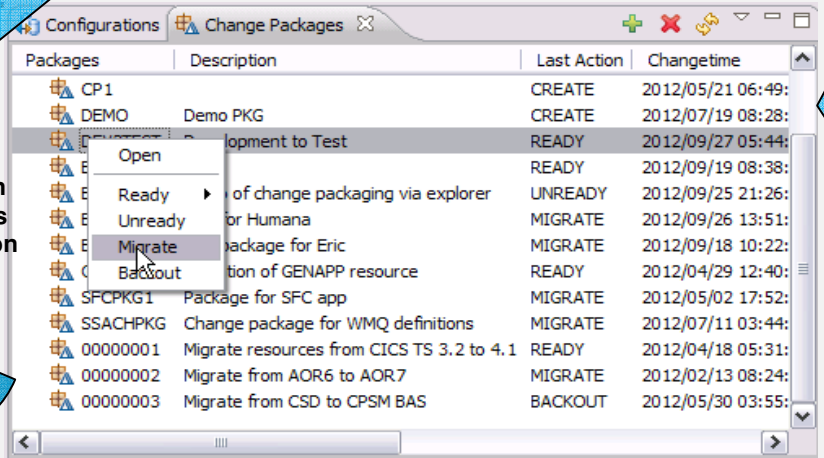
- Create Change Package
- Add resources
- Migrate Change Package
 - Can include transformation and approval
- Install resources in Target environment
- Less error prone promotion of resources
- Full audit trail and backout capability

Change package created for resources in Development repository



New! Multi-version support

Install definitions in CICS regions on production environment



Change package migrated to test environment

Operational Decision Manager for z/OS

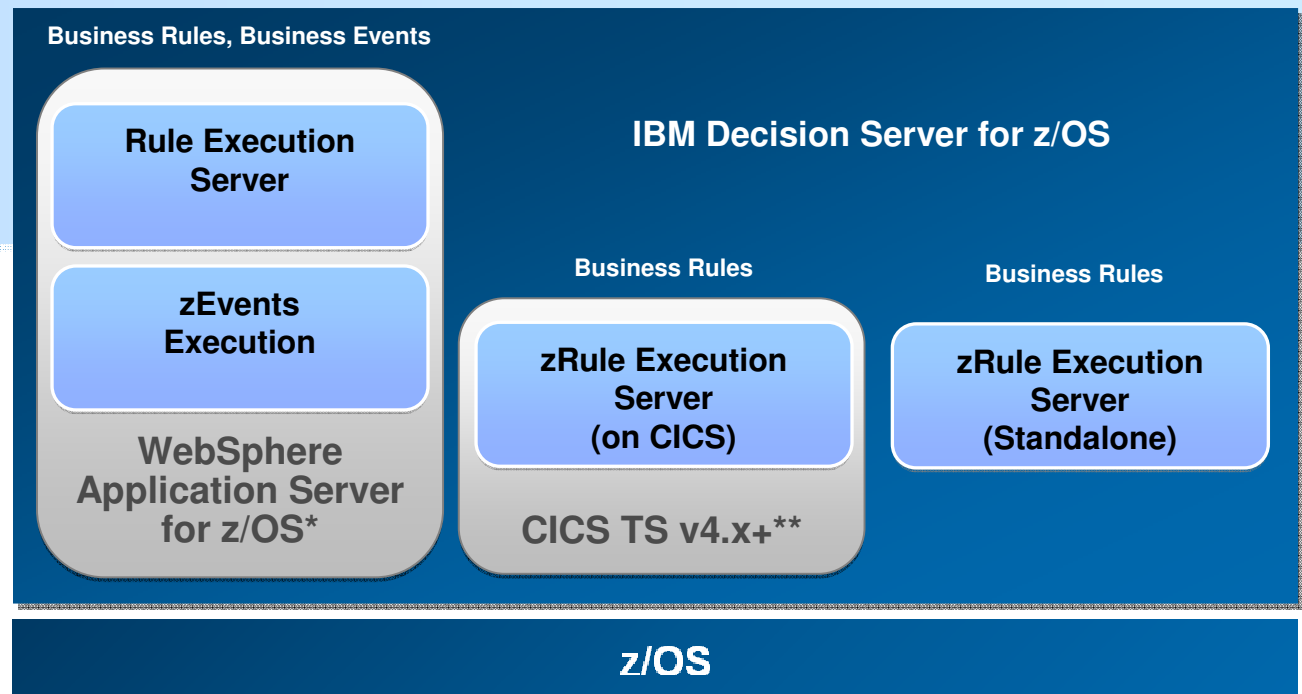
Event- and rule-enablement to deliver data analytics from dynamic applications

Decisions can be invoked from existing CICS and IMS applications

Runtime support for COBOL data types

Flexible runtime deployment to fit any System z environment:

- Deployed on WebSphere Application Server for z/OS
- Deployed on CICS TS 4.x+ and above (JVM server environment)
- Deployed standalone to z/OS



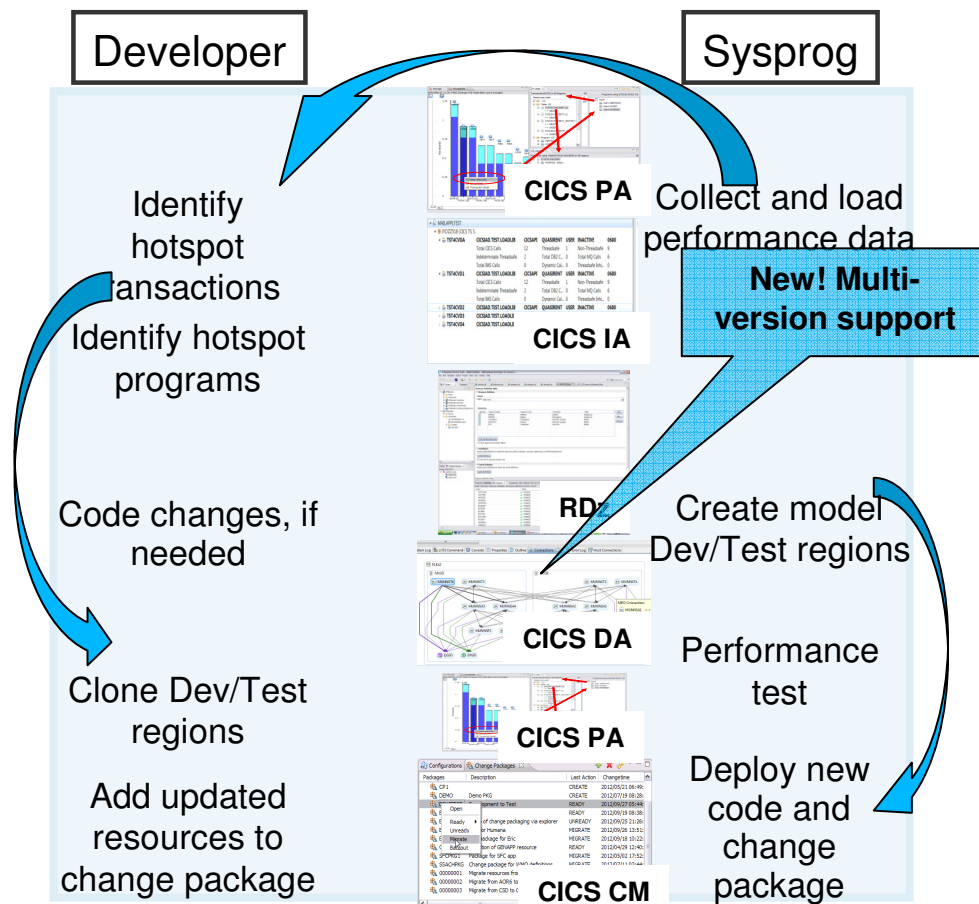
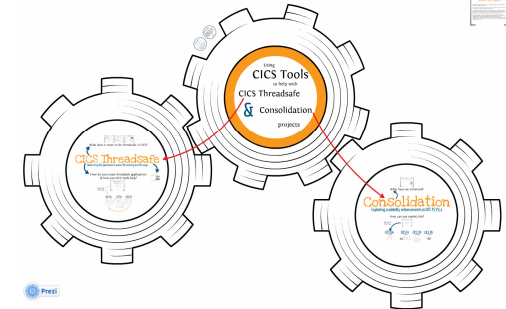
* WAS for z/OS limited use entitlement included with Decision Server

** CICS Transaction Server licenses purchased separately

Threadsafe Optimization

Threadsafe analysis and implementation to reduce CPU utilization by up to 15%

Extracting Optimum Performance from CICS



- Reduce CPU usage
- Defer capacity upgrades
- Improve response times
- Increase multi-processing

- Insight
- Analysis
- Change control

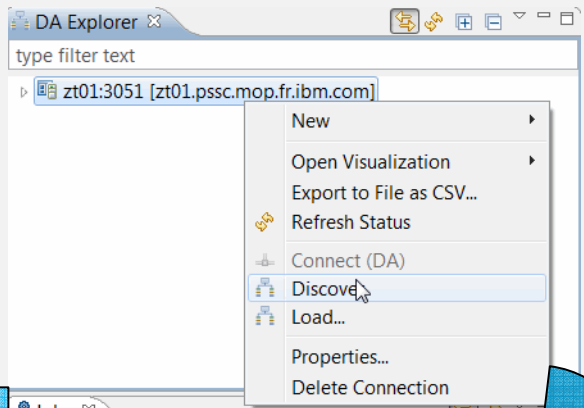
“By making only one major application threadsafe we were able to save 700 MIPS” Major US Bank

Implement Implement single point of control

Benefits

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

Discover



DA Explorer

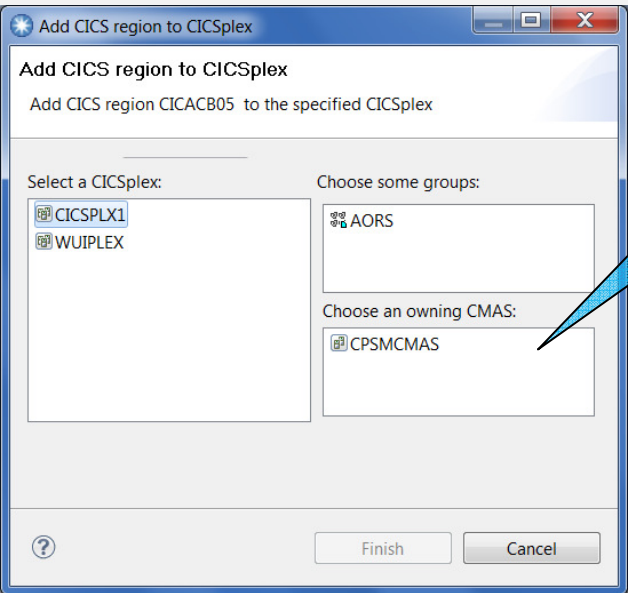
type filter text

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

New! Cloning of unmanaged regions

Visualize
Unmanaged regions



Add CICS region to CICSplex

Add CICS region CICACB05 to the specified CICSplex

Select a CICSplex:

- CICSPLEX1
- WUIPLEX

Choose some groups:

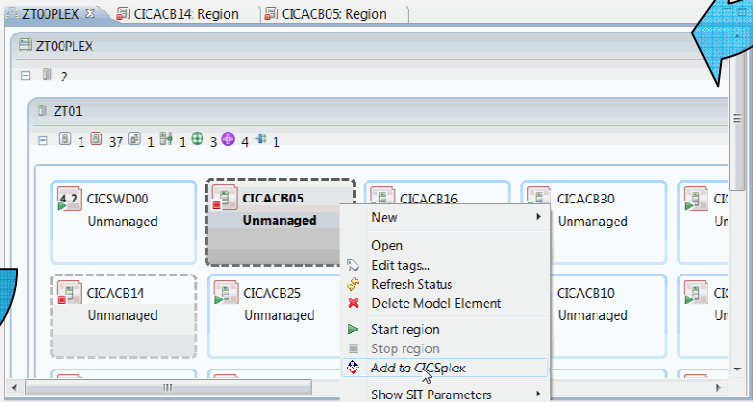
- AORS

Choose an owning CMAS:

- CPSMCMAS

Finish Cancel

Manage



ZTOOPLEX

ZTOOPLEX

ZT01

- CICSWD00 Unmanaged
- CICACB05 Unmanaged**
- CICACB14 Unmanaged
- CICACB16 Unmanaged
- CICACB25 Unmanaged
- CICACB30 Unmanaged
- CICACB10 Unmanaged

- New
- Open
- Edit tags...
- Refresh Status
- Delete Model Element
- Start region
- Stop region
- Add to CICSplex**
- Show SIT Parameters

CICS PA gives Platform and Application Performance insight

Scenario

- Summarize CICS performance data at application, platform, 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 and performance alerts
- Simplify analysis of large volumes of data
- Identify performance bottlenecks promptly

Summarize and export application and transaction data to DB2

New! Multi-version support

Drilldown to transaction or operation

Detailed performance and statistics analysis with data filtering

Command ==> _____ HDB Templates Row 1 to 6 of 6 Scroll ==> CSR

Select to edit Template. Enter NEW command to define a new Template.

/	Name	Type	Description	Changed	ID
_	APPLNM51	SUMMARY	Explorer HDB for Appl Context	2012/07/01 12:00	CICSPA
_	EXPLOR31	SUMMARY	Explorer HDB for CICS TS V3.1	2012/07/01 12:00	CICSPA
_	EXPLOR32	SUMMARY	Explorer HDB for CICS TS V3.2	2012/07/01 12:00	CICSPA
_	EXPLOR41	SUMMARY	Explorer HDB for CICS TS V4.1	2012/07/01 12:00	CICSPA
_	EXPLOR42	SUMMARY	Explorer HDB for CICS TS V4.2	2012/07/01 12:00	CICSPA
_	EXPLORS1	SUMMARY	Explorer HDB for CICS TS V5.1	2012/07/01 12:00	CICSPA

***** Bottom of data *****

Performance statistics of all JESs:

- CICS Response time: 0.02396 seconds
- Support time: 0.00000 seconds
- CICS TCB usage: 7%
- Task Storage usage: 7%
- File Request activity: 7%

Transaction Name	Response time (seconds)	Count	Response %	Support %
CICS	0.02396	10	7%	7%
User	0.00000	0	0%	0%
User CPU	0.00000	0	0%	0%
Support	0.00000	0	0%	0%
Support wait	0.00000	0	0%	0%

Start Time	Stop Time	Application Name	Application Version	AppID	Application Op.	Change TCB use	Chng.	User Chg.	User Chg.	User Chg.	Subscribed Data s.	Support	Dispatch	Dispatch	Dispatch	CP TCB	TS TCB	TS TCB	
2012-07-01 14:00:00	2012-07-01 14:00:00	CICSPAF001	1.0.0	CICSPAF001	MessageTransf.	0.00128	0	0.00128	0.00128	0.00128	0.00128	0.00128	0.00128	0.00128	0.00128	0.00128	0.00128	0.00128	0.00128

