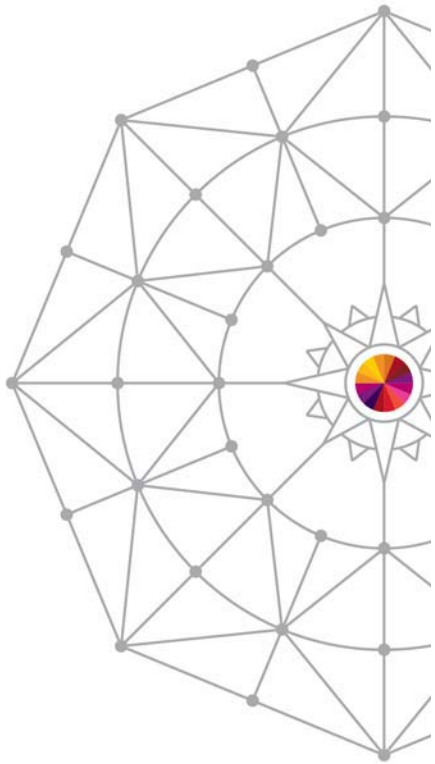
CICS Project Opening and Project Update

Andy Bates

CICS Transaction Server Product Manager

batesan@uk.ibm.com



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SHARE in Pittsburgh 2014

The world as we know it doesn't exist without Systems of Record

CICS: Trusted by 1000s of customer in 23 industries, spanning 75 countries
90% of the Global Fortune 100 Banking and Financial Services use CICS

Even though the world is awash in unstructured data, it's the transactional data that decision makers are focused on right now. And since the mainframe holds the vast majority of that data, it has a real role to play.

80%

of world's corporate data resides or originates on mainframes

IBM CICS Transaction Server V5

enterprise grade mixed language application serving

Service Agility

Runtime support for production ready web applications.

Integration with mobile applications.

Operational Efficiency

Increased system capacity and capability to achieve more with less.

Automatic control of critical resources using policies.

Cloud Enablement

Simplified system management and rapid application deployment.

On premise pattern based cloud deployment.

Monday

11:15 AM-12:15 PM

V5.2

15564: CICS TS V5.1 Technical Overview

Speaker: Steve Zemblowski

Project: CICS

Room 315 (David L. Lawrence Convention Center)

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IBM CICS Transaction Server V5.2

Announced, 7th April 2014 | GA, 13th June 2014

Service Agility

Integrates mobile capabilities and broadens the web programming model

without requiring additional middleware

Operational Efficiency

Support distributed security standards and automatically safeguard critical runtime resources

without requiring additional system code

Cloud Enablement

Deploy and manage several versions of a multi-program application and run them concurrently

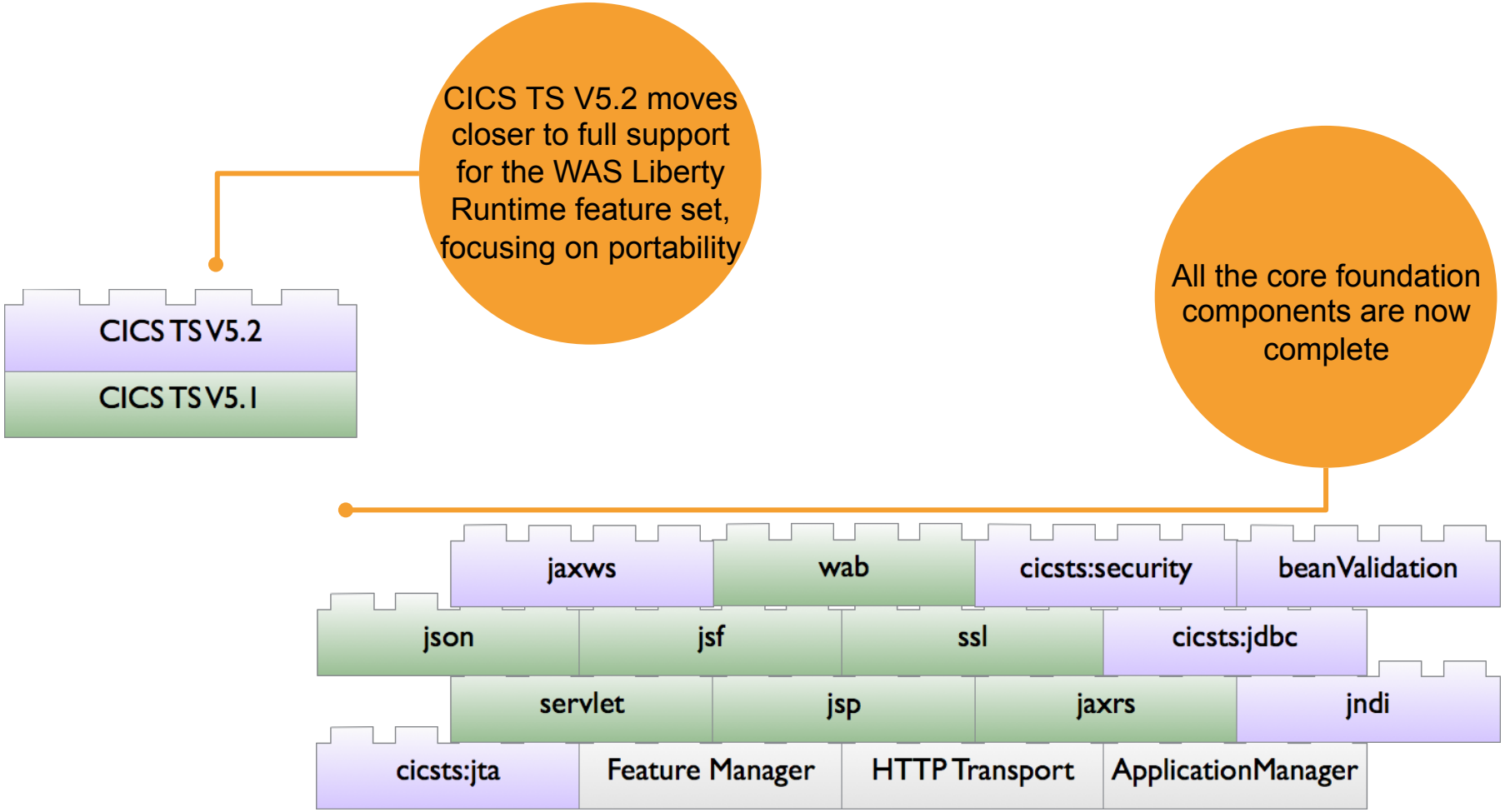
without requiring additional regions

+ Continuous enhancements to the solid foundation

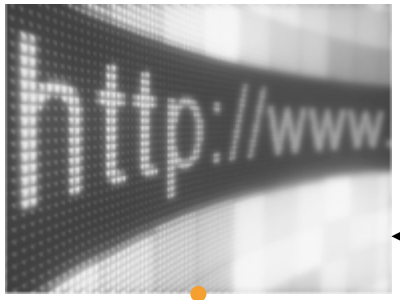
Service Agility

Integrates mobile capabilities and broadens the web programming model, ***without requiring additional middleware***

WebSphere Application Server Liberty Profile within CICS TS V5.2



Liberty Web Apps in CICS TS V5.2



CICS TS

JVM server

Liberty

Web App

JDBC

DB2

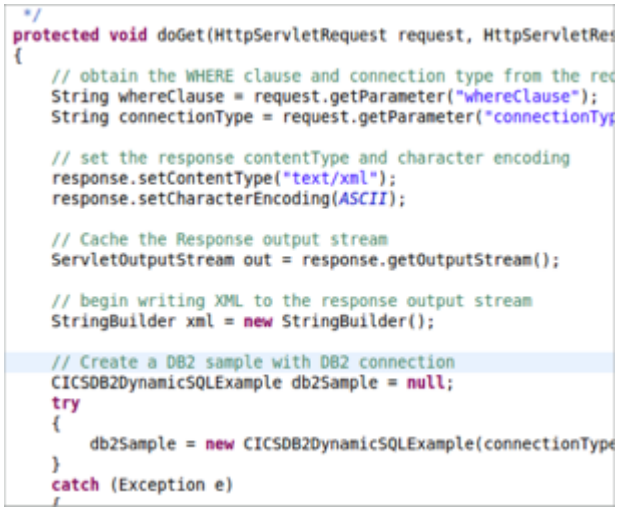
CICS Resources

Existing web interfaces developed using JSPs and Servlets can be easily moved into CICS

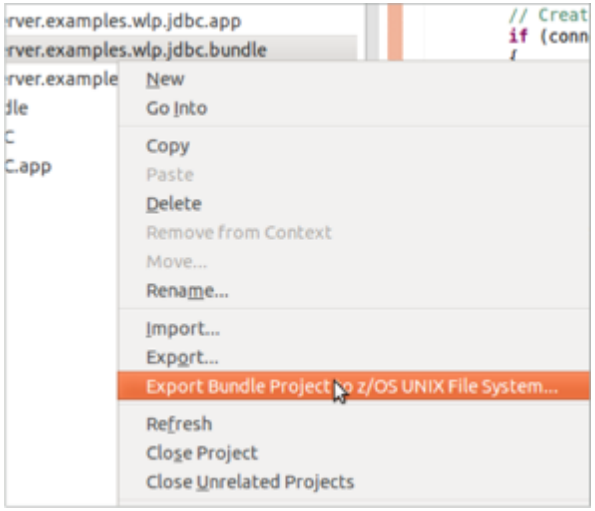
Direct access to DB2, providing application developers with two routes to the data

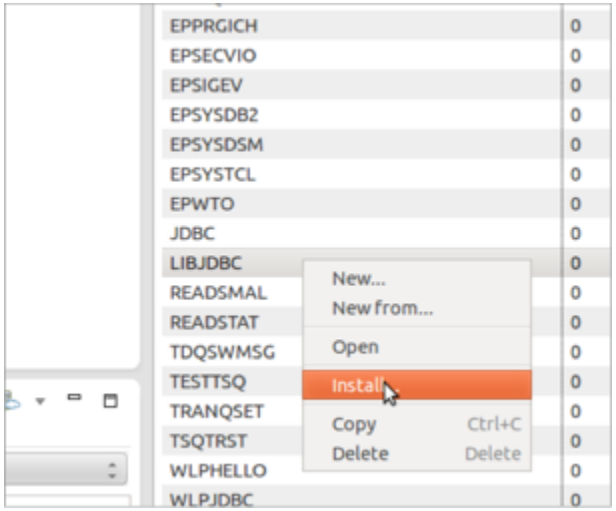
Liberty scenario

Move JSP or Servlet presentation code into CICS Transaction Server



```
 */
protected void doGet(HttpServletRequest request, HttpServletRes
{
    // obtain the WHERE clause and connection type from the rec
    String whereClause = request.getParameter("whereClause");
    String connectionType = request.getParameter("connectionTyp

    // set the response contentType and character encoding
    response.setContentType("text/xml");
    response.setCharacterEncoding(ASCII);

    // Cache the Response output stream
    ServletOutputStream out = response.getOutputStream();

    // begin writing XML to the response output stream
    StringBuilder xml = new StringBuilder();

    // Create a DB2 sample with DB2 connection
    CICSDB2DynamicSQLExample db2Sample = null;
    try
    {
        db2Sample = new CICSDB2DynamicSQLExample(connectionType
    }
    catch (Exception e)
```





A

Step 1

Modify application data logic to make JCICS API calls or direct JDBC calls, if required

B

Step 2

Package application into a EBA for deployment into CICS Liberty

C

Step 3

Install CICS application into CICS Liberty Server and enable using the CICS Explorer

Monday

1:30 PM-2:30 PM

15563: Web Apps using Liberty Profile Technology in CICS

Speaker: Ian Mitchell, IBM
Project: CICS
Room 315 (David L. Lawrence Convention Center)

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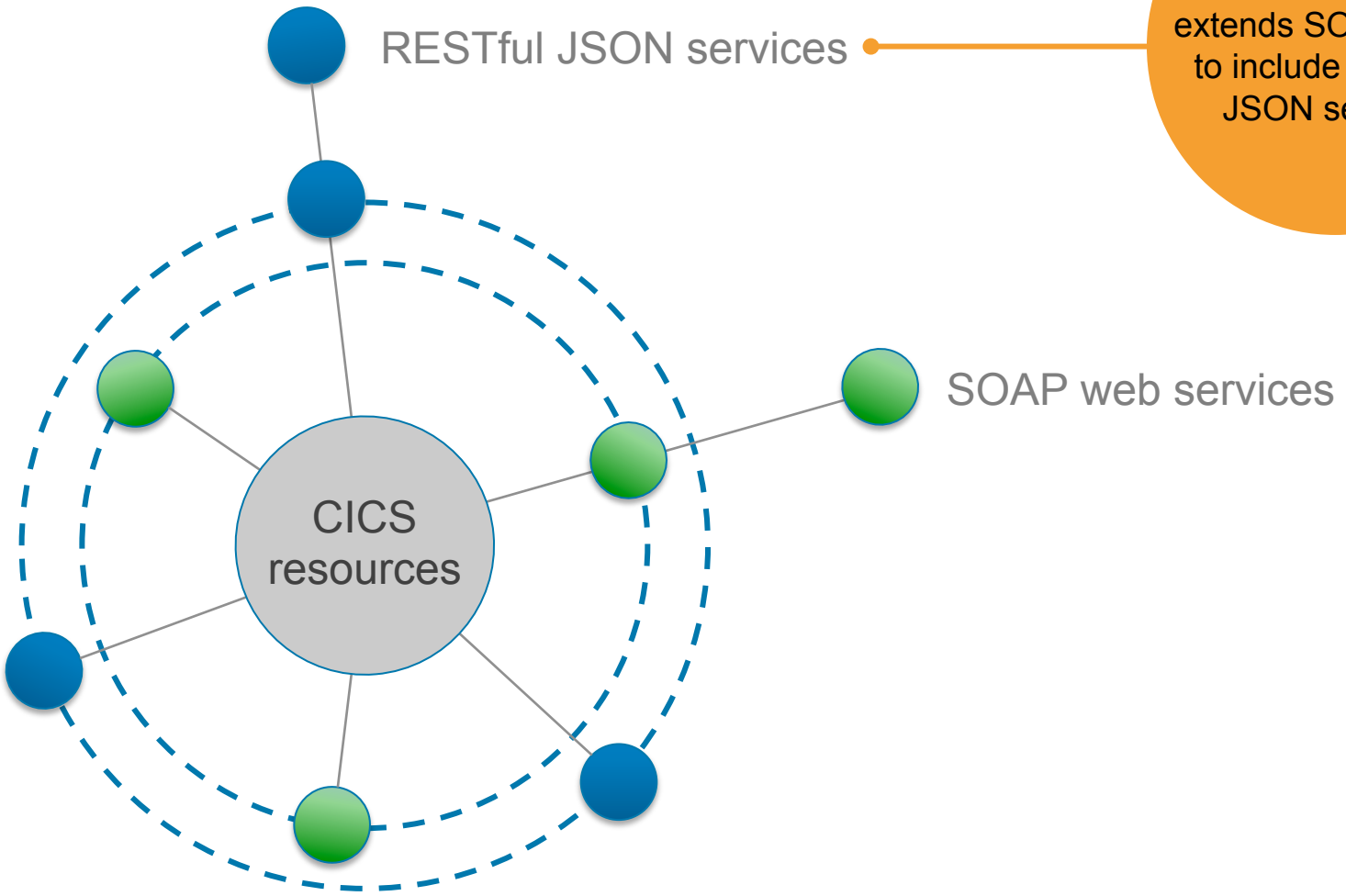
RESTful APIs and JSON parsing

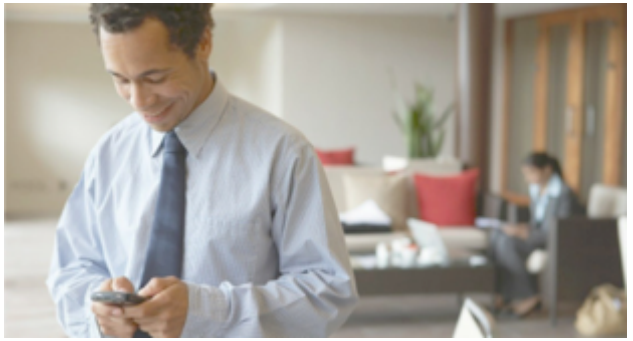


CICS TS V5.2 extends SOA support to include RESTful JSON services

Mobile scenario

Connect directly to CICS from Worklight using end-to-end JSON

```
function getCustomerDetails(custNum) {
    var pathURL = "GENAPP/getCustomerDetails";
    var request=
        {
            "LGICUS01Operation":{
                "ca" : {
                    "ca_request_id" : "01ICUS",
                    "ca_return_code" : "00",
                    "ca_customer_num" : custNum,
                    "ca_num_policies" : ""
                    }
            }
        };
```



A

Step 1

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

B

Step 2

Mobile developer uses JSON schema to build a Worklight adapter.

C

Step 3

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

HALKBANK

25 years of continuous operation
On CICS®, DB2®, and System z®

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Mobile

"*Mobile banking* is a fast growing channel for Halkbank. As for all other channels, *we run the transactions themselves on our CICS and DB2 for z/OS systems*, which helps *to ensure the highest levels of performance, availability and security*"

Ayhan Yalkut, System z Manager, Halkbank.

Scalable

The Turkish state pays most of the government salaries through the bank, causing a once-monthly peak in daily transactions, increasing from 25m to 50m

Reliable

"In more than 25 years of continuous operations, we have never had any unplanned downtime"

FORRESTER®

"Core enterprise applications process transactions — lots of transactions — and so can't be scaled by adding load balancers and spawning new copies of services. They scale by adding capacity to the transaction processing engine"

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GRUPPO BANCA CARIGE

Trusted platform for new mobile workload
On CICS®, DB2®, and System z®

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Trusted

"*Trust is crucial*, so whenever we launch new services, the challenge is always *to ensure that the underlying data and transactions are secure and reliable*. We needed a robust and trustworthy platform *for our new analytics and mobile capabilities*"

Daniele Cericola, ICT Governance Manager at Banca Carige.

Integrated

Banca Carige's new mobile application runs in the cloud, it hooks back into web services running on the zEnterprise. Mobile transactions are processed through CICS and DB2 on the mainframe.

Secure

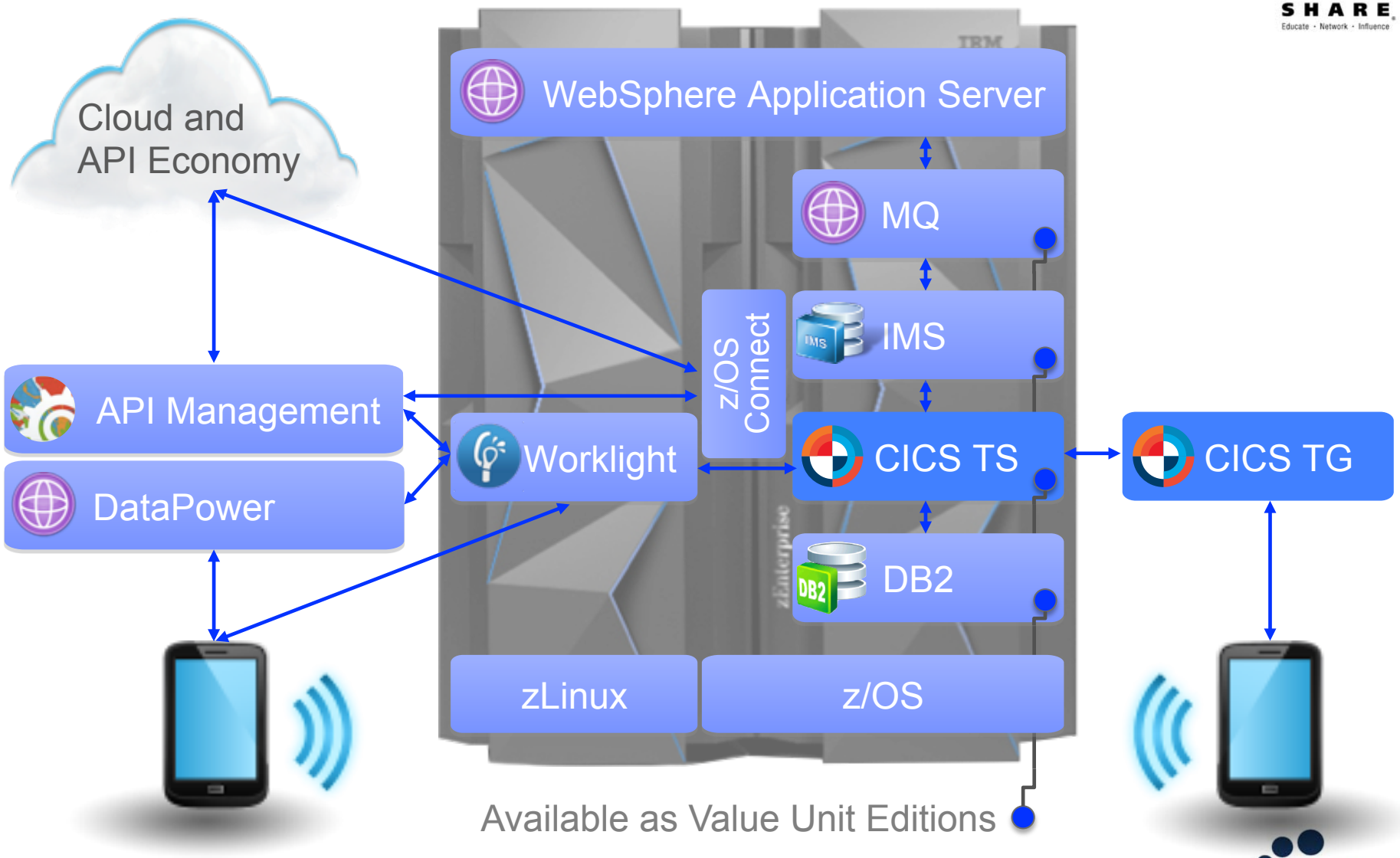
"availability and security are business-critical; the fact that these are tried-and-tested features of the mainframe makes it our natural platform of choice for our new initiatives"

FORRESTER®

"**97% of executives** surveyed said that information security is highly critical to their company's ability to compete in their market or industry"

SHARE in Pittsburgh 2014

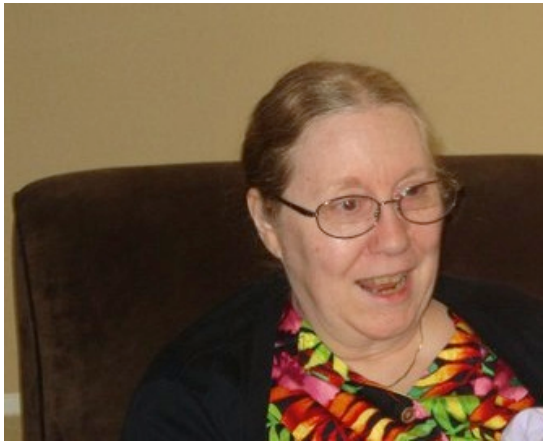
Systems of Engagement Meet Systems of Record



Monday

4:15 PM-5:15 PM

15856: CICS Mobile and JSON
Speaker: Leigh Compton
Project: CICS
Room 315 (David L. Lawrence Convention Center)



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MOBILE MAINFRAME APP THROWDOWN

Will you be our mobile champ?

CICS | IMS | WAS | DB2

Open to existing System z clients

The challenge: Build a proof-of-concept demonstrating mobile enablement of your existing mainframe apps.

Get IBM help to build your mobile PoC

Call us 'Coach': We provide getting started guides and access to IBM zMobile Experts for questions and queries.

Win a week with IBM experts & more

Make it real: Win help from IBM to bring your mobile app to life.

ibm.biz/mmathrowdown

No submission of code required, only screenshots.
Entries must be complete and submitted by **17 Sept 2014**.

System z CICS Mobile Test Drive Program

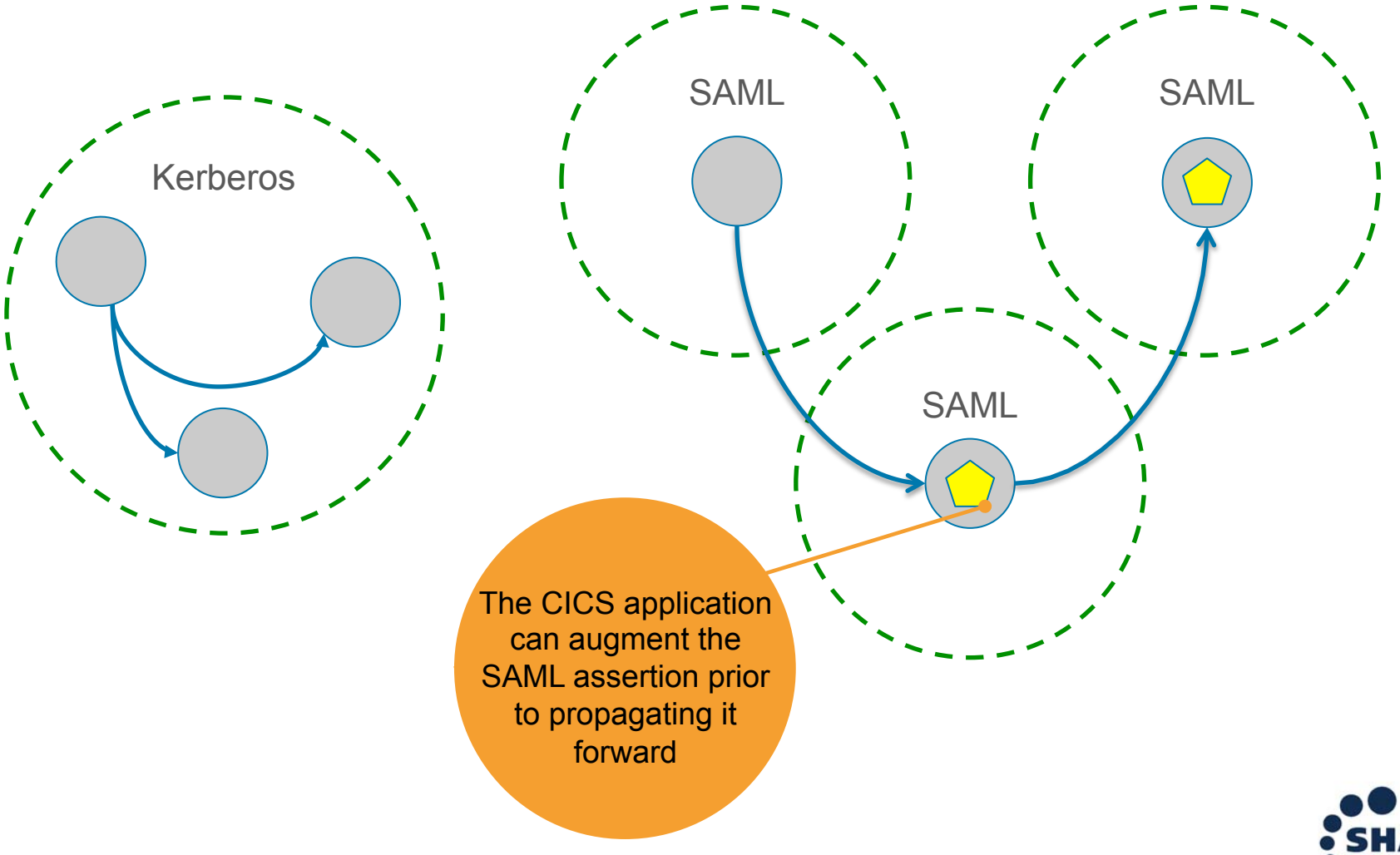
- The CICS Mobile Test Drive provides Independent Software Vendors a remote System z environment for developing and testing mobile applications at no charge for up to 60 days.
- Develop or test a mobile app that interfaces with an IBM Worklight server and to access applications running under CICS TS V5 using the new JSON mobile features
- Participants in the program who are using Worklight Studio for their deployment may also be provided an instance of Linux running on System z.
- The systems are designed to provide a maximum amount of flexibility and authority. As such, system users assume the role of the System Administrator and Security Administrator.
- Questions regarding any aspect of the program can be emailed to **ETPADMIN@us.ibm.com**

http://dtsc.dfw.ibm.com/MVSDS/%27HTTPD2.ENROL.PUBLIC.SHTML%28MOBILE%29%27

Operational Efficiency

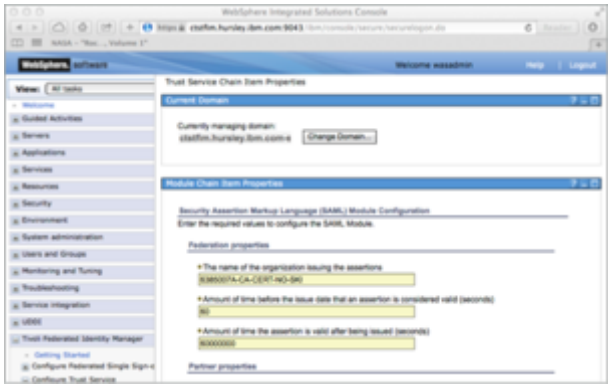
Support distributed security standards and automatically safeguard critical runtime resources, ***without requiring additional system code***

SAML and Kerberos security



SAML Security scenario

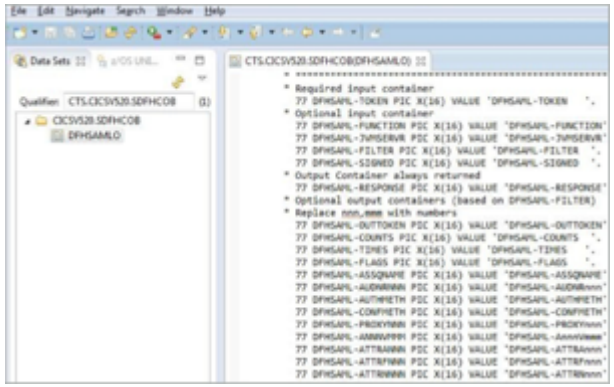
A CICS application developer writes a COBOL program with behavior that's dependent on the SAML security token



A

Step 1

Client requests SAML assertion from Tivoli Federated Identity Manager or Datapower



B

Step 2

CICS COBOL application extracts SAML containers from DFHSAML channel

C

Step 3

The application can add additional attributes to the assertion for downstream components

Thursday

11:15 AM-12:15 PM

15551: CICS - Identity and Security

Speaker: Leigh Compton
Project: CICS
Room 306 (David L. Lawrence Convention Center)

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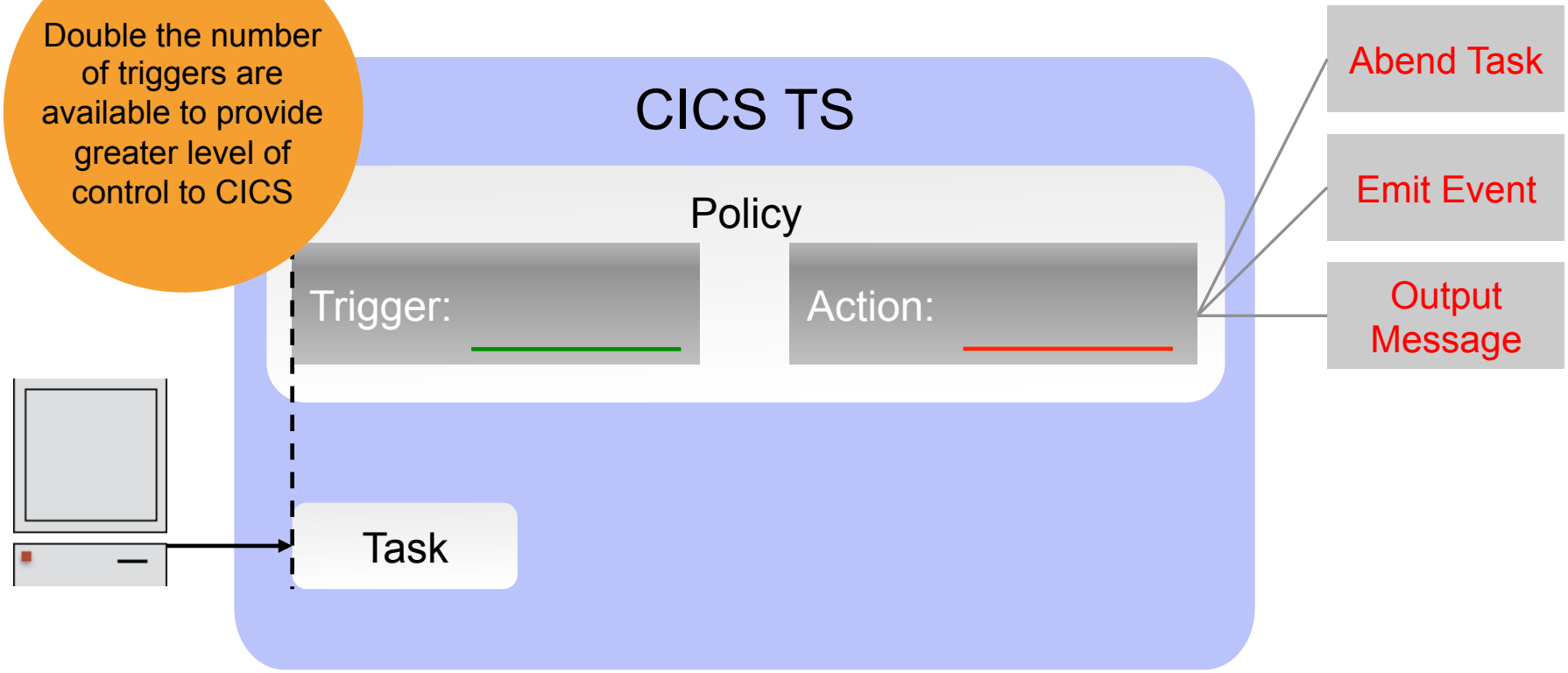
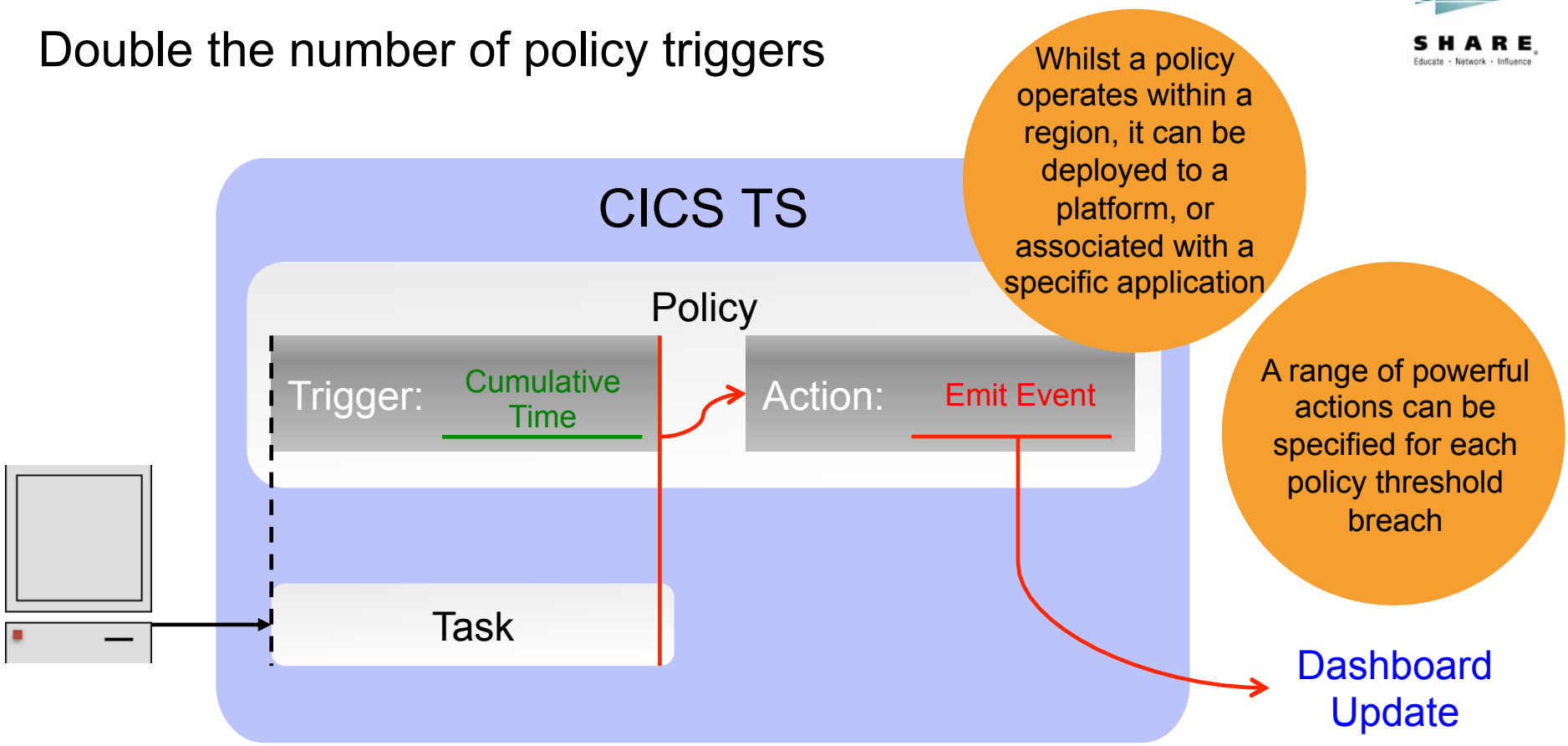
Double the number of policy triggers

Double the number of triggers are available to provide greater level of control to CICS



New V5.2 Triggers	Cumulative Time	Syncpoint	Start	TSQ	TDQ
CICS V5.1	DB2 SQL	Files	Storage	CPU Time	Prog. Link

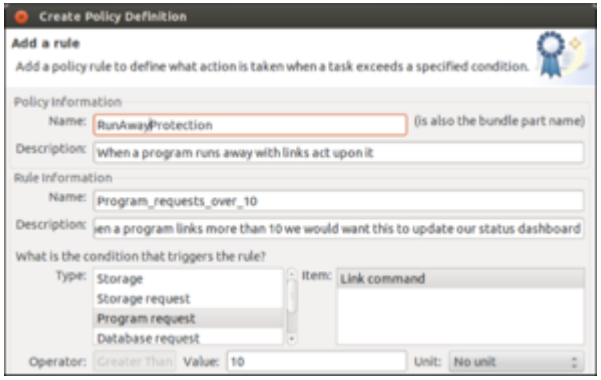
Double the number of policy triggers

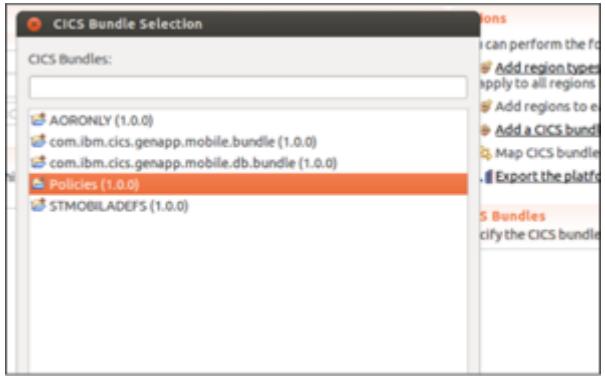


New V5.2 Triggers	Cumulative Time	Syncpoint	Start	TSQ	TDQ
CICS V5.1	DB2 SQL	Files	Storage	CPU Time	Prog. Link

Policy scenario

Define a policy to trigger an event when an application consumes too much total elapsed CPU time





A

Step 1

Define the policy thresholds and trigger action that CICS should take

B

Step 2

Associate the policy with the appropriate platform or application and deploy

C

Step 3

When the threshold is breached, CICS triggers an event, updating an operations dashboard

Thursday

1:30 PM-2:30 PM

15884: Using Policies to Manage Critical CICS Resources

Speaker: Matthew Webster
Project: CICS
Room 315 (David L. Lawrence Convention Center)

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Cloud Enablement

Deploy and manage several versions of a multi-program application and run them concurrently, ***without requiring additional regions***

What is a CICS Cloud?

- CICS implementation of cloud principles

'Pre-defined **application** architectures, and required **platform** services, that are deployed and managed by the system according to a set of **policies**.'

IBM PureSystems - Product Family overview homepage, Apr 2014

- Enabling creation of private CICS clouds

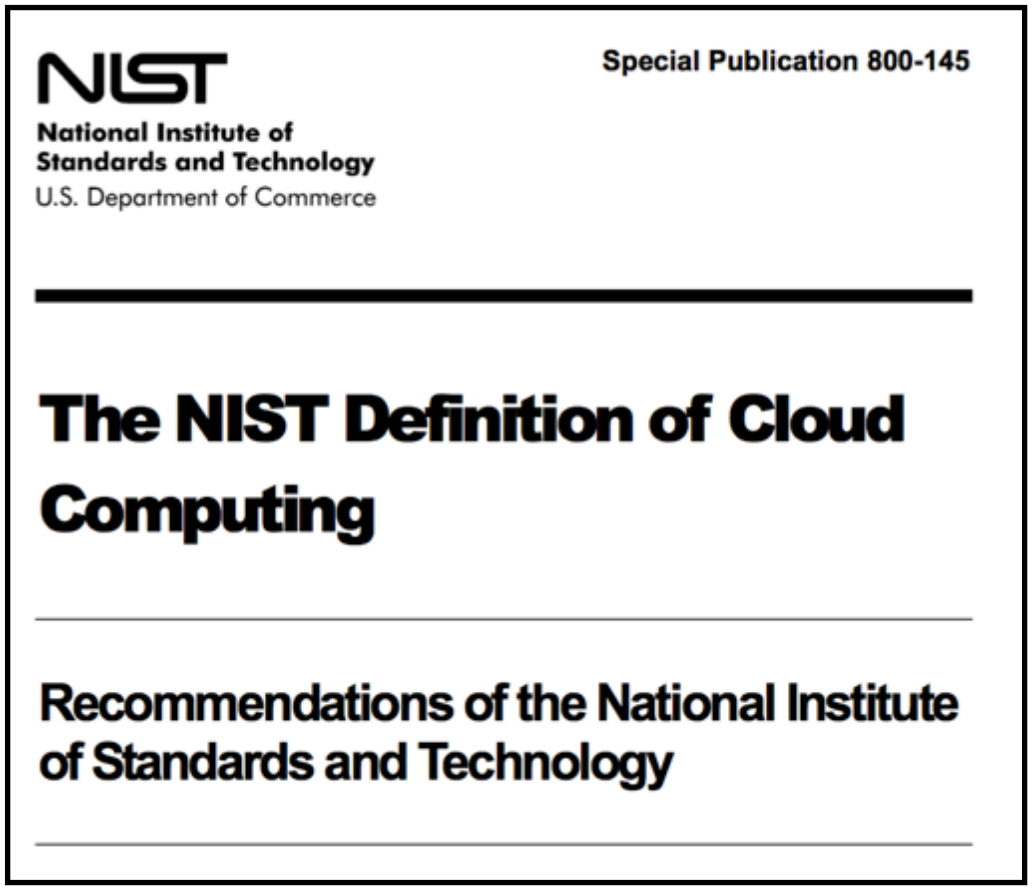
'The cloud infrastructure is provisioned for excusive use by a **single organization** comprising **multiple consumers** (e.g., business units)'

NIST Special Publication 800-145, Sept 2011

- Bringing Cloud benefits to CICS

CICS TS V5 delivers a **pattern based, policy managed, private CICS cloud** environment, **improving the agility** of CICS application deployments whilst **reducing the risk** of implementation errors.

The Essential Characteristics of Cloud Computing


NIST
National Institute of Standards and Technology
U.S. Department of Commerce

Special Publication 800-145

The NIST Definition of Cloud Computing

Recommendations of the National Institute of Standards and Technology

- On-demand self-service
- Broad network access
- Resource pooling
- Rapid elasticity
- Measured service

http://www.nist.gov/itl/cloud/ or search 'NIST Cloud'

Monday

3:00 PM-4:00 PM

15855: Modernizing CICS for Cloud

Speaker: Matthew Webster
Project: CICS
Room 315 (David L. Lawrence Convention Center)

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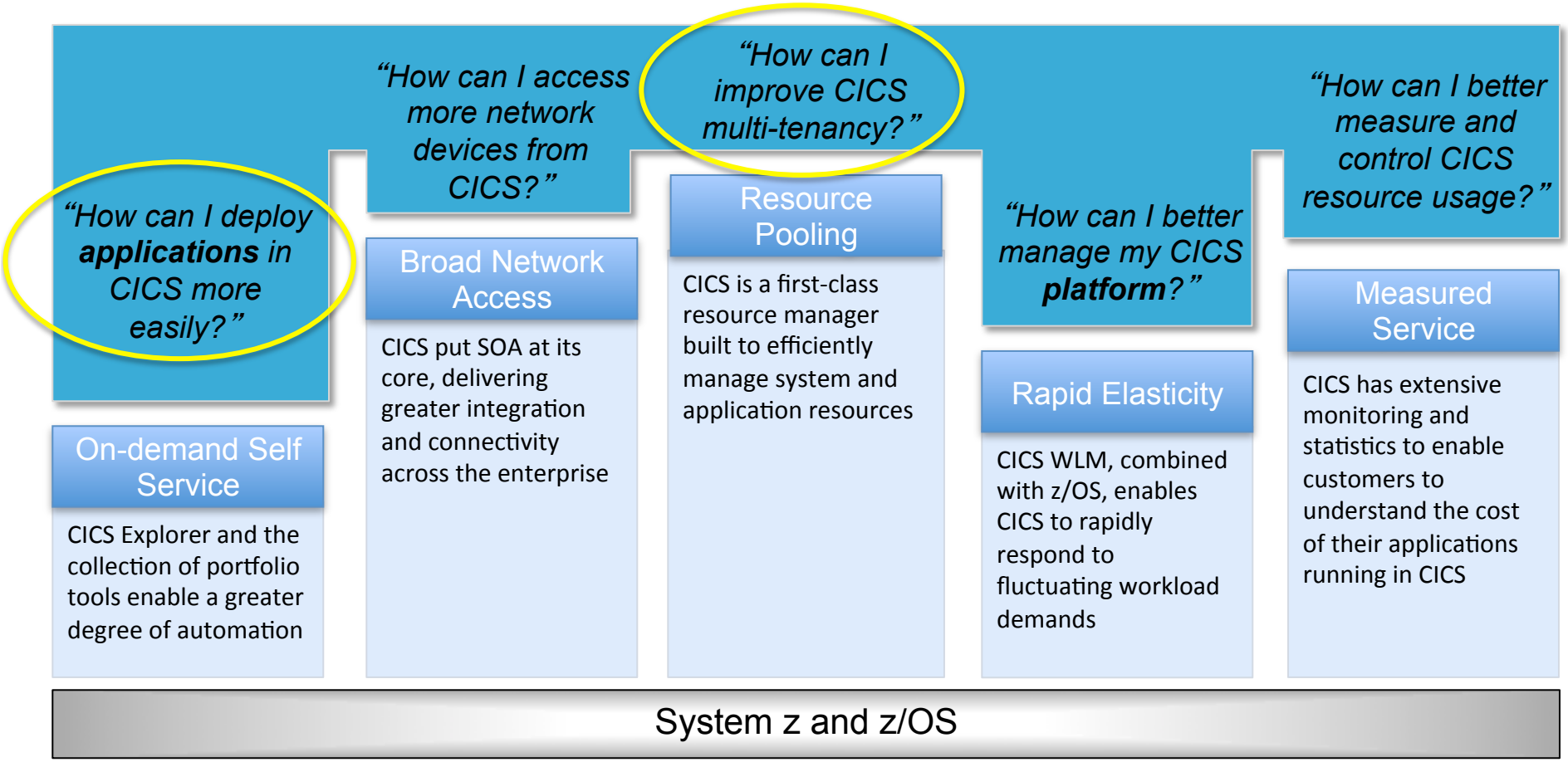
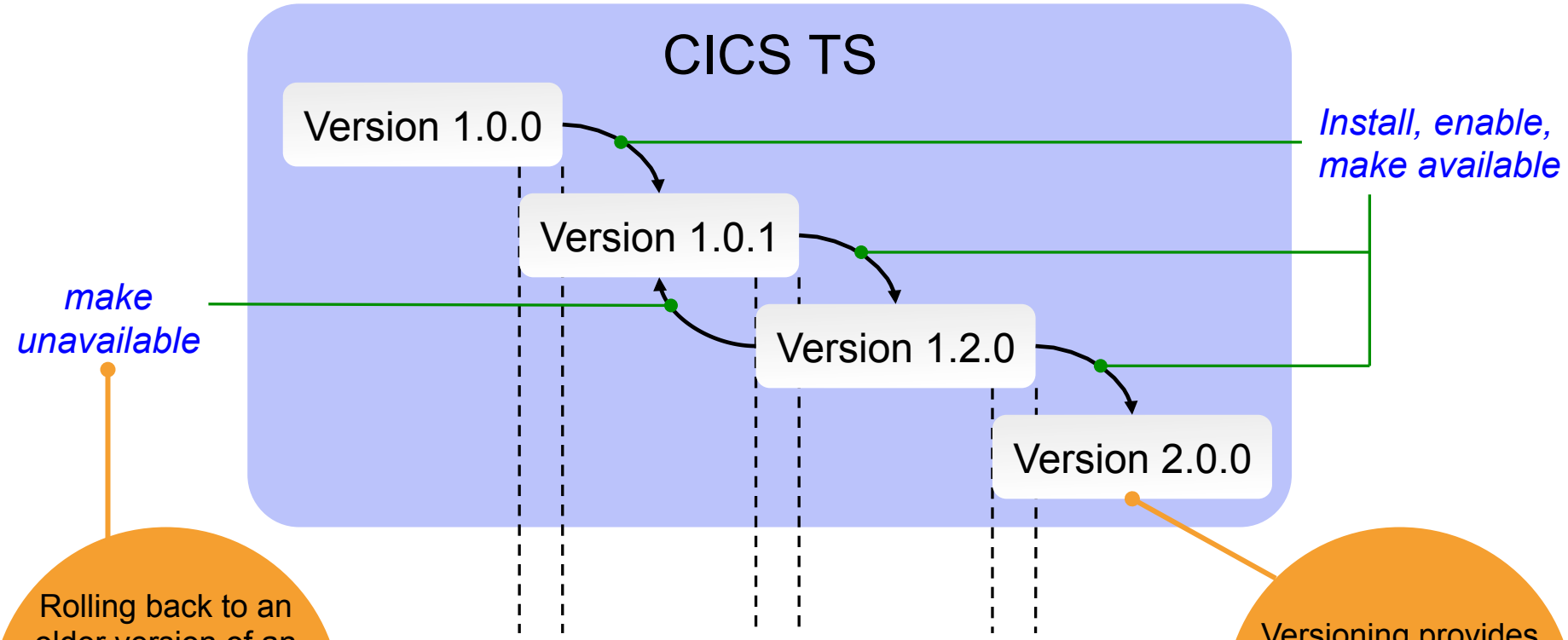
The Essential Characteristics of Cloud Computing

Question : How can you apply the 5 essential cloud characteristics to CICS?



(Hint : Adding more CICS regions is probably not the best answer!)

Multi-versioning



Multi-versioning

Application packaging helps you consolidate onto fewer regions by providing private program definitions

CICS TS

Private programs

PROG1

URIMAP

Payroll App

LIBRARY

URIMAP

Customer App

LIBRARY

PROG1

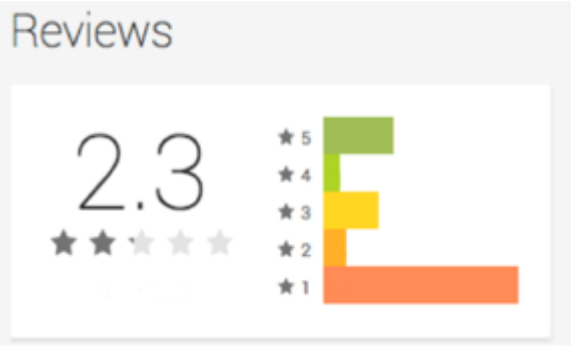
Private programs

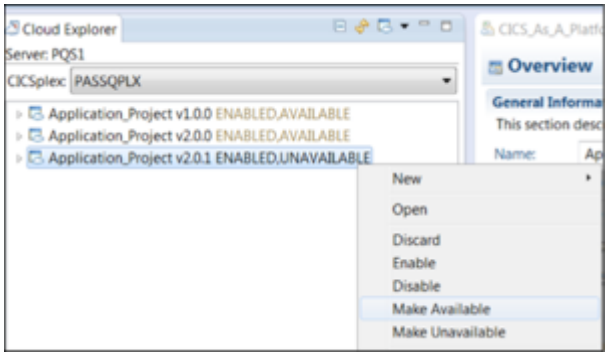
X

Y

Multi-versioning scenario

A bug has been found and an urgent fix is required immediately





A

Step 1

After fixing the bug in the code, repackage it with a new micro version number

B

Step 2

Once installed, switching to a new version of the application is simply a case of making it “available”

C

Step 3

CICS takes care of moving clients to the new version of the application across all regions within a platform

Wednesday

4:15 PM-5:15 PM

15882: Managing Multi-version Applications in CICS

Speaker: Matthew Webster
Project: CICS
Room 315 (David L. Lawrence Convention Center)

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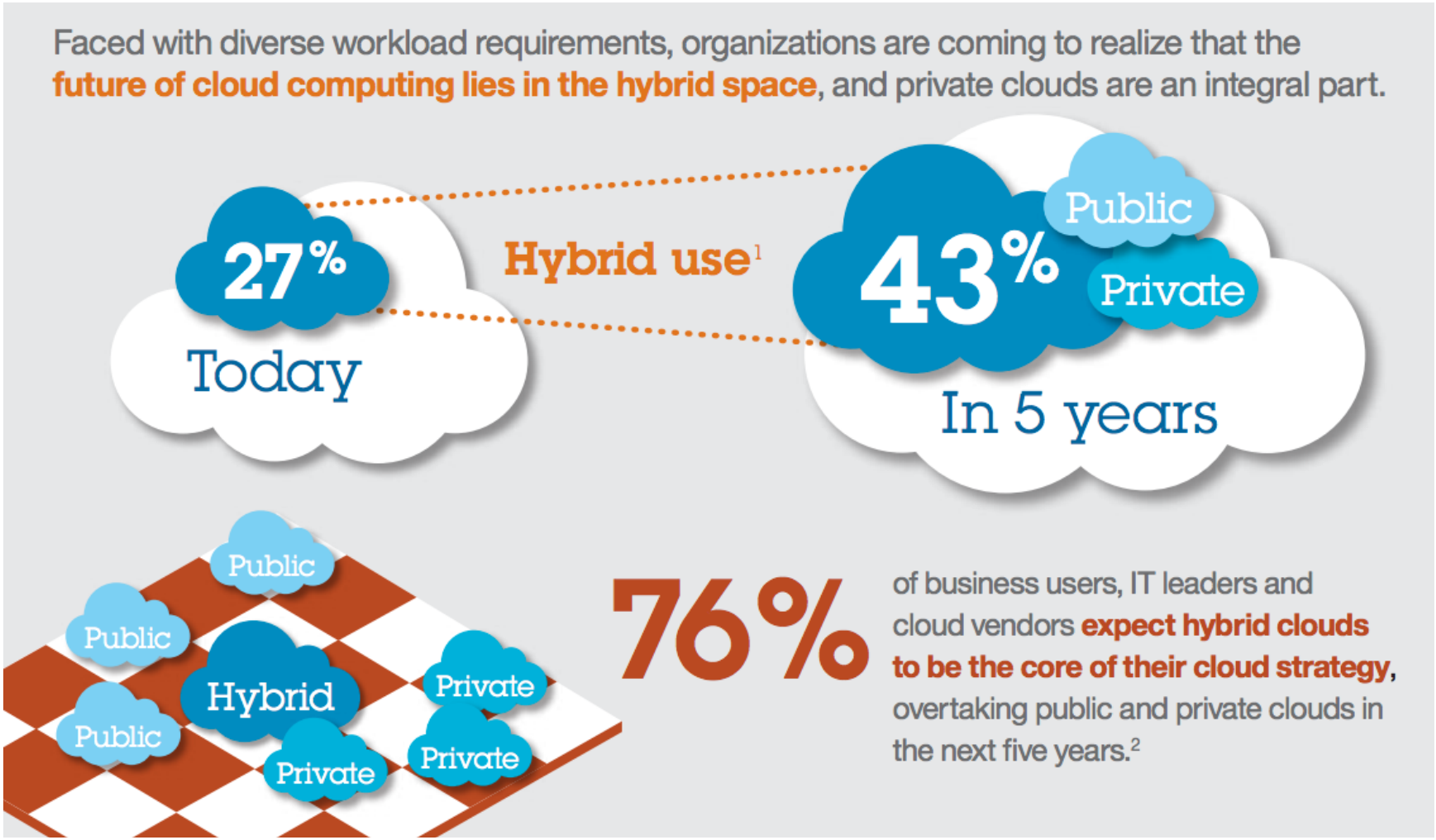
Cloud technology is driving change: cloud integration becomes key



http://www-935.ibm.com/services/us/en/it-services/server-services/private-modular-cloud-infographic01/index.html

Cloud platforms & integration

Instant services, runtimes, and infrastructure for cloud based applications.

Integration with existing Systems of Engagement

Clients using TXSeries who need to balance costs against growth.

TXSeries on Softlayer for cloud-style scalability

Simplified system management and rapid application deployment.

On premise pattern based cloud deployment.

IBM CICS Transaction Server V5.2

Announced, 7th April 2014 | GA, 13th June 2014

Service Agility

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Cloud Enablement

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without requiring additional regions

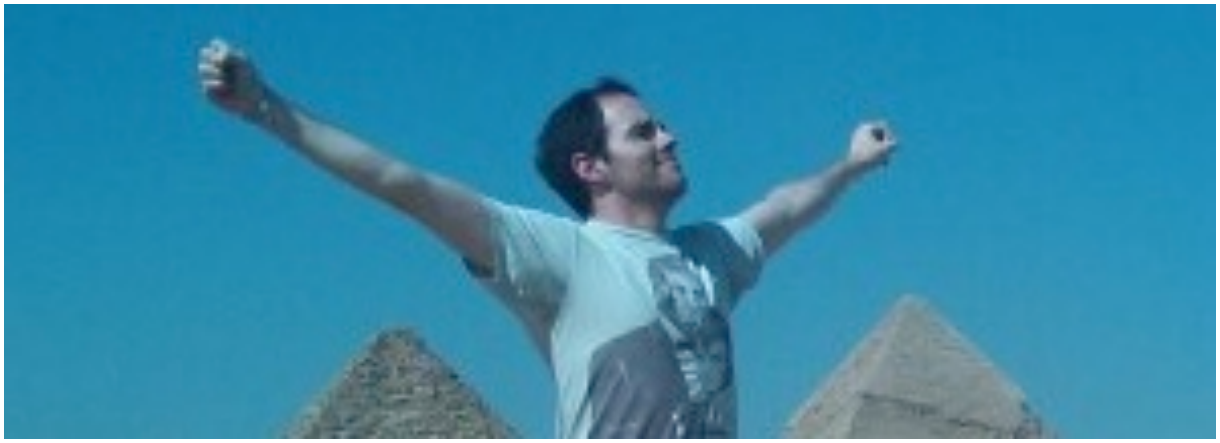
+ Continuous enhancements to the solid foundation

Tuesday

1:30 PM-2:30 PM

15877: CICS Explorer 5.2: Workload Management and More

Speaker: Stewart Francis
Project: CICS
Room 315 (David L. Lawrence Convention Center)



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Tuesday

4:15 PM-5:15 PM

15560: CICS Scalability

Speaker: Ian Mitchell, IBM
Project: CICS
Room 315 (David L. Lawrence Convention Center)

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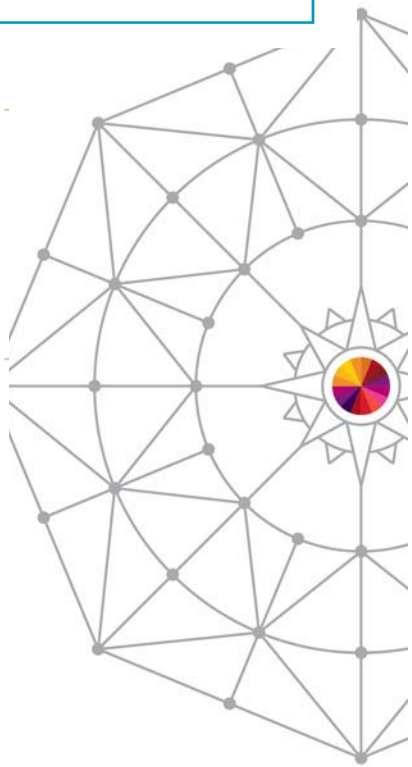
Tuesday

10:00 AM-11:00 AM

15857: The Evolution of CICS – 45 Years of Technical Leadership and Excellence
Speakers: Steve Ware , Susanne Branson and Glenn Schneck
Project: CICS
Room 315 (David L. Lawrence Convention Center)

11:15 AM-12:15 PM

15854: CICS V5 User Experience
Speakers: John Klavon and Andre Clark
Project: CICS
Room 315 (David L. Lawrence Convention Center)



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CICS TS V5.2 Developer Trial. No cost. No fuss.

- Try before you buy the latest edition of CICS Transaction Server
- No charge license, no single version charging period, no reason to wait
- Easy ordering via IBM ShopzSeries, with internet or physical delivery options

- CICS TS V5.2 Developer Trial is fully supported
- CICS TS V5.2 Developer Trial can be upgraded to production CICS TS V5.2 versions

Evaluate the Value	*Explore the Capability*	*Create the business case*

CICS TS Developer Trial

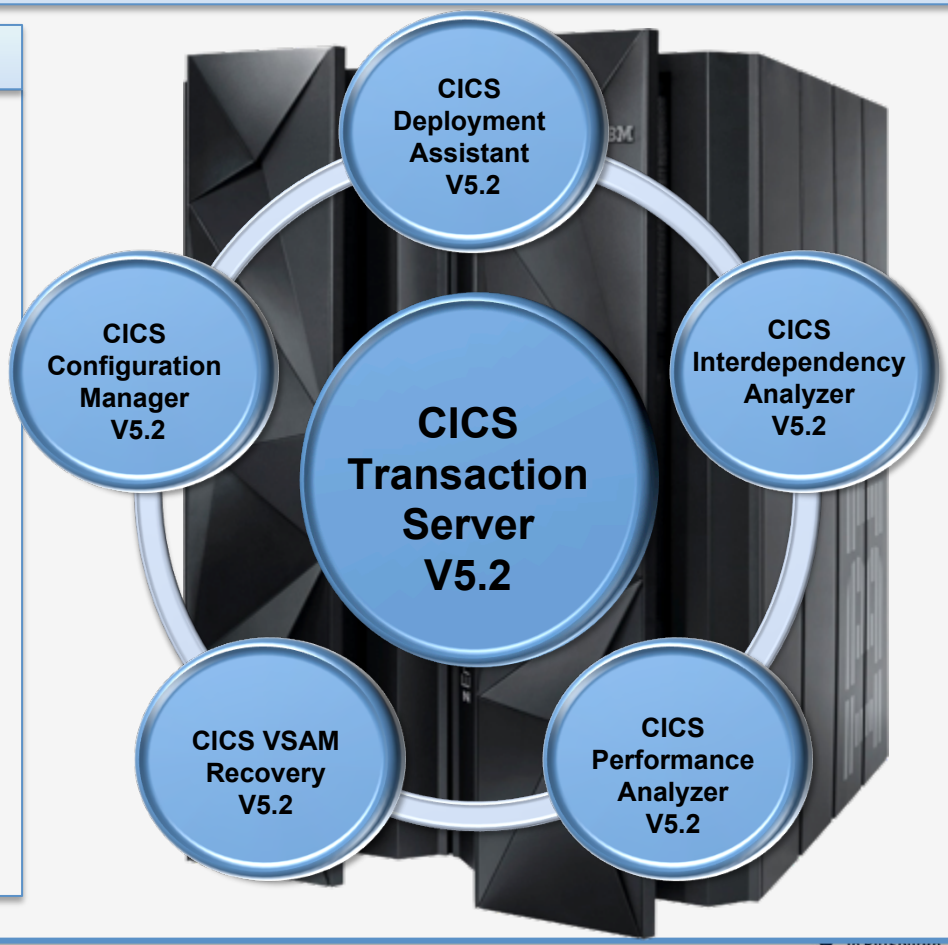
Trial the future

Upgraded and integrated core foundational tools suite

Five core CICS Tools – All updated for V5.2

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 V5.2 new capabilities reduces time to value
- Five core tools support and extend the CICS runtime



OMEGAMON Performance Suite v5.3

- Announced on July 15th 2014, the OMEGAMON Performance Suite includes;
  - OMEGAMON XE for CICS on z/OS v5.3.0
  - OMEGAMON XE for CICS TG on z/OS v5.3.0
  - OMEGAMON XE for Messaging v7.3.0
  - OMEGAMON XE for Storage v5.3.0
- SHARE presentations
  - Monday, August 4, 2014: 11:15 AM-12:15 PM Room 311
  - Tuesday, August 5, 2014: 11:15 AM-12:30 PM Room 311
  - Tuesday, August 5, 2014: 3:00 PM-4:00 PM Room 311

Simple and rapid mobile integration for your enterprise

NEW: CICS Transaction Gateway V9.1

- The headline act? **Mobile integration** (with JSON web services)
  - Quickly bring mobile to any version of CICS TS using CICS TG, without disrupting existing setup
- Enhancements to **connectivity**, **security** & **request monitoring**, + **Java 7.1** support
- Announced 1 July 2014, GA 5 September 2014
- Available for z/OS, for Multiplatforms and Desktop Edition

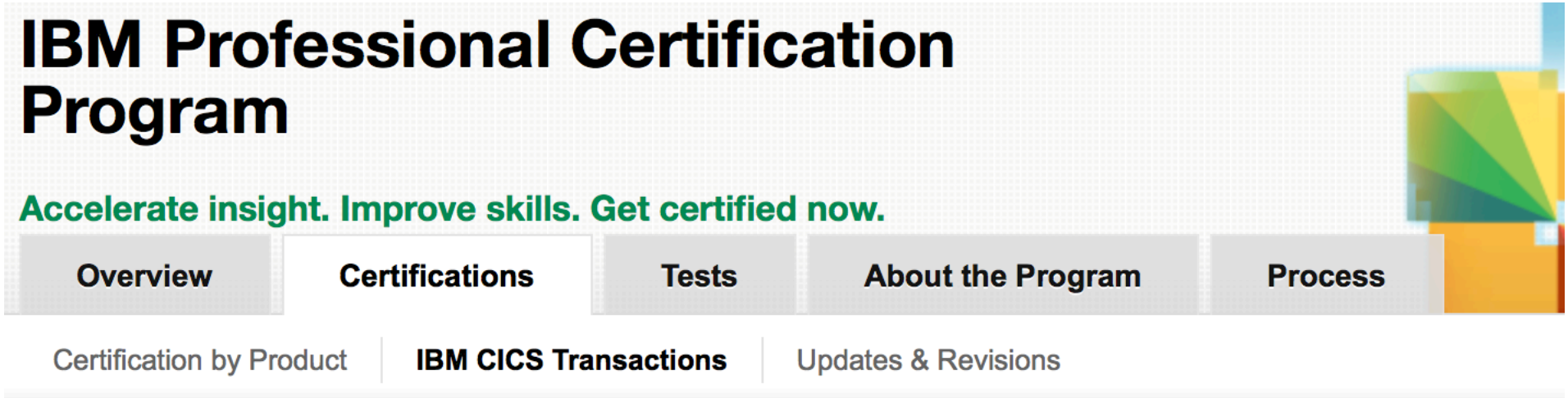
z customers can explore now!

Try the CICS TG for z/OS V9.1 open beta

Download
ibm.com/cics/openbeta
(also links to RFA)

YouTube Overview
ibm.biz/cicstg91beta

2 x brand new formal IBM CICS Certifications!



ibm.com/certify

2 x brand new formal IBM CICS Certifications!

Exam Selection: C2200-406: IBM CICS Transaction Server V5.2 for z/OS System Programming | Language: English Change Exam

Test Center

- **University of Pittsburgh**
  4200 Fifth Avenue
  Cathedral of Learning
  G-33
  Pittsburgh, Pennsylvania
  15260
  United States
- **New Horizons Computer Learning Center**
  Three Parkway Center
  Suite 103
  Pittsburgh, Pennsylvania
  15220
  United States
- **Goodwill of Southwestern Pennsylvania**
  118 52nd Street
  Pittsburgh, Pennsylvania
  15201
  United States

Select Date

Why can't I find an available appointment?

August 2014						
Su	Mo	Tu	We	Th	Fr	Sa
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

September 2014						
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14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

Show available appointments on Select one... Go

Select a date on the calendar to see available appointments.

pearsonvue.com/ibm

Submit and track your CICS requirements online

- Transparent process with no middle-man between you and the lab
- Track the latest status of your CICS requirements online
- Private fields for information you only want to share with IBM

Discuss your requirements directly with the CICS developers

Email notifications to let you know when your CICS requirement is updated

Search, discuss and vote on other submitted CICS requirements

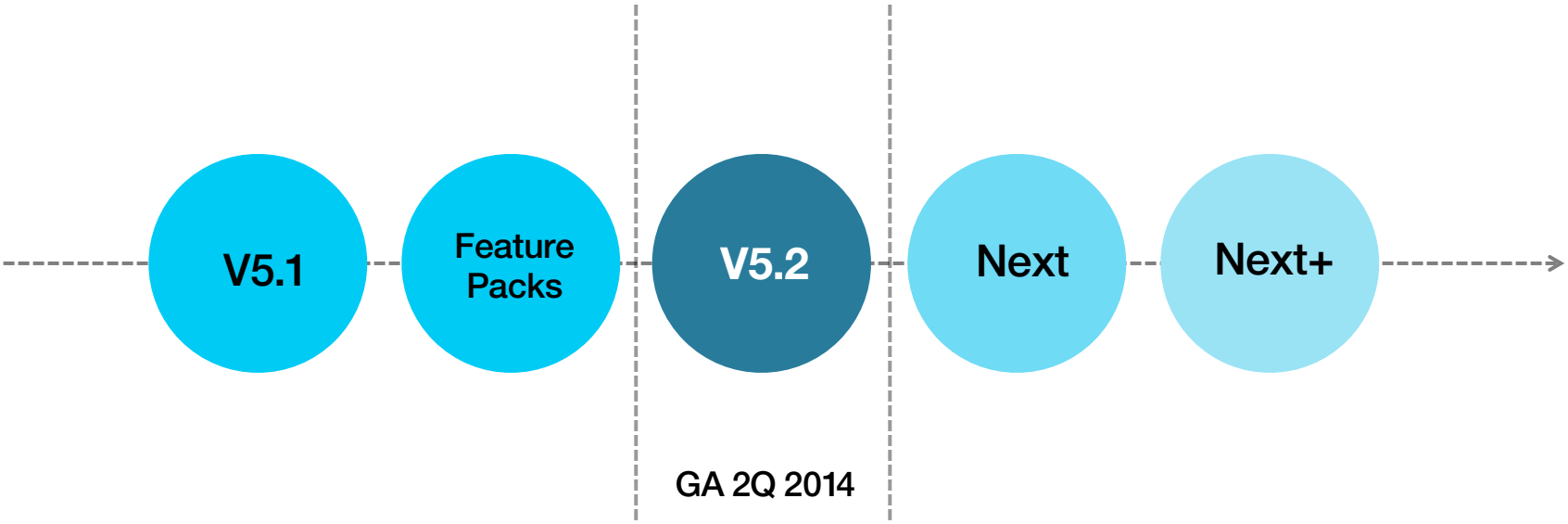
IBM RFE Community

Enhancing the future

Beyond CICS TS V5.2…

IBM CICS Transaction Server

timeline



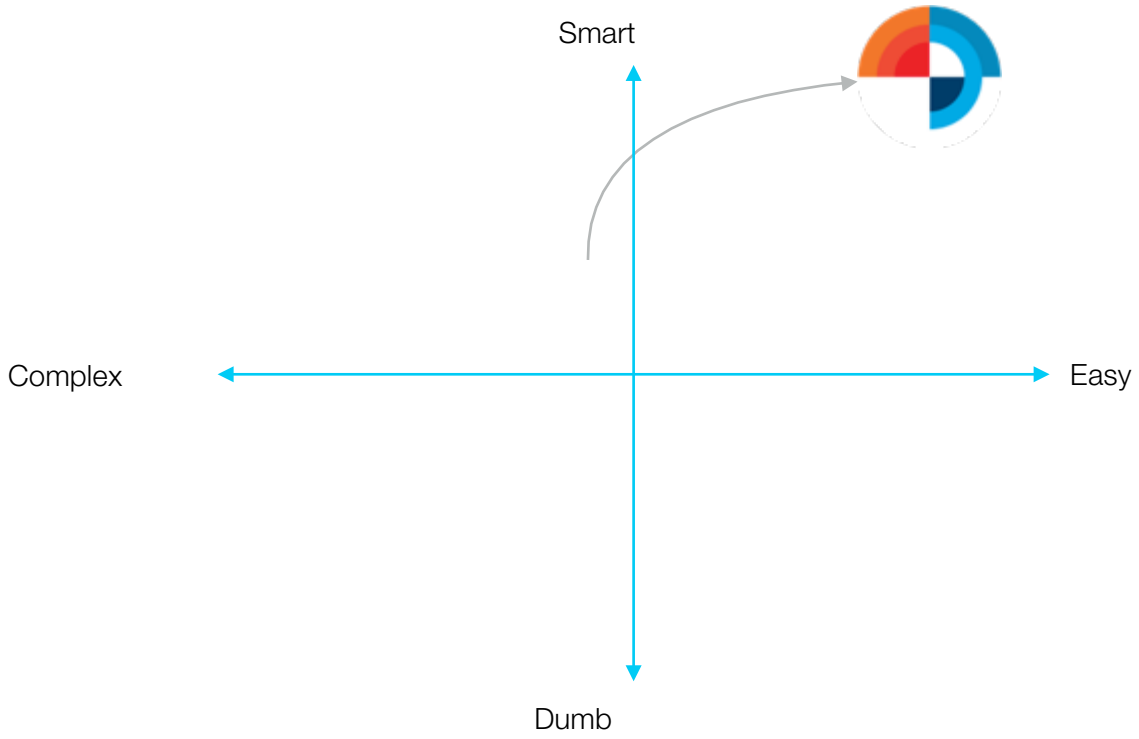
IBM CICS Transaction Server V5

a vision for an easier to use application server

As CICS has got smarter, the level of complexity has increased.

CICS TS V5 will continue to deliver more advanced capabilities.

At the same time, CICS will simplify common tasks, and provide automatic features to better manage your environments.



IBM Design Thinking

designing an IBM that

Works together

Integration across IBM

Interoperability with third-party technologies

Works the same

Easy skills transfer

Common interactions for similar capabilities

Works for me

Focused on the user & her story...

...across the experience lifecycle (install, first use, everyday use, maintain, upgrade)

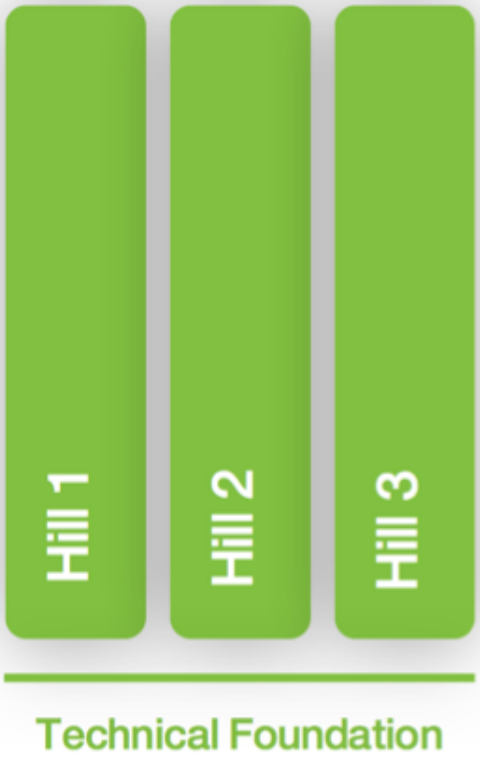
IBM Design Thinking : Core Practices

Hills focus projects on big problems and outcomes for users, not just a list of feature requests

Sponsor Users help design experiences for real target users, rather than imagined needs

Playbacks align teams, stakeholders, and clients around the user value, rather than project line items

IBM Design Thinking : Hills



Investing for Market Outcomes

Thursday

10:00 AM-11:00 AM

15883: CICS Futures Interactive Discussion

Speaker: Andy Bates
Project: CICS
Room 315 (David L. Lawrence Convention Center)

#SHAREorg

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

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CICS TS Early Programs – Get Involved!

- Basic Disclosure and Discussions
- Beta programs, with varying levels of involvement available
- Customer Architecture Forum, remote and on-site at the Hursley, UK Lab
- Design Partnerships:
  - Become a on IBM Design Thinking Sponsor User
  - Close relationship on a specific area of technology

Feedback to the Hursley Lab

Work directly with the CICS developers

Get a time to market advantage

CICS TS Early Programs

Be a part of the future

Follow us on…

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CICS Hursley

CICSbuzz