



Welcome to the Virtual CICS user group newsletter. The Virtual CICS user group at www.fundi.com/virtualcics is an independently-operated vendor-neutral site run by and for the CICS user community.

Virtual CICS user group presentation

The latest webinar from the Virtual CICS user group was entitled, “Continuous Testing: DevOps for the Enterprise”, and was presented by David Lawrence, COP and Technical Enablement Lead, DevOps for Enterprise Systems, IBM Systems Middleware.

David has 30 years’ experience working in software development and tooling. His roles have included consulting and training in a wide variety of solutions, including Rational ClearCase, ClearQuest, and Rational Team Concert. Currently David is responsible for managing the enablement of IBM’s internal community of technical sellers for system z Middleware. He also meets IBM’s z software development customers,



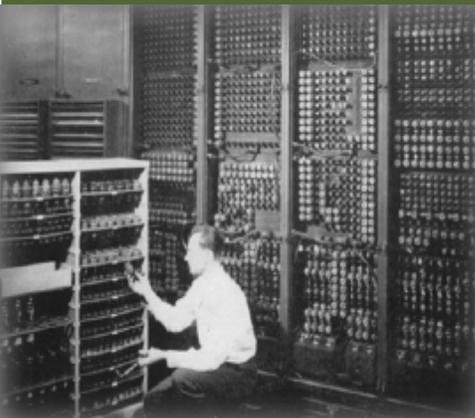
Figure 1: Delivering on the DevOps promise

helping them to understand IBM’s solutions and how to get the most value from them.

David started his presentation by looking into the future. He predicted that organisations are unlikely to build new large global

Contents:

Virtual CICS user group presentation	1
Meeting dates	6
Recent CICS articles	6
About the Virtual CICS user group	6



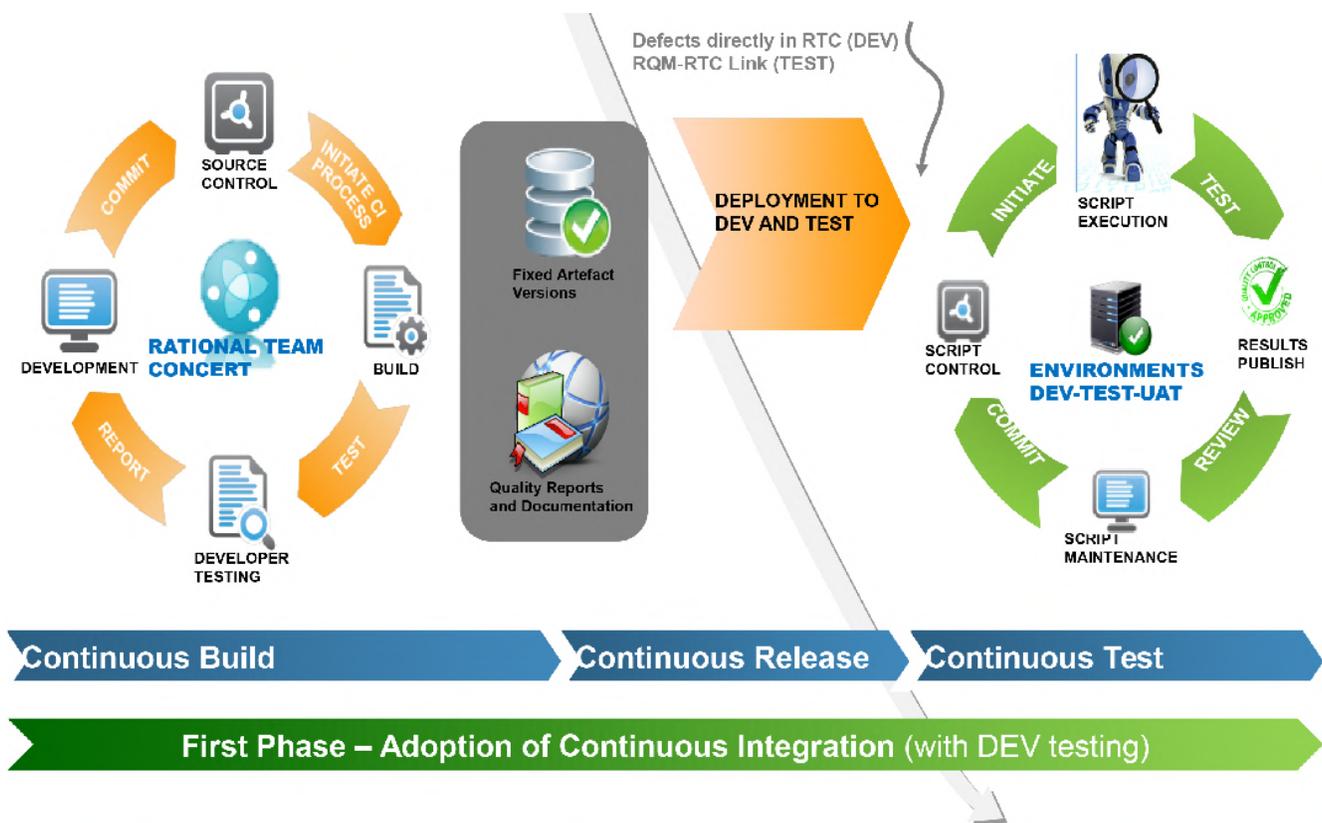


Figure 2: Common vision for development practices

System z-based applications in the medium future. He thought the challenge is to rapidly and efficiently expose systems of record to new systems of engagement Business demand for reduced time to market and global solutions drives the need to rapidly deliver to common APIs. He thought that investing in current applications will:

- Increase profit today by enabling you to deliver new features to market more rapidly.
- Reduce future maintenance costs and maintain your ability to continue rapid delivery

by reducing end-to-end complexity.

Moving disparate core application systems of record to a common set of APIs, positions you for future consolidation.

Eight key practices accelerate delivery:

- 1 Minimum viable product
- 2 Deliver in small batches
- 3 Minimize hand-offs, maximize flow
- 4 Eliminate overhead
- 5 Automate testing using APIs
- 6 Dedicate teams

7 Practice transparency

8 Loosely-coupled architectures.

Unicorn companies are start-ups, often software-focused, whose valuation now exceeds \$1 billion.

Most enterprise companies are not unicorns. Ancient infrastructure and beliefs remain, like: outdated developer and team tools; ageing developer population; disconnected teams, silos; FUD, “millennials can’t code COBOL”, “manual processes exist for a reason”, “SoR dev can’t be as nimble as distributed dev”.

In addition, ancient practices



Figure 3: Threadsafe environment

need overhauling, such as: manual testing; availability of entire system is required to test; mainframe availability required (if some z); reluctance to move test data off mainframe; cross-platform coordination required; manual project prioritization, status tracking.

Evolving towards the unicorns (see Figure 1) requires sites to: use modern multi-platform developer and team tools; automate deployment, configuration, and testing; use virtualized services to enable earlier

testing; offload testing from the mainframe; build and deploy in small batches; start with small pilot projects to build confidence; use real-time dashboards; consolidate SCMs; build a staged rollout plan; train the teams in tool usage and process changes; organize with cross-functional teams; gain executive buy-in and sponsorship up front; hire and train millennials on enterprise applications, tools, and languages; employ a loosely-coupled architecture.

IBM's proposed solution

is based around proven technology. It delivers a continuous integration software stack that enables application development for the mainframe and beyond.

The developer integrated development environment is RDz (Rational Developer for z Systems) or Rde for full Enterprise IDE facilities.

For automated unit test there's zUnit (fundamental capability of RDz). For off-mainframe z/OS environment there's Rational Developer and Test. For collaboration

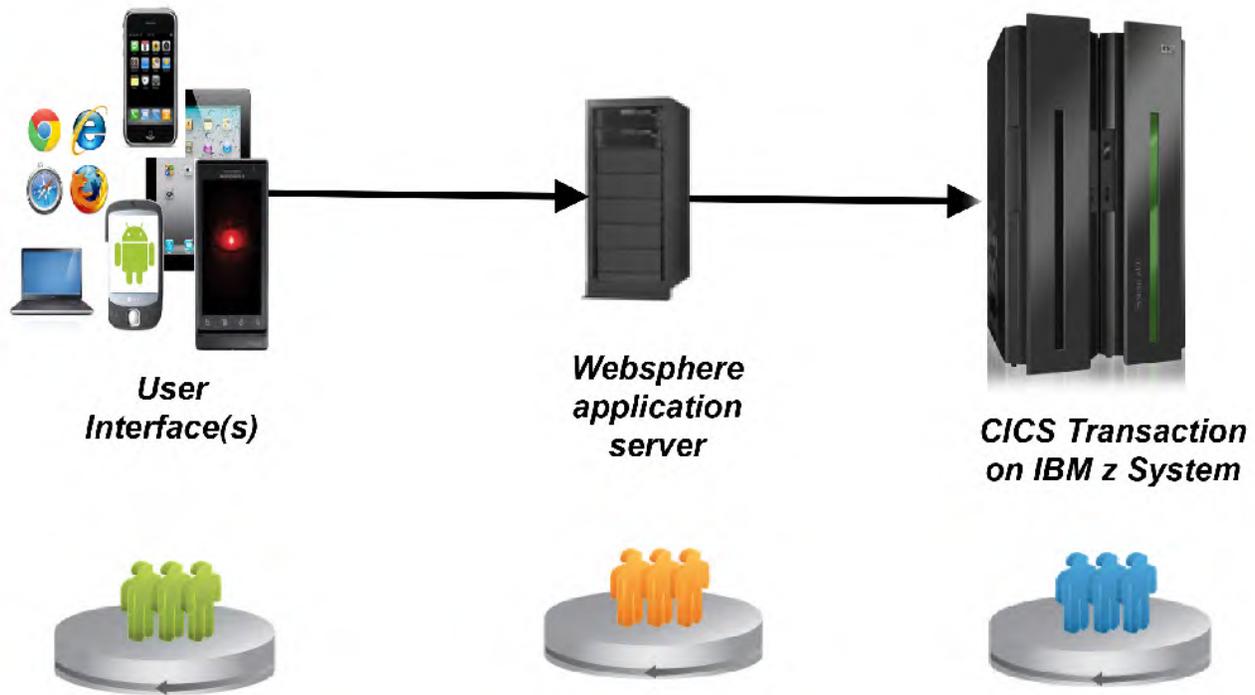


Figure 4: Application and team overview

and integration there's RTC (Rational Team Concert).

For environment mirroring there's Optim (TDM), Urban Code, and GreenHat. For continuous delivery there's Urban Code. And for a quality dashboard there's RTC.

A common vision for development practice is shown in Figure 2.

Continuous integration comes with the following key risks:

- Environmental mismatch – if the z/OS Linux environment mismatched the mainframe environment we introduce delay not savings.

- Mitigation – review UrbanCode to minimise the work involved
- Increased demand on high-cost resource removes any financial savings – sysprogs maintain the environments. This resource is more expensive than application developer resource.
- Mitigation – need to validate the sysprog overhead is not too onerous as above UrbanCode investigated.
- Robust RTC to Endeavor or RTC SCM link required – need to handle automated integration

between the strategic SCM and the virtual environment.

- Cost and availability of high-quality training – any solution will need to be capable of global deployment and consumption.
- New skills required to drive efficiency – need to focus on technical skills across the community.
- Mitigation – looking at global technical training opportunities in parallel with this initiative.
- Test driven development capabilities immature – deliver a means to carry

out unit testing of CICS and DB2 programs.

- Mitigation –I BM working on a solution and investigate potential test harness capabilities as an interim measure.
- Security considerations need to be evaluated – impacts of the new platform, ISR involvement critical.

The adoption of automated unit testing introduces fundamental new opportunities:

- Enables a move to test driven development on the mainframe.
- Developers build tests with expected results directly from the requirements. zUnit supports this, the tests are mainframe artefacts.
- Run the tests to validate they fail (if they pass your code already supports the business requirements!)
- Build code to fulfil the tests.
- Use the quality dashboard to validate percent successful tests over time – progress reports are percent of function delivered.
- At the end of the project the tests and known results are an asset

stored in the SCM. Future regression tests are stored with the code.

- The quality dashboard stores unit test line and branch coverage, and you can click to individual lines.
- All this capability is automated as part of deliverable.

Rational Developer Enterprise Edition (RDz) is a modern IDE and is illustrated in Figure 3.

You can use Rational Asset Analyzer to quickly understand flow and relationships across the enterprise even with little or no documentation. It can analyze, understand, and navigate complex application source code, including COBOL, PL/I, Assembler, C/C++, Java/JEE, etc.

It will reduce time to market and risk of resource shortage by understanding the impact of change, upfront. It understands source code complexity/fragility. It can analyze the impact of potential code changes or database changes. And it can find “dead code” for deletion from source base.

Users can choose from two user interfaces for ease of access and use. There’s integration with Rational Developer for System z for

IDE users, and there’s a browser-based user interface for dashboard and complex query construction.

It also supports enhanced usage scenarios such as COBOL Business Rule identification and capture. It can extend the RAA “vocabulary” to map business terms and properties to those used by developers. And it can leverage RAA’s capabilities to find where rules are encoded in the COBOL source. It can export the results in formats consistent with WODM BRMS technologies.

The Rational Development and Test Environment for System z lets users test z/OS software on Intel platforms without using z System hardware.

An example of the application and team overview is shown in Figure 4.

A copy of David Law’s presentation is available for download from the Virtual CICS user group Web site at www.fundi.com/virtualcics/presentations/CICSandDevOpsJan16.pdf.

You can see and hear the whole user group meeting by downloading the WMV file from www.fundi.com/virtualcics/presentations/2016-01-12meeting.wmv.

Meeting dates

The following meeting dates have been arranged for the Virtual CICS user group:

- On 8 March 2016, we have Circle Software's Ezriel Gross talking about "CICS Performance and Tuning 101".
- The following meeting is on 3 May 2016.

We will be using Citrix GoToMeeting for the user group meetings.

Recent CICS articles

The CICS journey continues by Nick Garrod in the Winter 2015-16 edition of *Enterprise Tech Journal*. You can find the article at http://ourdigitalmags.com/display_article.php?id=2367531&id_issue=287162

Automate z Systems Application Testing on the Cloud by David Lawrence (January 2016's guest speaker) in last February's *IBM Systems Magazine*. You can find the article at <http://www.ibmssystemsmag.com/mainframe/administrator/systemsmanagement/RDandT-cloud/>.

IBM CICS Team Finds Success by Hiring Young People Eager to Solve Problems by Valerie Dennis in the January 2016 edition of *IBM Systems Magazine*. You can find the article at <http://www.ibmssystemsmag.com/mainframe/Business-Strategy/Competitive-Advantage/CICS-hires/>.

CICS V5.3 Focuses on Agility, Efficiency, Cloud and DevOps by Catherine Moxey and Nick Garrod in the December 2015 edition of *IBM Systems Magazine*. You can find the article at <http://www.ibmssystemsmag.com/mainframe/administrator/cics/V5-3-announcement/>.

CICS Serviceability Enhancements to Dump and Trace by Darren Beard and Andy Wright in the October/November 2015 edition of *Enterprise Tech Journal*. You can find the article at <http://ourdigitalmags.com/publication/?i=281664&p=10>.

CICS Tools Supporting the CICS Journey by Satish Tanna in the October/November 2015 edition of *Enterprise Tech Journal*. You can find the article at <http://ourdigitalmags.com/publication/?i=281664&p=44>.

About the Virtual CICS user group

The Virtual CICS user group was established as a way for individuals using IBM's CICS TS systems to exchange information, learn new techniques, and advance their skills with the product.

The Web site at www.fundi.com/virtualcics provides a central point for coordinating periodic meetings (which contain technically-oriented topics presented in a webinar format), and provides articles, discussions, links, and other resources of interest to IBM CICS practitioners. Anyone with an interest in CICS is welcome to join the Virtual CICS user group and share in the knowledge exchange.

To share ideas, and for further information, contact trevor@itech-ed.com.

The Virtual CICS user group is free to its members.