

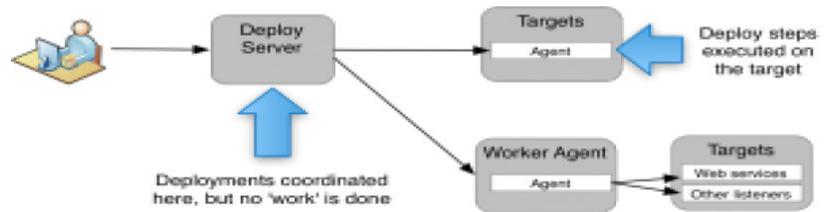


Welcome to the Virtual CICS user group newsletter. The Virtual CICS user group at [www.fundi.com/virtualcics](http://www.fundi.com/virtualcics) is an independently-operated vendor-neutral site run by and for the CICS user community.

## Virtual CICS user group presentation

The latest webinar from the Virtual CICS user group was entitled, “Meeting the challenges of agile development with DevOps, CICS, and UrbanCode Deploy”, and was presented by Mark Cocker, Senior Software Engineer, CICS Development, IBM.

Mark is a senior software engineer in the CICS development team at the IBM Hursley Laboratory in England, and is the hill lead for Java in CICS, delivering better experiences for developers, Java EE standards, and integration with other languages. Previously Mark was hill lead for DevOps in CICS, providing automated deployments of bundles and applications. Mark is also strategy representative on the project management



**Figure 1: UrbanCode Deploy – architecture**

team, client advocate, author of blogs, Redbooks, and SupportPacs, and regularly presents practical advice and demos on using new features in CICS.

Mark Cocker started his presentation by defining DevOps. He suggested that it's a movement to help development and operations work better together.

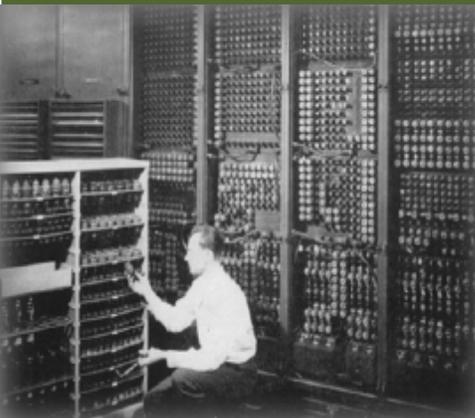
DevOps is an approach for software delivery based on 'lean' and 'agile' principles, in which all stakeholders – from line of business to development, quality

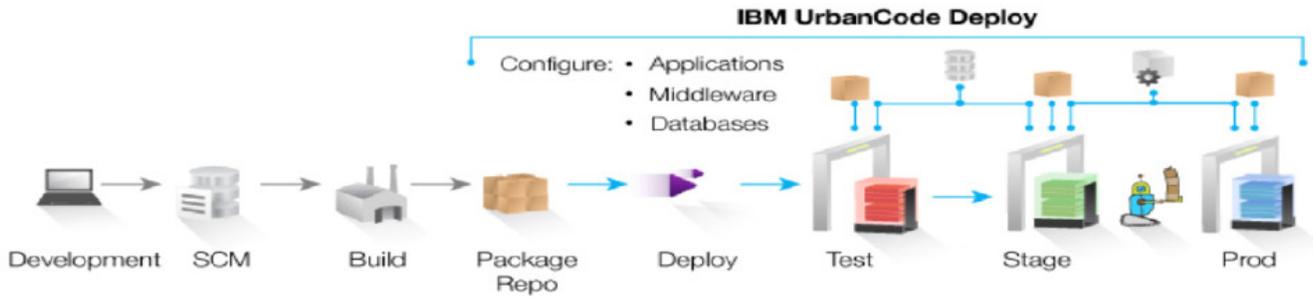
assurance, and operations – collaborate to deliver software more efficiently based on a continuous feedback loop.

Adopting DevOps capabilities and principles can result

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**Figure 2: UrbanCode Deploy**

in applications that are more efficient and effective, with continuous process improvement, while helping ensure that the changes and enhancements to the software are based on real customer feedback.

He went on to say that the DevOps delivery pipeline relies on collaborative development, continuous testing, and continuous release and deployment.

Mark went on to look at DevOps scenarios. He then looked at the CICS Build Toolkit, which allows users to build CICS projects from Eclipse sources, eg:

- Cloud applications, bundles, and platforms
- Java OSGi and Liberty profile components.

CICS Build Toolkit runs on z/OS, Linux, and Microsoft Windows, and works with CICS TS V4.1 and later. It has a verbose log of activity for audit purposes.

For the build stage, check out the set of Eclipse

projects. Optionally, people can copy pre-built Java files in a bundle (.jar .war .eba .ear). Then run cicsbt. Then copy the output to build the repository.

For the deploy stage, copy from the build repository, and check out the target environment properties file or application binding. Run cicsbt. Copy the output to the target z/OS zFS.

DFHDPLOY is a JCL utility that can be used to deploy, undeploy, and set the state of CICS bundles and applications. It provides a set of commands that you can sequence in a script. It waits for bundles and applications to reach the required state before progressing. It's easy to use with your existing z/OS automation, CICS Build Toolkit, and Unix scripts (eg resolve bundle, copy bundle, pause workload, undeploy old bundle, deploy new bundle, unpause workload).

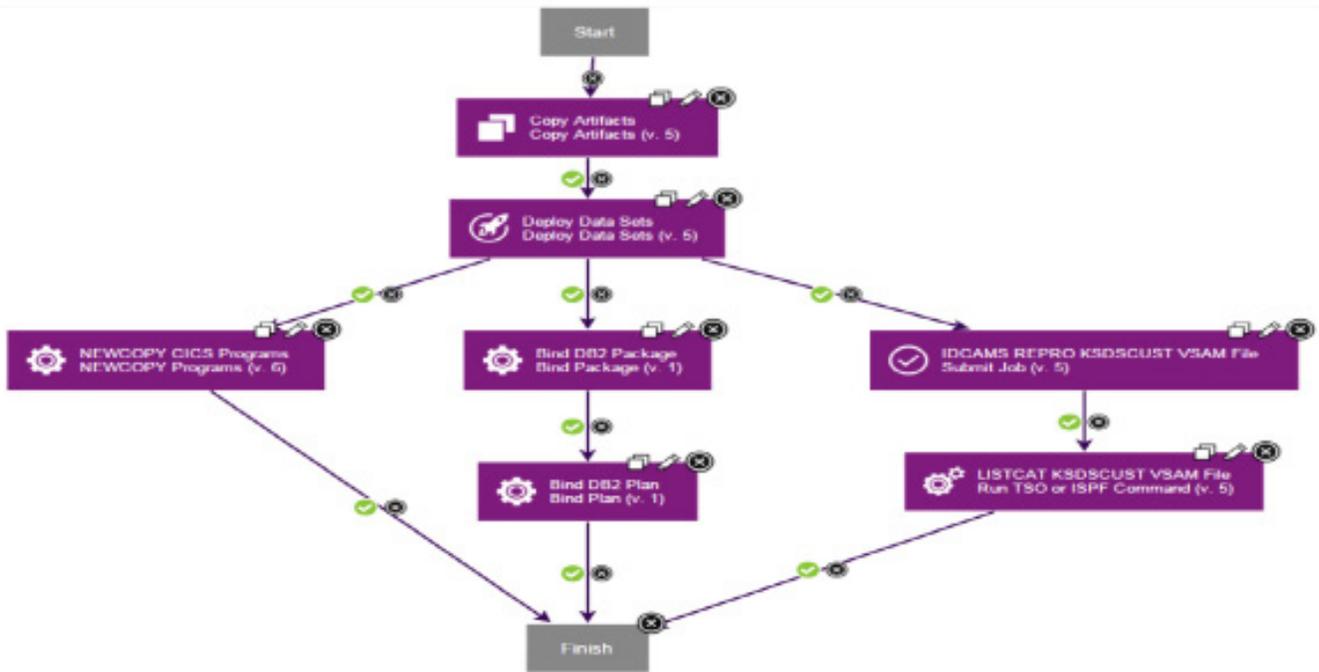
SET CICSplex connects to CICS V5.1 and above – CICSplex SM CMAS region.

DEPLOY BUNDLE defines a bundle resource in the CSDs or BAS.

SET BUNDLE changes the state to AVAILABLE, UNAVAILABLE, ENABLED, or DISABLED, or phase in a higher version of an OSGi bundle without disrupting active tasks.

UNDEPLOY BUNDLE changes the state to UNAVAILABLE, DISABLED, or DISCARDED.

UrbanCode (see Figure 2) provides: continuous delivery (it integrate with build and test tools to automatically deploy, test, and promote new builds); production deployments (orchestrate a complex production deployments of applications and configuration); self-service (grant teams rights to “push the go button” for different applications and environments); and incremental updates (deploy only the changed components or missing incremental (patch) versions).



**Figure 3: CICS, DB2, and VSAM steps performed in parallel**

With UrbanCode architecture (see Figure 1), there's a service tier, providing a Web UI and command line interfaces controlling a workflow engine, security service, and more. The data tier is where the configuration for UrbanCode Deploy is stored. These can be flat files, including deployable artefacts and logs. These are stored in a storage system known as CodeStation, which is typically on network storage.

Agents perform deployment, and import new versions. Agent relays are essentially proxies and agent brokers that consolidate traffic from many agents.

There are 170 plug-ins from IBM, partners, and

the community available for UrbanCode. Figure 3 illustrates combining plug-ins for CICS, DB2, and VSAM. It's possible to deploy the same application to different environments.

In conclusion, Mark said that applications and bundles provide a convenient way to package and manage components, resources, and dependencies in CICS. There are new tools to automate the reliable and repeatable deployment of CICS applications.

The CICS Build Toolkit builds CICS cloud applications and bundles. It resolves variables to deploy to different target environments. It can be called from your build scripts as part of your continuous

integration and deployments. It works with CICS TS V4.1 and above.

DFHDPLOY is a JCL utility to deploy and undeploy CICS bundles and cloud applications. Users can script the deployment in a single step, without the complexity of polling.

There are numerous CICS plug-ins for UrbanCode Deploy. It extends IBM UrbanCode Deploy to deploy and undeploy CICS applications, in coordination with other application and database components, in a single action.

A copy of Mark Cocker's presentation is available for download from the Virtual CICS user group

Web site at [www.fundi.com/virtualcics/presentations/AgiledevelopmentwithUrbanCodeJul16.pdf](http://www.fundi.com/virtualcics/presentations/AgiledevelopmentwithUrbanCodeJul16.pdf).

You can see and hear the whole user group meeting by downloading the WMV file from [www.fundi.com/virtualcics/presentations/2016-07-12meeting.wmv](http://www.fundi.com/virtualcics/presentations/2016-07-12meeting.wmv).

## Meeting dates

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

- On 13 September 2016, we have Bobby Tjassens Keiser, Technical Architect at Y-Innovate talking about “Application Modernization with LWW framework for CICS”.
- The following meeting is on 8 November 2016, when Ezriel Gross will be presenting.

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

## Recent CICS articles

*Get Started With Architecting Java Enterprise Edition In CICS Transaction Server* by Mark Hollands in *IBM Systems Magazine* (July 2016). You can find the article at: <http://www.ibmssystemsmag.com/mainframe/administrator/cics/>

## Java-CICS-TS/

*Sharing Views in CICS Explorer 5.4 Open Beta* by Steve Bolton on developerWorks (19 July 2016). You can find the article at: <https://developer.ibm.com/cics/2016/07/19/sharing-views-in-cics-explorer-5-4-open-beta/>

*The Latest CICS and IMS Updates Place z Systems at the Center of the API Economy* by Kristin Lewotsky in *IBM Systems Magazine* (July 2016). You can find the article at: <http://www.ibmssystemsmag.com/mainframe/trends/whatsnew/CICS-IMS-API/>

*CICS dynamic storage area above the bar, it's a bit different* by Sarah Bertram on developerWorks (15 June 2016). You can find the article at: <https://developer.ibm.com/cics/2016/06/15/cics-dynamic-storage-area-above-the-bar-its-a-bit-different/>

## CICS news

IBM has announced that the following key features are supported on this continuous delivery release of CICS TS V5.3: Support for Liberty Java Enterprise Edition (EE) 7 Web Profile, in integrated mode; Support for Liberty Java EE 7 Full Platform, in a new standard mode; Remote development and testing

of Java EE applications that use Java Connector Architecture (JCA) to call CICS programs; Improved zIIP offload eligibility for Liberty workloads; Support for embedding the separately licensed z/OS Connect Enterprise Edition V2.0; Several other enhancements to CICS TS V5.3, including a new non- Java JSON parser and an updated CICS Explorer

Additionally, a CICS TS V5.4 open beta offering is announced for customers to provide feedback on potential future capabilities. Full details can be found at [www-01.ibm.com/common/ssi/cgi-bin/ssialias?infotype=an&subtype=ca&supplier=897&letternum=ENUS216-036](http://www-01.ibm.com/common/ssi/cgi-bin/ssialias?infotype=an&subtype=ca&supplier=897&letternum=ENUS216-036).

## 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](http://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](mailto:trevor@itech-ed.com).

The Virtual CICS user group is free to its members.