Virtual CICS user group: Newsletter 69

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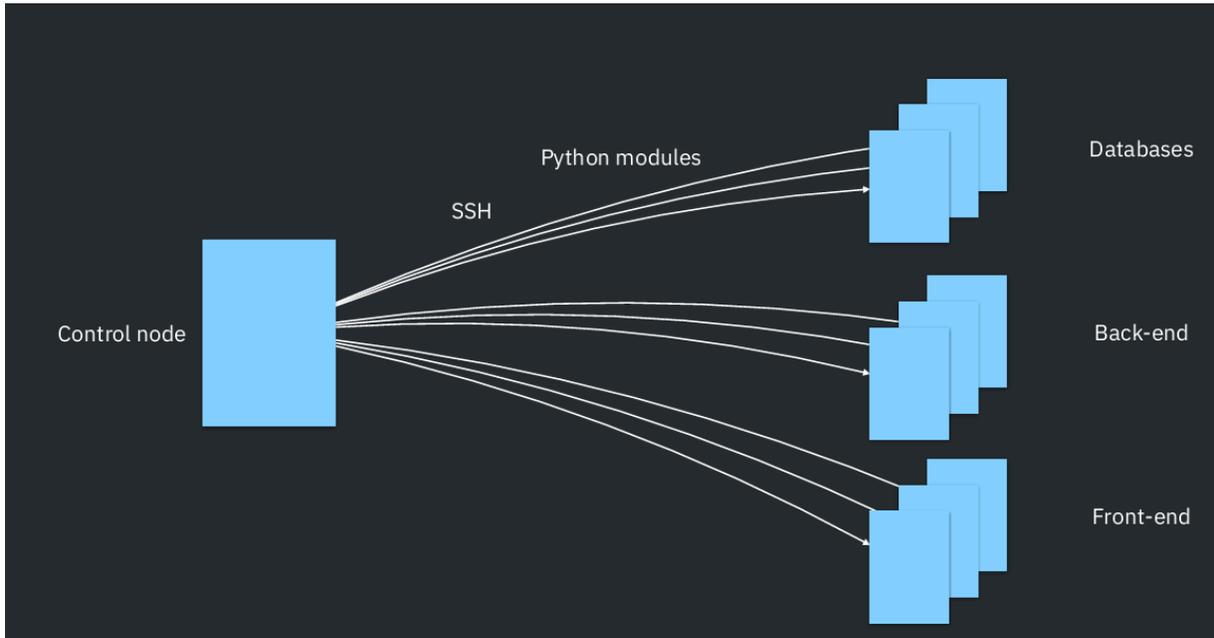

**Figure 1: The basic concepts of Ansible**

Virtual CICS user group presentation

The latest webinar from the Virtual CICS user group was entitled, "CICS DevOps with Ansible". It was presented in July by Stewart Francis, Lead Software Engineer at IBM.

Stew is the CICS TS Developer Productivity Architect. He works for IBM in Hursley Park and has been working on CICS TS for 15 years. Stew works on a wide variety of CICS productivity tooling, like CICS Explorer, Java developer tooling, and the CICS TS Ansible collection.

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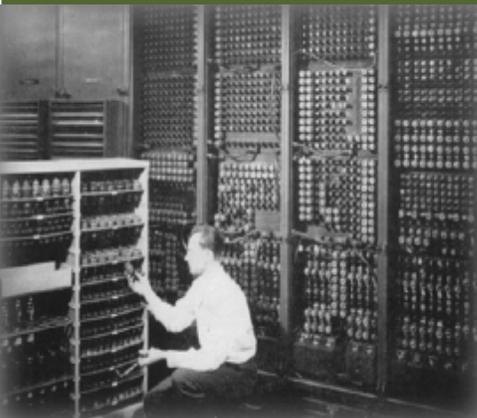
Samples for the IBM z/OS CICS collection

Documentation site | CICS collection on Galaxy | CICS collection on Automation Hub

This repository provides a number of samples that show how to use the CICS collection for real-life use cases:

1. Retrieving operational data from running CICS regions

   The `reporting` sample gives a good overview of how to get started with the tasks provided by the CICS collection.

   This sample shows how to retrieve data from running CICS regions and format it for use in dashboarding or ad hoc analysis.

   Because this sample only uses the HTTP-based CMCI REST API, it can easily be run from a workstation rather than needing any setup on z/OS.

2. Deploying a program to a CICS region

   The `deploy_program` sample shows how you can copy a load module from a build data set to a library used by CICS, and then NEWCOPY the program in CICS.

   This sample uses the z/OS core collection in concert with the CICS collection, within the one playbook.

3. Customising when a CMCI module should fail

   The `override_failure` sample shows how to override the default error when searching for a program that doesn't exist in CICS.

Figure 2: Sample CICS collection

Stew Francis started his presentation by saying that Ansible is a provisioning, configuration management, and application deployment tool. Its tagline is, "Turn tough tasks into repeatable playbooks". He went on to say that rather than managing one system at a time, Ansible models your IT infrastructure by describing how all your systems interrelate.

Common uses of Ansible include: system provisioning, installing applications, managing users, updating certificates, continuous delivery, and configuration management.

Stew explained that Ansible is popular across many enterprises, saying that it's now the top cloud configuration tool, and is heavily used on-prem too. The reasons for that are because

- It normalizes tooling across a multitude of platforms.

- It centralizes the automation strategy.

- Users can achieve configuration as code.

- There are well over 3000 modules available for all the things users might need to do.

Many mainframe sites might already have it in their organization, if not on their mainframe yet.

Figure 1 shows the basic concepts of Ansible. The control node is where the Ansible code runs, which in this session was a laptop. This can then control databases, the back-end, and the front-end using Python modules over a secure connection. There's no need to install Ansible on the target nodes.

The Ansible inventory identifies the nodes that are managed and categorizes them into different groups. Both nodes and groups can be assigned variables for use later during automation. The inventory can be static (using files) or can be provided dynamically.
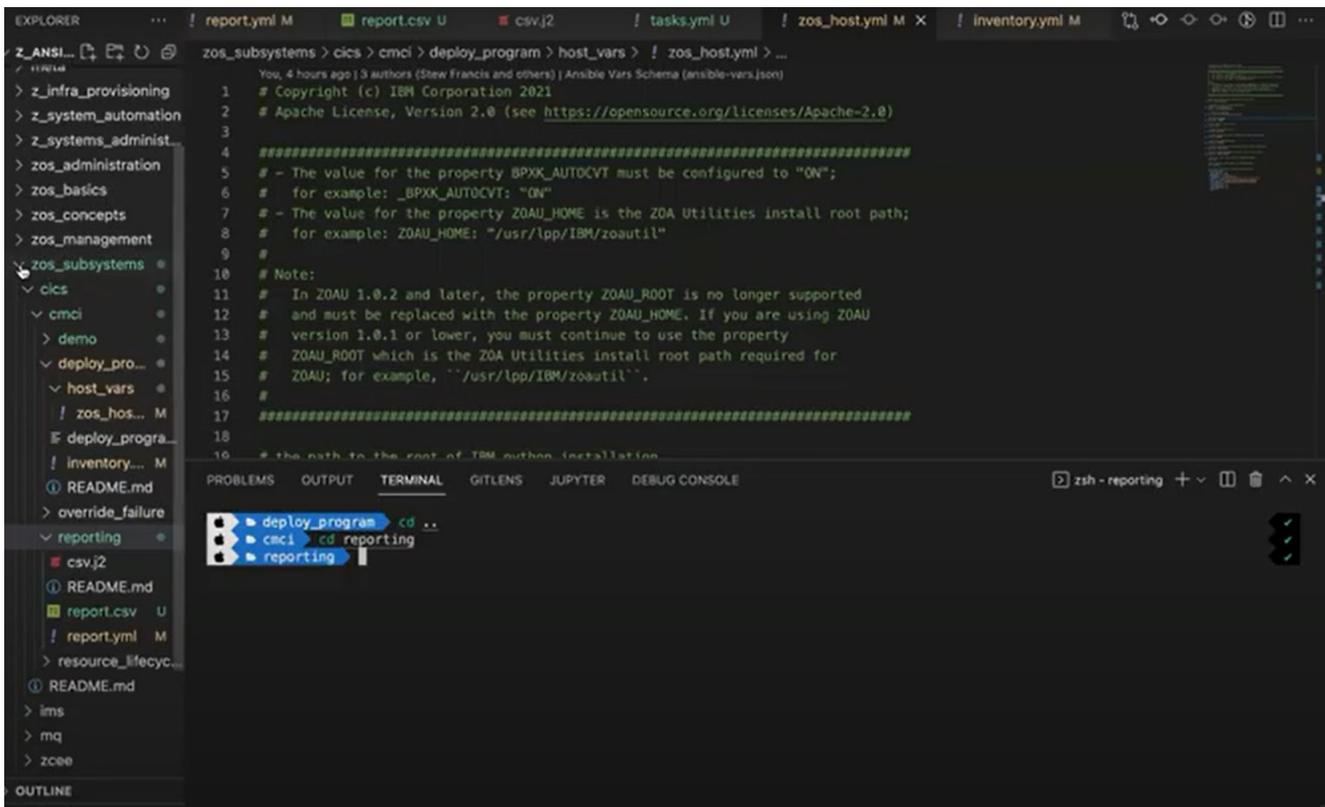
Figure 3: Example screen from first demo

Ansible tasks are work that you configure to be run on the managed nodes. Some are built into Ansible, but many are provided by Ansible plugins. Tasks are configured using Ansible, with configuration that is relevant to that task.

Ansible playbooks bind hosts from the inventory to tasks. The hosts can be individual node, groups, or everything. When a playbook is executed, it runs tasks against the hosts they are bound to.

By using Ansible Tower across the enterprise, users can take a higher-level view without needing to know the specifics of exactly how individual playbooks are put together. Users can use Ansible Tower to run playbooks without having to install Ansible themselves, and run them with functional credentials. Users can also schedule automation to run at specific times, such as a monthly audit or a dashboard refresh every minute.

Stew then went on to explain why people would want to use Ansible on z/OS. He said that using Ansible on z/OS allows users to centralize their automation skill set around a specific open-source technology that gives them flexibility and power. By sharing the same automation strategy as the rest of the enterprise, users can unlock opportunities for collaboration and integration. Ansible's flexibility permits the reuse of their existing automation – triggering System Automation (SA), z/OSMF workflows, JCL, etc – or adaptations to specific Ansible tasks.

In terms of Ansible for z/OS, there is a growing set of collections that support z/OS functions on Ansible Galaxy (the repository for

Ansible collections of tasks). They are also part of the Red Hat Ansible Certified Content for IBM Z. That means they are available on the Ansible Automation Hub, and are fully supported by Red Hat and IBM. The ibm_zos_core collection gives a good foundational experience on z/OS, covering datasets, APF, transferring data, operator commands, etc.

There is a CICS collection for Ansible, which contains tasks that are commonly required when working with CICS. Development work can be found at https://github.com/ ansible-collections/ibm_ zos_cics. The collection is on Ansible Galaxy at https:// galaxy.ansible.com/ibm/ibm_ zos_cics. The collection will be part of the supported Red Hat Ansible Certified Content for IBM Z.

Tasks in the CICS collection includes: cmci_action, cmci_ create, cmci_delete, cmci_ get, and cmci_update. They all use CMCI, which is the HTTP API to manage CICS, and that means they can be run on the target node (the z/OS LPAR) or remotely. CMCI is the same API that CICS Explorer uses. The Ansible collection can automate lots of things that are usually done manually in Explorer.

Stewart Francis showed some examples of what can be found in the CICS collection area (see Figure 2). He then gave a couple of demonstrations. The first one (see Figure 3) showed how to use Ansible to save the details of which resources or definitions are available in a particular environment. They can be stored in a CSV file and can later be imported into a spreadsheet.

The second demo looked at application deployment, and in particular the movement and NEWCOPYing of PROGRAM resources, which is, perhaps, one of the most common forms of automation used for CICS. It showed how a system programmer could automate moving dataset members from the build PDSE to the production CICS DFHRPL or LIBRARY PDSE, and then NEWCOPY the relevant programs.

A copy of Stewart Francis' presentation is available for download from the Virtual CICS user group website at https://itech-ed.com/ virtualcics/presentations/ CICSAnsibleJul22.pdf

You can see and hear the whole user group meeting at https://youtu.be/ xkkhWZDPzLo

Meeting dates

The following meeting dates have been arranged for the Virtual CICS user group. Meetings will continue as soon as we find a new sponsor:

- On 13 September we have Russ Teubner, CEO and co-founder at HostBridge, who will be discussing, "The impact of macros on CICS workloads".

- The following meeting is on 15 November, when Ezriel Gross, Principal Solutions Advisor at Rocket Software, will be looking at using Omegamon with CICS..

We are using Zoom for the user group meetings.

CICS news

IBM has announced the general availability of CICS Transaction Server 6.1. The new features in CICS TS 6.1 together with interactions with other products are grouped under three themes:

- Enhanced developer productivity, eg support for Java 11 on Z, Jakarta EE 9.1, Eclipse Microprofile 5, and Node. js 16.

- Improved security and compliance management.

- Reduced cost of management.

More information can be found at: https://community.ibm.com/community/user/ibmz-and-linuxone/blogs/john-tilling1/2022/06/17/cics-transaction-server-61-is-generally-available

CICS articles and blogs

CICS Region Tagging by Darren Beard and Andy Wright in Enterprise Tech Journal issue 3 (July 2022). You can find the article at: https://mydigitalpublication.com/publication/?i=753657&p=18&view=issueViewer

10 Major Enhancements to the Zowe Explorer for IBM CICS by Jeffin Siby in Zowe (12 July 2022). You can find the article at: https://medium.com/zowe/10-major-enhancements-to-the-zowe-explorer-for-ibm-cics-d2b0c1ecab48

CICS Feature Toggles by Andy Wright and Darren Beard in Enterprise Tech Journal issue 2 (May 2022).

You can find the article at: https://mydigitalpublication.com/publication/?m=23234&i=748150&p=10&ver=html5

Organizing CICS regions into OMEGAMON monitoring CICSplexs by Ezriel Gross in the IBM Z and LinuxONE Community (31 May 2022) You can find the article at: https://community.ibm.com/community/user/ibmz-and-linuxone/blogs/ezriel-gross/2022/05/31/organizing-cics-regions-into-omegamon-cicsplexs

Sponsorship opportunity

With the acquisition of HostBridge by Broadcom, the Virtual CICS user group is left without any sponsorship at all. Therefore, the user group will be on hiatus until a new sponsor comes forward, then the regular meetings will resume.

Any organization that is interested in supporting the CICS user community and sponsoring the user group should get in contact with trevor@itech-ed.com.

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 itech-ed.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.

Our new website address:
https://itech-ed.com/virtualcics/