

UrbanCode & Ansible:
Better Together
For IBM Z !





Laurel Dickson-Bull
**IBM Offering Manager for
IBM UrbanCode Deploy**

UrbanCode Deploy is a tool for automating application deployments through environments. It is designed to facilitate rapid feedback and continuous delivery in agile development while providing the audit trails, versioning, and approvals needed in production



Ronnie Geraghty
**IBM Z DevOps
Technical Specialist**

I work with Mainframe application development and operations teams to help them create fully automated DevOps pipelines for their z/OS applications using a combination of IBM and Open Source tools.



Haley Fung
**IBM Offering Manager
for IBM IMS and
Ansible for IBM Z**

Haley is one of the IMS and Ansible offering managers who specialized in enterprise modernization, API and DevOps. She is a frequent speaker at conferences and works with many customers transforming to a modern Z systems.



Bryant Panyarachun
**IBM Development Lead
for Ansible for IBM Z**

Bryant is one of the development leads in the IMS organization focusing on Cloud Native and DevOps integration for IMS clients and modernization with open source standards and tooling. He has been working with z/OS middleware teams to produce Ansible content to enhance the benefits of using Ansible automation with z/OS.



Randy Langehennig
**IBM WW DevOps Technical
Specialist - Monitoring Chat**

Why care about IBM Z ?

Keep in mind, seventy percent of the world's data still resides on the mainframe. The most critical financial institutions, airline companies, and healthcare providers leverage the mainframe every day, and they are not going away anytime soon.

Red Hat Ansible Certified Content for IBM Z



Red Hat Ansible Automation Platform

Red Hat Ansible Automation Platform is the enterprise framework for Ansible that enables a common approach to hybrid applications and infrastructure management

Flexibility



- Bring disparate IT into a coherent whole using a market leading open solution backed with enterprise support
- Interact directly with z/OS resources or integrate with existing platform tools

Consistency



- Integrate z/OS into an enterprise automation strategy in a consistent way
- Centralize management of your IT infrastructure

Simplicity



- The certified collections codify much of the z/OS specific knowledge and complexity
- Developer or system programmer can focus on their tasks and be more productive

Red Hat Ansible Certified Content for IBM Z

- Set of collections that accelerate the use of Ansible with IBM Z for configuration, provisioning, application deployment for z/OS etc..
- 4 Ansible for Z collections available today in Ansible Galaxy or Automation Hub:
 - z/OS Core
 - IMS
 - z/OS MF
 - System Automation
 - Intended future collection includes zHMC, CICS...
- Over 7800 total Ansible for Z collections downloads

UrbanCode Deploy for Z & Ansible for Z – Better Together

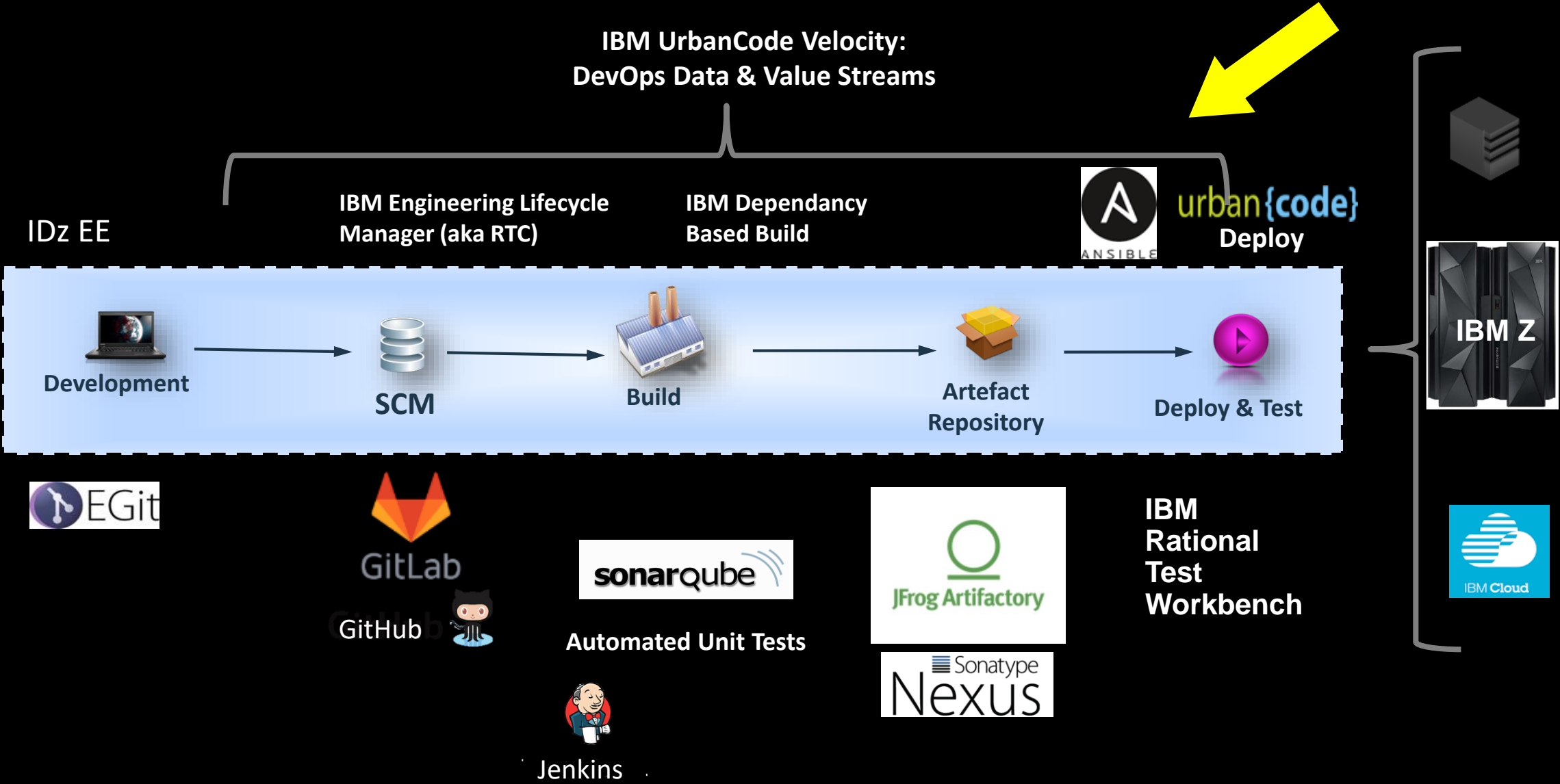
If I have Ansible, how can UrbanCode improve my DevOps experience on z/OS?

- Orchestrate the deployment of multiple packages simultaneously
- Manage external events inside the execution of a deployment (e.g., approvals)
- Restore a previous version in case of aborted deployment
- Keep track of every delivery through inventory capabilities
- Make deployment process easy to understand

If I have UrbanCode, how can Ansible improve my DevOps experience on z/OS?

- Limitless adaptation to user needs and integration with open source tools
- Keep advantage of agentless solution
- Parallelism –ability to drive automation to multiple systems simultaneously
- Consistency across enterprise hybrid multicloud environments through a single coherent market leading solution

One Pipeline across the Enterprise



Demo Environment Diagram

RHEL Server

- Python
- Ansible
- IBM z/OS Core Collection for Ansible

IBM UrbanCode Deploy (UCD) Server

- Orchestrate UCD Process

Linux UCD Agent

- Run Ansible

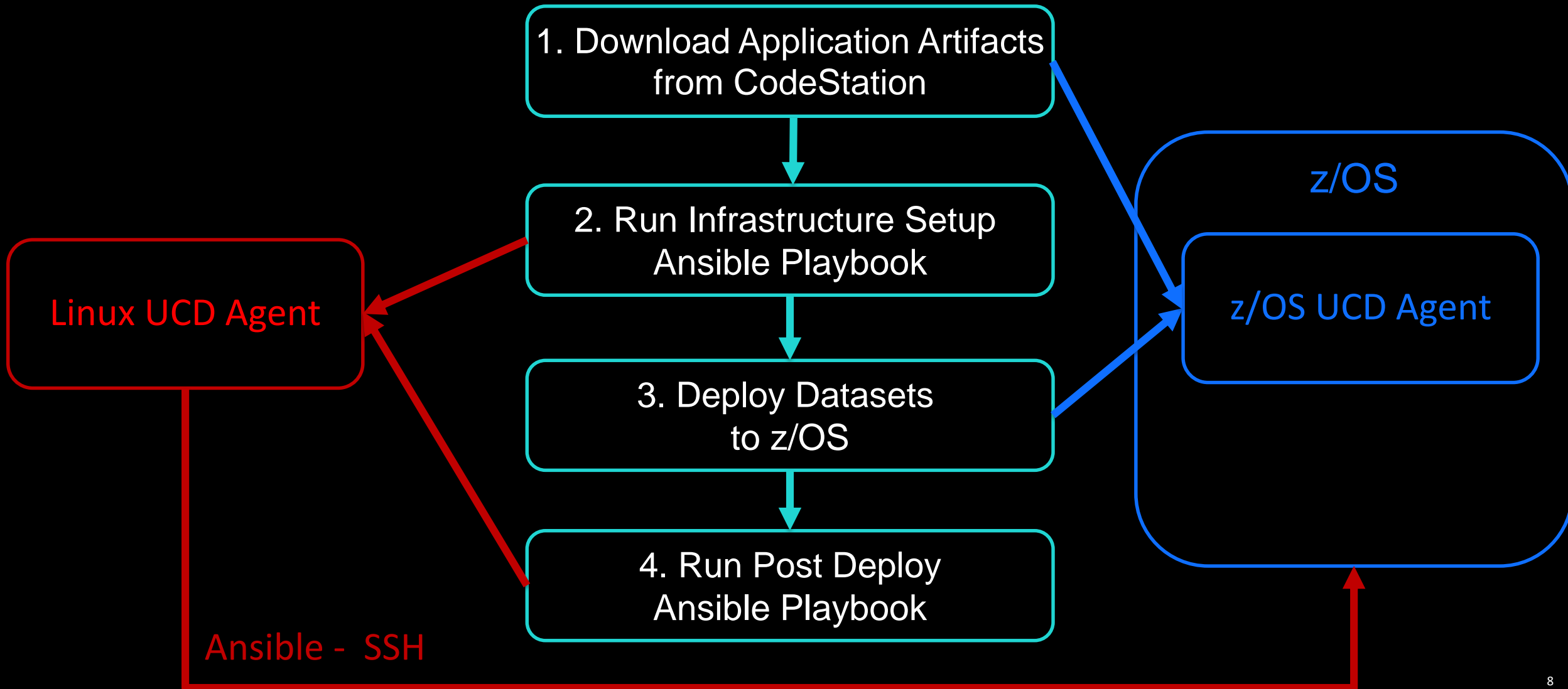
IBM ZD&T

- IBM Open Enterprise Python
- Z Open Automation Utilities

z/OS UCD Agent

- Run z/OS App Deploy

UrbanCode Deploy (UCD) Application Process



Demo

Join the Ansible for IBM Z community

- Facilitate communication amongst Guild members
- Host past recordings and presentations of Guild meetings
- Post blogs & videos for the IBM Z community



[Ansible for IBM Z: IBM Z & LinuxONE Community](#)

A screenshot of the website for the Ansible for IBM Z community. The page has a dark blue background with a pattern of binary code and cloud shapes. At the top, there is a navigation bar with the following items: "IBM Z and LinuxONE Community", "Get involved" (with a dropdown arrow), "Topic groups" (with a dropdown arrow), "User groups", "Solutions" (with a dropdown arrow), and "Resources". The main heading is "Ansible for IBM Z" in large white text. Below the heading is a sub-heading: "Faciliate communication, user interaction and feedback for Red Hat Ansible Certified Content for IBM Z". There is a blue button labeled "Contribute" with a dropdown arrow. At the bottom, there is a dark navigation bar with the following items: "Home", "Blog entries", "Discussions", "Events", "Videos", and "Library".

IBM Z and LinuxONE Community Get involved ▾ Topic groups ▾ User groups Solutions ▾ Resources

Ansible for IBM Z

Faciliate communication, user interaction and feedback for Red Hat Ansible Certified Content for IBM Z

Contribute ▾

Home Blog entries Discussions Events Videos Library

Community Content

[Announcing Red Hat Ansible Certified Content for IBM Z](#)

[System Magazine Web Article](#)

[Ansible, meet IBM Z](#)

[Getting started: Ansible on Z](#)

[Experience the Powerful Automation Capabilities of Ansible with z/OS Today](#)

[How an IBM Intern is Automating on z/OS with No Z Experience](#)

[Learn how to run batch jobs without using JCL on z/OS with Ansible](#)

[z/OS User Management with Ansible](#)

The screenshot shows a blog feed interface. At the top left, it says "Blog entries" with an RSS icon. At the top right, there are buttons for "This group" and "Related".

The first entry is titled "z/OS User Management With Ansible" and is posted by Blake Becker on 09/03/2020. It includes a thumbnail image of a dashboard with several line graphs. The text of the entry reads: "z/OS User Management With Ansible This blog assumes you have a basic understanding of Ansible; however, knowledge of Ansible is not required to enjoy this blog. We are using Red Hat Ansible Tower*'s upstream project, AWX. The information covered in this..." Below the text are tags for Ansible, IBM Z OS, IBM Z, IMS, and LinuxONE OS.

The second entry is titled "This month in Red Hat Ansible Certified Content: Updates to IBM Z Core and IMS collections, a central documentation site and more" and is posted by Haley Fung on 08/19/2020. It includes a thumbnail image of a document or website. The text of the entry reads: "Red Hat Ansible Certified Content for IBM Z continues to grow and expand to new use cases for your IBM Z automation needs. We bring another set of exciting updates to Ansible Galaxy. IBM z/OS IMS collection v1.1.0-beta.1 The IBM z/OS IMS collection v1.1.0-beta.1..." Below the text are tags for Ansible, Cloud, IBM Z OS, IBM Z, and IMS.

IBM z/OS Automation via Red Hat® Ansible® Z Trial

NEW! Z Trial for Ansible is available to try out Ansible for z/OS without any installation for FREE.

[Register here](#)

IBM Z Trial

Mainframe Automation with Red Hat Ansible

Welcome to your IBM Z Trial environment. Get started by exploring the scenarios below. Please approach the scenarios in order for an optimal experience.

SCENARIO | 10 MINS

Playbook for pinging z/OS

Explore scenario

SCENARIO | 15 MINS

Playbook for z/OS Copy and Install Tarball onto USS

Explore scenario

SCENARIO | 15 MINS

Playbook for z/OS Create PDS, Copy JCL, Submit and Query Job

Explore scenario

The screenshot displays the IBM Z Trial environment. On the left, a file explorer shows the directory structure for the 'z/OS' trial, including subdirectories for 'playbooks', 'files', 'z/OS', 'z/OS copy', 'z/OS install', 'z/OS JCL', 'z/OS PDS', 'z/OS query', and 'z/OS submit'. The main window shows the content of a playbook named 'z/OS copy.yml'. The playbook includes tasks for setting environment variables, defining variables for the z/OS host and user, and using the 'copy' module to transfer files to the z/OS system. The output of the playbook execution is visible in the terminal window, showing the successful completion of the tasks.

```
z/OS copy.yml
---
- name: z/OS copy
  hosts: all
  gather_facts: no
  environment:
    - "{{ environment_vars }}"
  vars:
    - name: z/OS copy
      local_file_dir: files
      remote_file_dir: /u/uss/
  tasks:
    - name: copy files to z/OS
      copy:
        src: local_file_dir
        dest: remote_file_dir
```

Executing the Playbook and Verifying Installation

Using VS Code Terminal (CVCWIN) to execute Ansible® playbook and parse the results.

In this task we will execute the playbook to perform the creation of the PDS, copy of the JCL into the PDS, submitting the JCL, and then query the job output.

1. Execute the playbook using this command: `ansible-playbook -i ansible.cfg z/OS copy.yml`



2. This will execute the playbook. You will start seeing the output from the executor. The execution will take a few minutes. Wait till it has completed.

Deinstalling the JCL, Submit and Query Playbook Task

IBM