

Course Code: ESX0G

Course Title: IBM z/OS Container Extensions zCX

## Description:

- z/OS Container Extensions (zCX), a new entitled capability of z/OS 2.4, ushers in a new era of hybrid computing supporting running Linux applications directly on z/OS.
- IBM® z/OS® Container Extensions (IBM zCX) makes it possible to run Linux on IBM Z® applications that are packaged as Docker container images on z/OS. Application developers can develop and data centers can operate popular open source packages, Linux applications, IBM software, and third-party software together with z/OS applications and data.

## Objectives:

- Describe the components of z/OS Container Extensions (zCX)
- Plan the resources required to setup zCX
- Configure and implement a zCX instance with z/OSMF workflow
- Start and connect to your zCX instance
- Access your zCX CLI Container and issue Docker commands
- Provision and deploy application container using zCX docker CLI
- Create Docker volumes for data persistence
- Monitor and manage your zCX instance and your containers
- Deploy some use-case applications in zCX containers
- Understand the Security considerations for zCX and containers
- Setup zCX user management and authentication
- Implement clustering and orchestration of zCX instances and container
- Understand how to Dockerize your Applications for z/OS Container Extensions
- Implement a zCX private secure registry to deploy your own containers
- Position zCX in the world of Hybrid Cloud
- Select workloads for zCX
- Determine which application is a good fit for zCX
- Describe some zCX use-cases

## Prerequisites:

- General z/OS knowledge, including basic UNIX System Services skills
- Basic knowledge of RACF
- Basic knowledge of z/OSMF and workflows TBD

## Duration:

16 Hrs

## Topics:

In this course we will learn the capabilities and benefits of zCX.

- You will plan, configure and implement a zCX instance with z/OSMF workflows

- You will learn how to use z/OSMF to setup and configure zCX
- Create, provisioning, and deploying a zCX instance
- Use z/OSMF workflows to manage the lifecycle of a zCX instance, deprovision a zCX instance
- Use reconfiguration workflow to increase/decrease resources for zCX instance
- Using zCX Command Line Interface, you will
- Get familiar with the docker CLI
- Explore installing zCX containers within newly provisioned zCX instance
- Provision and deploy application containers using zCX docker CLI commands
- Explore how to cluster zCX applications for higher availability and load balancing
- Operationally control zCX
- Dockerize your Applications for z/OS Container Extensions
- Create Docker volumes for data persistence, monitor and manage your zCX instance and containers
- Implement a zCX private secure registry to deploy your own containers
- Exercises and recorded demos reinforce the concepts and technologies being covered in the lectures.

## **Audience:**

This class is intended for z/OS system programmers and IT specialists incharge of configuring, implementing and deploying zCX under z/OS 2.4. This class is also intended for Application developers who will deploy dockercontainers in a zCX z/OS container extensions instance.