IBM Z Skills program
Eliminating the skills gap

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Build and showcase a diverse, sustainable, vibrant, skilled community of partners, clients, students, influencers, and team members that drive platform adoption, retention, and growth.

Lead IT Engineer
Accenture

Consulting, collaborating and inspiring the global open source community

Linux Engineer
CENADI

Modernizing Cameroon's tech infrastructure

Capacity Management Analyst
DDC-ITS

Hairstylist to Mainframer and community champion

System Engineer
Rabobank

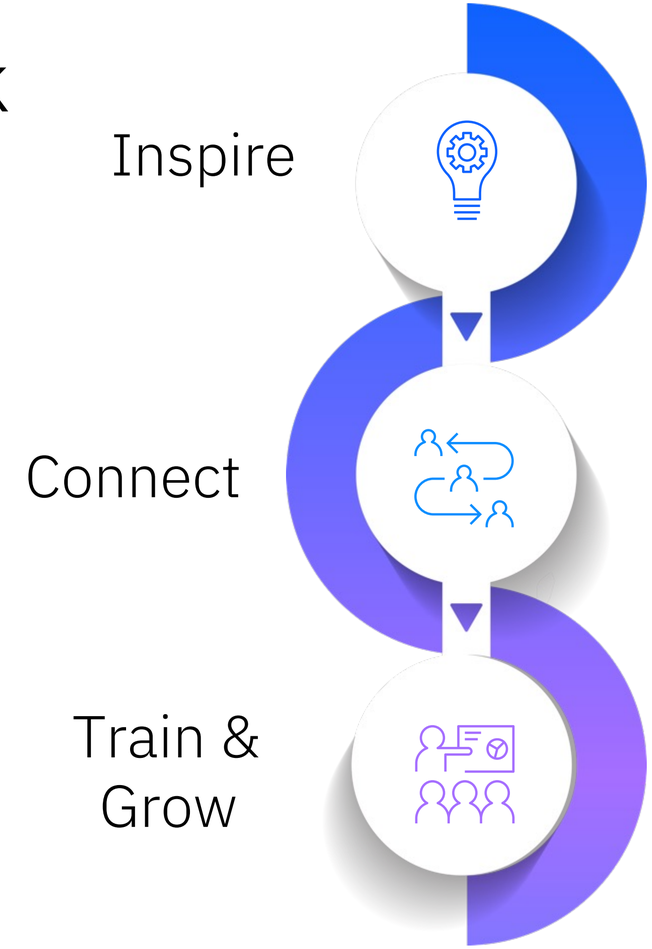
Innovating banking with IBM Z

Founders of the European company finmarie

Empowering women and gender equality through AI

IBM Z helps skill-up the work force of today and tomorrow

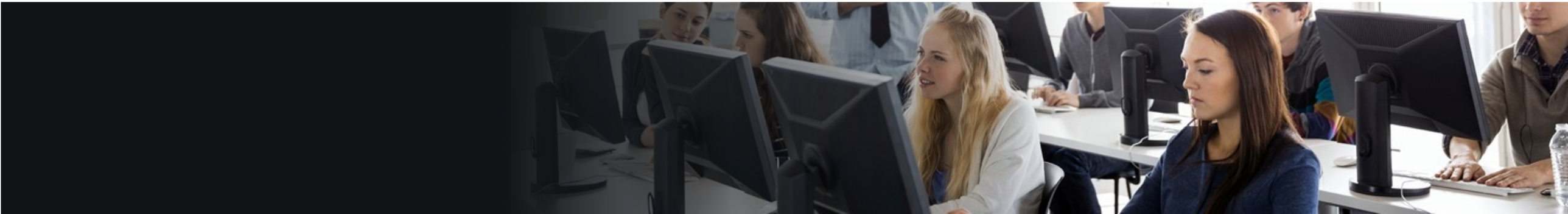
Participate in proven programs to meet client talent needs



Inspire NextGen talent
Participate in a **Z Career Connection Event**

Connect with badged talent
at an **IBM Z Virtual Career Fair**

Build Skills & Grow Talent
Leverage the **IBM Z Global Skills Accelerator Program** with 300+ hours of training, coaching and have new hires join the **New to Z user group**



Inspire NextGen talent

participate in a Z Career Connection Event

IBM Z Career Connection

Meet and inspire local students to explore mainframe technologies and careers.

On-Campus IBM Z Student Ambassadors

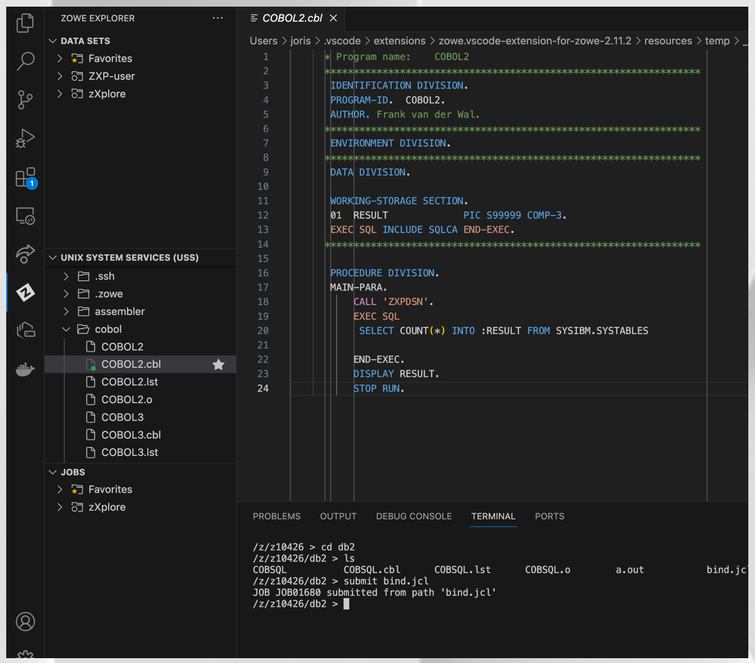
Engage with students on campuses all over the world are building and leading Mainframe Student Clubs.

> IBM Z STUDENT AMBASSADOR EXPERIENCE WAS NOT ONLY MOTIVATING, BUT IT PROVIDED SUPERB LEARNING OPPORTUNITIES. MEETING PEOPLE FROM AROUND THE GLOBE WAS INSPIRING.
>
> — *Junior Moremong*

IBM Z Xplore learning platform

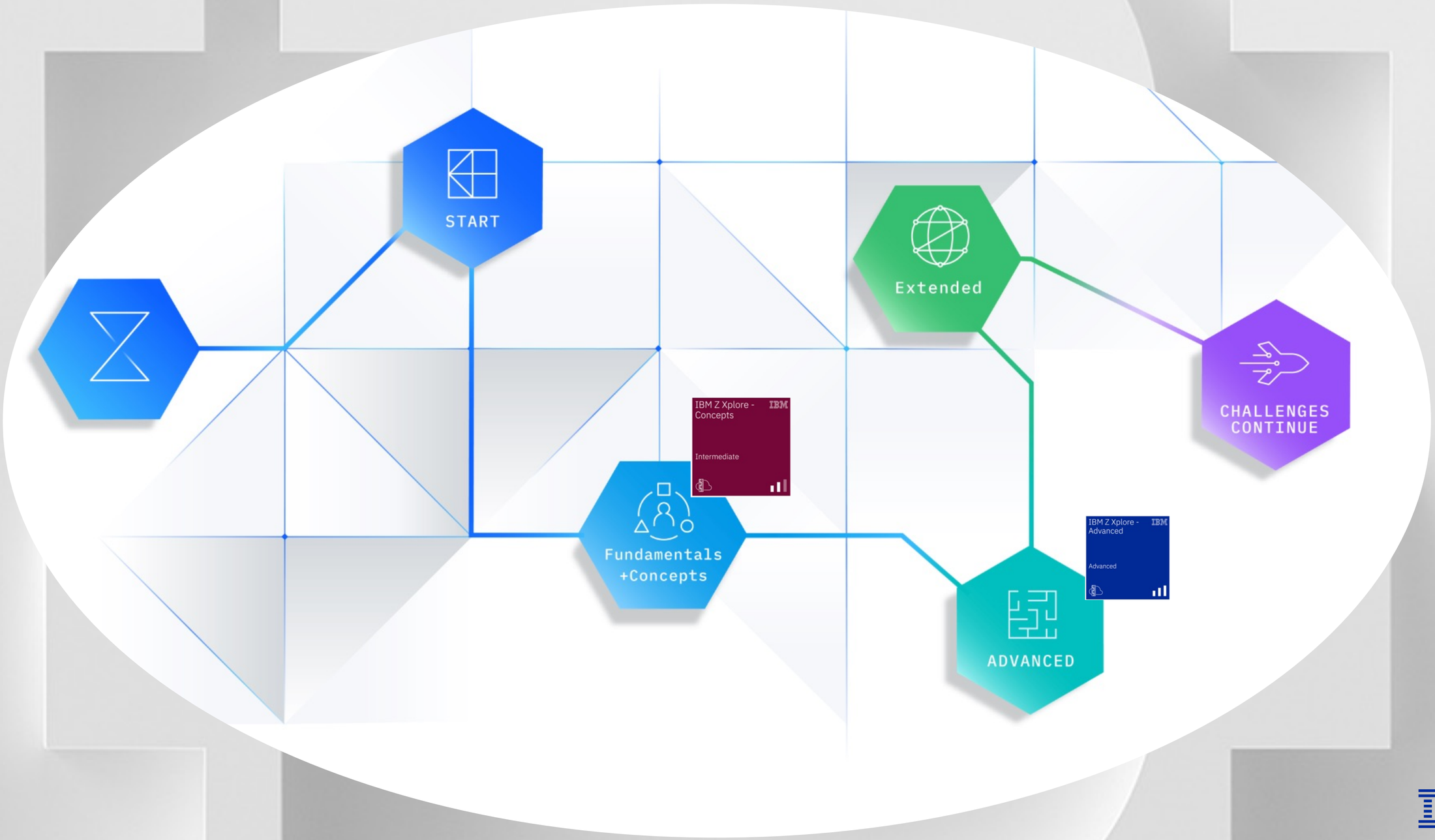
Self paced, free of charge learning platform

- Available year-round
- z/OS and Linux on IBM zSystems
- Use of modern techniques around open source tools like ZOWE and VS Code
- Data sets, JCL, Python, USS, security, REXX, COBOL, Linux, VSAM, REGEX, Db2, TSO/ISPF, Node.js, Machine Learning and more.
- Skills with the goal of building a career.
- Register: ibm.biz/ibmz-xplore



Concepts Badge: earned after the completion of the conceptual topics

Advanced Badge: earned after completion of advanced topics


START
Extended
CHALLENGES CONTINUE
IBM Z Xplore - Concepts
IBM
Intermediate
Fundamentals +Concepts
IBM Z Xplore - Advanced
IBM
Advanced
ADVANCED

Connect with badged talent

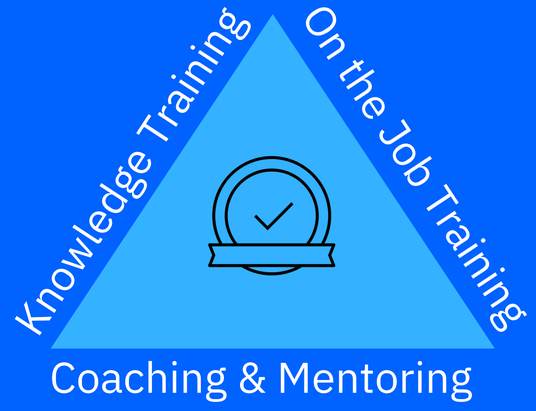
at an IBM Z Virtual Career Fair

Train: IBM Z Skills Accelerator Program

Easy button

The winning formula for building loyal, skilled talent

- Mainframe Sys Admin or App Developer program
- Competency based
- 300+ hours of learning
- Success Coach for participants and managers
- On the Job training & technical mentorship
- 75+ Client employers to date, 250+ participants



Clients Provide Learners, On-The-Job Training, Mentors

- New Hires or Incumbent employees
- On-the-job learning and technical mentors

Franklin Provides Program Administration

- Assigns Success Coaches
- Aligns learning plans
- Provides Check-in’s and learning support
- Conducts progress reviews
- Finalizes successful completion of skills program

IBM Provides Learning Framework & SMEs

- Registered competency framework with identified virtual online courses and learning
- Digital badging throughout the journey
- IBM SME technical office hours availability
- Certificate of Completion of program

Train: IBM Z Skills Accelerator Program

Easy button

Employer Benefits

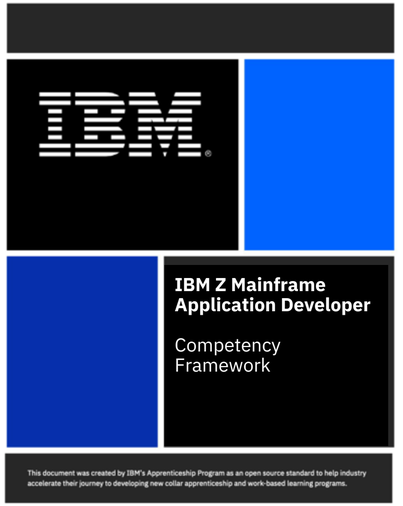
- **Appointed Success Coach**
  who will meet weekly with learners to keep them on track and confirm that learners are grasping all concepts
- **IBM Subject Matter Experts**
  who will meet weekly with learners to talk through any technical questions and host content labs
- **Flexibility**
  to accommodate work and training with guided learning
- **Proven Success**
  with over 320 hours of training and dependable content wherever participants are geographically located

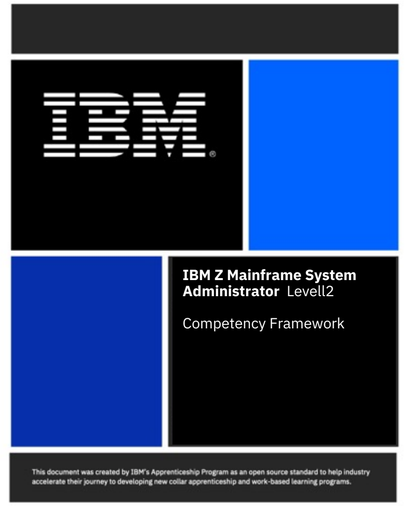
Employer Commitment

- **Recruit, hire, and onboard**
  individuals to participate in the program
- **Assign**
  each learner a technical mentors and provide on the job training for a one-year period

» **Enable**
learners to attend virtual training sessions with subject matter experts and their success coach

Registered Learning Frameworks





Mainframe System Administrator Level 1

Mainframe Application Developer

Mainframe System Administrator Level 2

Program Administered by Franklin Apprenticeships

Train: IBM Z Skills Accelerator Program

Detailed Competency Framework – App Dev

Meet

IBM to setup an introduction call with program administrator to discuss:

- Number of learners
- Location needed
- Desired learning paths
- Review of administrator/IBM Document of Understanding (DOU)
- Anticipated start date

Confirm

Once all details are finalized, client will:

- Sign a DOU with program administrator
- Complete procurement process with program administrator
- Finalize payment

*Note if rewards are being used, DOU will also be signed with IBM

Start

Starting Program:

IBM will work to schedule two meetings:

1) Kickoff meeting: Client executive sponsor, managers and mentors, IBM Account Team, and Program Administrator manager. We will review the program at a high level and answer any existing questions.

2) Onboarding call: Client has managers and and the learners who will be going through the program attend. Program Administrator Success Coach will be introduced, and we will discuss the 12-month learning plan and journey ahead.

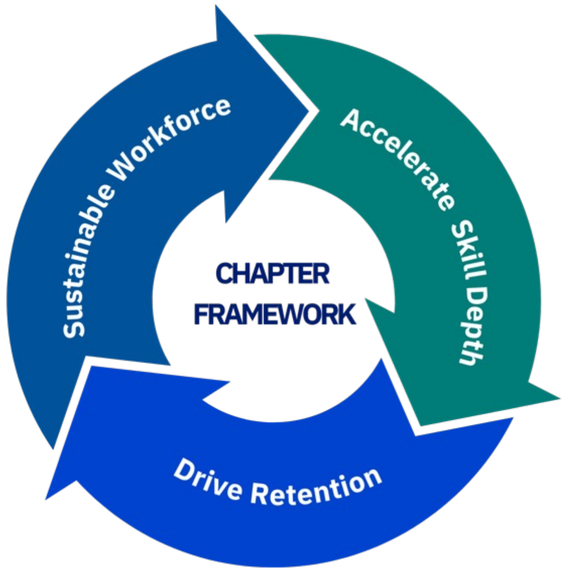
Grow: NEW TO Z Global Chapter Program

Build a vibrant mainframe early professional group in your area while accelerating the talent pipeline

Grow and nurture New to Z talent pipeline and drive engagement and skill depth

Build a thriving integrated community where early IBM Z professionals can jumpstart their careers

Showcase a **sustainable workforce** through community engagement, growth & acts of advocacy



Accelerate skill depth on the platform through regular in-person and virtual technical education

Drive retention of early career professionals by creating a sense of belonging through buddy programs, mentoring, local meetups and chapters, forums, etc.

Get Started in 3 Steps

1. Identify and build your team
2. Recruit and engage stakeholders
3. Register your chapter

Roles & Responsibilities

Chapter Leaders
- Lead the charge to build an engaged local group of early tenure mainframers
- Plan local meetup events

Stakeholders
- Drive early professional engagement and participation

IBM Chapter Support Team
- Provides resources and community support
- Shares best practices
- Promotes local events through New to IBM Z Digital Hub

Resources
- Registered chapters* can request hosting their events at an IBM site, funding for hospitality and swag, and more!
- Technical and event planning resource kits available on the IBM Z Advocacy Hub.

Launch a new chapter today!

Additional Education – Training and Communities Available

Title	Description	Link
Getting started with IBM Z	Hands-on resources to get an understanding of IBM Z concepts and technologies. Includes IBM Redbook video courses – z/OS Introduction, CICS, IMS, Cobol	developer.ibm.com/components/ibmz
Mainframe Skills Depot	Role based, hands-on learning paths with no-charge courses to earn industry recognized digital badges.	ibm.biz/skillsdepot
IBM Z Xplore	Mobile gaming app, interactive learning experience, IBM Z system access, student contest – build skills and earn badges	ibm.biz/ibmz-xplore
z/OS Mainframe Practitioner Certificate	Develop foundational skills in IBM Z hardware and software	ibm.biz/course-zosintroduction
IBM Training	(fee & no cost) Mainframe training, articles, badges, certificates and Learning Journeys	ibm.com/training/search?query=Mainframe
Open Mainframe Project	Cobol & Zowe classes	openmainframeproject.org/projects
Other opportunities to learn and take advantage		
Communities	New to Z user group: For professionals new or up to 10-years experience on the mainframe	ibm.biz/newtoibmz
	IBM Z Xplore: For students wanting to explore careers in enterprise computing & prepare for the future of work	ibm.biz/ibmzstudenthub
	Educator Hub: One-stop destination for IBM Z educators to find the latest communications, news and events, as well as collaborate and network	ibm.biz/ibmzeducatorhub
IBM Skills Build Downloads (educators and students only)	Access to select IBM resources through a free self-service program that will provide students with the skills to differentiate themselves in their career.	ibm.biz/z-academic
IBM Z Trial Softwares	Try the latest IBM® Z® software today at no charge, and with no installation required.	ibm.biz/ibmztrial

Visit ibm.biz/ztalent to learn more

Train: IBM Z Skills Accelerator Program

Detailed Competency Framework – App Dev

			Building Applications with React and Flux
15.0 Understand how to use version control for all elements of the software delivery lifecycle	15.1 Describe the principles of version control 15.2 Describe versioning, releases, issues, and merges in source code 15.3 Demonstrate proper usage of versioning, releases, issues, and merges in source code 15.4 Understand the use of dependencies and libraries from within and outside the team 15.5 Demonstrate usage of dependencies and libraries from within and outside the team	☒ O ☒ Q&A ☒ P ☐ RA ☐ S ☐ PD ☒ A ☒ MT ☐ EW ☒ RPL	OJT
16.0 Understand and demonstrate how to construct and test quality code, at scale	16.1 Understand how to construct quality code at scale 16.2 Understand the techniques used for ensuring quality 16.3 Understand the different types of testing, where to apply them, and the relative amounts 16.4 Understand the successful use of test coverage tools 16.5 Understand successful use of performance testing 16.6 Understand successful use of boundary and limit testing Understand successful use of chaotic testing	☒ O ☒ Q&A ☒ P ☐ RA ☒ S ☐ PD ☒ A ☒ MT ☐ EW ☒ RPL	OJT
17.0 Understand and demonstrate continuous integration	17.1 Articulate the value of continuous integration in a development environment - ***Course 1 Continuous Integration and Continuous Delivery – The Big Picture, Module 3*** 17.2 Demonstrate CI principles through frequent commits to trunk of codebase - ***Course 1 Continuous Integration and Continuous Delivery – The Big Picture, Module 3 & 5*** 17.3 Demonstrate CI principles through use of automated tests to ensure codebase is in a good state - ***Course 1 Continuous Integration and Continuous Delivery – The Big Picture, Module 3 & 5*** 17.4 Demonstrate proficient use of continuous integration tools - ***Course 2 Getting Started with Jenkins 2 and Course 3 Travis CI*** 17.5 Demonstrate understanding of the impact of commit defects into shared codebase - ***Course 1 Continuous Integration and Continuous Delivery – The Big Picture, Module 4***	☒ O ☒ Q&A ☒ P ☐ RA ☐ S ☐ PD ☐ A ☒ MT ☐ EW ☒ RPL	Continuous Integration and Continuous Delivery – The Big Picture Getting Started with Jenkins 2 Travis CI
18.0 Understand and demonstrate continuous delivery	18.1 Articulate the value of continuous delivery in a development environment - ***Course 1 Continuous Integration and Continuous Delivery – The Big Picture, Module 4***	☒ O ☒ Q&A ☒ P ☐ RA	Continuous Integration and Continuous

Train: IBM Z Skills Accelerator Program

Detailed Competency Framework – MSA

23.0 Demonstrate basic knowledge of HCD	23.1 Identify and discuss the HCD definition process sequence 23.2 Demonstrate how the HCD dialogs are used to define a configuration 23.3 Demonstrate knowledge in how to connect peripheral devices 23.4 Assist with the connection of peripheral devices when possible	☒O ☒Q&A ☐P ☒RA ☐S ☒PD ☒A ☒MT ☒EW ☐RPL	Course: z/OS Syste Services Structure (ibm.com)
24.0 Demonstrate basic understanding of the use of SMP/E to manage the deployment and lifecycle of mainframe software products	24.1 Use the SMP/E dialogs to install a product and its related service 24.2 Manage exception SYSMOD data 24.3 Use primary and secondary data sets as required by SMP/E 24.4 Analyze output from SMP/E processing and resolve commonly encountered problems 24.5 Use the REPORT command to determine software dependencies between zones 24.6 Use the BUILDMCS process to create a function SYSMOD from an installed product and its service 24.7 Use SMP/E functions to install software service automatically over the internet 24.8 Implement support for communication server FTP client 24.9 Use the RECEIVE ORDER command to order and install z/OS maintenance automatically over the Internet	☒O ☒Q&A ☐P ☒RA ☐S ☒PD ☒A ☒MT ☒EW ☐RPL	Badges: SMP/E for z/OS Workshop - IBM Training - Global
25.0 Demonstrate basic understanding of how to Perform and upgrade a major product in a production	Demonstrate basic knowledge of: 25.1 Implementation plans 25.2 Risk assessments 25.3 Back out plans 25.4 Test plans 25.5 Change management processes to execute the implementation plan	☐O ☒Q&A ☐P ☐RA ☐S ☒PD ☐A ☒MT	Badges: SMP/E for z/OS Workshop - IBM Training - Global

Common Foundational

Learning Content

- Introduction to Computer Science (10h)
- IBM Z Xplore (32h)
  - Fundamentals
  - Concepts
  - Advanced
- z/OS Practitioner Certification Course (50h)
  - Intro to IBM z/OS
  - Intro to z/OS Commands and Panels
  - Systems Programming on IBM Z

Mainframe System Admin (MSA I)

Mainframe System Administrator I

Learning Content

- Professional Development Courses
- Networking Principles
- z/OS REXX Programming
- z/OS System Services Structure
- SMP/E for z/OS Workshop
- Db2 Fundamentals
- CICS & IMS: IBM CICS Video Course Series
- CICS TS: Controlling CICS Transaction Server Operations 5.6
- CICS TS: Concepts and Operation Assessment 5.6
- IMS Fundamentals
- z/OS Introduction: An IBM Redbooks video course
- z/OS JCL: Introduction to z/OS JCL
- JCL Lecture
- TSO / ISPF / SDSF Lecture

Mainframe System Admin (MSA II)

Mainframe System Administrator II

Learning Content

- Professional Development Courses
- IBM Z Hardware Management Console Operations
- IMS Fundamentals/Diagnostics
- IBM Z System Automation Curriculum
- IBM Mainframe Specialist z/OS Expert 2.5
- Db2 - Database Management System Series
- Zowe Fundamentals
- Z Performance - Introduction to Mainframe Performance

Application Developer (App Dev)

Mainframe Application Developer

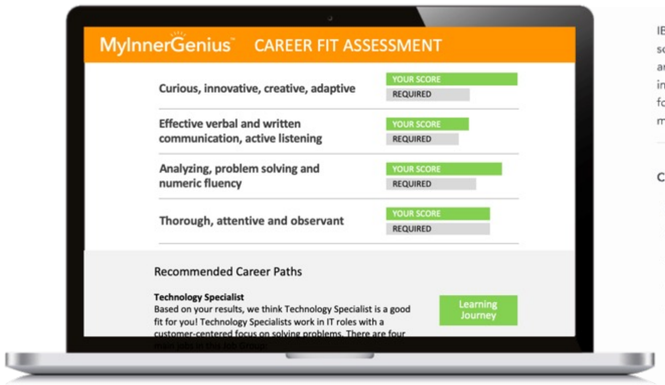
Learning Content

- Big Data and Analytics: Hands On
  - Big Data 101
  - Hadoop 101
  - Spark Fundamentals
- Web Development Fundamentals
- Front-End Web Development Quick Start w/HTML5, CSS, JavaScript
  - Intro to Web Development
  - iQuery Fundamentals
  - Angular: Getting started
  - Designing RESTful Web APIs
  - A Practical Start with React
  - Building Application w/React and Flux
- Clean Coding, Social Coding Behaviors and Practices
  - Manage Technical Debt
  - Clean Code: Writing Code for Humans
  - GitHub Fundamentals
  - Understanding and Eliminating Technical Debt
- Introductions to Functional and Imperative Languages
  - JavaScript Fundamentals Vol 1,2,3 & JavaScript
  - Development Environment
  - Node.js
  - Python
  - Java Fundamentals, Core Platform & Fundamental
- COBOL Programming: COBOL Programming with VSCode
- Test Driven Development: Big Picture
- Continuous Integration and Delivery Practices: Big Picture/ Getting started with Jenkins 2
- Feature Decoupling – Feature Toggles
- DevOps tools: Chef, Travis, Ansible, Jenkins – DevOps Big Picture
  - DevOps Big Picture
  - Implementing DevOps in the real world
  - Travis CI Tutorial
- Cloud Computing Fundamentals (37TSO / ISPF / SDSFh)
  - IBM Cloud Essentials
  - IBM Cloud Application Development V3
  - IBM Cloudant
  - Docker Containers – Big Picture
  - Container & Kubernetes Essentials
  - Introduction to OpenStack
  - Get started with Microservies ISTIIo
  - Beyond basics ISTII0
- Enterprise solutions
  - Db2 Fundamentals
  - Managing Db2 Operations
  - IBM CICS Video Course series
  - Modernize Applications w/IBM CICS
  - IMS Fundamentals

Now Offering MyInnerGenius Career Fit Assessments

Introducing a new way to match job-related skills, abilities and personality traits to the careers your employees will love.

The MIG Assessment poses a range of questions to identify individuals with skills and characteristics well suited for the role of Mainframe Systems Administrator or Application Developer. It also provides feedback explaining why an individual may not be the best candidate for one of those roles.



IBM z/OS Mainframe Practitioner work in IT roles with a focus on using mainframe systems to solve problems. They create, modify and test the code, forms and script that allow computer applications to run. Work from specifications drawn up by software developers or other individuals. May assist software developers by analyzing user needs and designing software solutions. May develop and write computer programs to store, locate and retrieve specific documents, data and information. Research, design, develop and test operating systems-level software, compilers and network distribution software. Set operational specifications and formulate and analyze software requirements. May design embedded systems software. Apply principles and techniques of computer science, engineering and mathematical analysis.

Competencies required for success in this role:

- Problem-solving abilities
- Mathematical skills
- Verbal skills
- Working memory
- Quality orientation
- Interpersonal skills
- Integrity
- Personal accountability
- Innovativeness
- Creativity

How closely you match this job

MyInnerGenius reduces bias and improves diversity and inclusiveness

- **Shields personally identifiable information** to remove unconscious bias
- Predicts job success **regardless of education** or experience
- Assesses **job-related competencies** to focus on what is most important
- Measures capabilities with **proven, validated unbiased assessments**

MyInnerGenius™

IBM Z Xplore Learning Platform

Host a Mini code-a-thon to to experience modern ways of working with the mainframe

The IBM Z Xplore mini code-a-thon is a one-day event with hands-on, self-paced challenges designed to experience modern ways of working on a mainframe.

Use today's common developer tools to create modern interfaces with current computer languages. Participant will create a web interface to a z/OS application and utilize data from IoT devices.

The code-a-thon has multiple challenges that progressively build on the concepts and code of previous challenges and a leadership board to showcase progress.

No prior experience required.

ENVIRONMENT AND TOOLS

Work with open-source tools and languages, traditional JCL, Internet of Things, transaction processing, and web technologies. Python is the primary programming language.

MINI CODE-A-THON ACCESS

Your IBM contact will provide you with a unique IBM Z Xplore link to access the mini hack

SOFTWARE DOWNLOADS

- VS Code
- Node.js

RESOURCE LINKS

- IBM Z Xplore Overview Kit
- Information Page

DURATION

- One Day