

## **IBM Bluemix Certification Training**

### **Cloud Computing Foundation**

**Learning Objectives** - In this module, you will learn what Cloud Computing is and what are the different models of Cloud Computing along with the key differentiators of different models. We will also introduce you to virtual world of Bluemix along with Bluemix key vocabulary, services and concepts.

**Topics** - What is Cloud computing? Why cloud computing? Different models of Cloud computing: Cloud service models, Cloud delivery models. Advantages of Cloud, about Bluemix and Bluemix keywords.

### **Bluemix overview**

**Learning Objectives** - In this module, you will learn about the open source PAAS (Cloud Foundry), IBM Containers and Openstack VMs (OpenStack).

**Topics** - Bluemix Introduction, Cloud foundry architecture, Bluemix Login/ access options, Create account through Bluemix, Login to Bluemix through CLI, Login to Bluemix through app manager, key components of IBM Bluemix environment, Organization management elements in IBM Bluemix environment, IBM Bluemix region and manage applications in multiple regions and Different framework and languages supported in Bluemix environment.

### **Java Based Application On Bluemix**

**Learning Objectives** - In this module, you will learn to Develop, deploy, and scale Java web apps with ease. IBM WebSphere Liberty Profile is a highly composable, ultra-fast, ultra-light profile of IBM WebSphere Application Server designed for the cloud.

**Topics** - What is buildpack? What is liberty profile? Creating sample application using boilerplate, Accessing the sample application, Important commands for managing applications through CLI, Pushing applications to Bluemix through cli, What is application scaling? Scaling applications with ease.

### **Enhancing Application Through Managed Services**

**Learning Objectives** - In this module , you will learn about services. What are managed services, and about some of the important services available in Bluemix.

**Topics** - What is a service? What is managed service? List of services available as part of the Bluemix platform, How to bind a service to an application, Using service to monitor applications, Binding database to an application and Auto scaling of applications.

### **Devops On Bluemix**

**Learning Objectives** - In this module, you will learn about DevOps on Bluemix from development to deployment. Get introduced to the concepts of delivery pipeline, monitoring and analytics, track and plan.

**Topics** - Capabilities of IBM Bluemix DevOps services, Delivery pipeline, Agile Track and Plan, Edit and debug applications using DevOps services web code editor, DevOps services source code management for projects.

### **IDE with Bluemix**

**Learning Objectives** - In module you will learn to work with IDEs like NetBeans, Eclipse on Bluemix. Connect to your DevOps Services projects from Eclipse, Loading DevOps Services projects, Open DevOps Services work item queries in Eclipse.

**Topics** - Introduction to Eclipse with Bluemix, Setting up the Bluemix server in Eclipse, GITHUB integration in Eclipse, Deploying application in Eclipse, How to bring source code to Eclipse, Push and test applications from Eclipse.

### **Other Frameworks on Bluemix**

**Learning Objectives** - In this module, you will learn about development, deployment, and scalability of server-side JavaScript apps with ease. The IBM SDK for Node.js provides enhanced performance, security, and serviceability. You will also learn about other frameworks supported in Bluemix.

**Topics** - Twelve factor design principles, creating a Node.js application in Bluemix, IBM SDK for Node.js, Enable live sync feature of Node.js apps, Other available frameworks in Bluemix, Twitter Sentiment analysis demo, What is Docker container? Bluemix Containers and virtual servers.

### **Load Testing using Load Impact and SSO Service for Security**

**Learning Objectives** - In this module, you will learn to use Load Impact for Load testing cloud applications. You will create user scenarios to define virtual user load for testing and running it against an application and you will learn to analyze results from load tests. You will learn what is SSO (Single Sign-on) and the applications that use SSO and Integration of an SSO service to an application.

**Topics** - Use Load Impact for Load testing cloud Applications, creating user scenarios, defining virtual user load for a test, running virtual user load against an application, analyzing results from load tests. SSO - requires the application to use an OpenID Connect client interface, applications SSO supports: Cloud Directory, Social providers and Enterprise. Integration- Authentication callback when adding the SSO service to an application.

### **Data Services**

**Learning Objectives** - In this module, you will learn the different types of Data Services available in PaaS and its unique features. You will also learn to manage instances of IBM Bluemix for PaaS data services: Dash DB and SQL DB.

**Topics** - Different types of data services available in PaaS, unique features of data services, manage instances of IBM Bluemix PaaS data services:- Dash DB and SQL DB, then you will learn about Cloudant DB.

### **Advanced Services In Bluemix**

**Learning Objectives** - In this module, learn about Usage of services in applications with examples by managing services using service dashboard and you will work on a Project end to end example using cloudant DB.

**Topics** - About advanced services on Bluemix, Project - sourcecode till deployment and Bigdata project - using Bluemix MapReduce services to build big SQL application.