AMAZIC ACADEMY

Amazic

TRAINING BROCHURE

2020

docker
BUSINESS PARTNER

AUTHORIZED TRAINING PARTNER

kubernetes

HashiCorp

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We can deliver any of our courses at your own site and customized to meet your own needs.

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DOCKER FUNDAMENTALS

Course length: 2 days

COURSE DESCRIPTION

The Docker Fundamentals training course features the foundational concepts and practices of containerization on a single Docker node. The course offers learners the opportunity to assimilate basic container orchestration and how to scale Docker across multiple nodes in a simple swarm cluster. This course provides essential foundational knowledge for subsequent Docker courses. Platform Availability: Linux, Windows

COURSE OUTLINE

Day 1
- Introducing Docker
- Containerization Fundamentals
- Creating Images
- Docker Volumes

Day 2
- Docker Networking Basics
- Introduction to Swarm Mode
- Introduction to Kubernetes

OBJECTIVES

By the end of this course successfull learners will be able to:

- Assess the advantages of a containerized software development & deployment
- Use Docker engine features necessary for running containerized applications
- Utilize Swarm and Kubernetes orchestrators to deploy, maintain, and scale a distributed application

WHO SHOULD ATTEND

Developers, operators, and architects desiring a strong foundation in Docker technologies and an introductory hands-on experience building, shipping, and running Docker containers.

DOCKER FOR ENTERPRISE DEVELOPERS

Course length: 2 days

COURSE DESCRIPTION

As the follow-on to the Docker Fundamentals course, Docker for Enterprise Developers is a role-based course designed for an organization's Development and DevOps teams to accelerate their Docker journey in the enterprise. The course covers best practices to containerize and modernize legacy applications or build containerized applications from scratch that are secure, robust, highly available, resilient and self-healing. It is highly recommended to complete the Docker Fundamentals course as a pre-requisite. Platform Availability: Linux

COURSE OUTLINE

Day 1
- Distributed Application Architecture
- Sample Application
- Edit and Continue
- Debugging
- Docker Compose
- Testing
- Service Discovery
- Defensive Programming
- Logging and Error Handling

Day 2
- Health Checks
- Secrets
- Configuration Management
- Development Pipeline Overview
- Universal Control Plane
- Docker Trusted Registry
- Repository Automation
- Build Server

OBJECTIVES

By the end of this course successfull learners will be able to:

- Describe the essential patterns used in a highly distributed EE application
- Understand how to configure EE applications for different environments without code changes
- Produce and containerize scalable, accessible, and fault-tolerant EE applications
- Apply different debugging and testing techniques to containerized EE applications

WHO SHOULD ATTEND

Software Engineers and DevOps professionals working in an Enterprise developing mission critical line of business applications

DOCKER FOR ENTERPRISE OPERATIONS

Course length: 3 days

COURSE DESCRIPTION

As the follow-on to the Docker Fundamentals course, Docker for Enterprise Operations is a role-based course designed for an organization's Development and DevOps teams to accelerate their Docker journey in the enterprise. The course covers in-depth core advanced features of Docker EE and best practices to apply these features at scale with enterprise workloads. It is highly recommended to complete the Docker Fundamentals course as a pre-requisite. Platform Availability: Linux

COURSE OUTLINE

Day 1
- Introduction to Docker Enterprise Edition
- Universal Control Plane
- User Management and Access Control
- UCP Orchestration
- Container Network Operations

Day 2
- Application Health and Readiness Checks
- Platform Security
- Docker Trusted Registry
- DTR Organizations and Teams
- Content Trust

Day 3
- Image Security Scanning
- Repository Automation
- Image Management

OBJECTIVES

By the end of this course successfull learners will be able to:

- Identify the key features of UCP and DTR
- Deploy applications on UCP using Swarm or Kubernetes, governed by secure, role-based authentication and authorization
- Establish a secure supply chain for containerized software development using DTR

WHO SHOULD ATTEND

SIT professionals with an operations or system administration background who have already attended Docker Fundamentals or have equivalent experience, desiring to understand designing, deploying, and managing Docker containers at scale in an enterprise environment.

DOCKER FUNDAMENTALS +
ENTERPRISE DEVELOPERS BUNDLE

Course length: 4 days

COURSE DESCRIPTION

The Docker Fundamentals + Enterprise Developers Bundle includes the full Docker for Enterprise Developers course as well as the prerequisite Docker Fundamentals course run back to back in a single intensive training experience.

COURSE OUTLINE

Day 1
- Introducing Docker
- Containerization Fundamentals
- Creating Images
- Docker Volumes

Day 2
- Docker Networking Basics
- Introduction to Swarm Mode
- Introduction to Kubernetes

Day 3
- Distributed Application Architecture
- Sample Application
- Edit and Continue
- Debugging
- Docker Compose
- Testing
- Service Discovery
- Defensive Programming
- Logging and Error Handling

Day 4
- Health Checks
- Secrets
- Configuration Management
- Development Pipeline Overview
- Universal Control Plane
- Docker Trusted Registry
- Repository Automation
- Build Server

OBJECTIVES

By the end of this course successfull learners will be able to:

- Assess the advantages of a containerized software development & deployment
- Use Docker engine features necessary for running containerized applications
- Utilize Swarm and Kubernetes orchestrators to deploy, maintain, and scale a distributed application
- Describe the essential patterns used in a highly distributed EE application
- Understand how to configure EE applications for different environments without code changes
- Produce and containerize scalable, accessible, and fault-tolerant EE applications
- Apply different debugging and testing techniques to containerized EE applications

WHO SHOULD ATTEND

Software Engineers and DevOps professionals working in an Enterprise developing mission critical line of business applications.

DOCKER FUNDAMENTALS +
ENTERPRISE OPERATIONS BUNDLE

Course length: 5 days

COURSE DESCRIPTION

The Docker Fundamentals + Enterprise Operations Bundle includes the full Docker for Enterprise Operations course as well as the prerequisite Docker Fundamentals course run back to back in a single intensive training experience.

COURSE OUTLINE

Day 1
- Introducing Docker
- Containerization Fundamentals
- Creating Images
- Docker Volumes

Day 2
- Docker Networking Basics
- Introduction to Swarm Mode
- Introduction to Kubernetes

Day 3
- Introduction to Docker Enterprise Edition
- Universal Control Plane
- User Management and Access Control
- UCP Orchestration
- Container Network Operations

Day 4
- Application Health and Readiness Checks
- Platform Security
- Docker Trusted Registry
- DTR Organizations and Teams
- Content Trust

Day 5
- Image Security Scanning
- Repository Automation
- Image Management

OBJECTIVES

By the end of this course successfull learners will be able to:

- Assess the advantages of a containerized software development & deployment
- Use Docker engine features necessary for running containerized applications
- Utilize Swarm and Kubernetes orchestrators to deploy, maintain, and scale a distributed applicationIdentify the key features of UCP and DTR
- Deploy applications on UCP using Swarm or Kubernetes, governed by secure, role-based authentication and authorization
- Establish a secure supply chain for containerized software development using DTR

WHO SHOULD ATTEND

IT professionals with an operations or system administration background desiring an intense and rapid onramp to Docker technologies

CERTIFIED KUBERNETES ADMINISTRATION

Course length: 4 days

COURSE DESCRIPTION

Do you know a little about containers and Kubernetes, but need to know more, including how to use them more effectively?

In this classroom-based, hands-on course, which prepares you take the Certified Kubernetes Administration (CKA) exam, you'll learn how to install and configure a production-grade Kubernetes cluster, from network configuration to upgrades to making deployments available via services. You will also learn how to maintain your Kubernetes administration.

This course is suitable for engineers who work with a variety of vendors' tools. We use kubeadm to deploy the cluster and focus on tools that would work on anyone's Kubernetes cluster. (To gain the skills needed to provision/manage a Kubernetes cluster, check out our Kubernetes for App Developers course, also offered through Amazic.)

COURSE OUTLINE

- Installation of a multi-node Kubernetes cluster using kubeadm, and how to grow a cluster
- Choosing and implementing cluster networking
- Various methods of application lifecycle management, including scaling, updates, and roll-backs
- Configuring security both for the cluster and containers
- Managing storage available to containers
- Learn monitoring, logging, and troubleshooting of containers and the cluster
- Configure scheduling and affinity of container deployments
- Use Helm and Charts to automate application deployment
- Understand Federation for fault-tolerance and higher availability

WHO SHOULD ATTEND

- Must be familiar with Cloud Native application concepts and architectures
- Can use Python, Node.js, Go, or other programming languages
- Basic Linux administration skills
- Can work fluently on the command line
- Can edit files using a command-line text editor

CERTIFIED KUBERNETES APPLICATION DEVELOPER

Course length: 3 days

COURSE DESCRIPTION

When your company prepares to use Kubernetes, the high-velocity, open-source orchestration tool, to deploy, scale, and update containerised applications, it will be up to you, the developer, to implement K8, and keep things running smoothly.

This intensive, classroom-based, hands-on course will help prepare you for the Certified Kubernetes Application Developer (CKAD) exam. It will teach you how to containerize, host, deploy, and configure an application in a multi-node cluster.

Starting with a simple Python script, you will define application resources and use core primitives to build, monitor and troubleshoot scalable applications in Kubernetes. Working with network plugins, security, and cloud storage, you will be exposed to many of the features needed to deploy an application in a production environment.

This course works with a variety of vendors' tools, and what you learn should easily translate to any company's operations.

COURSE OUTLINE

- Containerize and deploy a new Python script
- Configure the deployment with ConfigMaps, Secrets, and SecurityContexts
- Understand multi-container pod design
- Configure probes for pod health
- Update and roll back an application
- Implement services and NetworkPolicies
- Use PersistentVolumeClaims for state persistence

WHO SHOULD ATTEND

- Must be familiar with Cloud Native application concepts and architectures
- Can use Python, Node.js, Go, or other programming languages
- Basic Linux administration skills
- Can work fluently on the command line
- Can edit files using a command-line text editor

HASHICORP TERRAFORM 101 INTRODUCTION TO MODERN INFRASTRUCTURE PROVISIONING

Course length: 1 day

COURSE DESCRIPTION

This is an introductory course that covers HashiCorp Terraform, a simple and powerful tool for safely and predictably creating, changing, and improving infrastructure. If you have never used Terraform, this is the place to start.

COURSE OUTLINE

The course covers:

- Terraform syntax, internals, and patterns
- Creating and accessing compute instances
- Provisioning resources with Terraform
- Running custom applications on instances
- Authoring and using Terraform modules
- The computer science theory behind Terraform
- Basic collaboration with Terraform Enterprise

WHO SHOULD ATTEND

Developers and operators who want to automate the creation of cloud infrastructure, or any resources that have an API supported by Terraform.

HASHICORP TERRAFORM 201 COLLABORATIVE INFRASTRUCTURE AUTOMATION

Course length: 1 day

COURSE DESCRIPTION

This is an intermediate, comprehensive course aimed at users who desire an in-depth exploration of Terraform including Infrastructure as code, configuration and usage. Completion of Terraform 101 or equivalent experience with Terraform is required.

COURSE OUTLINE

The course covers:

- Provisioning across multiple cloud providers
- Team workflows and code organization (module owners, users, builders)
- Multi-environment techniques (production, staging)
- Managing resource lifecycles (create_before_destroy, prevent_destroy, ignore_changes)
- Recovering from partial state saves
- Collaborating on infrastructure changes with Terraform Enterprise
- Authoring and distributing modules with the registry

WHO SHOULD ATTEND

Developers and operators who want to automate the creation of cloud infrastructure, or any resources that have an API supported by Terraform.

HASHICORP VAULT 101 INTRODUCTION TO VAULT FOR DEVELOPERS

Course length: 1 day

COURSE DESCRIPTION

This is an introductory course aimed at developers who will be integrating their applications with Vault leveraging a number of features provided by Vault.

COURSE OUTLINE

The course covers:

- Module 1: Vault Overview
- Module 2: Secret Engines: Static Secrets
- Module 3: Secret Engines: Cubbyhole Secret Engine
- Module 4: Secret Engines: Dynamic Secrets
- Module 5: Encryption as a Service - Transit Secrets Engine
- Module 6: Authentication
- Module 7: Application Integration

WHO SHOULD ATTEND

Developers, Engineering Managers

HASHICORP VAULT 102 INTRODUCTION TO VAULT OPERATIONS

Course length: 1 day

COURSE DESCRIPTION

This is an introductory course for operations staff who are responsible for deploying Vault clusters.

COURSE OUTLINE

The course covers:

- Module 1: Vault Overview
- Module 2: Vault Installation
- Module 3: Auto-Unseal
- Module 4: Vault Cluster Deployment
- Module 5: Vault Operations
- Module 6: Vault Policies
- Module 7: Secure Introduction

WHO SHOULD ATTEND

DevOps, Security and Operations

HASHICORP VAULT 202 INTERMEDIATE VAULT OPERATIONS

Course length: 1 day

COURSE DESCRIPTION

This is an intermediate hands-on course aimed at users who desire an in-depth exploration of Vault highlights a number of Enterprise features that are necessary for scale.

Prerequisites: Vault 102 or equivalent Vault experience

COURSE OUTLINE

The course covers:

Module 1: Vault Identities: Entities and Groups
Module 2: Namespaces
Module 3: Granular Access Control
Module 4: Scaling for Performance
Module 5: Codify Management of Vault Clusters
Module 6: Production Topologies
Module 7: Monitoring Vault

WHO SHOULD ATTEND

DevOps, Security, and Operations

HASHICORP CONSUL 101 CONNECT DYNAMIC APPLICATION

Course length: 1 day

COURSE DESCRIPTION

Learn how to connect dynamic applications using Consul service discovery and service mesh. This introductory course will get you started using Consul's core capabilities, and give you the tools to continue learning about more advanced use cases on your own. Learn by doing, with the help of an instructor in this mixed lab and lecture course.

COURSE OUTLINE

During this hands-on training you will:

- Learn about the problems that Consul solves.
- Explore Consul's architecture and interfaces (HTTP API, DNS interface, and web UI).
- Implement service discovery and health checking.
- Connect services into a service mesh to encrypt and control network traffic.
- Manipulate values in Consul's key-value store and watch them for updates.
- Render a configuration file from key-value data using Consul Template.
- Install a local Consul agent that you can use to continue experimenting with after the course.
- Explore additional online learning resources.

WHO SHOULD ATTEND

Developers and operators who are writing or supporting dynamic applications or microservices, and have not run Consul in production before.

ABOUT AMAZIC

Amazic was founded in 2009, to provide a European-market entry point for cutting edge technology vendors and to accelerate their growth by providing training courses, building strong communities, driving product sales, and running market awareness campaigns to increase adoption of new technology and concepts.

Today, we help some of the world's most innovative technology brands such as Docker, Sysdig, Portworx, Cloudbees and Hashicorp to launch new products & services by providing them with a strong platform to build their European presence upon.

As a result of this, Amazic has grown into a trusted solution advisor for many of the world's largest organizations across different industry verticals by offering a unique combination of understanding of deep industry knowledge - and how these industries evolve over time-, business issues and applicable technologies.

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