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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.

COURSE OUTLINE

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

Day 2
- Docker Networking Basics
- Introduction to Docker Compose
- Introduction to Swarm Mode
- Introduction to Kubernetes
- Secrets
- Fundamentals Signature Assignment

OBJECTIVES

By the end of this course successful 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.

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 successful 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: 2 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.

COURSE OUTLINE

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

Day 2
- Docker Trusted Registry
- DTR Organizations and Teams
- Content Trust
- Image Security Scanning
- Repository Automation
- Image Management
- Operations Signature Assessment

OBJECTIVES

By the end of this course successful 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

IT 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 SECURITY COURSE

Course length: 1 day

COURSE DESCRIPTION

The Docker Security course is an advanced workshop style course designed to be inclusive of multiple roles: Developer, Operations, DevOps, or Architects. The course offers learners a hands-on overview of important security features and best practices to protect containerized services.

Completion of the Docker Fundamentals and Enterprise Operations course is strongly recommended as a prerequisite.

COURSE OUTLINE

Day 1
- Container Security
- Secure Networking
- Authentication and Authorization
- Secure Software Supply Chain
- Introspection
- Signature Assignment

OBJECTIVES

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

- Understand container security at the single host level
- Use the pipeline and logging tools to trace the complete history of a container
- Build a pipeline that emphasizes minimal attack surfaces, damage control, and auditability
- Set up monitoring that proactively kills off suspicious containers or nodes

WHO SHOULD ATTEND

Developers, operators, system administrators, network administrators, and IT security professionals with a strong understanding of Docker technologies desiring a deep understanding of securing Docker environments at scale in an enterprise environment.
CERTIFIED KUBERNETES ADMINISTRATOR

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? Container Solutions, a Linux Foundation Authorized Training Partner (ATP), is pleased to offer The Linux Foundation-Kubernetes Administration (LFS458) course.

In this classroom-based, hands-on course, which prepares you take the Certified Kubernetes Administrator (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.

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: 4 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.

Container Solutions, a Linux Foundation Authorized Training Partner (ATP), is pleased to offer you the help you'll need, with The Linux Foundation – Kubernetes for App Developers (LFD459) course.

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

- 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
PROVISION MODERN INFRASTRUCTURE

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

- Terraform syntax, internals, and patterns
- Creating and accessing compute instances
- Provisioning resources with Terraform
- Running custom applications on instances
- Authoring and using Terraform modules
- Computer science theory behind Terraform
- Basic collaboration with Terraform Enterprise
- Students will receive access to their own personal Linux-based lab environment for the class.

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. This is a beginner course aimed at folks getting started with Terraform.
CONNECT DYNAMIC APPLICATIONS

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

- 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.
- You will get access to your own personal Linux-based lab environment during the class, which you will use to accomplish the lab exercises.

WHO SHOULD ATTEND

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

Course length: 1 day

COURSE DESCRIPTION

This is an introductory course for developers who want to get started using Vault to encrypt secrets at rest and in transit. Experience with Vault is preferred but not required.

COURSE OUTLINE

- Vault core use cases
- Server Architecture basics
- How to interact with Vault: CLI, UI, API
- Secret Engines intro
- Static Secrets: Key/Value, Cubbyhole
- Dynamic Secrets
- Encryption as a Service – Transit secrets engine
- Vault tokens: service tokens vs batch tokens
- Direct Application Integration with Consul Template and EnvConsul
- Secure Introduction

WHO SHOULD ATTEND

Developers who work with sensitive data of all kinds. This is a beginner course aimed at developers getting started with Vault.
JENKINS FUNDAMENTALS

Course length: 1 day

COURSE DESCRIPTION

This course includes:

- The role of Jenkins in the software development cycle
- How to use the Jenkins Dashboard to manage your Jenkins instance, including using plugins and controlling security
- How to build your software, concentrating on Pipelines
- How to monitor builds using Blue Ocean and the Jenkins Dashboard
- This course only discusses Jenkins features; CloudBees product features are not included

PREREQUISITES

Students should have some general understanding of the software development cycle.

OBJECTIVES

- Gives students a good understanding of how Jenkins works
- Prepares students to take other courses that delve into the specifics of how to work with Jenkins

WHO SHOULD ATTEND

Any software professional who wants to learn about Jenkins.
JENKINS ADMINISTRATION FUNDAMENTALS

Course length: 1 day

COURSE DESCRIPTION

Learn the fundamentals of Jenkins Administration. After completing this training module, you should understand how to set up and configuring Jenkins, implement distributed builds, managing security with access controls and using the Jenkins command line interface (CLI) to automate tasks.

PREREQUISITES

Students should take the following courses or have CJE/CCJE certification before taking this class:
- Jenkins Fundamentals course

Students should also have some familiarity with ancillary technologies related to the product:
- Docker
- Git

See Ancillary Resources for documentation and training resources for these and other related technologies.
- The class has been structured so you can do the exercises even if you are not familiar with these tools but learning them will help you implement CloudBees Core when you get home

OBJECTIVES

After completing this training module, you should understand the following:

- Setting up and configuring Jenkins
- How to efficiently administer Jenkins
- How to implement distributed builds
- Managing security with access controls
- Using the Jenkins command line interface (CLI) to automate tasks
- Best practices
- Where to find additional information

WHO SHOULD ATTEND

- Beginner and intermediate Pipeline Developers
- QA Engineers
- Build and Release Engineers
- Technical Project Managers
- Architects
JENKINS PIPELINE FUNDAMENTALS

Course length: 1 day

COURSE DESCRIPTION

This course teaches you how to create and run a Jenkins Declarative Pipeline using the Blue Ocean Editor. Students will create a real-life Pipeline to build, test and deploy a Pipeline. The class ends with a quick tour of Pipeline capabilities that provide fit and finish to your Pipeline.

PREREQUISITES

- Jenkins Fundamentals course or CJE/CCJE certification
- Students should also have some familiarity with ancillary technologies that are used in this course: Docker, Git, Apache Maven, Gradle, Ant or NPM, Apache Groovy
- The class has been structured so you can do the exercises even if you are not familiar with these tools but learning them will help you implement your Pipelines when you go back to work.

OBJECTIVES

After completing this training module, you should understand the following:

- How to create, run, analyze and save a Declarative Pipeline using the Blue Ocean Editor and the Blue Ocean text editor
- The structure of a Declarative Pipeline, including the role of the stage, step, agent and post sections
- How to control the flow of execution in a Declarative Pipeline
- How to preserve and use files created by the build and test activities
- Pipeline capabilities that provide fit and finish to your Pipeline

WHO SHOULD ATTEND

The course is applicable to:

- Beginner and intermediate Developers
- QA Engineers
- Build and Release Engineers
- Technical Project Managers
- Architects
JENKINS PIPELINE INTERMEDIATE

Course length: 1 day

COURSE DESCRIPTION

This is a one-day class that delves into more advanced topics that the Pipeline Fundamentals class covers. Each section of the course uses two projects:

- Demo/follow-along project: Instructor shows how to do things; students can follow along, using copy-paste to populate their version of the project to get a feel for the tools.
- Lab project: Students are given a list of tasks and are expected to figure out how to implement those tasks.

PREREQUISITES

- Jenkins Pipelines Fundamentals course or CJE/CCJE certification
- Students should also have some familiarity with ancillary technologies that are used in this course: Docker, Git, Apache Maven, Gradle, Ant or NPM, Apache Groovy
- The class has been structured so you can do the exercises even if you are not familiar with these tools but learning them will help you implement your Pipelines when you go back to work

OBJECTIVES

After completing this training module, you should understand the following:

- How to create, run, analyze and save a Scripted Pipeline
- How to create and use shared libraries
- Tips for using tools such as Maven, Gradle and npm with Pipeline
- How to incorporate Docker agents into Pipeline
- Hints about how to converting Freestyle chained jobs to Pipeline

WHO SHOULD ATTEND

The course is applicable to:

- Beginner and intermediate Developers
- QA Engineers
- Build and Release Engineers
- Technical Project Managers
- Architects
CLOUDBEES CORE FUNDAMENTALS

Course length: 1 day

COURSE DESCRIPTION

This is a one-day class that discusses the CloudBees Core product line and features that are included on all platforms. Each student has a virtual lab they can use to follow-along with the lecture materials and to do lab exercises to practice using key features.

PREREQUISITES

Students should take the following courses or have CJE/CCJE certification before taking this class:
- Jenkins Fundamentals course
- Jenkins Administration Fundamentals course

Students should also have some familiarity with ancillary technologies related to the product:
- Docker
- Git

See Ancillary Resources for documentation and training resources for these and other related technologies.
- The class has been structured so you can do the exercises even if you are not familiar with these tools but learning them will help you implement CloudBees Core when you get home

OBJECTIVES

- Understand the role of the CloudBees Core products in the CloudBees Suite
- Understand the differences between the CloudBees Core platforms
- Learn how to use the major CloudBees Core features that are available on all platforms

WHO SHOULD ATTEND

The course is applicable to:
- Administrators of CloudBees Core clusters
- Pipeline Developers
- QA Engineers
- Build and Release Engineers
- Technical Project Managers
- Architects
CLOUDBEES CORE ON MODERN CLOUD PLATFORM INTERMEDIATE

Course length: 1 day

COURSE DESCRIPTION

This is a one-day class that discusses CloudBees Core on modern cloud platforms, how it is integrated with Kubernetes, and CloudBees Core features that are only available for CloudBees Core on modern cloud platforms. Each student has a virtual lab they can use to follow-along with the lecture materials and to do lab exercises to practice using key features. Each student lab is actually a Kubernetes Namespace.

OBJECTIVES

- Understand how CloudBees Core is integrated with Kubernetes
- Know how to use the major CloudBees Core features that are only available for CloudBees Core on modern platforms
- Learn basic practices for managing your cluster

WHO SHOULD ATTEND

The course is applicable to:

- Administrators of CloudBees Core on modern cloud platforms
- Pipeline Developers
- QA Engineers
- Build and Release Engineers
- Technical Project Managers
- Architects

PREREQUISITES

Students should take the following courses or have CJE/CCJE certification before taking this class:

- Jenkins Fundamentals course
- Jenkins Administration Fundamentals course
- CloudBees Core Fundamentals course
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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