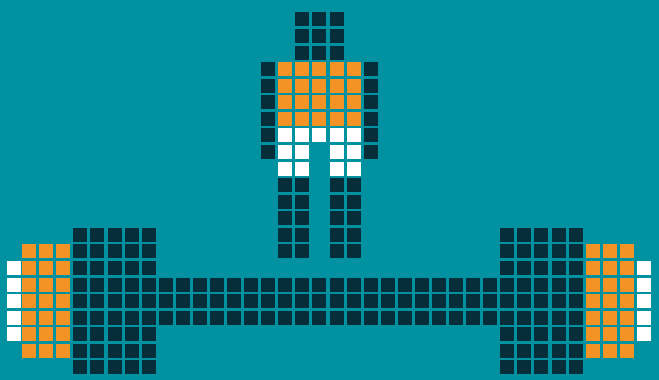
COMMANDEMY

COURSES 2018



JOIN THE
SMARTNESS
ACADEMY

CHEF™
AUTHORIZED
TRAINING PARTNER

IT TRENDS IN 2018

According to IDC, the public cloud market is set to rise to **$ 195 billion** by 2020, or **$ 236 billion** according to Forrester. Which trends in IT drive these high expectations?

Cloud platforms such as **Amazon Web Services**, **Microsoft Azure**, or **Google Cloud Engine** can create new compute infrastructure in seconds. They can be paused, scaled or deleted without any problems. This enormous flexibility and speed is achieved through the use of virtual resources for computing power, network and memory. The provisioning and maintenance of the required hardware is done by the cloud provider and frees the enterprise IT of these tasks.

Whether **virtual machine** or **container**, the runtime environment of the actual application must be described efficiently. With a descriptive language you can define which software needs to be installed on the target system. In the same way, you can specify rules for security or list all users that need to be created on that system. Once you've formulated your configuration you can automatically apply it using a **configuration management** tool or use it to automatically check for the **compliance** of your system.

One of the most popular tools are **InSpec** and **Chef**. The advantage is the reproduction of the same configuration on many different servers. You write the configuration once, but you can use it again and again. It does not matter if you start one or 100 servers in the cloud. The configuration can be applied automatically at start-up. An **enormous time saving** and help for consistent configuration across the entire infrastructure.

The reduction of manual interactions is also important in 2018. As a tool of choice, we want to recommend **Jenkins**. Jenkins can do anything you need to do on the Command Line every day. Trigger new deployment? Build a new build artefact? Run software tests and analyse? Once a developer has written new software code, Jenkins launches, then automatically runs tests and builds the finished artefact from the code if successful. This artefact will then be **automatically** transferred to your cloud infrastructure, whether container or classic virtual machines.

Whatever your IT challenge will be in 2018, we are confident that we can offer you a **training solution** that will help you grow. We are IT-Experts and we want you to be one too.

Edmund Siegfried Haselwanter, CEO

COMMANDEMY

Edmund Siegfried Haselwanter

Edmund Haselwanter is an automation addict and trainer. He studied Telematik at the Graz University of Technology. He has more than 12 years of experience as a consultant and trainer in IT for a number of Fortune 500 companies.

He is one of the leading Chef experts in Europe and frequently contributes to open-source projects to improve Chef even more. He is also a contributor to OpenStack and works with Linux on a daily basis.

Jürgen Brüder

Jürgen Brüder studied Information Management at the University of Applied Sciences in Graz and has been active in the Austrian IT sector ever since. He was the CTO of the Austrian based big-data startup Xeer and was also active as a consultant for various companies.

He specializes in the automated testing and management of infrastructure, OpenStack, Chef, Cucumber and the Ruby programming language.

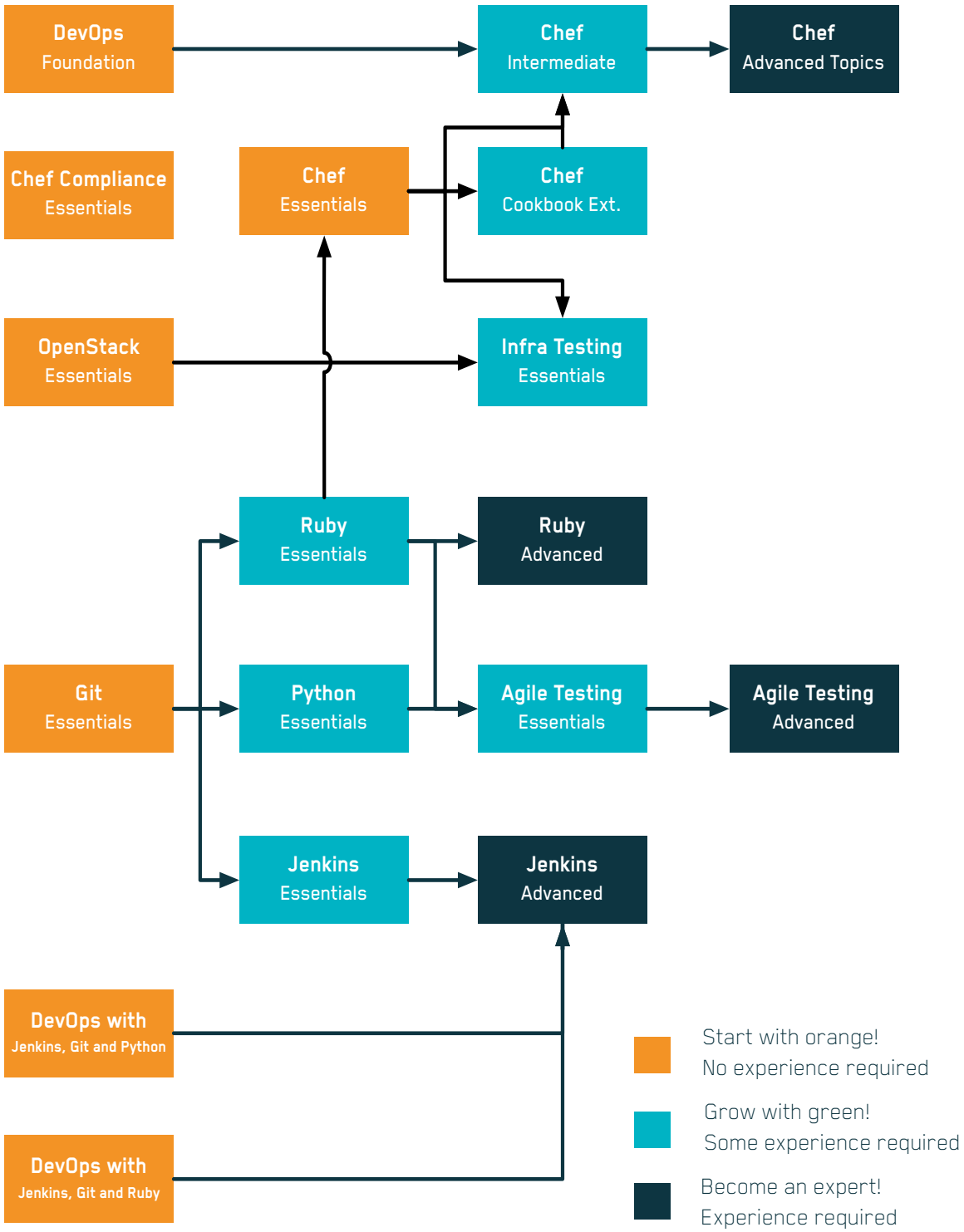
COMMANDEMY delivers world-class training courses that are easy to comprehend and take your skills to the next level. It does not matter if you are an established professional or just starting out, our training courses will give you the expertise you need.

Our trainers are an elite group of tech professionals that are experts in their respective fields. They will deliver the right mix of insightful theory and practical examples to give you the skills you need to succeed on the job and grow your career.

www.commandemy.com

LEARNING PATH

To get the most out of your training experience, we recommend to follow our learning path. Start with the basics in orange and work your way up to the advanced topics.



OUR COURSES

COMMANDEMY

AGILE TESTING METHODOLOGIES

All our Agile Testing Methodologies courses can be delivered **online** or **onsite**

AGILE TESTING METHODOLOGIES

Why are testers looking for defects after the implementation work has been carried out? If 50 to 60% of all the issues identified by software testers are requirement defects, why have they been left in for developers to work on?

Most of these problems come from neglected tests in IT projects. The classic approach is to write your code and then write a test for it. This often leads to tests never being written.

Methodologies like **Test Driven Development** (TDD), where tests are written before the actual code, and **Behavior Driven Development** (BDD), where tests are being written as actual user-stories rather than just plain code, are methods that try to solve this problem.

Our courses will take advantage of these methodologies and introduce tools like **Cucumber** and **RSpec** to implement them in your IT projects.

AGILE TESTING ESSENTIALS

COURSE TIME
2 days

AUDIENCE
Software Developers who want to use BDD to avoid bugs and make code changes possible without breaking existing functionality

PREREQUISITES
Attendees will need a basic understanding of

→ Linux systems
→ Working with the shell
→ Programming

HANDS-ON EXERCISES WILL GIVE YOU THE EXPERTISE YOU NEED TO AUTOMATE YOUR TESTS WITH CUCUMBER AND RSPEC.

The classic approach is to write code and then write a test for it. This often leads to tests being neglected.

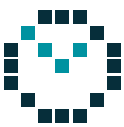
Behavior Driven Development (BDD) tries to solve this problem and helps you to avoid bugs. Tests are being written as actual user-stories rather than just code with **BDD**. This leads to valuable, well-defined specifications of the system's intended behavior.

Learn to take advantage of **BDD** by using tools like **Cucumber** and **RSpec**.

COURSE CONTENT SUMMARY

→ **Just enough Ruby to master this course**
→ **Understand Software Testing**
→ **Development Driven Testing**
→ **Test Driven Development**
→ **Behavior Driven Development**
→ **Introduction to RSpec**
→ **Introduction to Cucumber**
→ **Developing a web application with BDD**

AGILE TESTING ADVANCED



COURSE TIME
2 days

AUDIENCE
System Integrators who want to use BDD and Cucumber to test already existing applications and systems

PREREQUISITES
Attendees will need a basic understanding of

→ Linux systems
→ Working with the shell
→ Programming

EXPAND YOUR KNOWLEDGE ABOUT AGILE TESTING METHODOLOGIES AND LEARN HOW TO USE CUCUMBER WITH EXISTING SYSTEMS.

Our **Agile Testing Advanced** training takes your knowledge from the essential training a step further. You already know the advantages of **TDD**, **BDD** and tools like **Cucumber** and **RSpec** belong to your daily routine?

Perfect! But **Cucumber** can do so much more than just to test web applications and front-end interaction. You will learn how to automate everyday tasks and test external 3rd party systems.

COURSE CONTENT SUMMARY

→ **Review of Cucumber and Ruby**
→ **Advanced Cucumber usage**
→ **Testing closed systems with Cucumber**
→ **Testing APIs**
→ **Testing infrastructure**
→ **Extending Cucumber with Cucumber World**
→ **Adding Cucumber to legacy applications**
→ **Testing command-line applications with Aruba**
→ **How to write better Cucumber steps**

COMMANDEMY

COMPLIANCE

All our Compliance courses can be delivered **online** or **onsite**

COMPLIANCE

Compliance is either a state of being in accordance with established guidelines or specifications, or the process of becoming so. Studies show that there are about 80.000 security incidents in IT each year. 60% of these incidents were attributed to errors made by system administrators.

Most of the exploited vulnerabilities were compromised more than a year after the **CVE** (Common Vulnerability Exposure) was published. How can you defend your company against these kind of oversights?

The Center of Internet Security (CIS) releases lists of known IT vulnerabilities that also should be incorporated into the compliance effort.

We will show you how you can automate your Compliance efforts and incorporate the data from the CIS to stay up to date with the most recent exploits.

AUTOMATE COMPLIANCE COURSE

COURSE TIME
1 day

AUDIENCE
System- and Cloud-Administrators that need to have compliant systems

PREREQUISITES
Attendees will need a basic understanding of

→ Linux systems
→ Working with the shell

AUTOMATE YOUR COMPLIANCE STRATEGY WITH CHEF COMPLIANCE.

In this course you will learn how to install and initially configure the **Chef Compliance** server, perform compliance scans against Windows and Linux nodes, remediate compliance issues with Chef, and run Compliance reports.

In addition, you will learn how to use InSpec to create and modify **Chef Compliance** profiles and learn how to use CIS (Center for Internet Security) and DoD (Department of Defense) compliance specifications to write **Chef Compliance** profiles.

COURSE CONTENT SUMMARY

→ Chef Automate compliance Intro and Overview
→ Chef Automate compliance User Interfaces
→ Running Scans, Remediation, and Testing on Linux
→ Nodes
→ Running Scans on Windows Nodes
→ Creating Custom Profiles
→ Using the Audit Cookbook
→ Applying Compliance Frameworks Using InSpec
→ Users, Organizations, Teams and Permissions
→ Scheduling Scans and Running Reports
→ Further Resources

COMMANDEMY

CONFIGURATION MANAGEMENT

WITH CHEF

All our Chef courses can be delivered **online** or **onsite**

CHEF™

AUTHORIZED TRAINING PARTNER

CONFIGURATION MANAGEMENT

Server-Infrastructure used to be inflexible and rigid. Setting up a new server and configuring it manually could take days. With cloud solutions like **Amazon Web Services**, **Microsoft Azure** and **OpenStack** you can now create new servers and resources on-demand in mere seconds. However, together with these new technologies, new challenges arise as well.

If new resources can be issued so quickly, how can we keep up with the configuration and maintenance? The answer is **Configuration Management (CM).**

Chef is a CM tool that turns infrastructure into code. With Chef, you can automate how you build, deploy, and manage your infrastructure. Your infrastructure becomes as versionable, testable, maintainable and repeatable as application code.

The goal of our courses is to teach you everything you need to know about the inner workings of Chef, the tools that make it work and the challenges that come with it.

CHEF ESSENTIALS

THIS IS THE PERFECT BASIS TO LEARN HOW TO USE CONFIGURATION MANAGEMENT FOR YOUR SERVICES.

Our **Chef** Essentials training is the perfect starting point to get in contact with **Chef** because you do not need any former knowledge on the topic.

You will learn how to automate the configuration, deployment, and management of your server infrastructure. In addition to that, we will teach you how to test your configurations so that you are able to automate your whole infrastructure.

This course is available for **Windows** and **Linux**.

COURSE TIME
2 days

AUDIENCE
System- and Cloud-Administrators interested in, or responsible for, maintaining a large number of servers or virtual instances

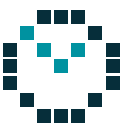
PREREQUISITES
Attendees will need a basic understanding of

→ Working with the shell

COURSE CONTENT SUMMARY

- → Introduction to Chef
- → Chef resources
- → Cookbooks
- → Chef-Client
- → Testing cookbooks
- → Details about the system
- → Desired state and data
- → Workstation installation
- → The ChefDK
- → The Chef server
- → Community cookbooks
- → Managing multiple nodes
- → Roles & Environments
- → Search

CHEF INTERMEDIATE



COURSE TIME
2 days

AUDIENCE
System- and Cloud-Administrators interested in, or responsible for, maintaining a large number of servers or virtual instances

PREREQUISITES
Attendees will need a basic understanding of

→ Linux systems
→ Working with the shell
→ Ruby experience
→ Chef Essentials

WITH OUR CHEF INTERMEDIATE TRAINING YOU`LL AUTOMATE YOUR IT INFRASTRUCTURE IN NO TIME.

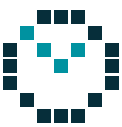
Building cookbooks with tests will increase the speed at which you work by giving you consistent feedback throughout the entire cookbook development process. Extending your cookbooks with custom resources will increase clarity within your recipes and provide resources that are portable to other cookbooks. **Ohai** plugins gather data from your nodes that will aid in more dynamic recipes and extensive reporting.

In this course, you will learn how to confidently refactor and extend a cookbook through explanation, demonstration, practice, and discussion. At the end of the course, you will have created a code repository that can be applied to solve the unique challenges you face managing your infrastructure.

COURSE CONTENT SUMMARY

→ **Why write tests? Why is that hard?**
→ **Writing a test first**
→ **Refactoring cookbooks with tests**
→ **Faster feedback with unit testing**
→ **Testing resources in recipes**
→ **Refactoring to attributes**
→ **Refactoring to multiple platforms**
→ **Approaches to extending resources**
→ **Why use custom resources?**
→ **Creating a Custom Resource**
→ **Refining a Custom Resource**
→ **Using and creating Ohai Plugins**
→ **Tuning Ohai**

CHEF ADVANCED TOPICS



COURSE TIME
2 days

AUDIENCE
System- and Cloud-Administrators interested in, or responsible for, maintaining a large number of servers or virtual instances that are already using Chef

PREREQUISITES
Students will need a basic understanding of

→ Linux systems
→ Working with the shell
→ Ruby experience
→ Chef Intermediate

DEEPEN YOUR KNOWLEDGE ABOUT CHEF AND LEARN AN ADVANCED WORKFLOW.

This training is the follow up of the **Chef** Essentials and **Chef** Intermediate training and gives you a deep inside knowledge of it.

Where the first two training courses concentrated more on the actual development of configuration code and applying it to the infrastructure, this training will take a deeper look at the bigger picture of using **Chef** in a modern professional IT environment. You will learn how to optimize your **Chef** workflow, collaborate as a team and stay secure.

A lot of best-practise examples and hands-on exercises enable you to put everything you will learn into practice.

COURSE CONTENT SUMMARY

→ **Chef cookbooks best-practices**
→ **Chef Client Run Internals**
→ **Chef-Vault**
→ **Optimizing your workflow**
→ **A sharable and secure Chef-Repo with Git-Crypt**
→ **Advanced infrastructure testing with InSpec**
→ **Using Chef for Compliance**
→ **Implementing Chef Handlers**
→ **Cookbook style and correctness**
→ **Foodcritic and Rubocop**

EXTENDING COOKBOOKS

LEARN HOW TO EXTEND YOUR CHEF COOKBOOKS.

Extending cookbooks takes you beyond the core functionality of cookbooks. You'll learn how to create custom resources and **Ohai** plugins.

With them, you can build any **custom tools** you need to configure your own infrastructure. At the end of this training, you'll be ready for the unique challenges you face when managing your network.

COURSE TIME
1 day

AUDIENCE
System- and Cloud-Administrators interested in extending the capabilities of Chef

PREREQUISITES
Attendees will need a basic understanding of

→ Linux systems
→ Working with the shell
→ Ruby experience
→ Chef Essentials

COURSE CONTENT SUMMARY

→ Approaches to extending resources
→ Why use custom resources?
→ Creating a custom resource
→ Refining a custom resource
→ Ohai
→ Ohai plugins
→ Creating an Ohai plugin
→ Tuning Ohai

CHEF™
AUTHORIZED TRAINING PARTNER

DEVOPS FOUNDATION

BECOME A HERO IN THE WORLD OF DEVOPS BY USING CHEF CONFIGURATION MANAGEMENT.

Since the creation of the modern cloud, **DevOps** is becoming more and more important. You and your company need to move on quickly when it comes to topics like Configuration Management or Containerization.

No worries, in our course you will learn how to develop a solid foundation for managing as many servers as you want by using **Chef** Configuration Management. It does not matter if you are using Windows or Linux, we will ensure that you are an hero in the world of **DevOps**.

COURSE TIME
3 days

AUDIENCE
System- and Cloud-Administrators interested in, or responsible for, maintaining a large number of servers or virtual instances

PREREQUISITES
Students will need a basic understanding of

→ Linux systems
→ Working with the shell

COURSE CONTENT SUMMARY

→ What is DevOps
→ Using Chef resources
→ Building Chef recipes and cookbooks
→ Collecting details about the system via Ohai
→ Attributes and templates
→ Storing your code in a repo
→ Centralizing management with Chef Server
→ Using Community Cookbooks
→ Automating chef-client runs
→ Managing a multi-node infrastructure
→ Simplification and scalability through Roles
→ Chef Search
→ Staging versus Production
→ Using Databags

COMMANDEMY

CONTINUOUS INTEGRATION

All our Continuous Integration courses can be delivered **online** or **onsite**

CONTINUOUS INTEGRATION

Big software projects are not developed by a single person. People need to collaborate to create great products. Each person is working on their assigned features and checking in code into a source code management system.

But how can you make sure that your code still works if multiple code bases merge?

A Continuous Integration (CI) system can take care of checking code quality and functionality. By running tests automatically it will tell you if your code is suitable to be used in production. CI systems, like Jenkins, are the basis of an agile workflow and should permanently check the state of your code base. This supports developers in writing better code and making less mistakes.

We provide courses that let you explore Continuous Integration (CI) systems for the use in your company.

JENKINS ESSENTIALS

COURSE TIME
2 days

AUDIENCE
System-, Cloud-Administrators and Developers that want to reduce time spent on deployment and testing

PREREQUISITES
Attendees will need a basic understanding of

→ Linux systems
→ Working with the shell

THIS TRAINING WILL HELP YOU TO AUTOMATE YOUR IT WORKFLOWS WITH JENKINS.

Jenkins, the most widely used Continuous Integration software, will be introduced in this training. It provides you with mechanisms that let you automate testing processes on newly committed code, improve code quality and handle the deployment of your code. No manual steps required!

In our **Jenkins** Essentials training you will learn how to setup **Jenkins**, how to integrate it into your development pipeline and how to use **Jenkins** to give you feedback on the code you are writing.

COURSE CONTENT SUMMARY

→ Introduction to Continuous Integration
→ Get to know Jenkins
→ The Jenkins dashboard
→ What are jobs?
→ Creating your first build job with Jenkins
→ Using plugins in Jenkins
→ Using Jenkins with Git
→ What are pipelines?
→ Writing jobs "as code"
→ Introduction to Groovy
→ Reporting with Jenkins
→ Integrating Jenkins into your Git Server
→ Distributed builds
→ Jenkins security basics
→ How to setup Jenkins

JENKINS ADVANCED

COURSE TIME
2 days

AUDIENCE
System-, Cloud-Administrators and Developers that want to reduce time spent on deployment and testing

PREREQUISITES
Attendees will need a basic understanding of

→ Linux systems
→ Working with the shell
→ Jenkins Essentials

USE THE POWER OF CONTAINERS TO GET RID OF DEPENDENCY HELL IN JENKINS.

In our **Jenkins** Essentials training you have learned all you needed to know to run your own **Jenkins** and create your own build jobs. As you progress in using **Jenkins** you will soon realize that some jobs need dependencies installed on the actual Jenkins master or slave to work. With multiple projects and teams using different version numbers of the same dependency, you are in for some trouble.

The best-practice is to not have any dependencies on your **Jenkins** machines at all. You should use Docker containers to manage your dependencies and let your jobs worry about starting the right containers. With this course you will learn how to do that.

COURSE CONTENT SUMMARY

→ **Reviewing Jenkins Essentials**
→ **Advanced pipelines**
→ **Advanced plugins**
→ **Advanced security**
→ **Scale your Jenkins**
→ **Just enough Docker for Jenkins**
→ **Using Docker to manage dependencies in Jenkins**

COMMANDEMY

DEVOPS

All our DevOps courses can be delivered **online** or **onsite**

DEVOPS

Many enterprises are divided into software development (Dev) and IT operations (Ops). Dev wants to release as many updates in a short time as possible. Ops on the other hand, is interested in a stable experience for the customer. Adding changes might lead to an increased risk in the stability of the product.

This leads to tension between the two camps. How can we create an environment in which we allow change to happen as often as it needs to? How can we lower the risk of change through tools and culture?

DevOps is a response to the interdependence of software development and IT operations. It aims to help an organization rapidly produce software products and services.

With the introduction of tools for Continuous Integration and -Deployment, change can be allowed often while reducing the risk. However, DevOps is not always about tools. It is also about communication and creating an open environment for delivering features to customers.

DEVOPS WITH JENKINS, GIT AND PYTHON

COURSE TIME
5 days

AUDIENCE
System-, Cloud-Administrators and Developers that want to reduce time spent on deployment and testing

PREREQUISITES
Attendees will need a basic understanding of

→ Linux systems
→ Working with the shell

SEE THE ADVANTAGES OF DEVOPS AND AUTOMATE MANUAL TASKS.

A Continuous Integration (CI) system can check the quality and functionality of the code. CI systems, such as **Jenkins**, are the foundation of an automated workflow and should constantly review the status of your codebase.

Python is an excellent programming language for beginners and is used for complex and challenging projects. This course will use **Python** to showcase the development part of an automated workflow.

Day 1 to 3 focus more on conveying technology-specific knowledge. Each of the three technologies (**Python**, **Git** and **Jenkins**) is dedicated to a full day. The core element of each course day will be hands-on exercises.The next two days then deal with the combination of all three technologies.

We will deal with a scenario in which we develop a **Python** application that tests an external system. The produced source code is managed with the help of **Git** and made available to a **Jenkins** CI system. Jenkins will automatically detect changes to the source code, read out and start included tests.

COURSE CONTENT SUMMARY

→ 1 day introduction to Python
→ 1 day of getting to know Jenkins
→ 1 day learning the Git Basics
→ 2-day practical example that combines all the knowledge from the previous days

DEVOPS WITH JENKINS, GIT AND RUBY

COURSE TIME
5 days

AUDIENCE
System-, Cloud-Administrators and Developers that want to reduce time spent on deployment and testing

PREREQUISITES
Attendees will need a basic understanding of

→ Linux systems
→ Working with the shell

SEE THE ADVANTAGES OF DEVOPS AND AUTOMATE MANUAL TASKS.

A Continuous Integration (CI) system can check the quality and functionality of the code. CI systems, such as **Jenkins**, are the foundation of an automated workflow and should constantly review the status of your codebase.

Ruby is an excellent programming language for beginners and is used for complex and challenging projects. This course will use **Ruby** to showcase the development part of an automated workflow.

Day 1 to 3 focus more on conveying technology-specific knowledge. Each of the three technologies (**Ruby**, **Git** and **Jenkins**) is dedicated to a full day. The core element of each course day will be hands-on exercises.The next two days then deal with the combination of all three technologies.

We will deal with a scenario in which we develop a **Ruby** application that tests an external system. The produced source code is managed with the help of **Git** and made available to a **Jenkins** CI system. Jenkins will automatically detect changes to the source code, read out and start included tests.

COURSE CONTENT SUMMARY

→ 1 day introduction to Ruby
→ 1 day of getting to know Jenkins
→ 1 day learning the Git Basics
→ 2-day practical example that combines all the knowledge from the previous days

COMMANDEMY

INFRASTRUCTURE AS A SERVICE

Our Infrastructure as a Service courses can only be delivered **onsite**

INFRASTRUCTURE AS A SERVICE

A few years ago, **IT infrastructure** used to be mostly metal boxes in a server room. Setting up a new server and configuring it manually could take days and even then they may not be utilized to their full potential.

How can you make sure that your **IT infrastructure** is used to its full potential? The answer is **Infrastructure as a Service** (IaaS).

IaaS allows one computer to do the job of multiple computers, by sharing the resources of a single hardware across multiple environments.

IT started a top-to-bottom overhaul of the computing industry with its ability to fully utilize physical resources to minimize the investment in new hardware. We teach you how to leverage the power of **IaaS** in your company.

CLOUD TECHNOLOGIES FOR MANAGERS

COURSE TIME
1 day

AUDIENCE
IT-Managers that want to keep up with recent developments in the cloud

PREREQUISITES
No special prerequisites are required for this course

LEARN HOW TO LEVERAGE THE CLOUD IN YOUR BUSINESS.

With the rise of **Virtualization** and **Containers**, it is possible to set up new resources on-demand in just a few seconds. These technologies basically allow one computer to do the job of multiple computers, by sharing the resources of a single hardware platform. It is a great solution for running business services, scaling high-performance applications and speeding up local development. But who can **keep up** with all these new tools and solutions?

This course is designed for **IT-Managers** that want to catch up with developments in this sector. It will help you to understand cloud solutions and make informed decisions. We refresh this course material regularly to bring you the **latest** and **greatest** in cloud technologies.

COURSE CONTENT SUMMARY

- → What is Virtualization?
- → Infrastructure as a Service
- → Amazon Web Services
- → Microsoft Azure
- → Google Cloud
- → OpenStack
- → What are containers?
- → Introduction to Docker
- → Kubernetes
- → RedHat OpenShift

OPENSTACK ESSENTIALS

COURSE TIME
2 days

AUDIENCE
System- and Cloud-Administrators interested in, or responsible for, maintaining a private cloud

PREREQUISITES
Attendees will need a basic understanding of

→ Linux systems
→ Working with the shell

LEARN HOW TO USE OPENSTACK AS AN INFRASTRUCTURE AS A SERVICE CLOUD ENVIRONMENT.

With the rise of **Infrastructure as a Service** (IaaS), it is possible to set up new servers on-demand in just a few seconds.

This training will help you to keep up with on-demand infrastructure and will enable you to harness the power of **IaaS**.

We will teach you everything you need to know about working with **OpenStack**, the inner workings of it, the tools that support it and how to build your own **IaaS** cluster with it.

As a result, you save a lot of time and avoid common beginner mistakes.

COURSE CONTENT SUMMARY

→ **Introduction to Virtualization**
→ **Overview of OpenStack**
→ **How to setup OpenStack**
→ **Working the Horizon Dashboard and API clients**
→ **Manage users, volumes, images, flavors, networks**
→ **Deploy instances**
→ **Create virtualized networks**
→ **A look at the inner workings of OpenStack**
→ **OpenStack Projects covered: Nova, Neutron, Horizon, Keystone, Glance**

COMMANDEMY

INFRASTRUCTURE TESTING

All our Infrastructure Testing courses can be delivered **online** or **onsite**

INFRASTRUCTURE TESTING

If you issue a new **server** you will need to setup everything according to specifications and check if everything is working as expected. A quality assurance engineer will get a checklist and go through all the steps **manually**.

Then the engineer will move on to the next server. How can we stop this **waste of precious time** and automate the verification of IT resources?

With the use of **Configuration Management** or infrastructure automation tools the time used to build machines is decreased. However, these tools also increase the quality of the systems built.

They provide automated testsuites that run after a server was setup to verify that it is working according to specifications. Our courses will provide you with the necessary knowledge to automate manual infrastructure tests.

INFRASTRUCTURE TESTING ESSENTIALS

COURSE TIME
2 days

AUDIENCE
System- and Cloud-Administrators interested in using infrastructure tests to automate daily testing tasks

PREREQUISITES
Attendees will need a basic understanding of

→ Linux systems
→ Working with the shell

LEARN HOW TO TEST YOUR INFRASTRUCTURE AND AUTOMATE YOUR DAILY TESTING TASKS.

Testing infrastructure can be a daunting task. Installing needs packages, writing configuration files and then checking if everything is working fine. This includes a lot of manual labour! And how to keep up with the work if new servers can be instantly created on-demand in the cloud?

With **testing tools** for infrastructure you can automate the manual testing process. Lean back and just let your tests run automatically whenever you create a new server. You will never have to worry about a misconfigured server again! This knowledge can be applied to any Configuration Management tool that you are using.

COURSE CONTENT SUMMARY

→ **What ist testing?**
→ **Test-Driven-Development**
→ **Understand the testing of infrastructure**
→ **Infrastructure testing frameworks**
→ **Introduction to Test Kitchen**
→ **Using InSpec to test infrastructure**
→ **Introduction to Dev-Sec**
→ **Introduction to InSpec**
→ **OS hardening**
→ **SSH hardening**
→ **How to apply this in Chef/Puppet/Ansible**

COMMANDEMY

PROGRAMMING LANGUAGES

All our Programming Language courses can be delivered **online** or **onsite**

PROGRAMMING LANGUAGES

Writing good **software** is not a trivial task. Good software provides features that the customer requested, is fully tested and free of bugs. Software can be a big client-side application, a server-side API or just a simple command line tool.

With the vast number of **programming languages** out there, which one is the best to solve your problem?

To solve complex development tasks, you need **programming languages** that make developing effective and fun.

We are specialized in teaching languages that can cover most of your everyday **programming** tasks and are on the forefront of their respective field.

RUBY ESSENTIALS

COURSE TIME
2 days

AUDIENCE
Software Developers that want to start learning Ruby

PREREQUISITES
Students will need a basic understanding

→ Linux systems
→ Working with the shell

OUR RUBY ESSENTIALS TRAINING IS A GREAT ENTRY POINT TO LEARN THE RUBY PROGRAMMING LANGUAGE.

Ruby was designed with the goal to make programming fun. Therefore, it is one of the best choices for people that are new to programming. Even though not as widely used as Java or C#, it can be found everywhere.
With **Ruby** as programming language you will not only know a language for the web but also for automating tasks in scripts.

Our **Ruby** Essentials training helps you to use **Ruby** as your base to build a whole Domain Specific Language (DSL). Tools you can use for this are Chef and Puppet. They are gaining more and more significance in the IT world. This leads to the fact that every developer should know at least a little **Ruby**.

COURSE CONTENT SUMMARY

→ **What is Ruby?**
→ **Setting up Ruby on your workstation**
→ **Writing your first Ruby program**
→ **Getting to know Ruby data types**
→ **Methods**
→ **Boolean logic**
→ **Control structure**
→ **Loops**
→ **Object-oriented programming with Ruby**
→ **Classes and Modules**
→ **Extending Ruby**
→ **Best-practices in Ruby**

RUBY ADVANCED

COURSE TIME
3 days

AUDIENCE
Anyone who wants to improve his or her Ruby skills

PREREQUISITES
Students will need a basic understanding

→ Linux systems
→ Working with the shell
→ Ruby Essentials

TAKE YOUR RUBY KNOWLEDGE TO THE NEXT LEVEL AND GET TO KNOW ALL ADVANTAGES OF IT.

This training builds on the knowledge of our **Ruby** Essentials training and brings your skills a step further.

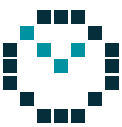
You are already able to code basic applications and scripts, work with a database and have a basic grip on web development with **Ruby**. What about all the other advantages of **Ruby** like Advanced Testing and Metaprogramming?

We will teach you everything you need to become and real **Ruby** expert. As a result you will know everything you need to master the **Ruby** language.

COURSE CONTENT SUMMARY

→ **Ruby Style and best-practices**
→ **A closer look at Modules**
→ **How to build Gems**
→ **Tools to make Ruby fast and efficient**
→ **Advanced Testing in Ruby**
→ **Metaprogramming with Ruby**
→ **Build an application that is bundled into a Gem**

PYTHON ESSENTIALS



COURSE TIME
2 days

AUDIENCE
Software Developers that want to start learning Python and use it for scripting or developing web applications

PREREQUISITES
Students will need a basic understanding

→ Linux systems
→ Working with the shell

OUR PYTHON ESSENTIALS TRAINING IS A GREAT ENTRY POINT TO LEARN THE PYTHON PROGRAMMING LANGUAGE.

For years, **Python** has been the first choice of people that are new to programming and who want to learn the basics of software development. This training will teach you all the basics that you need to know to work with **Python**. It will discuss the most important concepts and provide you with practical examples to become fluent in **Python** easily.

Our **Python** Essentials training helps you to use **Python** as your base for all programming tasks. With **Python** as programming language you will be able to build applications for the web, the command line and you will also be able to automate everyday tasks in scripts.

COURSE CONTENT SUMMARY

→ What is Python?
→ Setting up Python on your workstation
→ Writing your first Python program
→ Getting to know Python data types
→ Getting input from users
→ Functions
→ Boolean logic
→ Control structure
→ Loops
→ Object-oriented programming with Python
→ Classes and Modules
→ Extending Python
→ Best-practices in Python

COMMANDEMY

SOURCE CONTROL MANAGEMENT

All our Source Control Management courses can be delivered **online** or **onsite**

SOURCE CONTROL MANAGEMENT

How do you solve the problem of multiple employees working on the same files or **code bases**? Do you have a plan in place that prevents employees from overwriting each others changes? And what about backing up code?

Without a **Source Control Management System** (SCM) in place you are setting yourself up for problems.

With **SCM** the team is able to work absolutely independent. It will allow you to merge all the changes into a common version and upload it to a central place.

You can restore old versions, comment on changes and get automated feedback on your code from a Continuous Integration system. Our courses will concentrate on introducing you to **SCM** and workflows.

GIT ESSENTIALS

COURSE TIME
2 days

AUDIENCE
IT professionals that want to have control over their source code

PREREQUISITES
Attendees will need a basic understanding of

→ Linux systems
→ Working with the shell

COLLABORATE AND SHIP YOUR CODE FASTER WITH GIT.

This training introduces **Git**, the most widely **Source Control Management** software, to help you keep track of your code. Have you ever lost working code? Have you ever had problems combining your code base with the one of your co-worker to create on final working copy? **Git** was designed to help you with these problems.

You will learn how to track your code with **Git**. Never loose your code again! Furthermore, we will teach you how to collaborate on a shared code base using **Git**, how to manage releases and how to establish a workflow that will help you to ship code faster.

COURSE CONTENT SUMMARY

→ Why use a Version Control System?
→ Introduction to Git
→ What is a repository?
→ Modifying, staging and committing changes
→ The basic Git workflow
→ Working with Branches
→ Remote repositories
→ Using your own Git server
→ Introduction to GitLab
→ Working together on a repository
→ Merge Requests
→ Pulling changes
→ Resolving conflicts
→ Git tools

INFRA
LOVERS

Edmund Haselwanter
Leitnergasse 16/7 | 8010 Graz, Austria
Tel. +43 676 3282554
commandemy@infralovers.com
www.commandemy.com