

ALL

# THE PURRFECT TRAININGS

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Custom trainings for high  
performance teams.



INFRALOVERS

# ABOUT INFRALOVERS

Our courses combine knowledge from our previous and ongoing consulting projects to deliver practical, hands-on experiences.

Based in Austria, we provide European-wide training and workshops available in German and English. Due to our positive experiences and the flexibility it offers, we mostly give our courses remotely. If requested, we are also available on-site.

Infralovers is an official HashiCorp partner since January 2022.

Our Experienced trainers have built up years of experience in our consulting projects. We only teach what we have personally experienced, tested, and applied with clients. This is the only way we can credibly and professionally teach our knowledge to our training participants.

**DI Edmund Haselwanter**  
*CEO & Chef Trainer*



## FACT-SHEET

### LANGUAGE & LOCATION

All our courses can be held in English or German. We mostly teach remotely but are also available on-site.

### EXPERIENCED TRAINERS

Our experienced trainers have years of field experience and evolve constantly.

### CLOUD FOCUS

Our most loved trainings are about HashiCorp, Cloud Native, GitLab, Kubernetes & Ansible.

### EU BASED

Infralovers is an Austrian based company in Graz.

**1.560**

AVERAGE HOURS  
OF COURSES GIVEN  
PER YEAR

**94 %**

OF ATTENDEES WOULD  
LOVE TO ATTEND  
FURTHER COURSES.

**2013**

10+ YEARS OF  
EXPERIENCE  
AND KNOWLEDGE.

GET YOUR PERSONALISED QUOTE: [TEAM@INFRALOVERS.COM](mailto:TEAM@INFRALOVERS.COM)



# OUR COURSES

We are IT-Experts and we want you to be one too. All our trainers have years of experience in the tech industry and are experts at teaching complex topics in a simple way.

There are tons of great tasting courses here, one better than the other.



## CONTENT

### **HASHICORP** 04

- Terraform Foundations
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# HASHICORP SOLUTIONS

HashiCorp offers a range of **solutions that simplify the process of managing and securing your infrastructure**, including tools for provisioning, configuring, securing, and operating cloud infrastructure.

HashiCorp products automate, secure and simplify infrastructure management, boosting operational efficiency in modern IT.



## KING OF CLOUD TRAININGS

\*developer.hashicorp.com/well-architected-framework

### ABOUT HASHICORP

HashiCorp products provide powerful automation and collaboration tools that simplify the management of modern infrastructure, ensuring scalability, security, and agility for organizations.

**Terraform** enables you to easily create, manage, and update infrastructure as code across multiple cloud providers and on-premises, reducing human error and increasing efficiency.

**Consul** is a centralized platform for service discovery, configuration, and segmentation, allowing you to easily connect and secure distributed applications and services.

**Vault** provides secure storage and management of secrets and sensitive data, as well as access control and auditing capabilities, helping you to protect critical assets and meet compliance requirements.

**Nomad** is a powerful and easy-to-use platform for deploying and managing containerized and non-containerized applications across diverse infrastructure, enabling you to achieve greater flexibility, scalability, and resilience in your IT operations.

### TOOLS



### HASHICORP CLOUD OPERATING MODEL\*

The fastest path to unlock value in a multi-cloud datacenter, enabling efficient collaboration of people, processes, and tools.

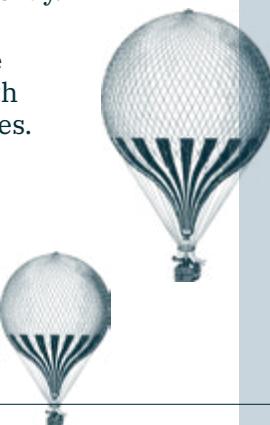


# HASHICORP CLOUD OPERATING MODEL\*

## INFRALOVERS EDITION

HashiCorp's cloud operating model enables your organization to unlock the fastest path to value in a modern multi-cloud datacenter. When your organization adopts this common operating model, it enables people, processes, and tools to work most efficiently.

We help you to start your state of the art multi-cloud datacenter today with our wide variety of HashiCorp courses.



## HASCHICORP ACADEMY & OUR HASHICORP COURSES

Terraform Foundations

Advanced HCP Terraform/Enterprise

Terraform Plugin Entwicklung

Terraform Testing

Vault Enterprise

Consul Enterprise

Nomad Essentials



LET'S LIFT  
OFF TO THE  
CLOUDS.



## 1. PROVISION

### INFRASTRUCTURE AUTOMATION WITH TERRAFORM

- > Infrastructure as code
- > Compliance & management
- > Self service infrastructure



## 2. SECURE

### SECURITY AUTOMATION WITH VAULT

- > Identity-based security
- > Secrets management
- > Encryption as a service
- > Advanced data protection

## 3. NETWORK

### NETWORKING AUTOMATION WITH CONSUL

- > Common service registry
- > Health monitoring
- > Networking middleware automation
- > Service mesh

## 4. DEPLOY

### APPLICATION AUTOMATION WITH NOMAD

- > Workload orchestration
- > Container orchestration
- > Heterogeneous orchestration

# TERRAFORM FOUNDATIONS

HASHICORP ACADEMY

Introduction to modern infrastructure provisioning.

Topic: HashiCorp | 3 Days | Beginner

## 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.

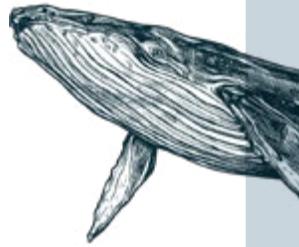
Students will receive access to their own personal Linux-based lab environment for the class. This is a three day course and it includes time for lectures, lab exercises, Q&A, and several breaks.

## AGENDA

- > Terraform Introduction
- > Terraform Internals and Usage
- > Terraform CLI
- > Language
- > State
- > Providers
- > Cloud Authentication
- > Modules
- > Versioning
- > Language Intermediate
- > Templates
- > Provisioners
- > Module Development
- > Terraform Testing
- > Recommended Patterns

### *The WiseWhale fact*

Terraform is the most popular „Infrastructure as Code“ tool on the market. A de facto standard since many years.



## AUDIENCE

Anyone who wants to learn Terraform.

## PREREQUISITES

- > Basic understanding of Linux
- > Basic experience with the Linux terminal

[TAKE A LOOK ONLINE →](#)



# ADVANCED HCP TERRAFORM/ ENTERPRISE

HASHICORP ACADEMY

Collaborative infrastructure automation.

Topic: HashiCorp | ⏰ 3 Days | 🌐 Intermediate

## DESCRIPTION

This course is aimed at existing Terraform users who desire an in-depth exploration of collaborative workflows and advanced features with Terraform Cloud or Enterprise.

Students will receive access to their own personal Linux-based lab environment for the class. We highly recommend to complete the “Terraform Foundations” course before attending this one.

## AGENDA

- > Terraform Review
- > TFC/E Platform and UI
- > State (remote and importing resources)
- > Workspaces
- > TFC/E Variables
- > Workflows - CLI, VSC, API
- > User & Group Organization
- > Private Module Registry
- > Operations and Governance
- > Policy as Code (Sentinel)

[TAKE A LOOK ONLINE →](#)

*The CleverRaccoon says:*

Let's provide a secure, scalable, and collaborative infrastructure management.



## AUDIENCE

- > Cloud SRE's
- > DevOps
- > System Administrators

## PREREQUISITES

- > Terraform Foundations
- > GitLab Essentials
- > Basic understanding of Linux
- > Basic experience with the Linux terminal



# TERRAFORM PLUGIN DEVELOPMENT

Write your own Terraform plugins with ease.

Topic: HashiCorp | ⏲ 2 Days | 📚 Intermediate

## DESCRIPTION

Terraform supports a plugin model, and all providers are actually plugins. Plugins are distributed as Go binaries. With such a plugin system, it is easy to extend Terraform with custom features.

This course will show how to write your own Terraform plugins. We will go into the challenges that come with it and provide lots of best-practices to get you started.

## AGENDA

- > What are Terraform plugin?
- > Terraform provider/plugin skeleton
- > The provider schema
- > Building a plugin
- > Defining resources
- > Invoking your custom provider
- > Error Handling & Partial State
- > Plugin best-practices

*The GoGorilla says:*

„Terraform is developed with Go. You should definitely have a look at this programming language before this training. Otherwise you will go ape!„



## AUDIENCE

Regular Terraform users.

## PREREQUISITES

- > Terraform Foundations
- > Basic understanding of Go
- > Basic understanding of Linux
- > Basic experience with the Linux terminal

[TAKE A LOOK ONLINE →](#)

# TERRAFORM TESTING

Test your Terraform managed infrastructure.

Topic: HashiCorp | ⌚ 2 Days | ⚛ Intermediate

## DESCRIPTION

After working with Terraform for some time, the following question often arises: How do you test the developed code as automatically as possible? A terraform run shows us the result, but can we really trust it? Terraform test tools help us with the answer.

This course shows how to use the most common test tools for Terraform to test your own modules and their results. In addition, the course teaches as much Go as you need to use these tools.

## AGENDA

- > What are infrastructure tests?
- > Why and how to test Terraform?
- > Linting Terraform
- > Go basics
- > Terratest
- > Kitchen-Terraform
- > Terraform Test
- > Best-practices when testing Terraform

[TAKE A LOOK ONLINE →](#)

## *The SmartDog tip*

Better safe than sorry. Those who do not test prior to deploying to production will soon find themselves overwhelmed with issues and challenges.



## AUDIENCE

System and cloud administrators who are interested in using infrastructure tests for Terraform and automating them.

## PREREQUISITES

- > Terraform Foundations
- > Basic understanding of Linux
- > Basic experience with the Linux terminal

# VAULT ENTERPRISE

## HASHICORP ACADEMY

Introduction to HashiCorp Vault.

Topic: HashiCorp | 3 Days | Beginner

### DESCRIPTION

This is an introductory course that covers HashiCorp Vault, a simple and powerful tool for managing secrets & protecting sensitive data. If you have never used Vault, this is the place to start.

Students will receive access to their own personal Linux-based lab environment for the class. This is a three day course and it includes time for lectures, lab exercises, Q&A, and several breaks.

### AGENDA

- > Vault Architecture
- > Vault Configuration
- > Static Secrets
- > Deploying Secrets
- > Tokens
- > Policies
- > Authentication Methods
- > Dynamic Secrets
- > Vault Deployment Guidelines
- > Vault Operations
- > Incident Management
- > Enterprise Replication

[TAKE A LOOK ONLINE →](#)

*The CraftyDonkey quote*

“An investment in knowledge pays the best interest.” -  
Benjamin Franklin



### AUDIENCE

Anyone who wants to learn Vault.

### PREREQUISITES

- > Basic understanding of Linux
- > Basic experience with the Linux terminal



# CONSUL ENTERPRISE

HASHICORP ACADEMY

Connect dynamic applications.

Topic: HashiCorp |  3 Days |  Beginner

## DESCRIPTION

This is an introductory course that covers HashiCorp Consul. Consul is a powerful tool that can automate network configurations, discover services, and enable secure connectivity across any cloud or runtime.

Students will receive access to their own personal Linux-based lab environment for the class. This is a three day course and it includes time for lectures, lab exercises, Q&A, and several breaks.

## AGENDA

- > Introduction to Consul
- > Consul architecture
- > Installation
- > Secure deployment
- > Service Discovery
- > Service Mesh
- > Configuration Entries
- > Gateways
- > Integrations
- > Consul Operations and Maintenance

[TAKE A LOOK ONLINE →](#)

## *The SmartCat tip*

“Less is more”, that may apply to some areas of life. When it comes to knowledge, this is clearly the wrong approach.



## AUDIENCE

Anyone who wants to learn Consul.

## PREREQUISITES

- > Basic understanding of Linux
- > Basic experience with the Linux terminal



# NOMAD ESSENTIALS

Deploy and manage containers and non-containerized applications.

Topic: HashiCorp | ⏰ 1 Day | 🌱 Beginner

## DESCRIPTION

This is an introductory course aimed at users who desire an in-depth exploration of Nomad including architecture, installation & configuration, scheduling, operations, and advanced topics.

Students will receive access to their own personal Linux-based lab environment for the class.

## AGENDA

- > Architecture Overview
- > Installing and Configuring Nomad
- > Creating and Running Jobs
- > Service Discovery with Consul
- > Operating Nomad
- > Interacting with the HTTP API
- > Advanced Job Strategies

## *The CraftyDonkey quote*

„Knowing is not enough - you have to apply. It is not enough to want - you have to do it too.“  
- Goethe



## AUDIENCE

Anyone interested in Nomad.

## PREREQUISITES

- > Basic understanding of Linux
- > Basic experience with the Linux terminal

[TAKE A LOOK ONLINE →](#)

KING  
OF CLOUD  
TRAININGS



# YOUR WAY THROUGH CLOUD NATIVE\*

OUR CLOUD NATIVE COURSES



## 1. CONTAINERISATION

All applications and dependencies can be **containerized**. It is recommended to aim for breaking down appropriate applications and developing new features as micro services over time.

SEE FROM PAGE 16



## 2. CI/CD



Implement a **CI/CD** pipeline that automates building, testing, and deploying new container images whenever changes are made to the source code. Automatic testing, rollouts, and rollbacks ensure smooth and reliable deployment to staging and production environments.

SEE FROM PAGE 23

## 3. ORCHESTRATION

Kubernetes is the market leader solution for orchestration solution.

PAGE 16



## 4. OBSERVABILITY & ANALYSIS

Solutions for monitoring, logging and trace like Fluentd, Jaeger, Prometheus

PAGE 17

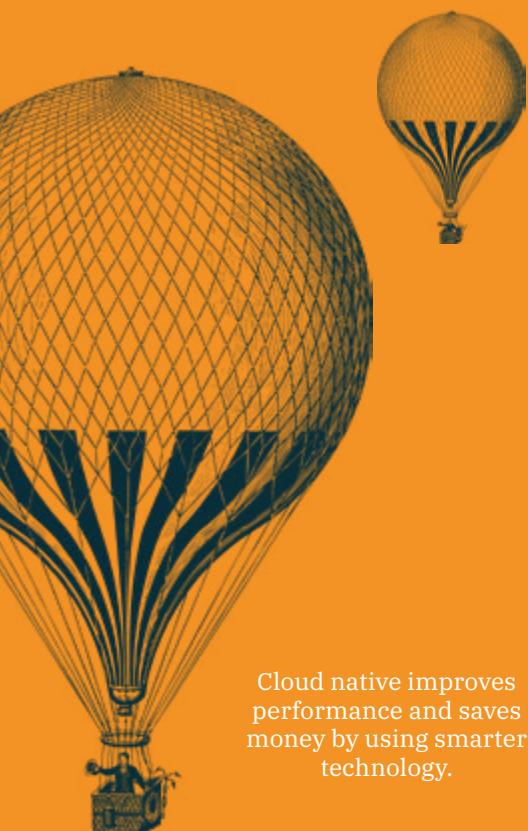
\*www.cncf.io

LET'S WALK  
THE PATH  
TOGETHER.



# OUR CLOUD NATIVE COURSES

Cloud native allows **faster development, easier scalability, higher resilience, and lower costs** through the use of containerization and micro services.



Cloud native improves performance and saves money by using smarter technology.

**KING OF CLOUD TRAININGS**

## ABOUT CLOUD NATIVE

Cloud Native is a method for creating and running applications that utilize cloud functions. It enables apps to easily scale, recover from errors, and start quickly. The best solution for agility and efficiency.

**Kubernetes** automates your app management by automating the deployment, scaling, and management of containerized applications.

**Prometheus** is a monitoring and alerting tool that helps you track and analyse metrics from various systems and applications.

**Grafana & Kibana** are data visualization tools. They help you make sense of complex data stored in e.g. Elasticsearch or Loki by creating interactive charts and graphs.

**Jaeger** is a distributed tracing system. It helps you troubleshoot and optimize complex systems by visualizing interactions between instrumented with OpenTelemetry.

**Fluentd** is a data collection and forwarding tool. It helps you unify your log data to multiple destinations like elasticseach or loki for analysis and processing.

**OpenTelemetry** provides unified APIs and libraries for distributed tracing, metrics, and logging. Monitor performance and behavior across different systems.

## TOOLS



## TRAININGS

Cloud Native Bootcamp  
GitOps  
Cloud Native Essentials  
Observability

# CLOUD NATIVE BOOTCAMP

Dive into the world of DevOps, Source Control Management, CI/CD and Containers.

**Topic:** Cloud Native |  6 Days |  Beginner

## DESCRIPTION

We will start this course by introducing Git, the most widely used source control management software. Git will help you to keep track of your code.

On the second day, GitLab CI, a widely used continuous integration software, will be our focus. GitLab CI provides mechanisms with which we can automate test processes for newly written code, improve code quality and manage the delivery of our code.

On day three and four, you will learn everything you need to know to get started in the world of Docker, Containers and Kubernetes. Kubernetes is quickly becoming the de-facto standard to operate containerized applications at scale. This course covers the essential knowledge needed to understand Kubernetes and includes instructions on how to deploy distributed applications that will scale, be fault-tolerant and simple to manage.

During the last two days, we dive into the world of Observability. The ability to observe services, is becoming increasingly important in the world of DevOps, Containers and Microservices. The more Containers/Services you operate, the more difficult it becomes to keep track of them. We will show how you can always know how your services are doing.

## AGENDA

- > Source control with Git
- > Git-Workflows
- > Solving Git conflicts
- > What is CI/CD?
- > Building pipelines with GitLabCI
- > Monolith vs Micro services
- > 12-Factor-App
- > API Gateways
- > Kubernetes Essentials
- > Observability
- > Logging, Monitoring, Tracing, Alerting
- > Fluentd, Prometheus, Grafana, Jaeger, OpenTelemetry
- > Chaos Engineering

**TAKE A LOOK ONLINE →**

*The CustomCat says:*

„This training was put together individually for a German telecommunications company. We can do that for you too!“



## AUDIENCE

- > Software Developers that want to have control over their source code
- > System-, Cloud-Administrators and Developers that want to reduce time spent on deployment and testing
- > System- and Cloud-Administrators interested in, or responsible for, maintaining a large number of servers or virtual instances
- > Software developers that want to learn how to deploy their applications within Kubernetes

## PREREQUISITES

- > Basic understanding of Linux
- > Basic experience with the Linux terminal

# CLOUD NATIVE ESSENTIALS

This is an introduction to Kubernetes, an open-source system for automating deployment, scaling, and management of containerized applications.

Topic: Cloud Native | ⏰ 2 Days | 🌱 Beginner

## DESCRIPTION

This course will teach you everything you need to know about container and how to use Kubernetes to manage your application infrastructure. Kubernetes is quickly becoming the de-facto standard to operate containerized applications at scale.

This course covers the essential knowledge needed to understand Containers as well as Kubernetes and includes instruction on how to deploy distributed applications that will scale, be fault-tolerant and simple to manage.

## AGENDA

- > Microservices vs. Monolith
- > Architecture and Theory
- > 12-Factor-App
- > Docker Images
- > Containerizing Applications
- > Container Networking
- > Volumes and Persistent Data
- > Secrets
- > Docker Compose
- > Container Orchestrators
- > What is Kubernetes
- > Kubernetes Architecture
- > Working with Pods
- > Kubernetes Services
- > Volumes and Data
- > ConfigMaps and Secrets
- > Ingress

[TAKE A LOOK ONLINE →](#)

## *The SmartCat tip*

„88% of RedHat customers have chosen Kubernetes when it comes to container orchestration.“\*



## AUDIENCE

- > Software developers that want to understand the core concepts to containerize their application and how to deploy their applications within Kubernetes
- > System Administrators that want to use container technologies and support their development teams as container experts
- > System Administrators that want to use container technologies and support their development teams as container experts

## PREREQUISITES

- > Basic understanding of Linux
- > Basic experience with the Linux terminal



**kubernetes**

# OBSERVABILITY

Analyse the current state of your services.

**Topic:** Cloud Native | **⌚** 2 Days | **☰** Intermediate

## *The Perceptive Parrot tip*

„Anyone who does not have an overview of the current state of their IT infrastructure will soon hit a wall!“



## AUDIENCE

Operators that want to have insights into their services.

## PREREQUISITES

- > Cloud Native Essentials
- > Basic understanding of Linux
- > Basic experience with the Linux terminal

## DESCRIPTION

The topic of Observability is becoming increasingly important in the world of DevOps, containers and micro services. The more containers / services you operate, the more difficult it becomes to keep track of everything. We will show you how you can always know how your services are doing.

This training deals with the four pillars of observability: monitoring, logging, tracing and visualization. Tools with practical examples are presented for each pillar: Fluentd, Kibana, Prometheus, Grafana, Jäger and OpenTelemetry.

## AGENDA

- > What is Observability
- > Logging
- > Monitoring / metrics
- > Traces
- > Alerting / visualization
- > Log aggregation and analytics of containers / micro services
- > Logging using the EFK stack
- > The F in EFK: Fluentd
- > Visualization with Kibana
- > Monitoring of containers / micro services
- > Monitoring using Prometheus
- > Visualization with Grafana
- > Tracing in distributed systems
- > Tracing using Jäger
- > Tracing, Metriken and Logging with OpenTelemetry
- > Chaos Engineering in the observability context

[TAKE A LOOK ONLINE →](#)

# OUR IaC COURSES

## INFRASTRUCTURE AS CODE

Infrastructure as code provides **consistency, efficiency, and agility** by allowing IT infrastructure to be managed and provisioned through **code** rather than manual processes.

Building and managing with code, brings consistency, efficiency, and agility.



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OF CLOUD  
TRAININGS

### ABOUT INFRASTRUCTURE AS CODE

With IaC you manage and provisions computing infrastructure using machine-readable definition files instead of manual configuration. Deploy and manage easier and more reliable infrastructure, promoting consistency and scalability.

**Ansible** this automation tool simplifies your deployment and management of your applications and systems. It uses a simple syntax and an agentless architecture to automate routine IT tasks, such as configuration management, application deployment, and orchestration.

**Chef Infra** is an automation tool that helps you manage complex infrastructure by automating configuration, deployment, and maintenance tasks.

**CINC** is an open-source solution and offers the same value to end-users as the upstream product. Chef Infra cookbooks will work just as well within the Cinc Client.

**Terraform** enables you to easily create, manage, and update infrastructure as code across multiple cloud providers and on-premises, reducing human error and increasing efficiency.

### TOOLS



### TRAININGS

Ansible Essentials  
Ansible AWX  
Chef Essentials

Terraform Foundations  
HCP Terraform & Enterprise  
Terraform Plugin Entwicklung  
Terraform Testing

# ANSIBLE ESSENTIALS

The perfect base to learn how to use configuration management for your services.

Topic: IaC | 1 Day | Beginner

## DESCRIPTION

Our Ansible 101 training is the perfect starting point to get in contact with Ansible 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.

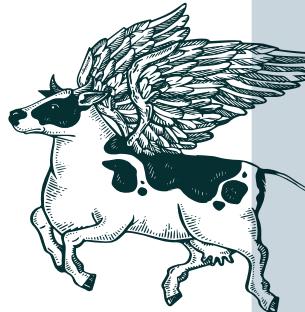
This course is only available for Linux on the control plane. The concepts learned can also be applied to Windows hosts without restriction.

## AGENDA

- > Introduction to Configuration Management
- > Create your first Ansible playbook
- > Work with an Ansible inventory
- > How to use variables, facts, and imports
- > Ansible Templating
- > Ansible Roles and Ansible Galaxy
- > Outlook: Test your playbooks

## *The FlyingCow quote*

“There is only one thing that is more expensive than education in the long run: no education.”  
- John F. Kennedy



## AUDIENCE

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

## PREREQUISITES

- > Basic understanding of Linux
- > Basic experience with the Linux terminal

[TAKE A LOOK ONLINE →](#)



# ANSIBLE AWX

This training is the follow up to the Ansible 101 training and will deepen your understanding even more.

Topic: IaC | ⌚ 2 Days | ⚙ Advanced

## DESCRIPTION

This training builds on the Ansible 101 course and deepens your knowledge even more. Topics of this training course is Ansible Tower and its provisioning so that non-Ansible users can handle configuration automation.

This course is only available to Linux clients, but Windows and Linux hosts can be managed.

## AGENDA

- > Revisit Ansible roles and inventory
- > Ansible Tower - How does it work?
- > Ansible AWX vs. Ansible Tower
- > Ansible Tower - How to automate
- > Ansible Tower - How to distribute configuration automation

## *The Unicorn quote*

The beautiful thing about learning is that no one can take it away from you.  
- B.B. King



## AUDIENCE

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

## PREREQUISITES

- > Basic understanding of Linux
- > Basic experience with the Linux terminal
- > Ansible 101

[TAKE A LOOK ONLINE →](#)



# CHEF ESSENTIALS

The perfect base to learn how to use configuration management for your services.

Topic: IaC | 2 Days | Beginner

## DESCRIPTION

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

Using the open source alternative CINC, 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.

## AGENDA

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

[TAKE A LOOK ONLINE →](#)

## *The WiseWhale quote*

„Knowing is not enough - you have to apply. It is not enough to want - you have to do it too.“  
- Goethe



## AUDIENCE

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

## PREREQUISITES

- > Basic understanding of Linux
- > Basic experience with the Linux terminal



# OUR DEVOPS & CI/CD COURSES

## CONTINUOUS INTEGRATION & CONTINUOUS DEPLOYMENT

CI/CD enables **faster and more reliable software delivery, better collaboration, and faster error detection** and recovery.

Testing helps ensure software **applications meet your needs, are reliable and secure, and can be deployed quickly and with confidence.**

Automate testing, and deployment, bring speed, quality, and reliability to your process. Like doing everything with 8 arms at the same time.



KING  
OF CLOUD  
TRAININGS

### ABOUT DEVOPS, TESTING, CONTINUOUS INTEGRATION & CONTINUOUS DEPLOYMENT

Emphasize automated building, testing and deployment. Different tools help you catch bugs early, deliver software faster and more reliably and test your CI/CD.

**Git** is used in CI/CD to manage source code changes and automate software delivery. It helps to ensure that changes are tested, built, and deployed quickly and reliably, improving software quality and reducing delivery time.

**Cucumber** automates testing of software features and ensures they meet user requirements. It improves collaborations between developers and non-technical stakeholders.

**Programming Language Basics** of Go, Ruby and Python will be needed in some of our courses. We'll teach you just enough basics to master our trainings.

**Terraform** enables you to easily create, manage, and update infrastructure as code across multiple cloud providers and on-premises, reducing human error and increasing efficiency. Therefore Terraform Testing is crucial to keep things running smoothly.

### TOOLS



### TRAININGS

- Agile Testing CI/CD Bootcamp
- GitLab Essentials
- GitOps
- Agile Testing Essentials - Ruby & Cucumber
- Agile Testing Essentials - Python & Behave
- AI/LLM Essentials for DevOps
- Terraform Testing

# AGILE TESTING CI/CD BOOTCAMP

Run your tests on autopilot with  
CI/CD pipelines.

Topic: Testing/CI/CD | ⏰ 5 Days | 🌟 Beginner

## DESCRIPTION

We will start this course by introducing Git, the most widely used source control management software. Git will help you to keep track of your code.

GitLab CI, a widely used continuous integration software, will be our focus. GitLab CI provides mechanisms with which we can automate test processes for newly written code, improve code quality and manage the delivery of our code.

Our “Agile Testing” part teaches you how to efficiently test your applications and systems with ease. Nevertheless, most of these test will still get triggered manually by an employee. Combining agile tests with a CI/CD pipeline can make them run automatically whenever a change occurs.

This course will show how combining agile tests with a CI/CD pipeline can avoid errors and failure by automating the running of these tests.

## AGENDA

- > Source Control with Git
- > Git-Workflows
- > Solving Git conflicts
- > What is CI/CD?
- > Building pipelines with GitLabCI
- > Introduction to Python *OR* Ruby
- > Python *OR* Ruby Datatypes and Control Structure
- > Understand Software Testing
- > Development Driven Testing
- > Test Driven Development & Behavior Driven Development
- > Introduction to Behave *OR* Cucumber
- > Develop and Test a REST API with the BDD methodology
- > How to introduce agile testing methods in your company
- > Review agile testing & CI/CD pipelines
- > Combining both to truly automate tests
- > Pitfalls to avoid and best-practices

**TAKE A LOOK ONLINE →**

## The FixingFlamingo quote

„Education is the passport  
to the future, for tomorrow  
belongs to those who prepare  
for it today.“  
- Malcolm X



## AUDIENCE

- > System Integrators that want to use BDD and Cucumber to test already existing applications and systems
- > Software Developers that want to use BDD to avoid bugs and make code changes possible without breaking existing functionality

## PREREQUISITES

- > Basic understanding of Linux
- > Basic experience with the Linux terminal

# GITLAB ESSENTIALS

Collaborate and ship your code faster with Git and GitLab.

Topic: SCM | ⌚ 2 Days | 🌱 Beginner

## DESCRIPTION

This course introduces Git with an additional focus on using GitLab. You will learn to track changes with the most popular Source Control Management software git: No more losing code!

We will teach you how to collaborate on a shared code base, how to manage releases and how to establish a workflow that will help you ship code faster with Git and GitLab.

With a duration of two days, we can commit more time to practical examples in this course and allow more room for custom Git/GitLab workflows.

## AGENDA

- > Why use a Version Control System?
- > Introduction to Git
- > What is a repository?
- > Modifying, staging and committing changes
- > Working with Branches
- > Remote repositories
- > Using your own GitLab server
- > Working together on a repository
- > Merge Requests and pulling changes
- > Resolving conflicts
- > Complex Git workflows
- > Introduction to DevOps CI/CD
- > GitLab-CI outline
- > What are pipeline jobs?
- > GitLab-Runner-Setup (optional)
- > Building the first Build Pipeline with GitLab-CI
- > Writing jobs as Code (gitlab-ci.yml)
- > CI/CD Hands-On

[TAKE A LOOK ONLINE →](#)

## *The CleverRacoon quote*

“All knowledge consists in certain and clear realisation.”  
- René Descartes



## AUDIENCE

- > Software Developers that want to have control over their source code
- > Integration Engineers that need to combine several code pieces into one releasable code base
- > Operation Engineers that need an easy way to access releases

## PREREQUISITES

- > Basic understanding of Linux
- > Basic experience with the Linux terminal



# GITOPS

Continuous Delivery meets Cloud Native.

Topic: SCM | ⌚ 2 Days | 🌱 Beginner

## DESCRIPTION

GitOps is a new method to manage Kubernetes clusters and application deployments. This is achieved by placing configuration-as-code into a Git repository as the single source of truth. Everything else is then automatically handled by connected CI/CD systems.

This course will take you through all the important parts of GitOps and help you to choose best tools for setting up your GitOps workflow.

## AGENDA

- > Introduction to GitOps
- > A single point of change
- > Collaborative GitOps workflow
- > Integrate with popular CI tools
- > Deploy to Kubernetes via GitOps
- > Security and GitOps

[TAKE A LOOK ONLINE →](#)

KING  
OF CODE  
TRAININGS



*The GitCat says:*

„Nothing works in IT these days without Git. If you want to get to the next level with this course, you should visit our Git course beforehand..“



## AUDIENCE

Anyone that wants to deploy to K8s efficiently.

## PREREQUISITES

- > Cloud Native Essentials
- > GitLab Essentials



# AGILE TESTING ESSENTIALS

## RUBY & CUCUMBER

Hands-on exercises will give you the expertise you need to automate your tests with cucumber and ruby.

Topic: Testing | 3 Days | Beginner

### DESCRIPTION

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 behaviour.

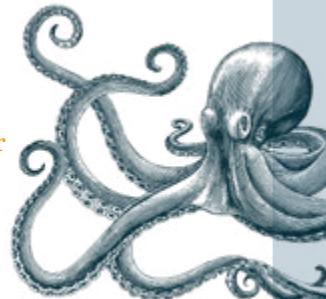
Learn to take advantage of BDD by using tools like Cucumber.

### AGENDA

- > Introduction to Ruby
- > Ruby Data types and Control Structure
- > Understand Software Testing
- > Development Driven Testing
- > Test Driven Development
- > Behavior Driven Development
- > Introduction to Cucumber
- > Develop and Test a REST API with the BDD methodology
- > How to introduce agile testing methods in your company

### *The TestOpus quote*

„The best way to predict your future is to create it.“  
- Abraham Lincoln



### AUDIENCE

- > System- and Cloud-Administrators interested using automated testing tools like Cucumber.
- > Developers that want to manage resources for development and testing environments
- > System-, Cloud-Administrators and Developers that want to reduce time spent on deployment and testing
- > System-, Cloud-Administrators and Developers that want to increase test coverage

### PREREQUISITES

- > Basic understanding of Linux
- > Basic experience with the Linux terminal

[TAKE A LOOK ONLINE →](#)



# AGILE TESTING ESSENTIALS

## PYTHON & BEHAVE

Hands-on exercises will give you the expertise you need to automate your tests with python and behave.

Topic: Testing | 3 Days | Beginner

### DESCRIPTION

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 behaviour.

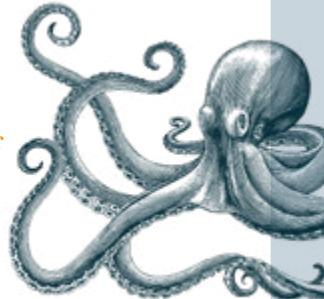
### AGENDA

- > Introduction to Python
- > Python Datatypes and Control Structure
- > Understand Software Testing
- > Development Driven Testing
- > Test Driven Development
- > Behavior Driven Development
- > Introduction to Behave
- > Develop and Test a REST API with the BDD methodology
- > How to introduce agile testing methods in your company

[TAKE A LOOK ONLINE →](#)

### *The TestOpus quote*

„The best way to predict your future is to create it.“  
- Abraham Lincoln



### AUDIENCE

- > System- and Cloud-Administrators interested using Behave
- > Developers that want to manage resources for development and testing environments
- > System-, Cloud-Administrators and Developers that want to reduce time spent on deployment and testing
- > System-, Cloud-Administrators and Developers that want to increase test coverage

### PREREQUISITES

- > Basic understanding of Linux
- > Basic experience with the Linux terminal

BEHAVE

 python™

# AI/LLM ESSENTIALS

## FOR DEVOPS

Learn AI/LLM basics in one day for DevOps, Cloud-Native, and IT-Security to enhance workflows and security.

Topic: DevOps | 1 Day | Beginner

### DESCRIPTION

In this entry-level course, participants will gain a foundational understanding of artificial intelligence (AI) and large language models (LLMs). This one-day workshop is tailored specifically for professionals in DevOps, Cloud-Native, and IT-Security. This course will demystify AI/LLM concepts and showcase practical applications within these domains.

Students will learn how AI and LLMs can streamline workflows, enhance security protocols, and drive innovation in their organizations. Through a combination of theoretical knowledge and presenter demonstrations, participants will explore the integration of AI/LLM technologies into existing infrastructures, focusing on real-world use cases such as automated monitoring, threat detection, incident response, and predictive maintenance. By the end of the day, attendees will be equipped with the skills and insights needed to leverage AI/LLM to optimize their daily workloads.

### AGENDA

- > Basics of AI and machine learning
- > Introduction to large language models
- > How to run your own AI/LLM (Ollama)
- > Using the LangChain Framework
- > Integration into existing systems
- > Demonstrating DevSecOps use cases

[TAKE A LOOK ONLINE →](#)

### *The AIntelope quote*

“AI and LLMs enhance DevOps by automating repetitive tasks, optimizing workflows, and providing real-time insights, enabling teams to work more efficiently and focus on innovation.”



### AUDIENCE

- > Everyone who is interested in AI/LLM.

### PREREQUISITES

- > Stable internet connection
- > Modern browser

# OUR IT-SECURITY & MONDOO COURSES

**Mondoo** automates security audits and compliance checks, ensuring your systems meet standards like **NIS2** and **ISO 27001** while detecting vulnerabilities efficiently. Its real-time insights and custom policy creation streamline security management and remediation processes.



Mondoo automates compliance and security checks, streamlining vulnerability detection and management with real-time insights and custom policies.

## ABOUT SECURITY, SECURITY STANDARDS AND REDUCING RISKS

Using Mondoo is crucial for maintaining robust security and compliance, as it automates audits, detects vulnerabilities, and ensures adherence to standards like NIS2 and ISO 27001.

**Automated Security Audits.** Mondoo automates the process of auditing security configurations and compliance, saving time and reducing human error.

**Vulnerability Detection.** It identifies and highlights security vulnerabilities across your infrastructure, helping to proactively address potential threats.

**Compliance Assurances.** Mondoo ensures adherence to industry standards and regulations, such as NIS2 and ISO 27001, by continuously checking and reporting on compliance status.

**Custom Policy Creation.** Users can create and manage custom security policies tailored to their specific needs and requirements.

**Real-Time Insights.** Provides actionable insights and detailed reports to keep you informed about your security posture and compliance status.

**Integration with Systems.** Mondoo integrates seamlessly with various systems and platforms, including cloud services, containers, and other infrastructure components.

## TOOLS



## TRAININGS

Mondoo Essentials  
Mondoo Advanced  
EU NIS2 Guidelines

# MONDOO ESSENTIALS

Gain hands-on experience with Mondoo, mastering its features, custom policies, and advanced security management.

Topic: Security | 2 Days | Beginner

## DESCRIPTION

This course offers a comprehensive introduction to Mondoo, a leading security tool that enhances IT security. Participants will gain hands-on experience in configuring and using Mondoo to detect vulnerabilities, ensure compliance with standards like NIS2 and ISO 27001, and manage security risks across various environments.

Covering Mondoo's architecture, core features, integration with systems like cloud services and containers, vulnerability scanning, compliance checks, and security monitoring. Advanced topics include creating custom policies, automating security tasks, generating detailed reports, and incident response techniques. Interactive labs will equip participants with the skills needed for effective security management using Mondoo.

## AGENDA

- > Introduction to Mondoo
- > Setup and configuration
- > Integrating Mondoo with various systems (AWS/Azure, Kubernetes, VMs, Containers etc.)
- > Vulnerability scanning with cnquery
- > Compliance checks with MQL
- > Custom policy creation with cnspec
- > Automate security tasks and monitoring
- > Reporting and analytics
- > Incident response and remediation

## *The Guard-Dog says*

"Like a vigilant guard dog, Mondoo doesn't just bark—it protects, ensuring your security stays strong and unbreakable."



## AUDIENCE

- > IT security professionals responsible for securing infrastructure and managing security tools
- > Compliance officers responsible for ensuring organizational compliance with industry standards and regulations (e.g. NIS2, ISO 27001)
- > Auditors conducting security audits who need to understand the current state of security in an organization
- > DevOps engineers focused on combining software development and IT operations

## PREREQUISITES

- > Stable internet connection
- > Modern browser

[TAKE A LOOK ONLINE →](#)

# MONDOO ADVANCED

Gain hands-on experience with Mondoo, mastering its features, custom policies, and advanced security management.

Topic: Security | 1 Day | Intermediate

## DESCRIPTION

This advanced one-day training course is designed for participants who have already completed the initial two-day Mondoo Foundations training. The course will delve into more sophisticated aspects of Mondoo, focusing on policy scoring, exception handling, data exporting, smart ticketing, custom compliance frameworks and deeper dive into ensuring compliance with standards like NIS2 and ISO 27001

By the end of the training, participants will have a deeper understanding of these advanced features and how to leverage them for enhanced security management in their organizations.

## AGENDA

- > Recap of key Mondoo concepts
- > Customizing the scoring system
- > Managing check exceptions and advisory exceptions
- > Set up smart ticketing for efficient issue management
- > Export data to aggregation and GRC tools
- > Implement a custom compliance framework in Mondoo

*The Guard-Dog says*

“Mondoo automates security audits, detects vulnerabilities, and delivers insights, ensuring seamless compliance and system security.”



## AUDIENCE

- > IT security professionals responsible for securing infrastructure and managing security tools
- > Compliance officers responsible for ensuring organizational compliance with industry standards and regulations (e.g. NIS2, ISO 27001)
- > Auditors conducting security audits who need to understand the current state of security in an organization
- > DevOps engineers focused on combining software development and IT operations

## PREREQUISITES

- > Mondoo Foundations

[TAKE A LOOK ONLINE →](#)

# EU NIS2 GUIDELINES

Gain in-depth knowledge of the EU NIS2 guidelines in this one-day workshop, covering key provisions, compliance requirements, and best practices for organizational implementation.

Topic: Security | 1 Day | Beginner

## DESCRIPTION

This comprehensive one-day workshop is designed to provide an in-depth understanding of the EU Network and Information Security Directive 2 (NIS2) guidelines, a critical regulatory framework aimed at enhancing cybersecurity across the European Union. Participants will gain valuable insights into the key aspects of NIS2, its implications for various sectors, and strategies for compliance.

Ideal for IT professionals, compliance officers, and organizational leaders, this workshop will equip participants with the knowledge needed to navigate and comply with NIS2 requirements effectively.

## AGENDA

- > Introduction to NIS2
- > Evolution from NIS1 to NIS2
- > Key objectives and scope of NIS2
- > Differences between NIS2 and DORA
- > Overview of critical sectors and services under NIS2
- > Security and notification requirements
- > Governance and risk management practices
- > Responsibilities of operators of essential services (OES) and digital service providers (DSP)
- > Compliance strategies and best practices

## *The Picky Rooster says*

*"I am checking everything, if it's not correct... chock-a-doodle-doo!"*



## AUDIENCE

- > Organization leaders that want to make their organization NIS2 compliant
- > IT security professionals responsible for securing infrastructure and managing security tools
- > Compliance officers responsible for ensuring organizational compliance with industry standards and regulations

## PREREQUISITES

- > Stable internet connection
- > Modern browser

[TAKE A LOOK ONLINE →](#)

# BUI



# LD THE TRAINING



What seems like a strange combination might just be right for you.  
Let us know your wishes and we will create your perfect training.

THAT FITS  
YOUR NEEDS

#### A LITTLE BIT OF THIS

What we mean by that: There is no such thing as impossible, only incredibly tailor-made training courses that are precisely customised to your business requirements. We don't do "off the shelf".

#### AND A LITTLE BIT OF THAT

We cook every course fresh - without artificial flavours or produce. Our trainers recognize the recipes with which every course participant gets out of the comfort zone - and jumps into the superhero zone.

#### THE PERFECT MIX

The key to personal training success is a balanced mix of encouragement and challenges - the motivating motto: really learn instead of just taking part.



KING OF  
INDIVIDUAL  
TRAININGS

# YOUR TEAM IS CAPABLE OF MORE

Custom trainings for high performance teams.



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