#### Course code: DO381

Plan, implement, and manage OpenShift clusters at scaleRed Hat OpenShift Administration III and exam (D0381) expands upon the skills required to plan, implement, and manage OpenShift® clusters in the enterprise. You will learn how to support a growing number of stakeholders, applications, and users to achieve large-scale deployments. This offering is based on Red Hat® OpenShift Container Platform 4.10. The Red Hat Certified Specialist in Scaling OpenShift Deployments exam (EX380) is included.

Affiliate	Duration	Course price	ITB
Praha	5	2 841 €	0
Bratislava	5	2 841 €	0

The prices are without VAT.

### **Course terms**

Date	Duratio	n Course price	Туре	Course language	Location
11.11.2024	5	2 841 €	Presence	CZ/SK	Praha - Knowledge Factory
18.11.2024	5	2 841 €	Online	EN	Virtual Training Red Hat
09.12.2024	5	2841€	Online	EN	Virtual Training Red Hat
13.01.2025	5	2841€	Presence	EN	Praha - Knowledge Factory

The prices are without VAT.

#### Who is the course for

- Cluster engineers (systems administrators, cloud administrators, or cloud engineers) focused on planning, designing, and implementing production-grade OpenShift clusters. Cluster engineers require automation skills to scale their manpower to provision and manage an increasing population of clusters, applications, and users, at the same time ensuring these clusters remain in compliance with corporate standards.
- Site reliability engineers (SREs) focused on keeping OpenShift clusters and applications running without disruption. SREs are interested in troubleshooting infrastructure and application issues with OpenShift clusters and require automation skills to reduce the time to identify, diagnose, and remediate issues.

#### What we teach you

- Manage OpenShift cluster operators and add operators.
- Automate OpenShift management tasks using Ansible® playbooks.
- Create and schedule cluster administration jobs.
- Implement GitOps workflows using Jenkins.
- Integrate OpenShift with enterprise authentication.
- Query and visualize cluster-wide logs, metrics, and alerts.
- Manage both shared, file-based storage and non-shared, block-based storage.
- Manage machine pools and machine configurations.

#### **Required skills**

- Complete Red Hat OpenShift Administration II: Operating a Production Kubernetes Cluster (D0280) and become a Red Hat Certified Specialist in OpenShift Administration.
- Complete Red Hat System Administration II (RH134) and become a Red Hat Certified System Administrator.
- Recommended, but not required: become a Red Hat Certified Systems Engineer or a Red Hat Certified Specialist in Ansible Automation. Basic knowledge about writing and running Ansible playbooks is desired.

#### Course outline

#### GOPAS Praha Kodaňská 1441/46 101 00 Praha 10 Tel.: +420 234 064 900-3 info@gopas.cz

GOPAS Brno Nové sady 996/25 602 00 Brno Tel.: +420 542 422 111 info@gopas.cz GOPAS Bratislava Dr. Vladimíra Clementisa 10 Bratislava, 821 02

Tel.: +421 248 282 701-2

info@gopas.sk



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# Red Hat OpenShift Administration III: Scaling Deployments in the Enterprise with Exam

#### Move from Kubernetes to OpenShift

Demonstrate that OpenShift is Kubernetes by deploying Kubernetes-native applications on OpenShift. Introduce automation on OpenShift

Automate OpenShift administration tasks using bash scripts and Ansible playbooks.

#### Manage operators with OpenShift

Deploy Kubernetes Operators and configure OpenShift cluster operators.

#### Implement GitOps with Jenkins

Implement a GitOps workflow using containerized Jenkins to administer an OpenShift cluster.

#### Configure enterprise authentication

Integrate OpenShift with enterprise identity providers.

#### Configure trusted TLS certificates

Configure OpenShift with trusted TLS certificates for external access to cluster services and applications.

#### Configure dedicated node pools

Configure a subset of the cluster nodes for special workloads.

#### Configure persistent storage

Configure storage providers and storage classes to ensure cluster user access to persistent storage.

#### Manage cluster monitoring and metrics

Configure and manage the OpenShift monitoring stack.

## Provision and inspect cluster logging

Deploy, query, and troubleshoot cluster-wide logging.

#### Recover failed worker nodes

Inspect, troubleshoot, and remediate worker nodes in a variety of failure scenarios.

#### What you need to know

#### Impact on the organization

This offering supports IT operations teams that are in the prepare and expand stages of their Container Adoption

Journey. The curriculum enables companies to innovate faster, scale based on customer demand, and proactively

manage a growing number of OpenShift clusters that host cloud-native and cloud-compatible applications.

Red Hat has created this offering in a way intended to benefit our customers, but each company and infrastructure is

unique, and actual results or benefits may vary.

#### Impact on the individual

This offering builds upon the essential skills required to configure and manage an OpenShift 4.x cluster, teaching the

enhanced skills needed to operate production environments at scale, including:

- Automating Day 2 tasks to establish production clusters with higher performance and availability.
- Integrating OpenShift with enterprise authentication, storage, CI/CD, and GitOps systems to improve productivity of IT operations and compliance with organization's standards.
- Troubleshooting techniques to identify issues with cluster operators and compute capacity.

GOPAS Praha Kodaňská 1441/46 101 00 Praha 10 Tel.: +420 234 064 900-3 info@gopas.cz **GOPAS Brno** Nové sady 996/25 602 00 Brno Tel.: +420 542 422 111 **info@gopas.cz**  GOPAS Bratislava Dr. Vladimíra Clementisa 10 Bratislava, 821 02 Tel.: +421 248 282 701-2 info@gopas.sk



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