

Percona Operator for PostgreSQL Training: Course Overview

This **one-day** training provides a **comprehensive introduction** to **deploying and managing PostgreSQL on Kubernetes** using **Percona Operator for PostgreSQL**. Participants will learn the fundamentals of the **Kubernetes architecture, operators, and cluster management**, along with hands-on labs covering deployment, backups, scaling, monitoring, and more.



Topics covered:



1. Kubernetes Fundamentals

- Understanding **virtual machines vs. containers**
- Introduction to **Docker** (images, containers, and management)
- **What is Kubernetes?**
- How Kubernetes **orchestrates containers**
- Different **Kubernetes distributions**



2. Kubernetes Operators and Percona Operator for PostgreSQL

- What are **Kubernetes Operators**, and why are they important?
- Installing and managing **Percona Operator for PostgreSQL**
- Automating **PostgreSQL cluster creation and maintenance**



3. Hands-On Labs

This is a practical course, and from the initial hour, we will be doing hands-on work while learning about:

- **Installation and Customization:** Deploying PostgreSQL on an existing Kubernetes cluster, changing PostgreSQL settings, exposing a cluster, and managing certificates.
- **Cluster Management:** Implementing backup strategies, horizontal and vertical scaling, upgrading process, pausing, and deleting clusters.
- **How-to:** Monitor a cluster, deploy a standby cluster for Disaster Recovery, switch over the primary database node, and add custom PostgreSQL extensions.
- **Troubleshooting:** accessing the logs, inspecting, and debugging a faulty pod.

