



**PERCONA**  
Kubernetes Operators



**Percona is  
Cloud-Native**

Percona Kubernetes Operator for XtraDB Cluster provides:

- Consistent deployment configuration
- Build once, use multiple times
- Reliably deploy across environments with confidence and ease

Percona Kubernetes Operator for XtraDB Cluster provides the same configuration regardless of hosting environment.

**This enables:**

- Efficient scaling
- Simpler benchmarking
- Stable testing environments



## What is a Kubernetes Operator?

Kubernetes Operators provide a way to package, deploy, and manage a Kubernetes application. A Kubernetes application is deployed on Kubernetes and managed using the Kubernetes APIs and tooling. Operators help in building cloud-native applications by delivering automation advantages like deploying, scaling, and backup and restore while being able to run anywhere Kubernetes is deployed.

Kubernetes Operators are not just a tool for managing containers. They enable you to easily balance resources against demand and provide an avenue for consistent and reliable deployment of new services. With Kubernetes Operators, you are assured that your new environments are consistent across cloud providers and on-premises environments.

## Percona Kubernetes Operator for XtraDB Cluster

When you're looking to scale your Percona XtraDB Cluster environment, it would be great if there was a way to ensure consistency across all the members and even across multiple environments. With Percona Kubernetes Operator for XtraDB Cluster, you have that tool.

Our Operator is based on the Kubernetes API and enables you to build highly available PXC environments. The primary value of the Operator is that, regardless of where it is used, it creates a PXC member that is identical to other members created with the same Operator. This provides an assured level of stability to easily build appropriate test environments or deploy a repeatable, tested database environment that meets Percona expert recommended best practices, either on-premise or in different cloud providers. Operators enable scalable and repeatable deployments.

One of the major benefits of the Percona Kubernetes Operator for XtraDB Cluster is that it is based on our expertise in developing best practices for configuration of a Percona XtraDB Cluster (PXC) environment. The Operator is easier and faster to deploy, and incorporates best practices for use of PXC.

Percona Kubernetes Operator for XtraDB Cluster delivers a tool that can be customized for use in most any environment. Once configured, the Operator can be used to instantiate new Percona XtraDB Cluster members quickly, easily, and efficiently.

When you want to add a member to an existing Percona XtraDB cluster or start the building of a new Percona XtraDB cluster, use the Operator to configure your member(s). The nature of the Kubernetes Operator means that you do not need to make any new decisions; all members are built out the same as each other member created from the same Operator.

The ease of deploying a new Percona XtraDB cluster or scaling an existing Percona XtraDB cluster is evident. Since all members are equal, you don't have any concerns about a misconfiguration negatively impacting your entire Percona XtraDB Cluster. The Operator contains everything needed to build out identical members, no matter if they are on premises, in the cloud, or in different cloud environments.

Knowing that your configuration is consistent, regardless of environment, enables hybrid and multi-cloud environments. Multi-cloud environments are becoming increasingly popular as a way to minimize the impact of an outage event at a specific provider and a method to avoid vendor lock-in.



# PERCONA

Kubernetes Operator  
FOR XTRADB CLUSTER

## Supported Features

- **Deploy easily** - create a Percona XtraDB Cluster environment with no single point of failure and the ability to span multiple activity or availability zones
- **Scale Your Percona XtraDB Cluster** – change the size parameter to add or remove members of the Percona XtraDB Cluster. Three is the minimum recommended size for a functioning Percona XtraDB Cluster.
- **Automate Your Backups** – configure Percona XtraDB cluster backups to run on a scheduled basis. Backups are stored on a persistent volume and support simple restores
- **Integrate with Percona Monitoring and Management (PMM)** - use Percona's monitoring tool to view and manage your Percona XtraDB Cluster environment
- **Rely on ProxySQL to Remove Single Point of Failure** - rely on ProxySQL's native clustering with Kubernetes anti-affinity rules to deploy an environment that removes any single point of failure
- **Automate node recovery** - use the self healing capability to automatically recover from failure of a single Percona XtraDB Cluster node
- **Provide data encryption** - rely on support for data encryption in transit
- **Supports private container registries** - access information from a private registry to enhance security

## Common Configurations Options

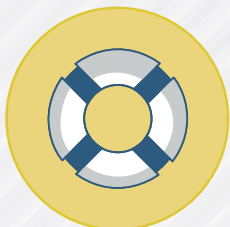
- **Set Resource Limits** – set limitation on requests to CPU and memory resources
- **Customize Storage** – set the desired Storage Class and Access Mode for your Percona XtraDB cluster data
- **Control Scheduling** – define how your Percona Pods are scheduled onto the Percona XtraDB cluster with tolerations, member selector and affinity settings



## Access Percona Kubernetes Operator for XtraDB Cluster Documentation

Documentation and sample Operator files are available [here](#).

*All Percona software is fully open source and available to download at no charge.*



## Contact Us

For organizations interested in using Percona Kubernetes Operator for XtraDB Cluster for your deployment needs, Percona offers Support and Consulting services. To learn about how Percona can help you and for pricing information, please contact us at 1-888-316-9775 or 0-800-051-8984 in Europe or [sales@percona.com](mailto:sales@percona.com).