Percona Operator for XtraDB Cluster

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Who Is Percona?

- Champions of Unbiased Open Source Database Solutions
- Provide trusted expertise in open source database technology through Consulting, Support, and Managed Services
- Engineer open source server and tool software to enhance community usage of open source databases
 - Percona Monitoring and Management (PMM)
 - Percona Toolkit (PT)
 - Percona XtraBackup (PXB)
 - Percona Server for MySQL (PS)
 - Percona XtraDB Cluster (PXC)

- Percona Server for MongoDB (PSMDB)
- Percona Backup for MongoDB (PBM)
- MySQL Storage Engines
 - Percona MyRocks
 - TokuDB



Why Percona XtraDB Cluster?

- Bringing databases into Kubernetes introduces reliability concerns not adequately addressed by MySQL async/semi-sync replication
- Snapshot State Transfer (SST) makes self-healing and scaling simplistic
- PXC is mature and extremely robust
- ProxySQL 2.0 contains integrations specifically for PXC we can use in container environments



Features of the PXC Operator (at GA)

- Tested, proven, robust self-healing with no single points of failure
- Integration with Percona Monitoring & Management (PMM)
- Simplified deployments follow Percona best practices (PXC cluster in ~6 minutes)
- Automated Backup and Restore with support for object storage through Percona XtraBackup
- Automatic TLS management using Cert-Manager supporting cluster traffic encryption and client traffic encryption



Features of the PXC Operator (at GA)

- Full support for advanced Kubernetes features like Pod Disruption Budgets, Tolerations, Multi-AZ/Affinity, complex Constraints, and Priority Classes
- Supports using either PersistentVolumeClaims or Local Storage (emptyDir and hostPath)
- Full support for custom MySQL configuration via ConfigMap
- Supports private or custom container registries

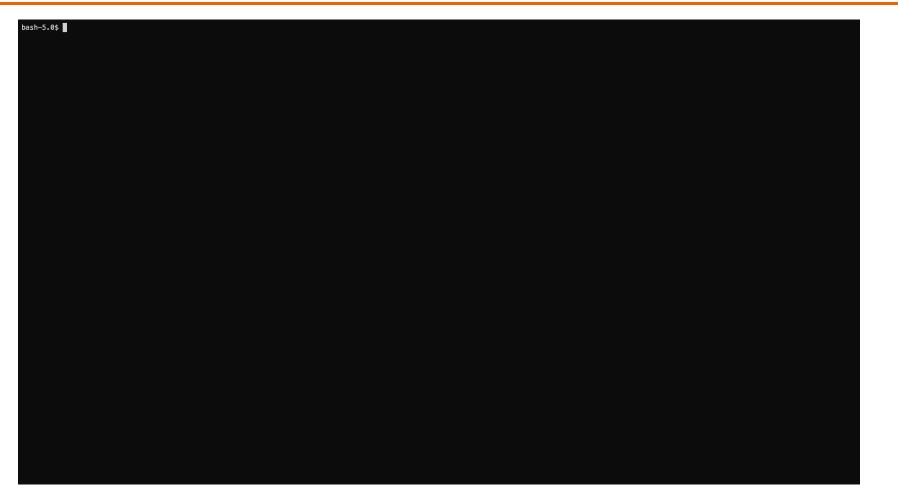


What's Coming Soon?

- OpenShift certification + automated operator upgrades via OLM
- Automated zero-downtime PXC upgrades via UpgradeController
- Full support for Percona's advanced data-at-rest encryption features
- Service Brokers for OpenShift and other platforms



Demo Video





Final Thoughts

- I'll be presenting a deep dive called "Building a Kubernetes Operator for Percona XtraDB Cluster" on May 29th during Percona Live Austin in our Kubernetes track
- Percona also has an operator for *Percona Server for MongoDB* in early access
- All of Percona's software is 100% Free and Open Source, find our operators and more at https://github.com/percona/



