From air-gapped to multi-cloud:

Modern database deployment patterns with ClusterControl

severalnines

AGENDA

- Speaker intro
- ClusterControl intro
  - Highlights, reqs and core features
- Modern DB deployment patterns
  - Standardizing deployments across on-prem, private cloud, and public cloud providers
  - Designing hybrid and multi-cloud topologies for HA, DR, and read scaling
  - Operating databases in air-gapped / highly restricted environments
- Q and A

Today's engineer

Who: Prem N.
What: Solutions Architect
Why: 20+ years of database work across various roles.

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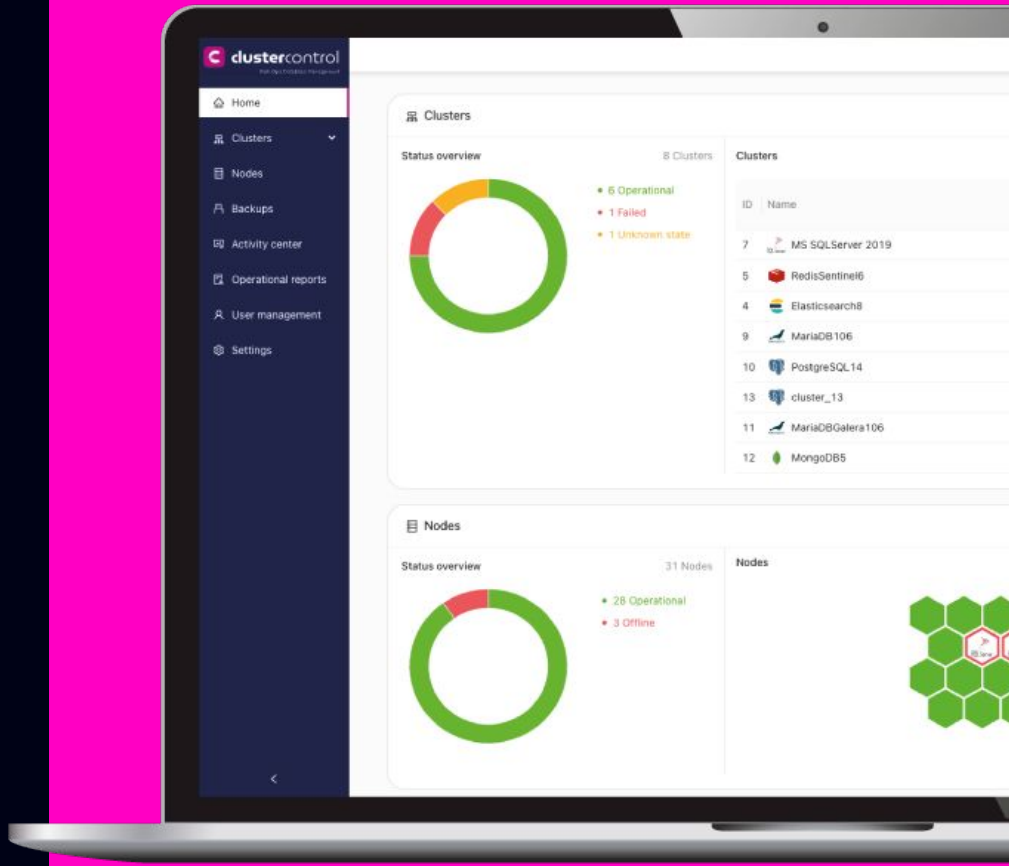
ClusterControl Highlights

Database ops orchestration platform to deploy, monitor, manage, and scale database ops in any environment:

- Self-hosted in on-prem and hybrid environments
- Centralized management and monitoring from a single pane of glass
- Supports open-source and source-available databases
- Integrates with popular tooling - Terraform, Ansible, Puppet, etc



ClusterControl System Requirements

Hardware

- Arch: x86_64 only
- RAM: >2 GB
- CPU: >2 cores
- Disk space: >40 GB
- Cloud platforms: AWS, Google Cloud, Microsoft Azure

Operating Systems

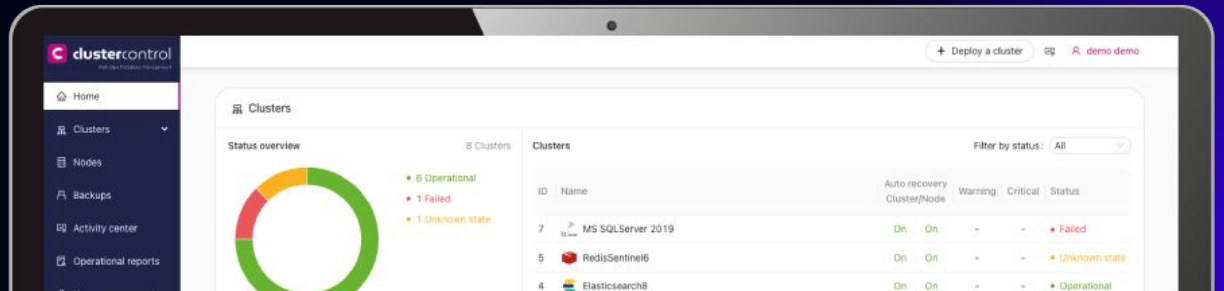
- RHEL 8.x/9.x
- Rocky Linux 8.x/9.x
- AlmaLinux 8.x/9.x
- Ubuntu 22.04/24.04 LTS
- Debian 10.x/11.x/12.x

ClusterControl
Latest Features

- GA support for Kubernetes operators
- Support for MySQL Group Replication
- Support for Percona Server Pro 8.4
- CMON Controller Pooling — PREVIEW
- Improved offline / air-gapped installation

ClusterControl Core Features

Deploy	**Scale**	**Failover**	**Backup and Restore**
Monitor	**Integrate**	**Management**	**Administration**



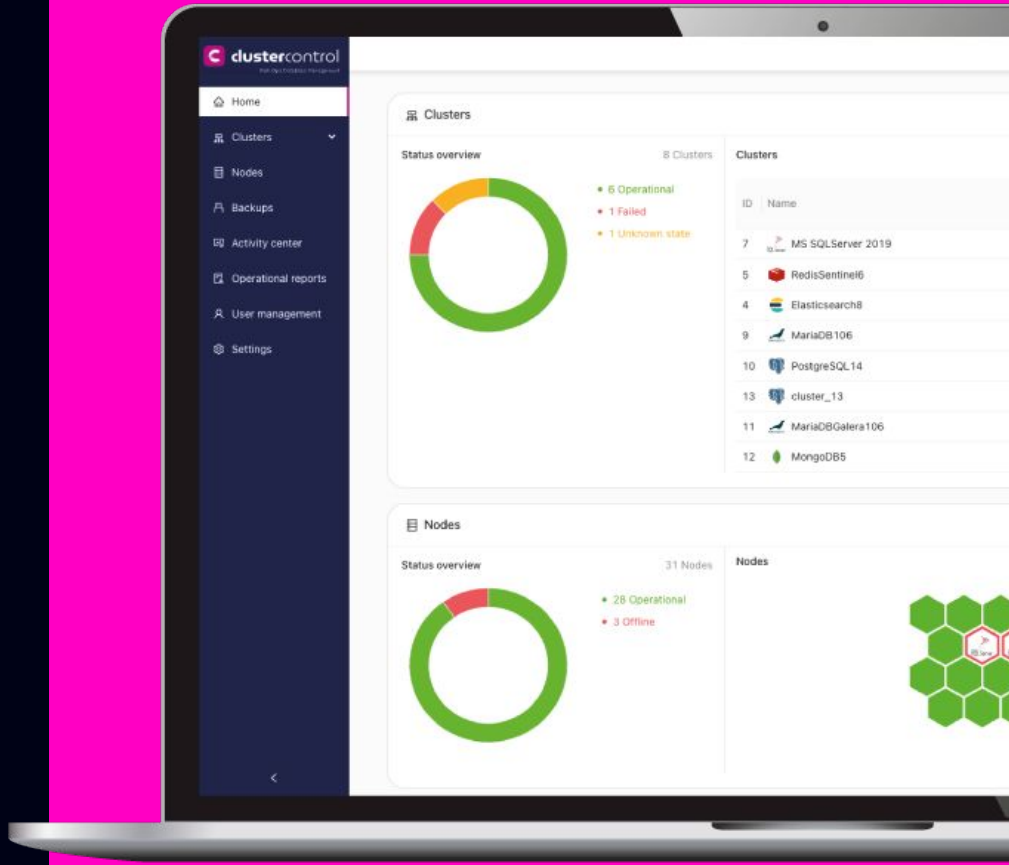
Modern Deployment Patterns

Deploying in *air-gapped* env.

What will we be deploying in an air-gapped env:

(**Assumption**: ***satellite repository server with required packages is available***)

- ClusterControl (link)
- Database hosts (*VM or Bare Metal host with OS*)
- Databases on DB hosts using ClusterControl

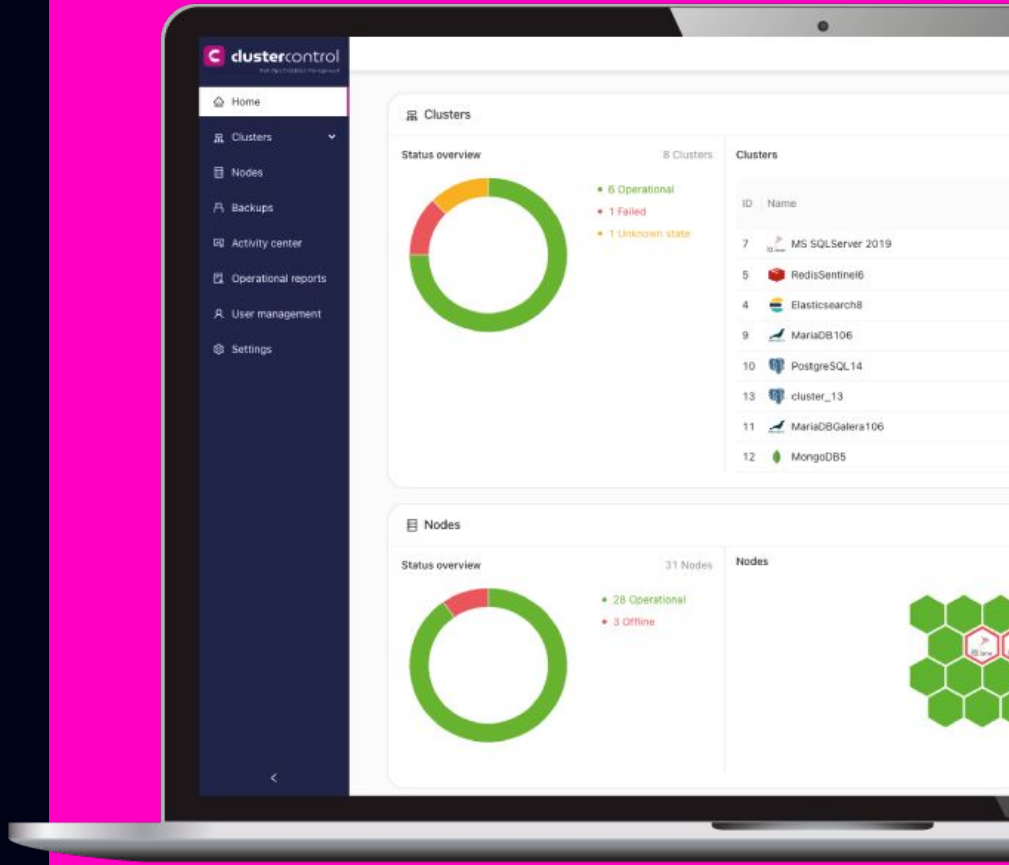


Deploying in *Multi-Cloud* env.

What will we be deploying in a multi-cloud env:

(**Assumption**: ***satellite repository server with required packages is available***)

- Database hosts (*VM or Bare Metal host with OS*) in AWS and DigitalOcean
- Databases on AWS using ClusterControl
- Databases on DigitalOcean using ClusterControl



Deploying in *Hybrid-Cloud* env.

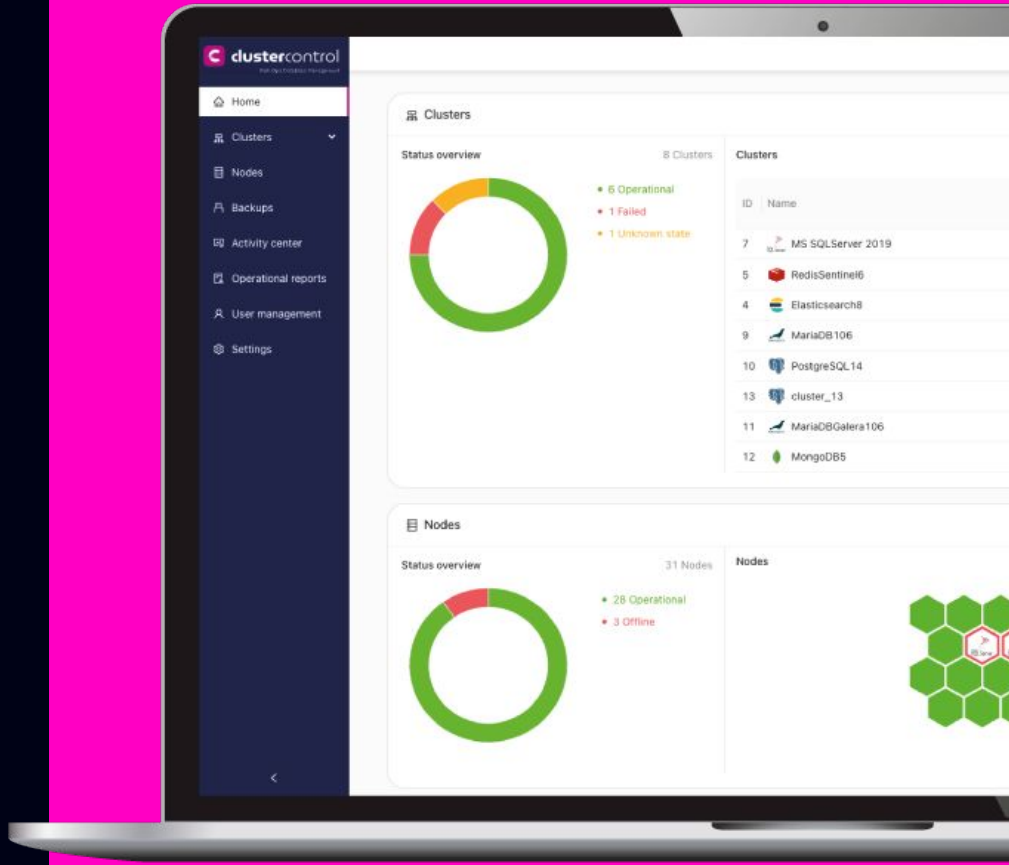
(Discussion Only)

What will we be discussing deploying in a hybrid-cloud env:

Assumptions:

1. *Satellite repository server with required packages is available*
2. *AWS DirectConnect pipe has been setup between your on-prem DC and AWS region*
3. *Private Networking has been setup to use the DirectConnect to access AWS EC2 instances using Private IP address space*

- Having DB Primary (and one or more Replica nodes) in on-prem DC and having one or more additional Replica nodes in public clouds (AWS, DigitalOcean, GCP, Azure, etc)



Thank you!