

PowerDNS Cloud Control

Cloud-Native DNS. Automated. Scalable. Production Ready.

The Challenge

Modern DNS infrastructures must deliver more than high performance and reliability. Service providers, enterprises, cloud platforms, and 5G networks require DNS services that can be deployed globally, scale elastically, recover automatically, and integrate seamlessly into modern cloud-native environments.

Traditional deployment models based on bare-metal infrastructure, virtual machines, and manual configuration struggle to keep pace with today's operational requirements. Running DNS across hundreds or thousands of locations demands automation, orchestration, lifecycle management, observability, and efficient resource utilization.

Organizations need a platform that makes cloud-native DNS simple to deploy, operate, and scale.

The Solution

PowerDNS Cloud Control is the cloud-native deployment and operations platform for the complete PowerDNS product portfolio.

Built on Kubernetes and modern cloud-native technologies, Cloud Control automates the deployment, scaling, monitoring, and lifecycle management of PowerDNS solutions.

By combining containerization, orchestration, automation, visibility, and intelligent DNS-specific capabilities, Cloud Control enables organizations to build resilient, geographically distributed DNS infrastructures that scale from enterprise deployments to nationwide and global service provider networks.



Key Capabilities

Cloud-Native DNS Platform

PowerDNS Cloud Control provides a fully cloud-native platform for deploying and operating the entire PowerDNS portfolio on Kubernetes. Using OCI-compliant container images, Helm charts, and Kubernetes-native automation, organizations can deploy consistent DNS infrastructures across private, public, hybrid, and edge environments.

- ✓ **Kubernetes-native deployments**
- ✓ **OCI-compliant container images**
- ✓ **Helm-based lifecycle management**
- ✓ **Unified platform for all PowerDNS products**
- ✓ **Consistent deployments across environments**

Built-in Visibility

Cloud Control provides comprehensive operational visibility through native Prometheus metrics, pre-configured alert rules, and Grafana dashboards.

Operators gain immediate insight into DNS performance, latency, query processing, and infrastructure health without building custom monitoring solutions.

- ✓ **Prometheus metrics**
- ✓ **Grafana dashboards**
- ✓ **Integrated alerting**

Automated Deployment & Lifecycle Management

Cloud Control automates the complete lifecycle of DNS services, from initial deployment through configuration updates, scaling, upgrades, monitoring, and maintenance.

Integrated automation significantly reduces operational effort while enabling faster and more reliable service delivery.

- ✓ **Automated deployment**
- ✓ **Full support for GitOps deployment and LCM using Argo or Flux**
- ✓ **Simplified upgrades**
- ✓ **Configuration management**
- ✓ **Reduced operational complexity**
- ✓ **Faster time to production**

Elastic DNS Scaling

Cloud Control enables DNS services to scale dynamically based on operational metrics. Organizations can automatically scale DNS services according to DNS latency, query volumes, CPU utilization, or any Prometheus metric, ensuring optimal performance under changing workloads.

- ✓ **Horizontal auto-scaling**
- ✓ **DNS-aware scaling**
- ✓ **Optimized resource utilization**
- ✓ **Improved service availability**
- ✓ **Cost-efficient operations**

Intelligent DNS Automation

Cloud Control includes DNS-specific automation capabilities that go far beyond generic Kubernetes deployments. Backend management, DNSdist configuration, service discovery, and deployment changes are automatically synchronized across the infrastructure, reducing manual configuration while improving operational consistency.

- ✓ **Automatic backend discovery**
- ✓ **Dynamic DNSdist configuration**
- ✓ **Kubernetes Operators & Agents**
- ✓ **CRD-based automation**
- ✓ **Simplified operations**

Edge-Ready DNS

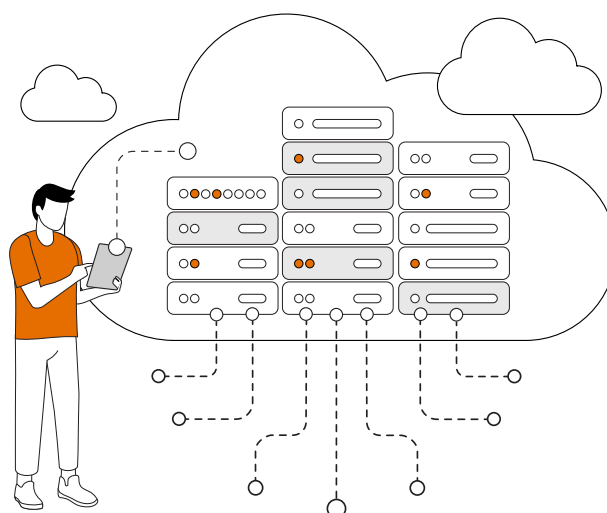
Cloud Control is designed for geographically distributed deployments, making it ideal for edge computing, cloud platforms, and 5G networks. Containerized DNS services can be deployed close to users while remaining centrally managed through Kubernetes automation.

- ✓ **Distributed edge deployments**
- ✓ **Low-latency DNS**
- ✓ **5G-ready architecture**
- ✓ **Geographic scalability**
- ✓ **Centralized management**

Multi-cluster Observability

The add-on PowerDNS Single Pane of Glass provides centralized visibility and management for PowerDNS Cloud Control deployments across multiple clusters. By consolidating operational data, health information, and performance metrics into a single interface, operators can monitor distributed DNS infrastructures more efficiently, accelerate troubleshooting, and maintain consistent operations across data centers, cloud regions, and edge locations.

- ✓ **Centralized monitoring across multiple clusters**
- ✓ **Unified operational dashboards**
- ✓ **Consolidated health and performance insights**
- ✓ **Faster troubleshooting and root cause analysis**
- ✓ **Simplified operations for distributed DNS environments**



Key Benefits at a Glance



Cloud-native DNS platform



DNS-specific **orchestration**



Automated deployment and lifecycle management



Edge and 5G readiness



Elastic **DNS scaling**



Built-in **visibility**



Kubernetes-native automation



Multi-cluster **observability**

Ready to step into the world of Cloud-Native DNS?

Discover how PowerDNS Cloud Control simplifies the deployment, automation, and operation of modern DNS infrastructures for everything from enterprise environments to large-scale 5G networks.

[Contact us](#)

doc.powerdns.com

