

PowerDNS Single Pane of Glass

Unified Multi-Cluster DNS Operations. **Complete Visibility.**
Centralized Control.

The Challenge

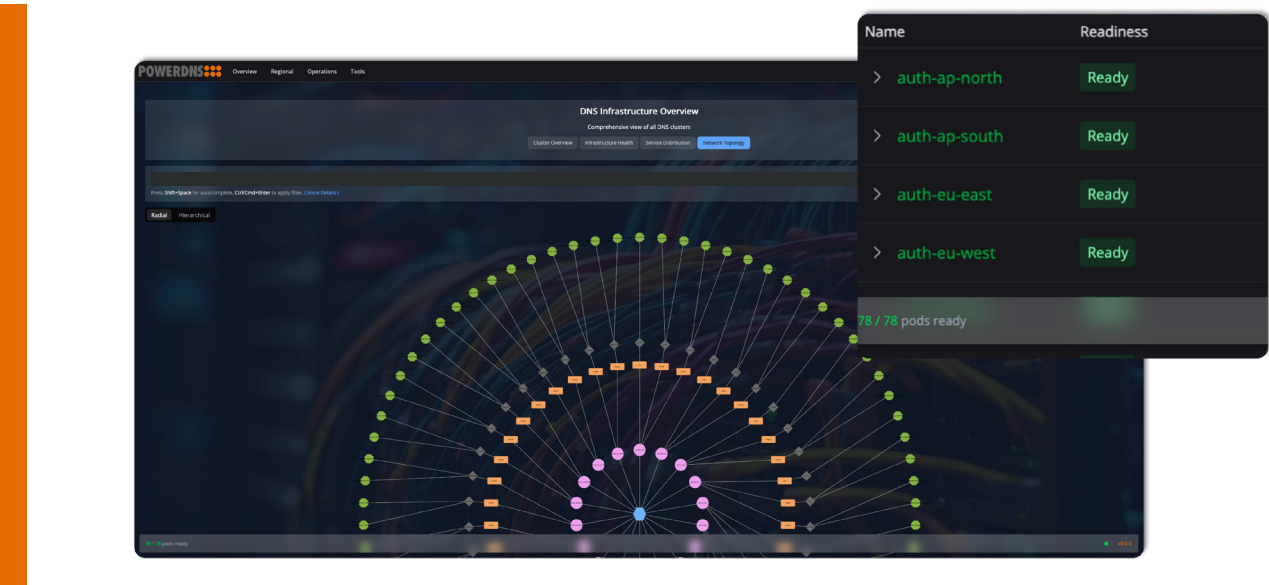
Managing cloud-native DNS services across multiple Kubernetes clusters quickly becomes operationally complex. Operators often need to switch between dashboards, regions, clusters, and tools to monitor health, investigate issues, compare DNS behavior, or perform operational tasks.

While Kubernetes provides cluster-level visibility, it lacks application-specific capabilities for managing distributed DNS services across multiple clusters.

The Solution

PowerDNS Single Pane of Glass is an add-on for PowerDNS Cloud Control that provides a unified interface for **observing**, **analyzing**, and **operating** cloud-native PowerDNS deployments across multiple Kubernetes clusters.

Instead of working with separate dashboards and tools, operators gain centralized visibility into infrastructure health, topology, DNS services, logs, and operational actions through a single web-based interface.



Key Capabilities

Unified Multi-Cluster Visibility

Monitor up to 1,000 PowerDNS Kubernetes clusters from a centralized dashboard with real-time visibility into infrastructure health, service status, topology, and deployment readiness.

- ✓ Unified dashboards
- ✓ Multi-cluster visibility
- ✓ Health monitoring
- ✓ Network topology
- ✓ Cluster readiness

Label-Based Organization

Organize DNS infrastructure using a flexible label-based taxonomy. Instead of fixed hierarchies, clusters can be categorized by region, role, environment, customer, team, or any custom dimension, enabling consistent filtering, dashboards, and access control across the entire platform.

- ✓ Flexible label taxonomy
- ✓ Multi-dimensional organization
- ✓ Custom infrastructure grouping
- ✓ Dynamic filtering

Multi-Cluster DNS Query Analysis

Execute DNS queries simultaneously across multiple clusters and compare responses in a single interface. Quickly identify inconsistencies and investigate differences using integrated comparison tools and pod logs.

- ✓ Multi-cluster DNS queries
- ✓ Response comparison
- ✓ Visual difference analysis
- ✓ Integrated pod logs
- ✓ JSON export

Flexible Views & Playlists

Organize and filter clusters using the flexible labeling system and a powerful query engine. Create customized views, group services, and build dashboards tailored to different teams, regions, or operational roles. Playlists automatically rotate through multiple dashboard screens, making them ideal for NOC displays, monitoring stations, and status boards.

- ✓ Custom dashboard views
- ✓ Multi-level grouping
- ✓ Team-specific views
- ✓ Automatically rotating screens

Centralized Operational Actions

Perform operational tasks across multiple clusters from a single interface, including cache clearing and deployment restarts, while monitoring execution status in real time. Single Pane of Glass provides a centralized interface for operational actions executed locally through Cloud Control.

- ✓ Mass cache clearing
- ✓ Rolling deployment restarts
- ✓ Real-time status updates
- ✓ Centralized operations
- ✓ Reduced manual effort

Centralized Log Access

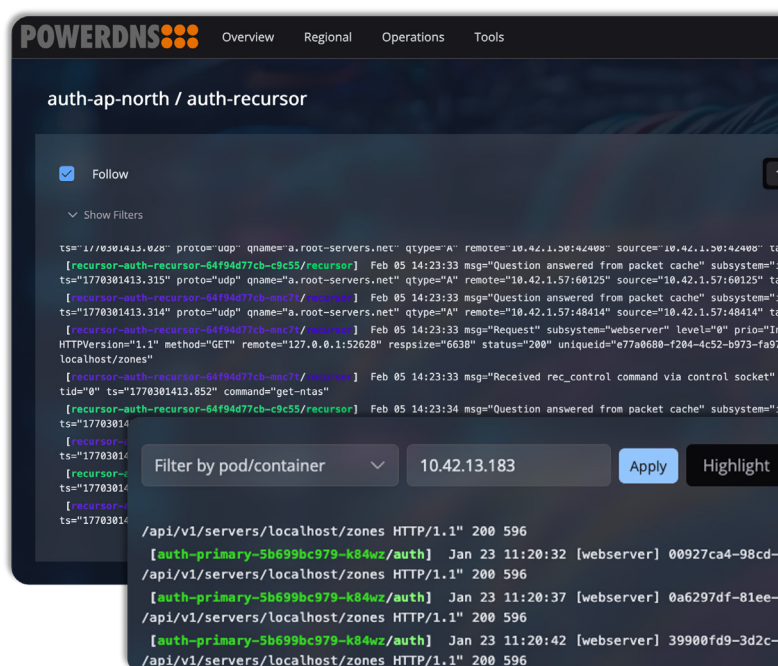
View live logs from individual or multiple pods without requiring direct Kubernetes access. Filter, search, and export logs to simplify troubleshooting across distributed deployments.

- ✓ Live log streaming
- ✓ Multi-pod log view
- ✓ Search and filtering
- ✓ Log export
- ✓ Simplified troubleshooting

Permission-Based Access Control

Control visibility and operational permissions using a flexible labeling system combined with policy-based authorization. Users see only the clusters and actions relevant to their responsibilities.

- ✓ Role-based permissions
- ✓ Label-based authorization
- ✓ Granular access control
- ✓ Read-only access
- ✓ Operational delegation



Key Benefits at a Glance



Unified **multi-cluster** visibility



Mass **cache** clearing



Centralized **DNS** operations



Centralized **log** access



Flexible **dashboards** and **filtering**



Reduced operational **complexity**



DNS **query** comparison



Permission-based **access** control

Ready to Simplify Multi-Cluster DNS Operations?

Discover how PowerDNS Single Pane of Glass provides centralized visibility, observability, and operational control for cloud-native PowerDNS deployments at any scale.

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