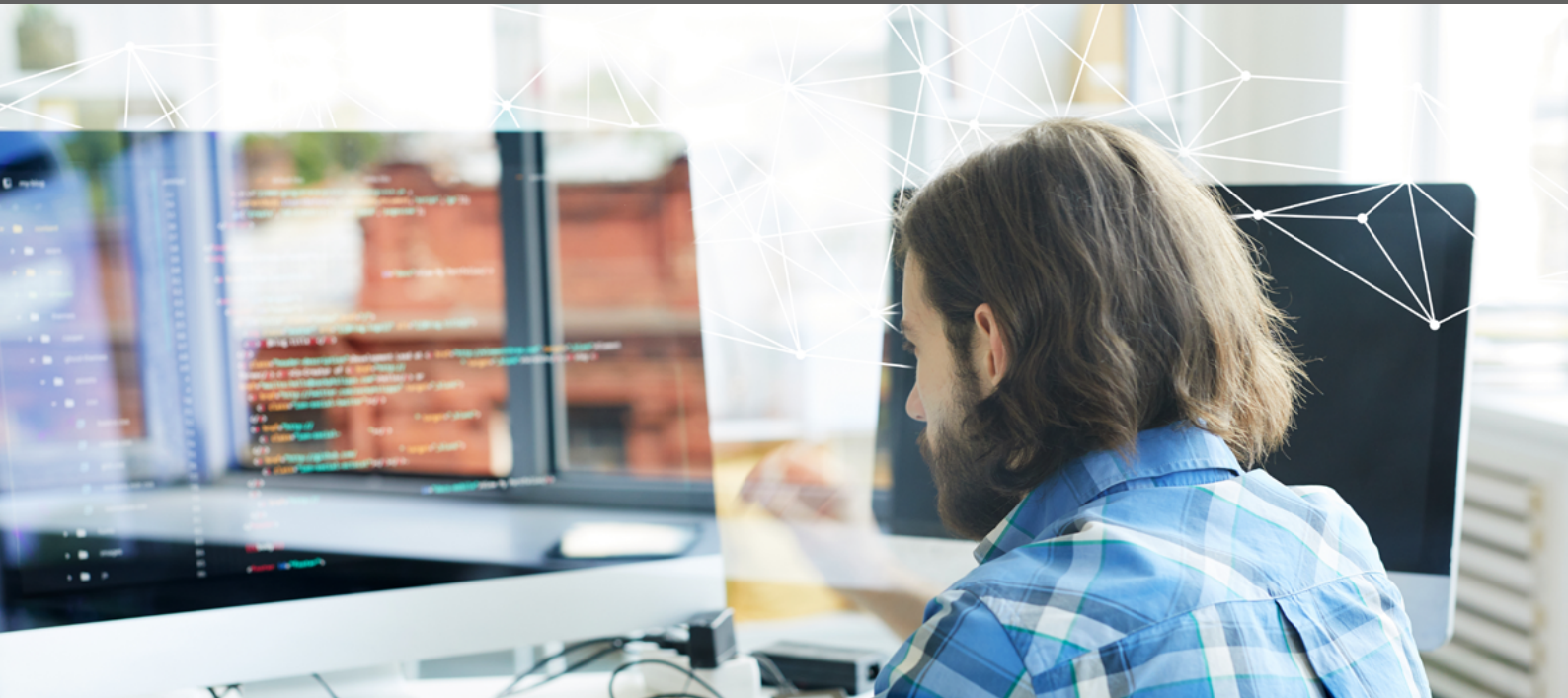


PowerDNS Cloud Control

A Cloud-native DNS Setup



Cloud-native software is seeing major take-up as the orchestration and management solution for next generation telecom infrastructure, and cloud-native DNS is no exception. PowerDNS Cloud Control enables a cloud-native setup of DNS. It gives you the tools to deploy and manage PowerDNS services on a Kubernetes platform* in your network.

The Importance of Cloud-native DNS

Cloud-native solutions enable network operators to implement next generation telecom infrastructure with highly distributed services deployed on the edge of their networks.

Containers, service meshes and microservices empower organizations to use scalable applications in modern, dynamic environments. Cloud-native DNS applies this flexible, scalable and efficient approach to DNS installations.



Allows operations teams to **design, deploy, and manage DNS deployments more easily** and with less manpower



Reduced complexity and operational costs compared to legacy installations, with remote orchestration and lifecycle management



Extensible and scalable setup for different DNS requirements and unpredictable traffic demands



Allows **for geographic distribution and edge computing with low latency DNS responses**



Manageable and predictable use of required resources and PaaS technologies



Co-locate DNS with other services on low-cost hardware with cost-effective, containerized infrastructure

* It is assumed that a working Kubernetes deployment is present in the customer's network.

Cloud-native **PowerDNS**

Combining Graduated Cloud-native Technologies with PowerDNS

PowerDNS Cloud Control allows operators to deploy and manage DNS nodes in several data centers and locations simultaneously. This includes servers as close to end-users as possible, enabling DNS for edge computing, 5G and IoT scenarios. Using PowerDNS Cloud Control and Kubernetes, operations teams are able to design, deploy, and manage DNS deployments easily. It allows them to concentrate on the desired state of the deployment, without worrying about how to achieve that state.

- Cloud-native deployment and orchestration for large-scale deployments
- Includes the official images needed for a fully cloud-native stack for the core PowerDNS set of products
- Recursive DNS: Deployment of PowerDNS Recursor and DNSdist on a Kubernetes cluster
- Authoritative DNS: Deployment of PowerDNS Authoritative Server, DNSdist and ZoneControl on a Kubernetes cluster
- Kubernetes deployments simplify upgrades and downgrades, without loss of service
- Automated deployment and lifecycle management with Helm charts
- Cloud Control GUI provides an overview of running pods and containers
- Reporting with first-class support for Prometheus metrics and alerting, as well as Grafana dashboards

Containerization

All releases of PowerDNS are available as Docker images through a private registry. Compared to legacy DNS technology on VMs, our Docker images allow you to use your system resources more efficiently, save storage, provide quicker turn around and reduce budget.

Monitoring & Alerting

Given the criticality of DNS to the overall internet experience, monitoring and alerting are particularly important. Prometheus enables PowerDNS to collect, process and prepare metrics, as well as provide alerts, about critical events. Grafana visualizes collected data for single view graphs and dashboards.

Automated Deployment, Orchestration & Lifecycle Management

PowerDNS Cloud Control is based on the standard for container orchestration – Kubernetes. It ships with Helm charts to easily deploy and configure PowerDNS components, custom resource definitions and operators for custom workloads. Control loops ensure that a system matches your desired state, while REST-APIs are available to perform checks and changes if necessary.

Configuration & Operations

PowerDNS Cloud Control brings containerization, orchestration, monitoring and alerting together into one solution across multiple Kubernetes clusters. This gives operators a straightforward way to visualize, configure, monitor and even deploy cloud-native PowerDNS software.

Step Into the World of Cloud-native DNS with PowerDNS Cloud Control

Increase scalability, reduce costs and manage your DNS more efficiently. Benefit from DNS containerization, automation, orchestration and lifecycle management, monitoring and alerting, combined with simplified configuration and management.

PowerDNS Cloud Control enables cloud-native deployments of PowerDNS. Leveraging cloud-native tools such as Helm, Docker and Prometheus, it allows you to deploy PowerDNS services on a Kubernetes platform in your network.