



Products, Features & Services

PowerDNS

PowerDNS, founded in the late 1990s, is a premier supplier of DNS software, services and support. Deployed throughout the world with some of the most demanding users of DNS, we pride ourselves on quality software and the very best support available.

PowerDNS customers include leading telecommunications service providers, large scale integrators, content distribution networks, cable networks / multi service operators and Fortune 500 software companies. In various important markets, like Scandinavia, Germany and The Netherlands, PowerDNS is the number one supplier of nameserver software.

PowerDNS is based in The Netherlands, Europe and is privately held.

Products

Authoritative Server

The PowerDNS Authoritative Server is the only solution that enables authoritative DNS service from all major databases, including but not limited to MySQL, PostgreSQL, SQLite3, Oracle, Sybase, Microsoft SQL Server, LDAP and plain text files.

DNS answers can also be fully scripted using a variety of (scripting) languages like for example Lua, Java, Perl, Python, Ruby, C and C++. Such scripting can be used for dynamic redirection, (spam)filtering or real time intervention.

In addition, the PowerDNS Authoritative Server is the leading DNSSEC implementation, hosting the majority of all DNSSEC domains worldwide. The Authoritative Server hosts at least 30% of all domain names in Europe, and around 90% of all DNSSEC domains in Europe.

Recursor

The PowerDNS Recursor is a high-end, high-performance resolving name server which powers the DNS resolution of at least a hundred million subscribers. Utilizing multiple processors and supporting the same powerful scripting ability of the Authoritative Server, the Recursor delivers top performance while retaining the flexibility modern DNS deployments require.

Features

PowerDNS products adhere to the relevant DNS standards, please see the compliance matrix at the end of this document.

Please find a list of major features. To verify the presence or absence of a desired feature, please contact us on the addresses found at the end of this document.

Common:

- IPv4, UDP/TCP
- IPv6, UDP/TCP, 100% compliant

- Remotely pollable statistics for real time graphing
- High performance
- SNMP statistics bridge (read only)

Authoritative Server:

- MySQL, PostgreSQL, Oracle, Sybase, Microsoft SQL Server, LDAP, SQLite3
 - Including replication
 - Near instant startup time
- Plain BIND zone files
 - Brief startup time
- Migration tools from legacy DNS platforms (zone2sql)
- Internal Lua-based scripted answer generation
- External high-performance Script-based answer generation
- Geographical load balancing
- Full DNSSEC support including all standardized algorithms
- TSIG for transaction signatures, AXFR authorization/requests
- Master/Slave support
- Built-in web server for statistics and limited direct control
- API for direct control (pdns_control, pdnssec)
 - Local and remote access

Recursor:

- Full support for all relevant standards
- Advanced anti-spoofing measures
- Reconfiguration without downtime
- Plain BIND zone files for “resolved hosting”
- Internal Lua-based scripted answer generation
- Question interception, answer reconditioning, NXDOMAIN redirection
 - Including ‘block lists’ and security measures
- API for direct control (rec_control)
 - Local and remote access

Platform Requirements

PowerDNS products are written for UNIX environments like Solaris, Linux (for example Debian, Ubuntu, Red Hat, Fedora etc), and BSD (FreeBSD, NetBSD, OpenBSD). Microsoft Windows is not supported on the server side.

In terms of hardware PowerDNS has no specific requirements, except when scaling to large numbers of zones in which case system memory determines the amount of zones that can be served at high speed. A typical server with 4 cores and 8GB of RAM will suffice for almost all deployments.

We offer advice and consulting on specific scaling needs, i.e., how many servers would be required to support a desired traffic capability.

Support

PowerDNS is pleased to offer various levels of support, ranging from entry-level office hours service via email to 24/7, SLA backed support via all means available (telephone, skype, instant messaging, remote logins).

In addition, remote diagnostics are provided over secure shell (SSH), or VPN (OpenVPN, IPSEC or Cisco).

A private ticketing system is provided, with a unique login per customer. Response and solution times are according to the table below.

Different accounts can be generated within the ticketing system. Each of these accounts can observe all customer provided issues. In addition, for telephone support, all callers are expected to be up to date with respect to concurrent issues.

The following table is typical for our support levels; per-agreement exact response times can be customized.

Issue Severity	Response time	Workaround available	Permanent fix
Critical (P0, P1)	< 2 hours	< 8 hours	See "Major"
Major (P2)	< 6 hours	< 12 hours	Within 7 days
Minor (P3)	Within one business day	Within 10 days	Within 60 days
Minor (P4)	Within two business days	Feature requests are optionally implemented	Feature requests are optionally implemented

Training

PowerDNS provides the following training courses:

- PowerDNS Authoritative Basic deployment & maintenance
 - One day
 - Skill level: UNIX admin
- PowerDNS Authoritative Advanced deployment & maintenance, including DNSSEC
 - Two days (Three days including DNSSEC introduction)
 - Skill level: advanced UNIX admin
- PowerDNS Recursor Basic deployment & maintenance
 - One day
 - Skill level: UNIX admin
- PowerDNS Recursor Advanced deployment & maintenance
 - Two days
 - Skill level: advanced UNIX admin
- PowerDNS NOC training: monitoring DNS performance from metrics
 - One day
 - Skill level: NOC operator

Our courses are available in Dutch, English, German, French and Spanish. Training is preferably held on-site, but can also be organized in The Netherlands. Our training comes with a server that provides a virtual machine per participant which allows for real life testing.

These courses can be mixed & matched per your requirements.

Professional services

We provide professional services for our supported users. Professional services are not available for users without a valid support agreement. In this way, we can make sure that the results of the professional services supplied are actually supported.

Professional services are provided on-site and are billed by the day. We have consultants that are fluent in Dutch, English, German, French and Spanish.

Integration

DNS is not an island and always features a level of integration with other systems, if only monitoring. In many instances, PowerDNS will need to be provisioned with new domains or access lists, and such provisioning requires small adaptations so we can respond to your higher level systems.

In addition, PowerDNS, its libraries and the platform itself need to be kept up to date, and in larger deployments this needs to be coordinated centrally.

Similarly, larger deployments either need load balancing equipment or integration of the setup within a internal routing configuration to leave such balancing to existing routing and switching equipment.

Integration services are available to carrier grade supported users.

APIs for provisioning & control

A variety of APIs is available to provision and control the PowerDNS products. On top of the available APIs and data schemas, several web maintenance engines are available. Notable features are:

- REST based APIs
- SQL based APIs
- TCP/IP vendor-neutral text based control, password protected
- Multi-tenant web-based DNS resource record control
- Provisioning of DNS-based filtering

Compliance Matrix

PowerDNS Software is fully compliant with at least the following standards track or 'in wide use' RFCs. Lack of an RFC does not imply non-compliance, please contact us to verify.

RFC	Description
RFC 1034	Domain names - concepts and facilities
RFC 1035	Domain names - implementation and specification
RFC 1464	Using the Domain Name System To Store Arbitrary String Attributes
RFC 1876 (Auth)	A Means for Expressing Location Information in the Domain Name System
RFC 1982 (Auth)	Serial Number Arithmetic
RFC 1925	The Twelve Networking Truths
RFC 1995 (Interoperable)	Incremental Zone Transfer in DNS
RFC 1996 (Auth)	A Mechanism for Prompt Notification of Zone Changes (DNS)

	NOTIFY)
RFC 2136	Dynamic Updates in the Domain Name System (DNS UPDATE)
RFC 2181	Clarifications to the DNS Specification
RFC 2230	Key Exchange Delegation Record for the DNS
RFC 2308	Negative Caching of DNS Queries (DNS NCACHE)
RFC 2536	DSA KEYS and SIGs in the Domain Name System (DNS)
RFC 2538	Storing Certificates in the Domain Name System (DNS)
RFC 2539	Storage of Diffie-Hellman Keys in the Domain Name System (DNS)
RFC 2671	Extension Mechanisms for DNS (EDNS0)
RFC 2782	A DNS RR for specifying the location of services (DNS SRV)
RFC 2854	Secret Key Transaction Authentication for DNS (TSIG)
RFC 2930	Secret Key Establishment for DNS (TKEY RR)
RFC 3403	Dynamic Delegation Discovery System (DDDS) Part Three: The Domain Name System (DNS) Database
RFC 3596	DNS Extensions to Support IP Version 6
RFC 3597	Handling of Unknown DNS Resource Record (RR) Types
RFC 3658	Delegation Signer (DS) Resource Record (RR)
RFC 4025	A Method for Storing IPsec Keying Material in DNS
RFC 4034	Resource Records for the DNS Security Extensions
RFC 4035	Protocol Modifications for the DNS Security Extensions
RFC 4255	Using DNS to Securely Publish Secure Shell (SSH) Key Fingerprint
RFC 4343	Domain Name System (DNS) Case Insensitivity Clarification
RFC 4398	Storing Certificates in the Domain Name System (DNS)
RFC 4592	The Role of Wildcards in the Domain Name System
RFC 4701	A DNS Resource Record (RR) for Encoding Dynamic Host Configuration Protocol (DHCP) Information (DHCID RR)
RFC 4892	Requirements for a Mechanism Identifying a Name Server Instance
RFC 5001	DNS Name Server Identifier (NSID) Option
RFC 5452	Measures for Making DNS More Resilient against Forged Answers

Further information

For further information, please contact powerdns.support.sales@netherlabs.nl, or during European office hours call +31-15-7850372

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