

# The PowerDNS Name Server

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# What is PowerDNS?

- An Authoritative Name Server.
- A Recursive Name Server.
- A company that provides DNS services.
- An Open Source project.

# Why PowerDNS?

- Free.
- Flexible.
- Scalable.
- Open Source.
- Active development.
- Loads (reloads) fast.

# Big Names

- wikipedia.com
- xs4all.nl
- easydns.com
- 10 – 15% of the world's Name Servers.
- AOL and Shaw Cable run recursor.

# PowerDNS on your server

- Install PowerDNS
  - Subversion repository.
  - Snapshot.
  - Release.
- Choose a Backend.
  - MySQL, PostgreSQL, Oracle, DB2, OpenDBX, SQLite, BIND, LDAP, geo, pipe, etc.
- Install a Zone Editor
  - PowerAdmin.
  - WebDNS.
  - ZoneAdmin.

# SQL Tables

```
mysql> describe domains;
```

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	NULL	auto_increment
name	varchar(255)	NO	UNI		
master	varchar(20)	YES		NULL	
last_check	int(11)	YES		NULL	
type	varchar(6)	NO			
notified_serial	int(11)	YES		NULL	
account	varchar(40)	YES		NULL	

# SQL Tables

```
mysql> describe records;
```

Field	Type	Null	Key	Default	Extra
id	int(11)	NO	PRI	NULL	auto_increment
domain_id	int(11)	YES	MUL	NULL	
name	varchar(255)	YES	MUL	NULL	
type	varchar(6)	YES		NULL	
content	varchar(255)	YES		NULL	
ttl	int(11)	YES		NULL	
prio	int(11)	YES		NULL	
change_date	int(11)	YES		NULL	

# SQL Tables

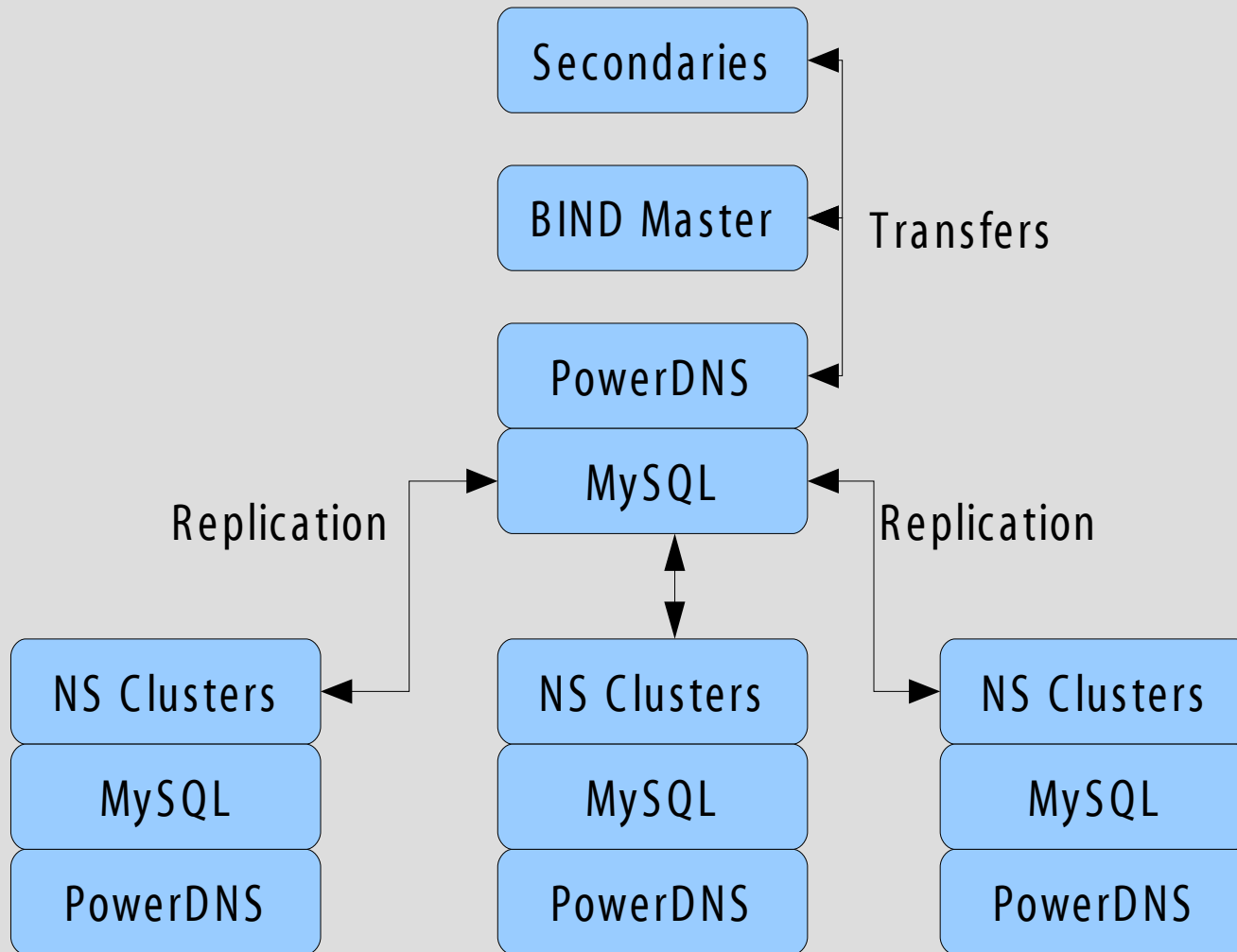
```
mysql> describe supermasters;
```

Field	Type	Null	Key	Default	Extra
ip	varchar(25)	NO			
nameserver	varchar(255)	NO			
account	varchar(40)	YES		NULL	

# PowerDNS as a Slave

- Accepts Notifies and Transfers.
- Supermaster can automatically provision.
  - But will not expire domains.
- MySQL Replicaton.

# Complicated Scenario



# Special Features

- SQL queries can be modified.
  - basic-query : select content,ttl,prio,type,domain\_id,name from records where type='%s' and name='%s'
- Built-in web server for statistics.
- Supports multiple concurrent backends.
- Modular recursion.
- Packet caching.
- Query caching.
- Authoritative RFC1918 private address space answers.

# Migrating to PowerDNS

- zone2sql.
  - Convert your data and populate your DB.
- Super Master.
  - Automatically provision your data.
- dnsreplay , dnsscope , dnsgram
  - Test the results.

# Dog and Pony.

- ZoneAdmin.
- PowerDNS web stats.

# For more information

- <http://www.powerdns.com/>
- <http://doc.powerdns.com/>
- <http://wiki.powerdns.com>
  - Mailing lists: users, dev, announce.
  - #powerdns