

Puppet on Drupal Servers

Examples in case studies

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Why Puppet?

What's wrong with Bash?

Why Puppet?

Typical LAMP server setup for Drupal:

- Apache
- MySQL
- PHP
- Memcached
- Drush
- Capistrano

We assume a base Linux is already available as a VM.

Why Puppet?

Issues while 'manually' installing packages:

- Configuration drift
- Distribution specifics
- Documenting actual installation
- Installation/configuration time

Why Puppet?

Development teams and external contributors

- Untracked 'quick hack' changes
- File system rights
- User configuration across multiple servers

System failures

- Time to recover
- Unmanaged configurations

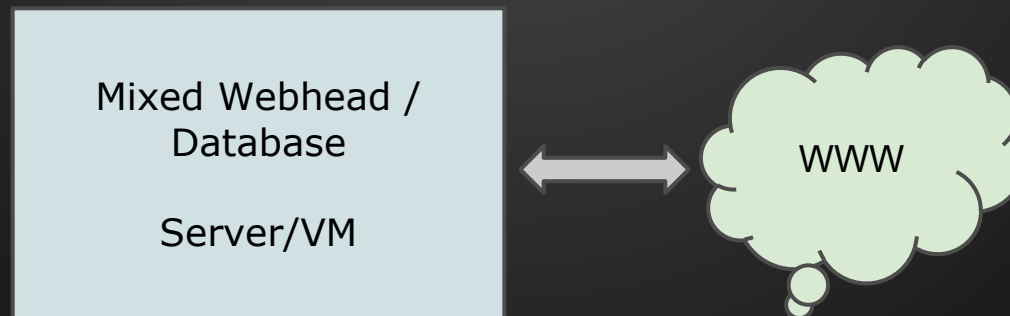
Small SMB setup

Start small

Small SMB setups

What do we need?

- One standard LAMP stack
- Maybe several Domains
- Room to grow
- Maybe a dev environment



Small SMB setups

How do we do it?

Create a Puppet configuration containing the following classes:

- `apache_httpd`
- `php`
- `mysqld`
- `memcached`
- `drush`
- `capistrano`

Small SMB setups

Puppet Enterprise (PE) assignment:

Group: BaseMixedWebhead [Edit](#) [Delete](#)

Parameters

Key	Value	Source
apache_memory_share	0.6	BaseMixedWebhead
mysql_memory_share	0.3	BaseMixedWebhead
memcached_memory_share	0.1	BaseMixedWebhead

Groups

— No groups —

Classes

Class	Source
php::mysql	BaseMixedWebhead
drush	BaseMixedWebhead
apache_httpd	BaseMixedWebhead
memcached	BaseMixedWebhead
mysql	BaseMixedWebhead
php::memcached	BaseMixedWebhead
mysqld	BaseMixedWebhead
ruby	BaseMixedWebhead
capistrano	BaseMixedWebhead
php	BaseMixedWebhead

Small SMB setups

apache_httpd:

```
class apache_httpd (  
    $deploy_user = 'deploy',  
    $memory_share = 1.0,  
    $enable_coredumps = false,  
    $php_mail_override = 'none',  
    $non_www_redirect = false,  
    $www_redirect = false,  
    $sslCertKeyFile = "/etc/pki/tls/private/localhost.key",  
    $sslCertFile = "/etc/pki/tls/certs/localhost.crt",  
    $sslCACertFile = "/etc/pki/tls/certs/ca-bundle.crt",  
    $client = 'none',  
    $no_robots = false,  
    $do_f5_check = false,  
)
```

Small SMB setups

php:

```
class php ( $memory-limit = '128M' )
```

mysqld:

```
class mysql (  
    $memory_share = 1.0,  
    $client = 'none',  
    $server_id = '01'  
)
```

memcached:

```
class memcached ( $memory_share = '0.1' )
```

Small SMB setups

Create a drupal site configuration

```
define drupal_site::create (  
  $client,  
  $primary_domain,  
  $secondary_domains = 'none',  
  $db_password,  
  $deploy_user = $drupal_site::t_deploy_user  
  $deploy_group = $drupal_site::t_deploy_group  
  $disable_basic_auth = false  
  $use_primary_only = false  
  $https_http_redirects = 'none'  
  $http_https_redirects = 'none'  
  $www_redirect = false,  
  $non_www_redirect = false,  
  $mysql_host = 'localhost'  
  $mysql_server = 'localhost',  
  $theme_default = 'none',  
  $memcache_server = 'localhost'  
  $temporary_file_path = '/tmp'  
  $create_deploy_dirs = false,  
  $deploy_dir = 'deploy',  
  $deploy_files_redirect_target = 'none',  
  $create_virtual_dirs = false,  
  $is_main = true,  
  $main_domain = $name,  
)
```

Small SMB setup

Examples:

- ABC Station App (www.abcstationapp.com)
- MetaTag (www.metatag.com)
- Zing Toys (www.zingtoys.com)

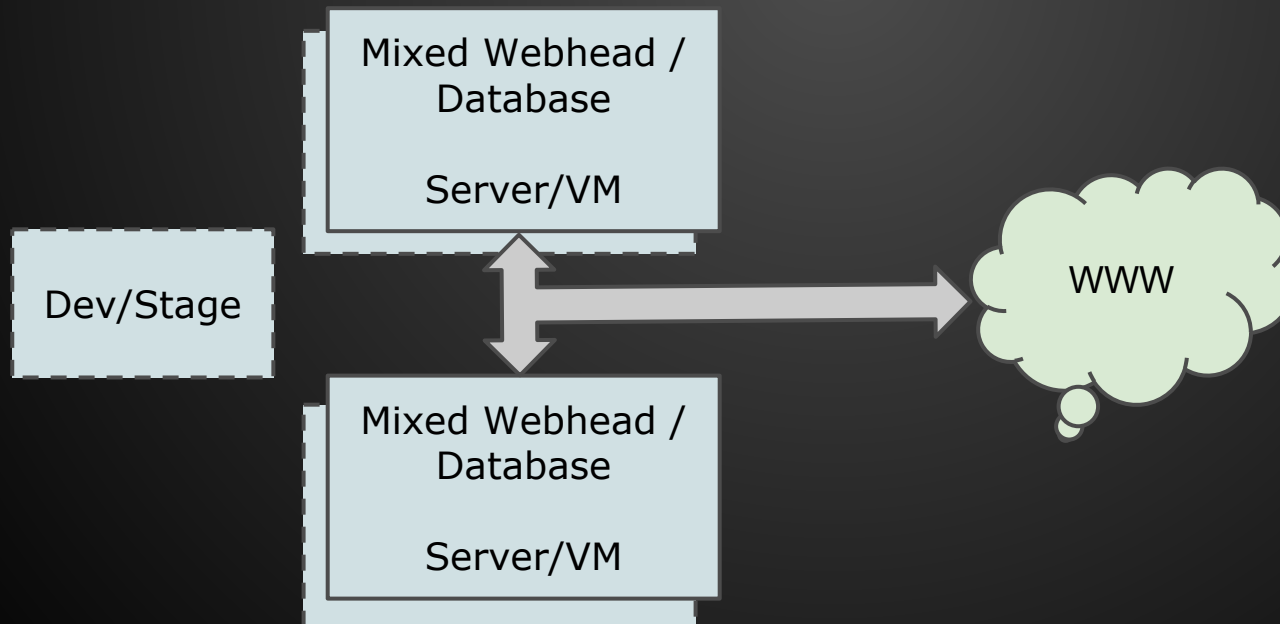
Medium enterprise setup

We need more...

Medium Enterprise setup

What do we need?

- More of the same
- But interconnected
- Higher availability and scalability



Medium Enterprise setup

Example mysqlid:

```
class mysql (  
  ...  
  $server_id = '01'  
)
```

Drupal configuration:

```
define drupal_site::create (  
  ...  
  $mysql_host = 'localhost'  
  $mysql_server = 'localhost'  
  $memcache_server = 'localhost'  
  ...  
  $is_main = true,  
  ...  
)
```

Medium Enterprise setup

Adding Gluster FS to the mix:

```
class glusterfs (  
    $volume_name = 'shared1',  
    $share_name = 'shared1',  
)
```

No more 'stale NFS mounts'!

Medium Enterprise setup

Monitor it all

Parameters		
Key	Value	Source
<code>munin_bonding_ifs</code>	<code>bond0</code>	vmh04.copperfroghosting.net
<code>munin_yum_apt_check_cron_hour</code>	<code>2</code>	vmh04.copperfroghosting.net
<code>munin_yum_apt_check_cron_minute</code>	<code>13</code>	vmh04.copperfroghosting.net
<code>munin_diskstat_iops_drives</code>	<code>sda,sdb</code>	vmh04.copperfroghosting.net
<code>munin_has_gluster_fs</code>	<code>true</code>	vmh04.copperfroghosting.net
<code>munin_diskstat_throughput_drives</code>	<code>sda,sdb</code>	vmh04.copperfroghosting.net
<code>munin_diskstat_latency_drives</code>	<code>sda,sdb</code>	vmh04.copperfroghosting.net
<code>munin_check_gluster_fs</code>	<code>true</code>	vmh04.copperfroghosting.net
<code>glusterfs_volume_name</code>	<code>shared1</code>	vmh04.copperfroghosting.net
<code>munin_has_nfs</code>	<code>true</code>	vmh04.copperfroghosting.net
<code>munin_ethernet_ifs</code>	<code>bond0,eth0,eth1,venet0</code>	vmh04.copperfroghosting.net
<code>has_megaraid</code>	<code>true</code>	VMH-Dell-IBM

Medium Enterprise setup

Examples:

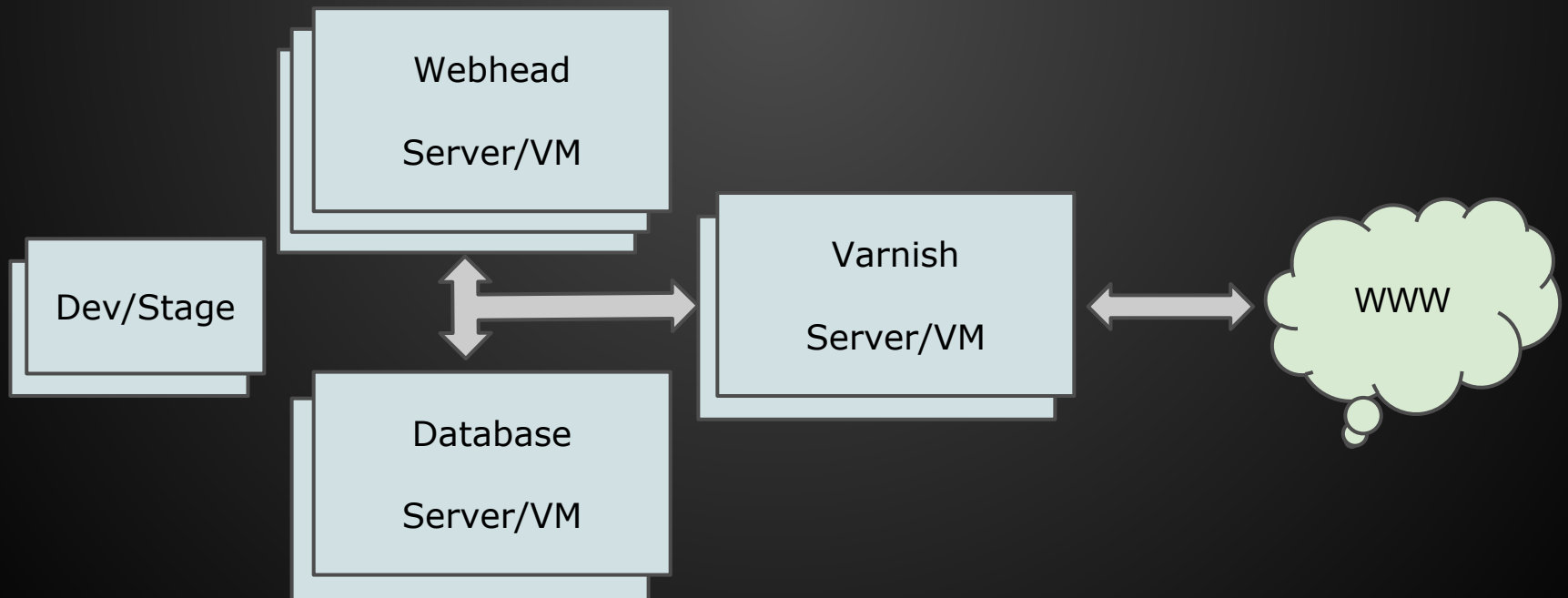
- Fearnert (www.fearnert.com)
- Emmys (www.emmys.com)

Large Enterprise Setup

This setup cannot fail

Large Enterprise setup

- Maximum redundancy
- Maximum caching
- Dev and Stage with identical setup



Large Enterprise Setup

Varnish caching

```
class varnish (  
    $memory_share = 1.0,  
    $listen_port = '80',  
    $client = 'none',  
    $logging = false,  
    $xforwardIP = false,  
)
```

Chroot environments for 3rd parties

```
class chroot (  
    $group = 'sftp',  
    $gid = 1500,  
    $chroot_dir = "/var/chroot",  
    $chroot_os = 'none',  
    $chroot_os_arch = 'none',  
    $chroot_os_mirror = 'none',  
)
```

Large Enterprise Setup

And there is more:

- New Relic
- Java
- Solr
- Postfix
- Crons
- Backups
- Jenkins
- etc.

Large Enterprise Setup

Example:

Sony Pictures Television International

- www.axn-asia.com
- www.axntv.de
- la.axn.com
- www.axnscifi.it
- So many more...

Find out more

The web is endless...

Find out more

Online resources:

- forge.puppetlabs.com
- github.com/bernd-copperfroghosting
- www.copperfroghosting.com

- bernd@copperfroghosting.com

Thank you!