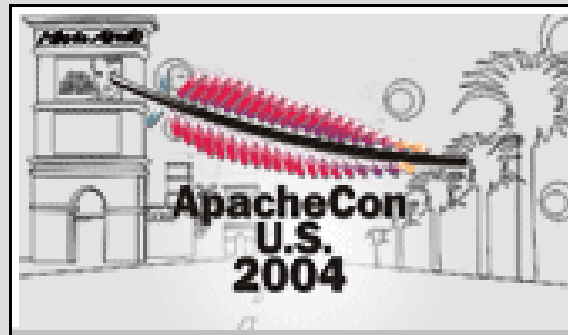


Mass Virtual Hosting with Apache 2.0

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Virtual Hosts

- IP Address
 - Required for HTTPS
- The 'Host' Header
- Mass Virtual Hosting?
 - HTTPD's Default configuration doesn't deal well with thousands of Virtual Hosts!

Considerations

- Security
 - Suexec?
 - PHP?
 - Perchild?
 - Root?
- Performance
 - Hits/Second
 - Memory
- Maintainable
 - You have to Administrate it!

Logging

- Standard log files?
 - Multiple Server?
 - Thousands of Virtual Hosts?
 - 'Split Later'
- Piped Logging
- `mod_log_spread`

Static Vhosts

- httpd.conf
- Include vhosts.d/*.conf
 - foo.bar.com.conf

Advantages

- Speed
 - No special lookup methods
- Configuration
 - Every Directive is available

Problems

- Scripting?
 - mod_macro lessens the complexity
- Requires Graceful Restarts
 - Add A Vhost
 - Change a Vhost
- Wasted Memory
 - Many sites are rarely
- Multiple Servers?
- Root?
 - How can you edit or script the configuration files?
 - Restarting Apache?

mod_rewrite

- Using a RewriteMap:

```
RewriteMap lowercase int:tolower
```

```
RewriteMap vhost txt:/etc/httpd/conf/vhost.map
```

```
RewriteCond %{HTTP_HOST} !^$
```

```
RewriteCond ${lowercase:%{HTTP_HOST}|NONE} ^(.+)$
```

```
RewriteCond ${vhost:%1} ^(/.*)$
```

```
RewriteRule ^(/.*)$ %1/$1
```

```
[E=VHOST:${lowercase:%{HTTP_HOST}}]
```


Advantages

- Speed
 - Fast Lookups -- To a Point!
- Easy to add a Virtual Host

Problems

- Security?
 - PHP?
 - Suexec?
- Multiple Servers?
- Root?
 - Edit RewriteMap File

mod_vhost_alias

- Uses the host header to determinate the filename:
 VirtualDocumentRoot /vhosts/%0
- Use Symlinks for ServerAliases?

Advantages

- Easy to Setup
- Fast!
 - No external lookups
- Based on file system layout
 - Can be shared across servers.

Problems

- Security?
 - Suexec – Can work
 - PHP
- Root?
 - Changing a file system?

mod_vhost_dbi

- Uses a LibDBI database to provide information about a Vhost.

mod_vhost_dbi

mod_dbi_pool

libdbi

MySQL

Postgres

Oracle

SQLite

mod_db_pool

PoolDbiDriver	Server1	mysql
PoolDbiHost	Server1	10.0.0.20
PoolDbiUsername	Server1	myuser
PoolDbiPassword	Server1	mypass
PoolDbiDBName	Server1	vhost_db
PoolDbiConnMin	Server1	1
PoolDbiConnSoftMax	Server1	1
PoolDbiConnHardMax	Server1	5
PoolDbiConnTTL	Server1	30

mod_vhost_dbi

```
<VirtualHost *:80>  
VhostDbiEnabled On  
VhostDbiConnName Server1  
VhostDbiQuery "SELECT ServerName,  
    DocumentRoot, UserName FROM VhostInfo  
    WHERE ServerName = "&{RequestHostname}"  
</VirtualHost>
```


Advantages

- Security
 - Suexec
 - PHP OpenBaseDir
 - Not Perfect!
- Root?
 - No Need
 - No Configuration Files to Change
 - No Server to Restart

Problems

- Depends on a Database Server
 - Performance Implications
 - Uptime?

Resources

- Slides, mod_vhost_dbi:
 - <http://www.outoforder.cc/>
- Virtual Hosts:
 - The Apache Documentation!
 - <http://httpd.apache.org/docs-2.0/vhosts/>



Questions?

