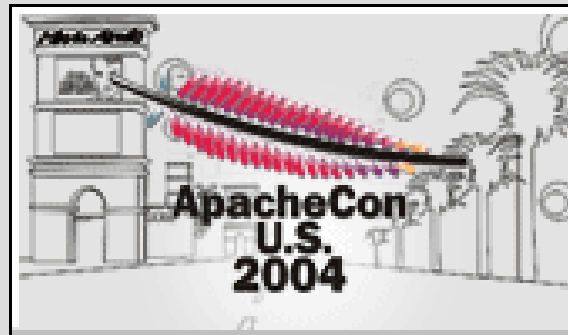


# Mass Virtual Hosting with Apache 2.0

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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?**