System Tips and Tricks

David Hernandez

Drupal Camp NJ 2013

Topics

- Web and MySQL servers

- Apache configurations and .htaccess files

- File system permissions and SELinux

- Configuring Bash profiles and command line shortcuts

- Simple shell scripting

- SSH and encryption keys

- Setting up Drush and overcoming problems

- How Drush aliases work

- Using version control

- Setting up mobile device emulators

Web Server

Local server setup documentation: http://drupal.org/node/157602

Documentation > Develop for Drupal > Setting up a development environment > Local server setup

OS specific guidelines

- Windows: http://drupal.org/node/263
- Linux: http://drupal.org/node/262
- Mac: http://drupal.org/node/159540

Locally referencing hosts

Windows: Windows\System32\drivers\etc\hosts

Linux: /etc/hosts

Mac: /etc/hosts

Format

[*IP Address*] [*hostname*]

127.0.0.1 localhost
127.0.0.1 drupal.localhost
127.0.0.1 www.example.com
127.0.0.1 localhost drupal.localhost www.example.com drupal2.localhost

Apache Web Server (...and then some)

Packaged systems

WAMP: http://www.wampserver.com

XAMPP: http://www.apachefriends.org

MAMP: http://www.mamp.info

Acquia Dev Desktop: http://www.acquia.com/products-services/dev-desktop

For linux, either Redhat or Ubuntu, I recommend native installation of Apache, MySQL, and PHP (including necessary extensions and connectors.)

Web Server Packages

Keep in mind

- Mac OS comes with PHP and MySQL
- Apache user names
    - Redhat: httpd
    - Ubuntu: apache2
    - Mac and Windows: logged in user
- Config files and locations are different for each and may depend on versions

Apache Configuration

Include conf.d/*.conf

```
<VirtualHost *:80>
    ServerName drupal.localhost
    ServerAlias d7.localhost
    DocumentRoot /var/www/html/drupal
    <Directory /var/www/html/drupal>
        AllowOverride All
    </Directory>
</VirtualHost>
```

AllowOverride must be set to "All" to allow .htaccess files to work. To forbid .htaccess file use, set to "None".

Apache Rewrite

These lines go within a directory stanza (<Directory>) unless in the .htaccess file. All of the conditions must be met for the rewrite to occur.

```
# The request is not a file
RewriteCond %{REQUEST_FILENAME} !-f
# The request is not a directory
RewriteCond %{REQUEST_FILENAME} !-d
# The requested URI is not /favicon.ico
RewriteCond %{REQUEST_URI} !=/favicon.ico
# Rewrite for 7
RewriteRule ^ index.php [L]
# Rewrite for 6
RewriteRule ^(.*)$ index.php?q=$1 [L,QSA]
```

Troubleshooting Rewrite

Logging is a server level configuration, and cannot be set up in an .htaccess file.

```
<VirtualHost *:80>
      RewriteEngine On
      RewriteLog "/some/place/to/write/logs/rewrite.log"
      RewriteLogLevel 3
</VirtualHost>
```

Multisite Clean URLs

Subdomain multisites can use the same rewrite in the .htaccess file, or copy the same rewrite for each VirtualHost configuration.

Subdirectory multisite requires multiple rewrites.
(There are multiple ways to accomplish this.)

```
RewriteCond %{REQUEST_FILENAME} !-f
RewriteCond %{REQUEST_FILENAME} !-d
RewriteCond %{REQUEST_URI} ^/mysite/(.*)$
RewriteRule ^ /mysite/index.php [L]


RewriteCond %{REQUEST_FILENAME} !-f
RewriteCond %{REQUEST_FILENAME} !-d
RewriteCond %{REQUEST_URI} !=/favicon.ico
RewriteRule ^ index.php [L]
```

Path from user to Drupal

Request sent from user (http:www.example.com/node/1) >

Received by server, handled by Apache >

Apache finds right host config, applies rewrites >

Apache runs index.php, executing Drupal >

Drupal determines correct site >

Drupal builds page >

Page sent to user.

MySQL Commands

Login

mysql -u [*username*] -p

mysql -u [*username*] -p -h [*hostname*]

*Using -p will prompt you for the password

Backup

mysqldump -u [*username*] -p [*databasename*] > [*filename*]

Import

mysql -u [*username*] -p [*databasename*] < [*filename*]

or

Log into mysql, then...

> use [*databasename*];

> source [*filename*];

File System Permissions

settings.php
> Web server user needs write access for gui install.
> Read-only access post installation.

files directory
> Web server needs write access always.

tmp directory
> Drupal needs a writable directory for temporary files.

Other files (Drupal code files)
> Read access

SELinux

Security Enhanced Linux (SELinux) is a mechanism for fine-grained access control on Linux systems.

It can prevent the web server from writing to various directories, regardless of the set permissions.

List SELinux context
    ls -Z

Check SELinux mode
    getenforce

Temporarily put SELinux into permissive mode
    setenforce 0

Bash Profiles

.bashrc in your home directory for user specific aliases and functions.

#sets up the prompt color
export PS1='\[\033[01;32m\]\u@\h\[\033[00m\]:\[\033[01;36m\]\w\[\033[00m\]\$ '
user@localhost:/var/www/html$

#sets up proper alias commands when called
alias ll='ls -hla --color'

After making changes
$ source ./.bashrc

Simple Shell Scripting

```
$ touch testscript
$ vi testscript


#!/bin/bash
echo Hello World!


The user running the script needs execute permissions.
$ ls -l testscript
-rw-rw-r--. 1 user group 39 Feb  1 12:00 testscript


$ chmod u+x testscript
$ ./testscript
Hello World!
```

SSH

ssh [*user*]@[*remotehostname*]
$ ssh user1@www.example.com

Edit .ssh/config file
      Host [shortcutname]
      HostName [hostname]
      IdentityFile [path to identity file]

      Host example
      HostName example.com
      IdentityFile ~/.ssh/examplekey

$ ssh user1@example

SSH Keys

ssh-keygen -t rsa -C "email@example.com"

... enter filename
... enter passphrase

$ ssh user1@example.com -i ~/.ssh/examplekey

Drush

http://www.drush.org
http://drupal.org/node/1791676

Add to your .bashrc or .bash_profile
    export PATH=$PATH:/path/to/drush
or add an alias.

$ drush status
    PHP configuration   : /etc/php.ini

Drush Aliases

http://drush.ws/examples/example.aliases.drushrc.php

Add alias files to ~/.drush/

Individual alias
    [aliasname].alias.drushrc.php
Multiple aliases
    aliases.drushrc.php
Grouped aliases
    [groupname].aliases.drushrc.php

Drush Aliases

Single alias

```php
<?php
$aliases['example'] = array(
    'root' => '/path/to/drupal',
    'uri' => 'example.localhost',
);
```

$ drush @example status

Drush Aliases

Grouped aliases

```php
# File example.aliases.drushrc.php
<?php
$aliases['sites1'] = array(
      'root' => '/path/to/drupal',
      'uri' => 'example1.localhost',
);
$aliases['site2'] = array(
      'root' => '/path/to/drupal',
      'uri' => 'example2.localhost',
);
```

```
$ drush @example.site1 status
```

Version Control

Use It!

Mobile Device Emulators

iPhone, iPad

Xcode: http://developer.apple.com/xcode/

Android

SDK: http://developer.android.com/sdk/index.html

Download and install the SDK.

Run the manager from the command line.

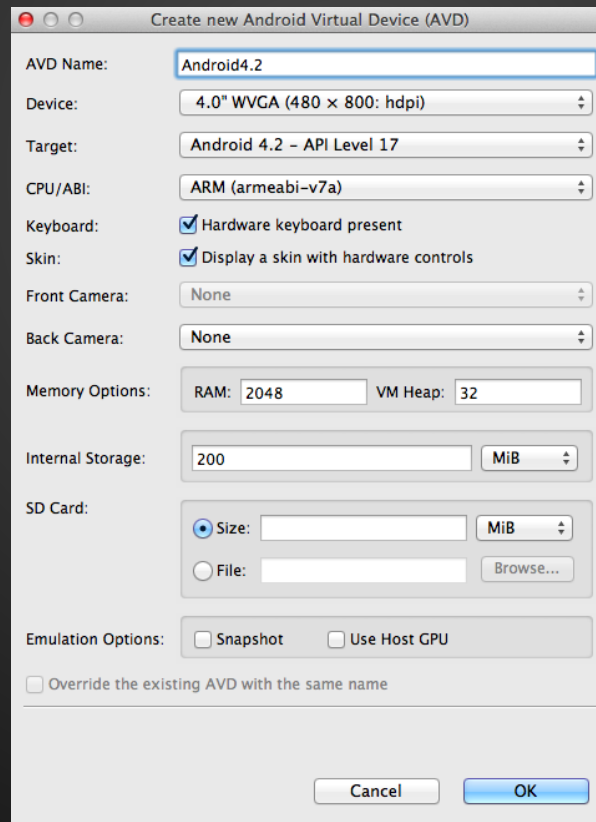$ /path/to/sdkbundle/sdk/tools/android

Install packages

Android SDK Manager

Check the box next to the package you want to install, and click "Install paakges..."
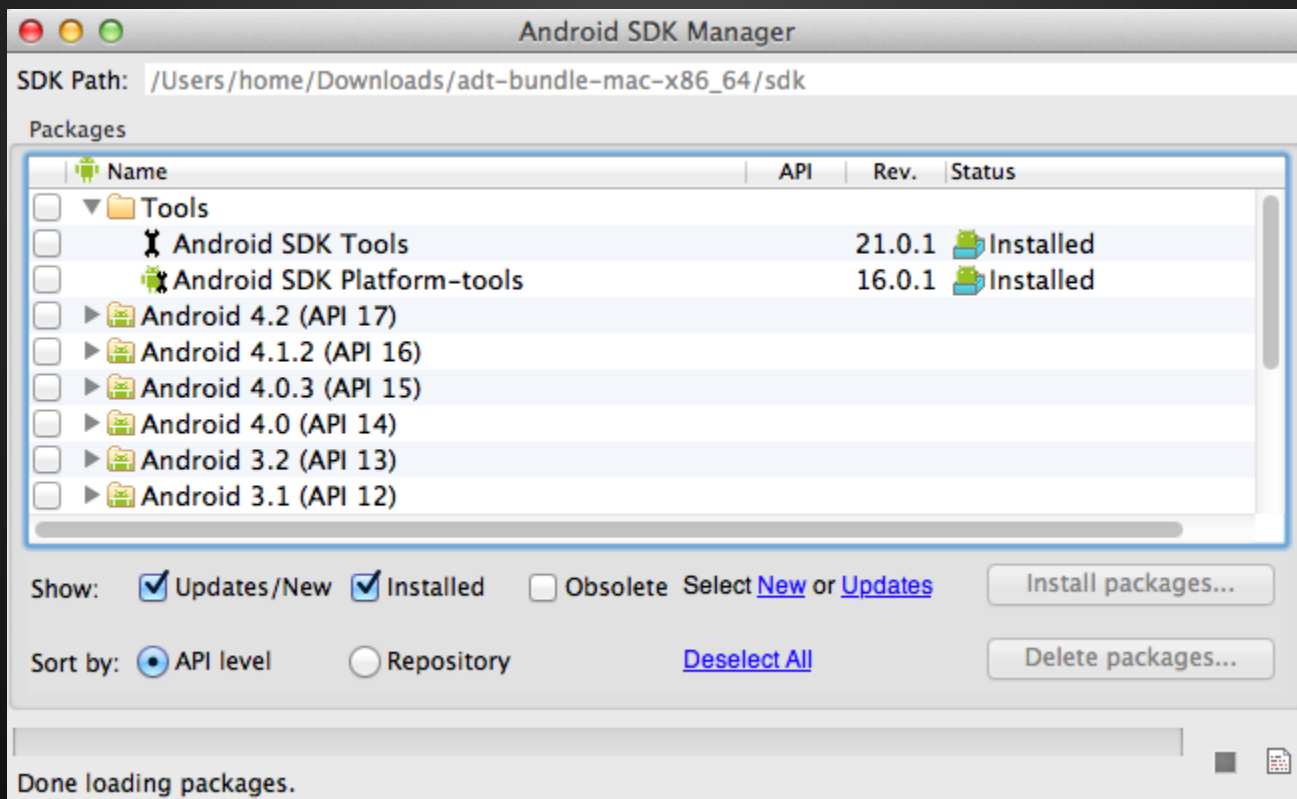
Android Virtual Device

From the Android SDK Manager menu, click "Tools", then "Manage AVDs ...".
In the Android Virtual Device Manager window, click "New...".

Launching AVD

In the AVD Manager, highlight the device you watch to start, then click the "Start..." button. The first boot may take several minutes.
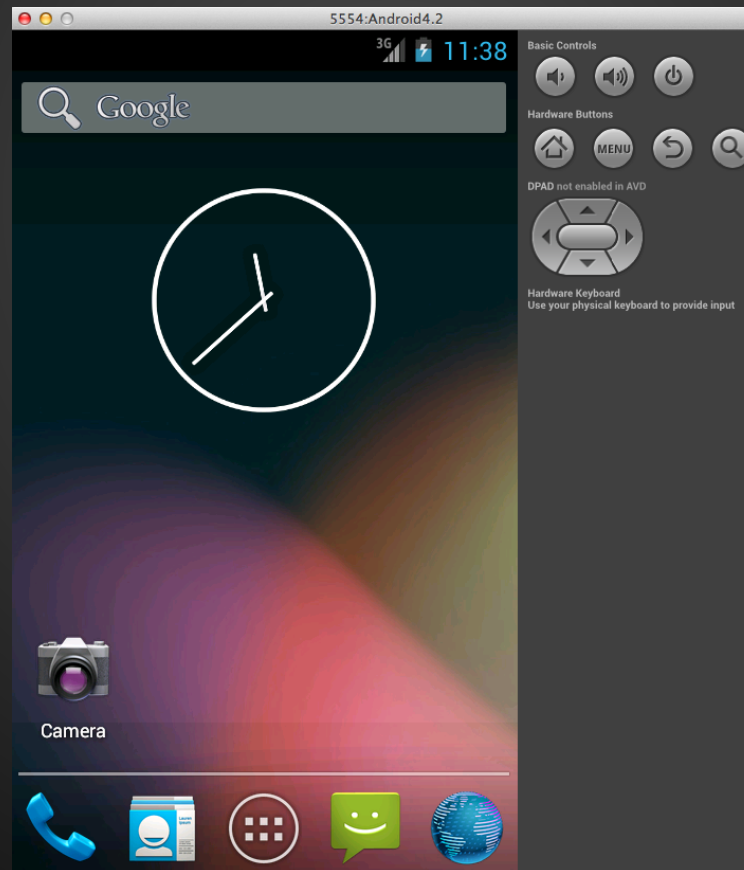
AVD Tips

- Do NOT run the SDK from a network drive.

  - The default storage location for AVDs is the user home directory.

- If an AVD is slow, increase the memory setting.

- To access a host computer website, use 10.0.2.2.

System Tips and Tricks

David Hernandez

Drupal Camp NJ 2013