

SOFTWARE

# YOUR OWN NETWORK RUNNING FROM A MACBOOK

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I need a local wireless LAN for about 100 mobile phones working as message terminals for an info screen projected to a white wall. As I had an old, unused Fritz! Box, I created a WLAN there but disabled DHCP as local domains are not supported by the Fritz! OS due to security constraints.

Then I installed dnsmasq on the Macbook and a packet sniffer to see what is going on.

```
brew update  
brew install dnsmasq  
brew install wireshark --with-qt
```

while I could use the DNS server already available under Mavericks. But then things became difficult. Here is what finally worked for me. Not sure if this is really the best way to handle it...

```
# need to be run as root
sudo -s
# WiFi off
networksetup -setairportpower en0 off
# set IP address, net mask, and router
networksetup -setmanual Wi-Fi 192.168.1.2 255.255.255.0 192.168.1.1
# set nameserver IP address
networksetup -setdnsservers Wi-Fi 192.168.1.2
# start nameserver
launchctl load -w /Library/LaunchDaemons/homebrew.mxcl.dnsmasq.plist
# start DHCP server
launchctl load -w /System/Library/LaunchDaemons/bootps.plist
apachectl start
# WiFi on
networksetup -setairportpower en0 on
# test local domain
dig test.dev
```

And just for the records here are two configuration files for DHCP and nameserver including their directories.

```
sudo nano /etc/bootpd.plist
```

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE plist PUBLIC "-//Apple//DTD PLIST 1.0//EN"
"http://www.apple.com/DTDs/PropertyList-1.0.dtd">
<plist version="1.0">
<dict>
  <key>bootp_enabled</key>
  <false/>
  <key>detect_other_dhcp_server</key>
  <true/>
  <key>dhcp_enabled</key>
  <array>
    <string>en0</string>
  </array>
  <key>reply_threshold_seconds</key>
  <integer>0</integer>
  <key>Subnets</key>
```

```
<array>
  <dict>
    <key>allocate</key>
    <true/>
    <key>dhcp_domain_name_server</key>
    <array>
      <string>192.168.1.2</string>
    </array>
    <key>dhcp_router</key>
    <string>192.168.1.1</string>
    <key>lease_max</key>
    <integer>86400</integer>
    <key>lease_min</key>
    <integer>86400</integer>
    <key>name</key>
    <string>192.168.1</string>
    <key>net_address</key>
    <string>192.168.1.0</string>
    <key>net_mask</key>
    <string>255.255.255.0</string>
    <key>net_range</key>
    <array>
      <string>192.168.1.3</string>
      <string>192.168.1.254</string>
    </array>
  </dict>
</array>
</dict>
</plist>
```

```
sudo nano /usr/local/etc/dnsmasq.conf
```

```
address=/.dev/192.168.1.2
```

