

BACKBURNER 100% WORKING GUIDE now lets never speak of this again.
Version 4 (hopefully the last one).

Having today gotten the 9th or 10th of my clients laptops working with the Smoke trial I've had enough. So I decided to just write a damn document so I don't have to do it anymore. As far as possible I have used built in mac point and click methods and as little terminal bashing as possible as my clients are editors not IT professionals. I've also suggested free helper app links and avoided using Nano as that scares people.

You might not need to do all of this to ensure a working Backburner but if you follow these steps exactly it will work.

Be aware that a default installation of Smoke 2013 will install all you need to export. Backburner usage as an export module is not network rendering and there is a difference between Burn (remote rendering) and Backburner (a background task module) in the context of Smoke. The confusion perhaps comes from the fact that Backburner is also used as a network render manager for 3DSMax and to manage network renders with a Network License. When I talk of Backburner in this document it is only in the context of background export and proxy rendering related to a standalone installation of Smoke 2013.

There is nothing complicated about this guide but you have to follow it exactly - we are tweaking bits of OSX that most users never need to touch and a typo can be the difference between a working system and reinstalling OSX. The process is logical and simple - don't be scared of the mass of details or the number of steps, take your time and be methodical. Remember too that all commands are case sensitive so be sure to copy what's shown exactly...

The process is as follows

- A Enable OSX Root User to allow us to make the changes we need
- B Setup your ethernet configuration to be exactly what Backburner wants to see
- C Configure your network settings
- D Configure Backburner
- E Check Services
- F Configure and test Smoke
- G Setup additional networking such as Wi-Fi
- H Repair Permissions
- I Disable OSX Root User
- J Simplify Network switching

What you will need;

- OSX install disk or USB stick (hopefully not but if things take a bad turn you don't want to be looking for one later)
- Smoke install disk or USB stick (hopefully not but again you might need to reinstall and you'll be sad if you left it at work)
- A real text editor, for this guide I will use TextWrangler from <http://barebones.com/products/textwrangler/> (its free)
- Your brain. No guide replaces thinking for yourself, if you see something that

sounds like it might mess you up, stop for a minute, google, ask around, there is no point rushing doing things you don't understand. That's how accidents happen.

Guide conventions;

⌘ is the Command key, Apple key depending on how old you are.

Rather than typing the word Command a thousand times I'm just going to drop in the ⌘ symbol. I think Apple still print it on their keyboards.

Likewise key combinations will be shortened so that Print will be indicated simply as ⌘P not as Command + P.

A- Enable Root User on OSX

A lot of people don't realise that a standard installation of OSX does not enable Root or SuperUser access.

The Admin account you get by default allows anyone with the Root password. to gain Root access but the root user needs to be enabled. In simple terms the root user simply has read and write privileges to all areas of the file system and to generally mess with things that other users can't. We're editors so naturally we want to mess with stuff...

So as a first step we need to Enable the root user. You do this from the Directory Utility which is at /System/Library/CoreServices/Directory Utility

1- In the Finder select Go to Folder (Shift⌘G) or click on Go to Folder under Go in the menu bar

If there's only one command you should remember is OSX its probably ⌘S to save. BUT if there are TWO commands, then Go To Folder is a strong candidate for the silver medal. This keyboard shortcut will save you a tremendous amount of time by letting you jump deep into the OSX file system without clicking around.

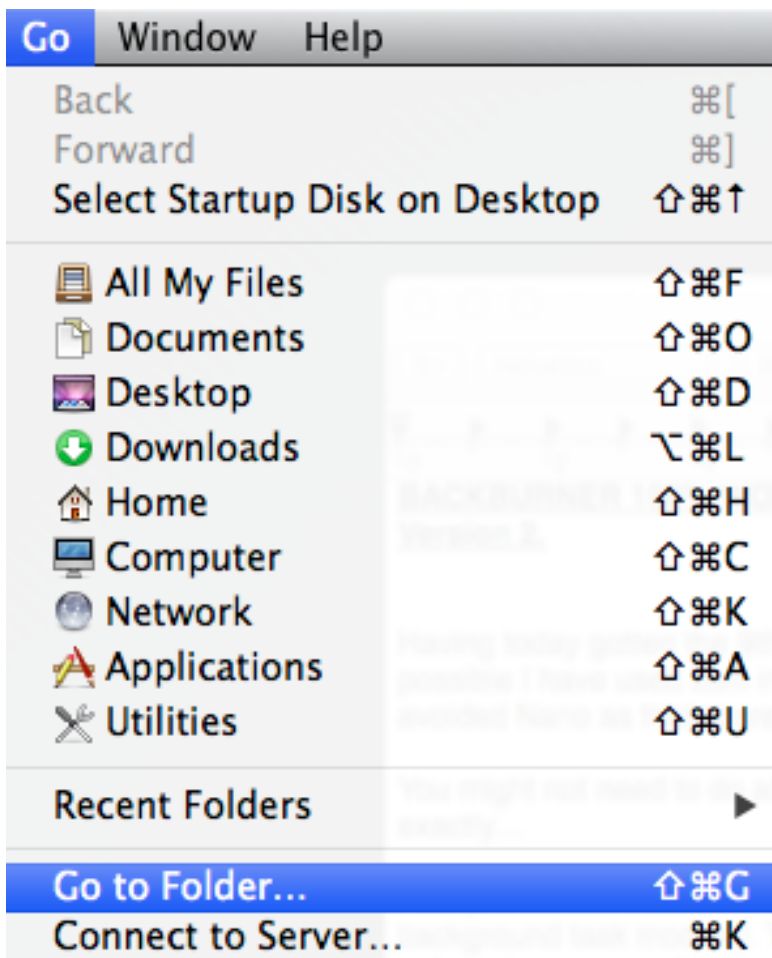
While I'm talking about it Go to Folder has some nice features too. For example it supports Tab completion. What this means is once you start to type a directory or filepath once you have typed enough characters to uniquely identify it pressing the tab key will complete the text, saving you from typing the whole thing and saving you from making spelling mistakes.

For example say you want to go to /Users/YourName/Library/iTunes/ you can get there by typing /U tab/Yo tab/Li tab/iT tab where each time you hit the tab key the rest of the path will autocomplete.

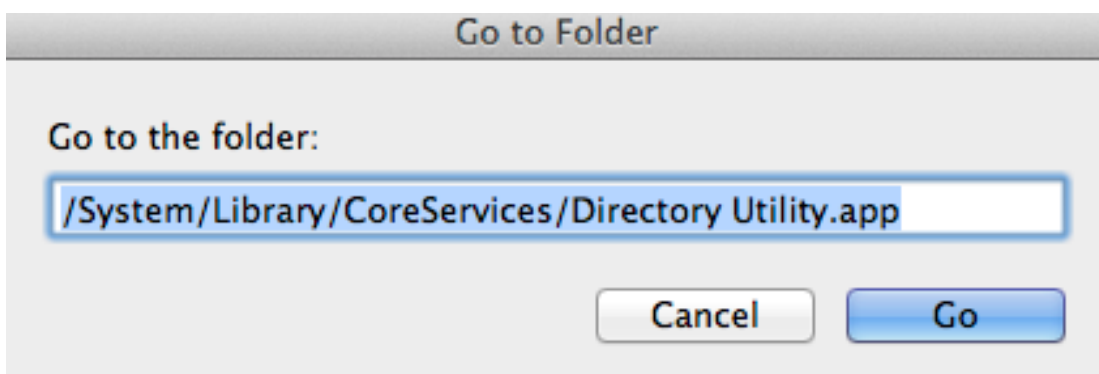
It also supports drag and drop so if you've navigated somewhere and want to know the

full path to something just Shift⌘G and drag the directory or file onto the Go to Folder window.

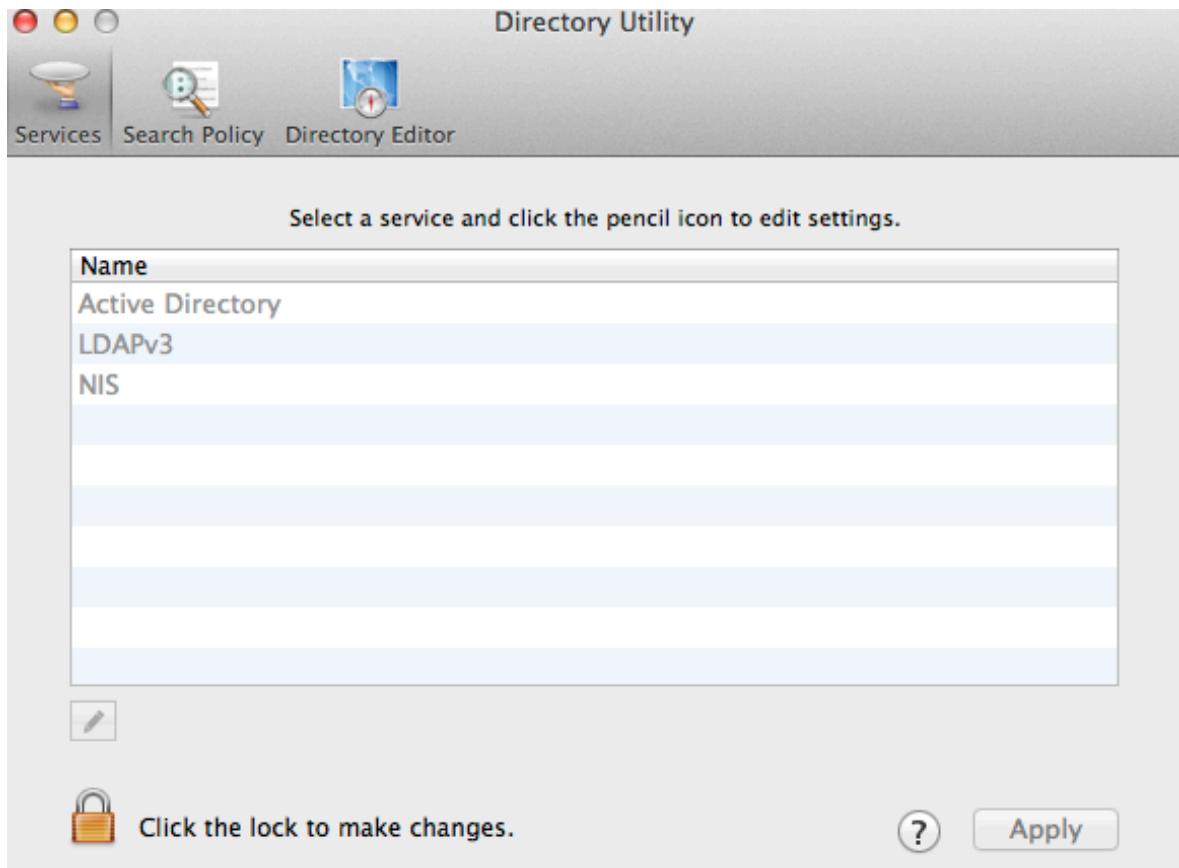
And lastly, you can use the Go to command in save and Open dialog boxes saving you from click navigation hell. Simply hit Shift⌘G from any Open or Save window to bring it up. Tab to complete and drag and drop work here too.



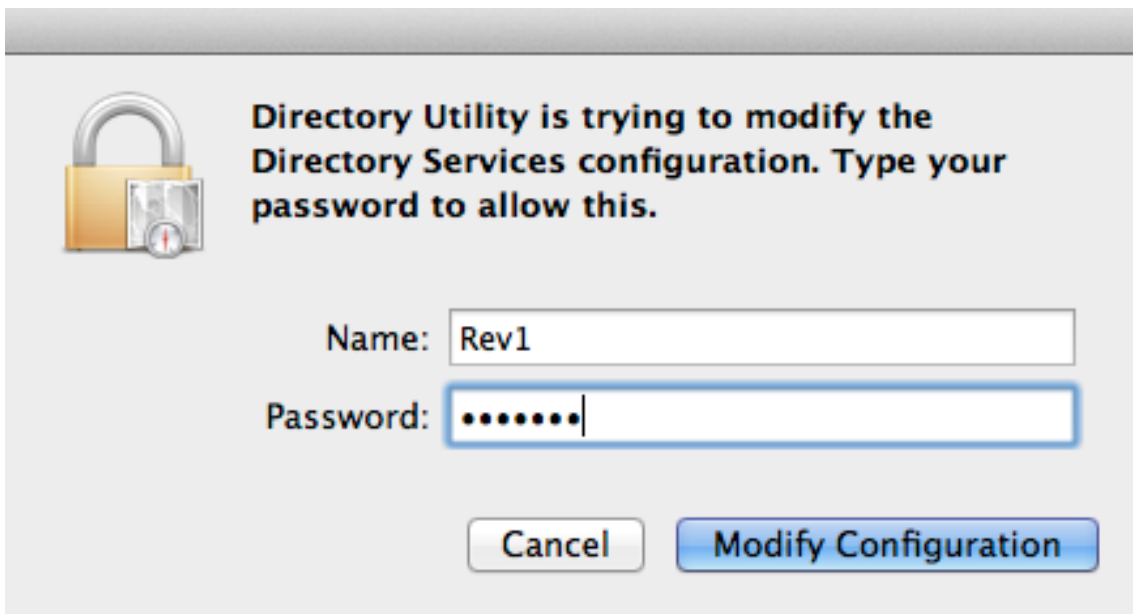
2- Enter /System/Library/CoreServices/
then press Go



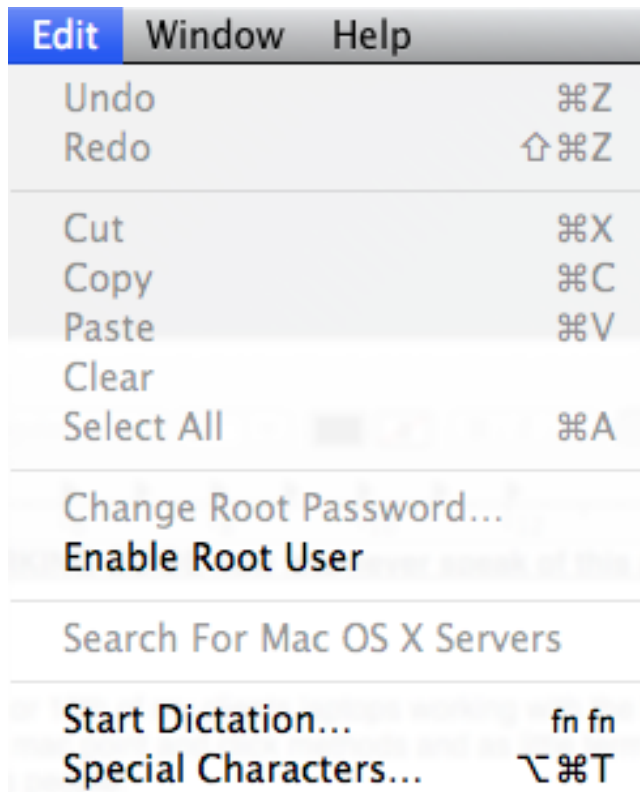
3- Click on Directory Utility.app and open it



4- Once the Directory Utility is open click on the lock to allow you to make changes. OSX will ask for you to Authenticate with your Password.



5- Now from the Edit drop down menu select 'Enable Root User'



6- When you have finished doing everything else in this guide feel free to Disable the Root user again by the exact same process but this time the 'Enable Root User' item will have magically changed to 'Disable Root User' so click that instead.

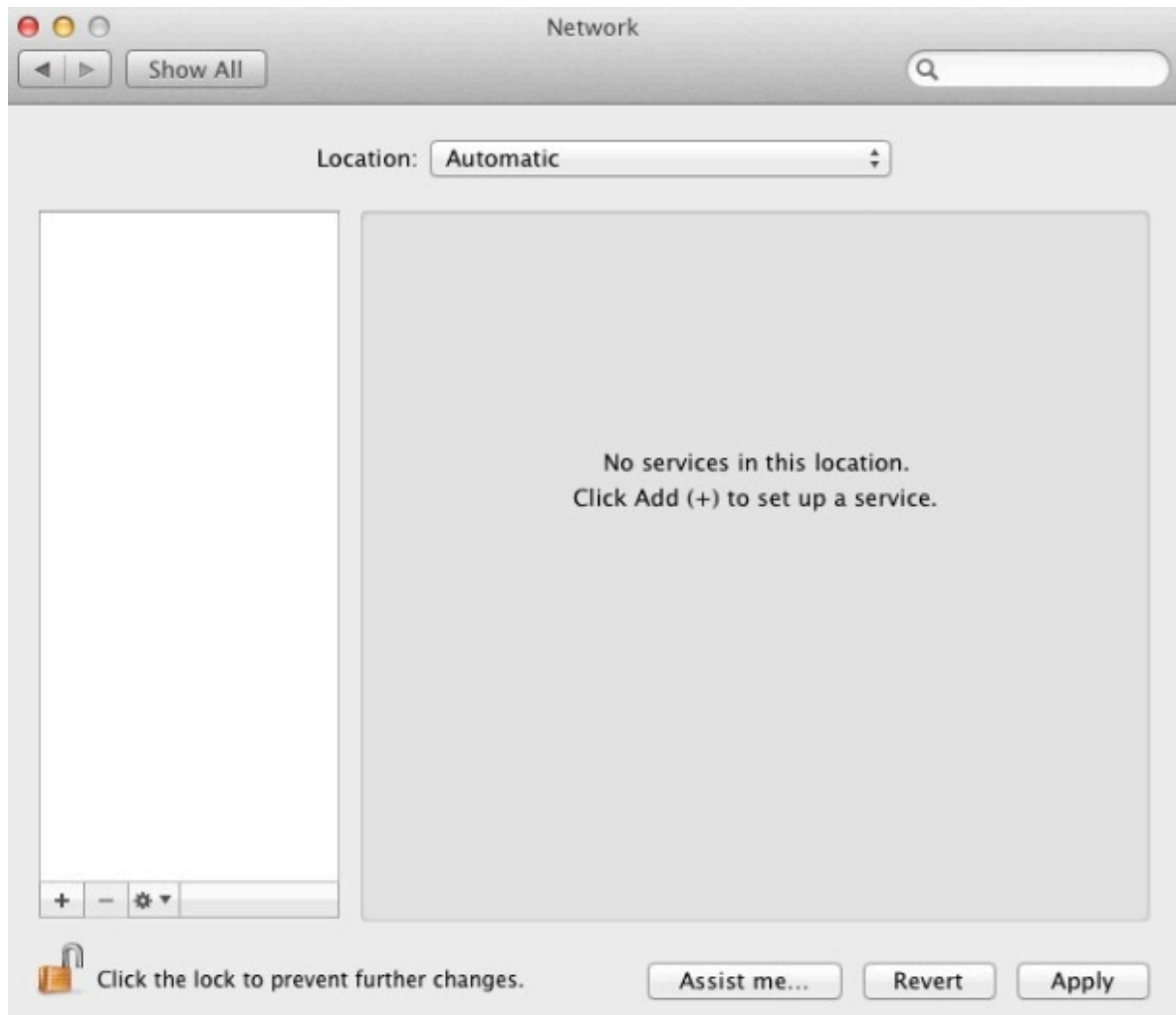
I've had Root enabled on all my machines since OSX was released without incident but Apple issues constant dire warnings of how VERY BAD things might happen by having it enabled, so we may as well comply with established best practices.

B- ESTABLISH your network port

OSX and most operating systems refer internally to their network ports numerically rather than by the useful names you give them, Wi-Fi, Ethernet are just numbers to OSX. And like most computers OSX likes to start counting from 0 rather than 1. It numbers them in the order in which it finds them, which is the order in which you turn them on in Preferences. en0 is the first port and in OSX that is the one you said you use to connect to the internet when you installed OSX.

It might seem odd but lots of software uses the en0 Mac address for license locking so lets make sure we know the software is looking at what we want it to.

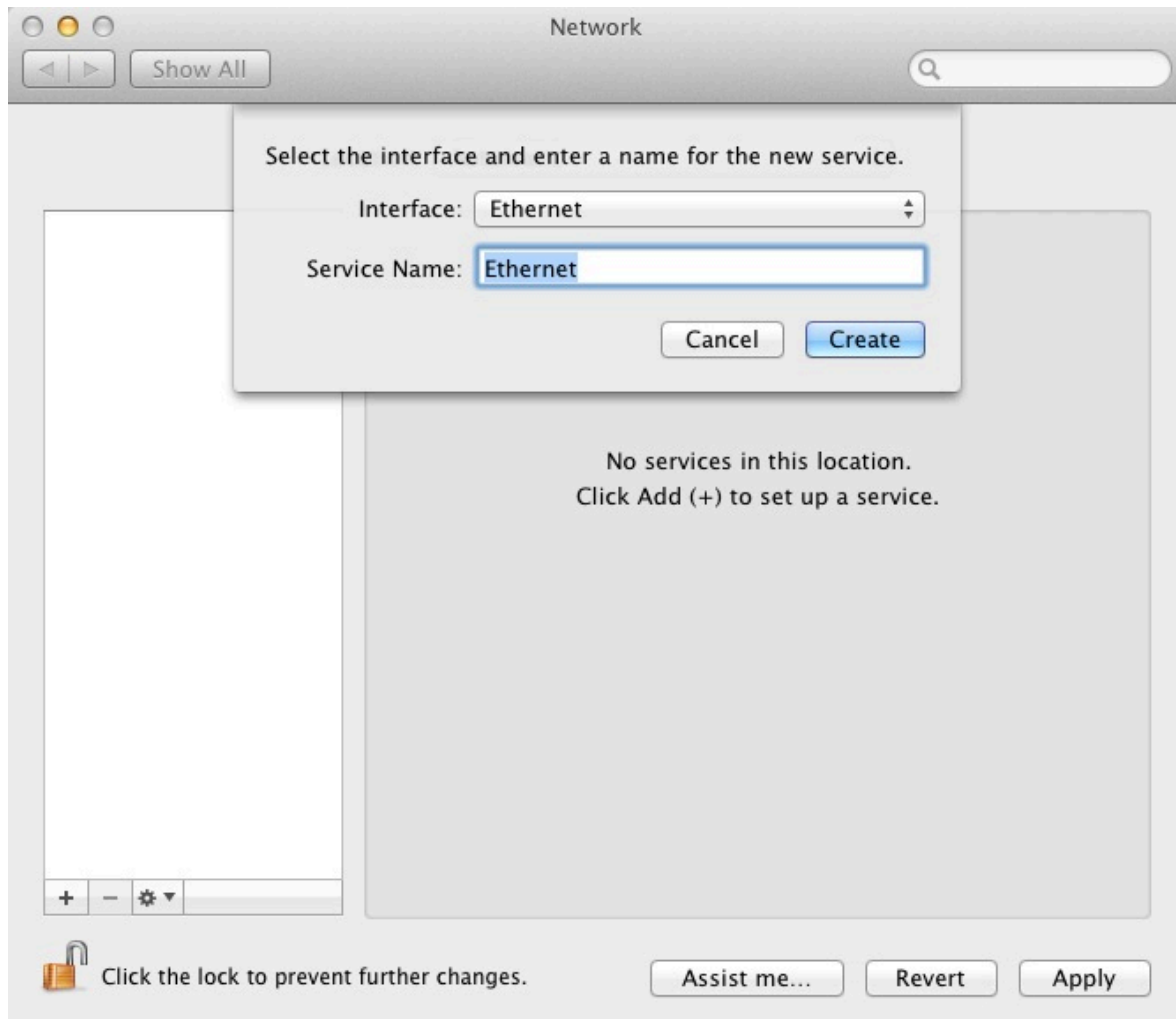
1- Open System Preferences a from the dock icon or from the Apple pulldown menu. Now select 'Network' and click on the lock symbol to let you make changes. Delete all the network interfaces by clicking on the - symbol at the bottom left of the available interfaces list.. It will look like this afterwards.



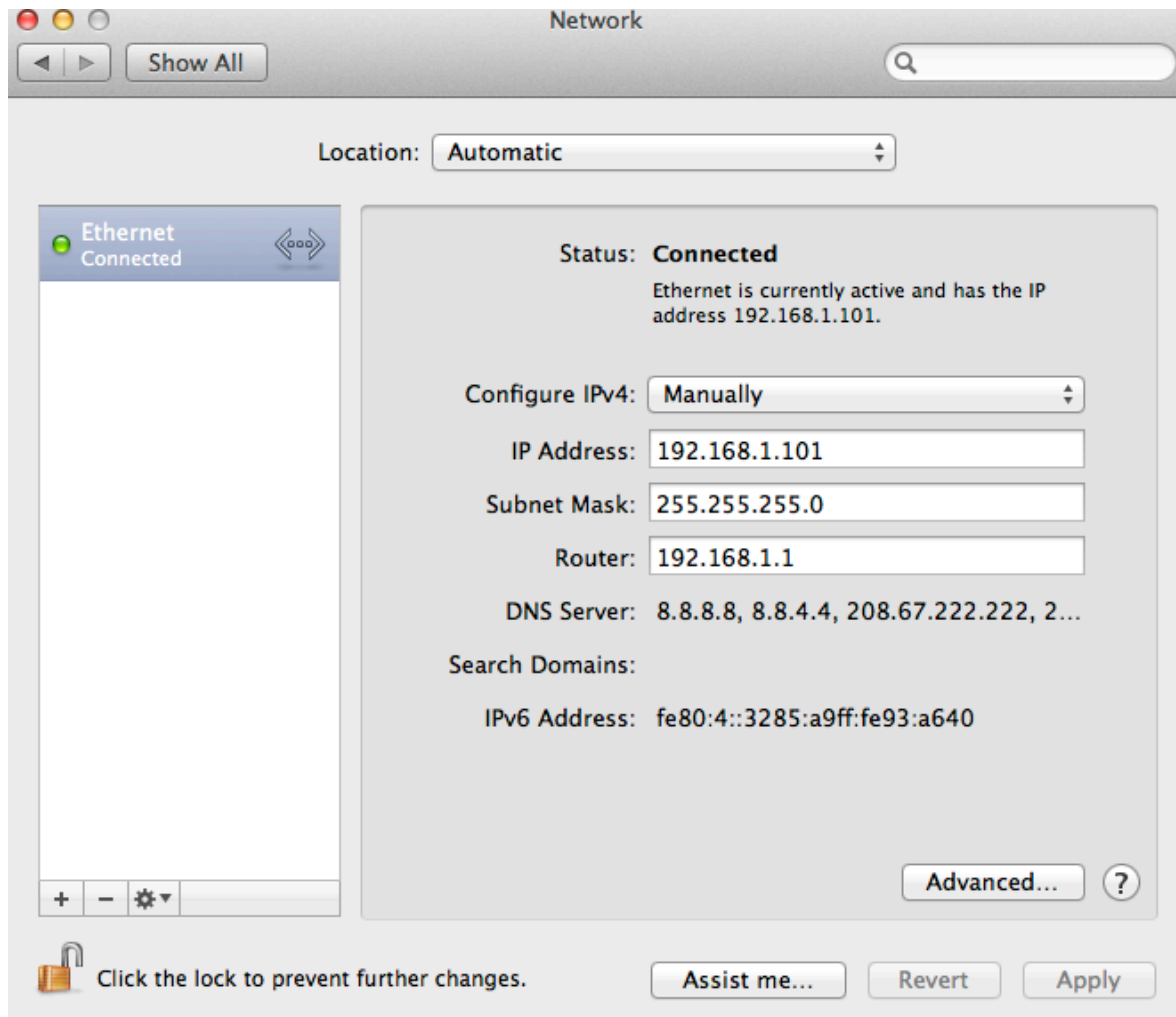
2- Next we need to delete the Network interfaces file at `/Library/Preferences/SystemConfiguration/NetworkInterfaces.plist`
Use the Go to Folder Command and type that path in. Then select the file and press `⌘D` or drag it to the trash. OSX will ask for authentication, enter your password and press Enter.

3- Restart the Mac. This will allow OSX to build a new plist with no entries that we will start to populate in the next step.

4- Once the Mac has restarted open System Preferences and select Network again. Click on the lock icon to allow you to make changes. This time press the + symbol to the bottom left of the interfaces list and add your Ethernet adapter as your first interface, DO NOT USE WI-FI as your first interface. You can add Wi-Fi back in at the very end once the rest of your system works fine.

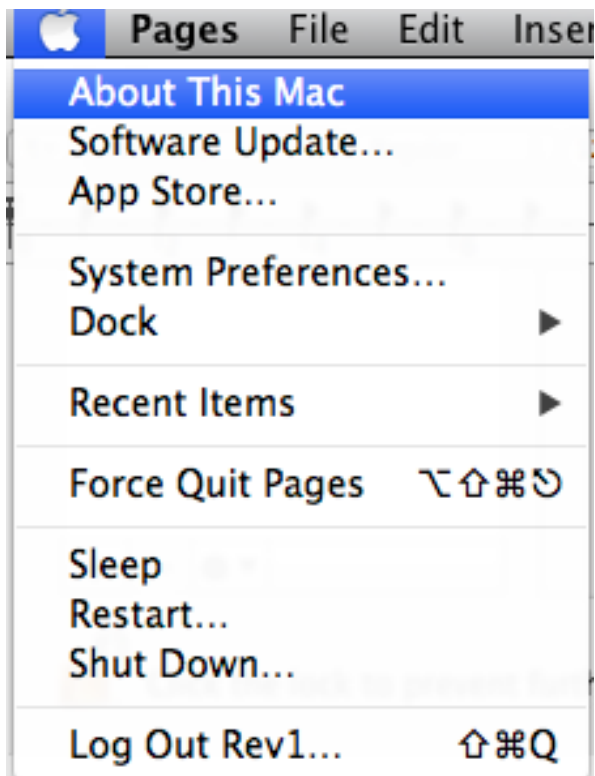


Select Ethernet from the drop down menu and then press Create. Then press Apply This interface should now be en0 as far as OSX is concerned.



5. Just for the sake of completeness we will now check that the newly added Ethernet interface is in fact en0.

Open 'About this Mac' from the apple menu,



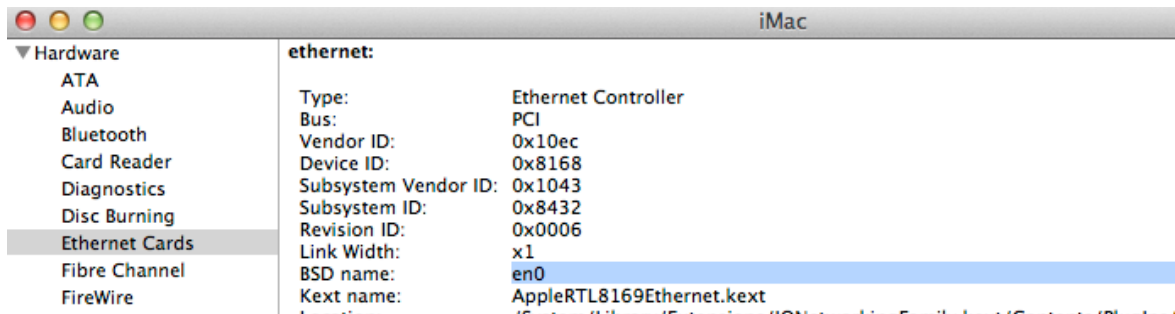
select 'More Info',



select 'System Report'



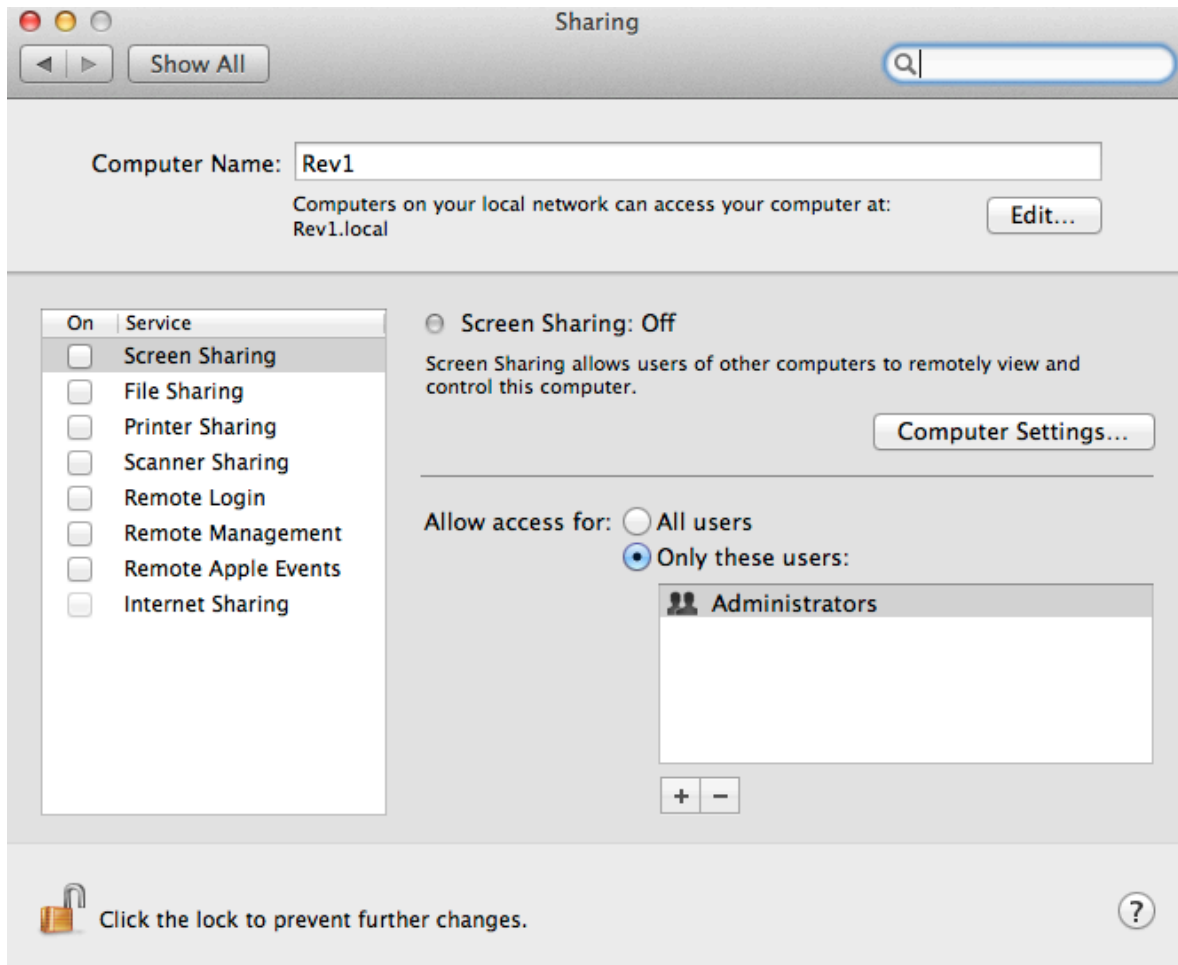
select 'Ethernet' 7th option down under hardware. Check that the BSD name is en0



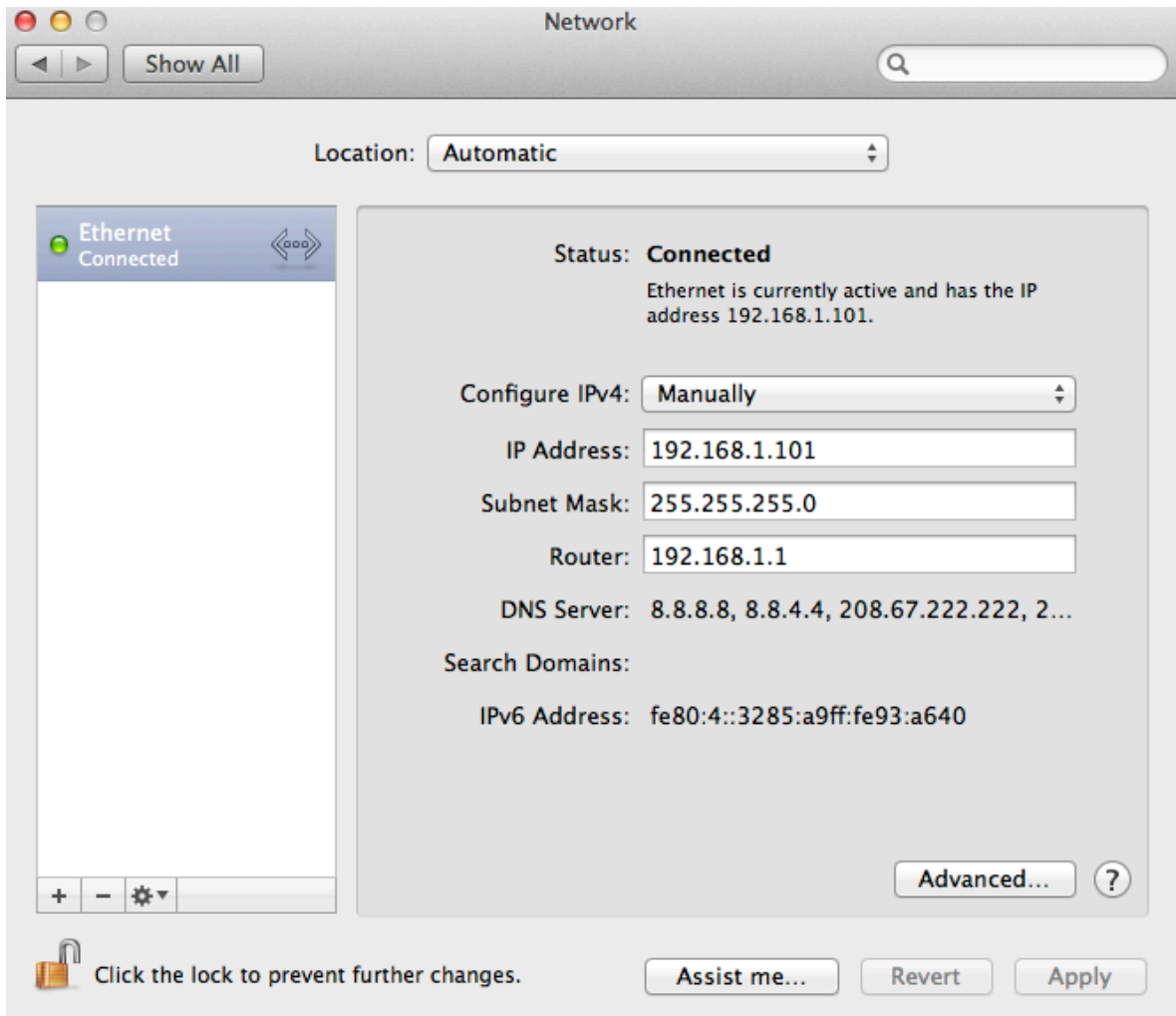
C- CONFIGURE your network port

Pretty much any network dependent service will benefit from a fixed IP address, as the port we are dealing with is a wired Ethernet port this shouldn't be a problem.

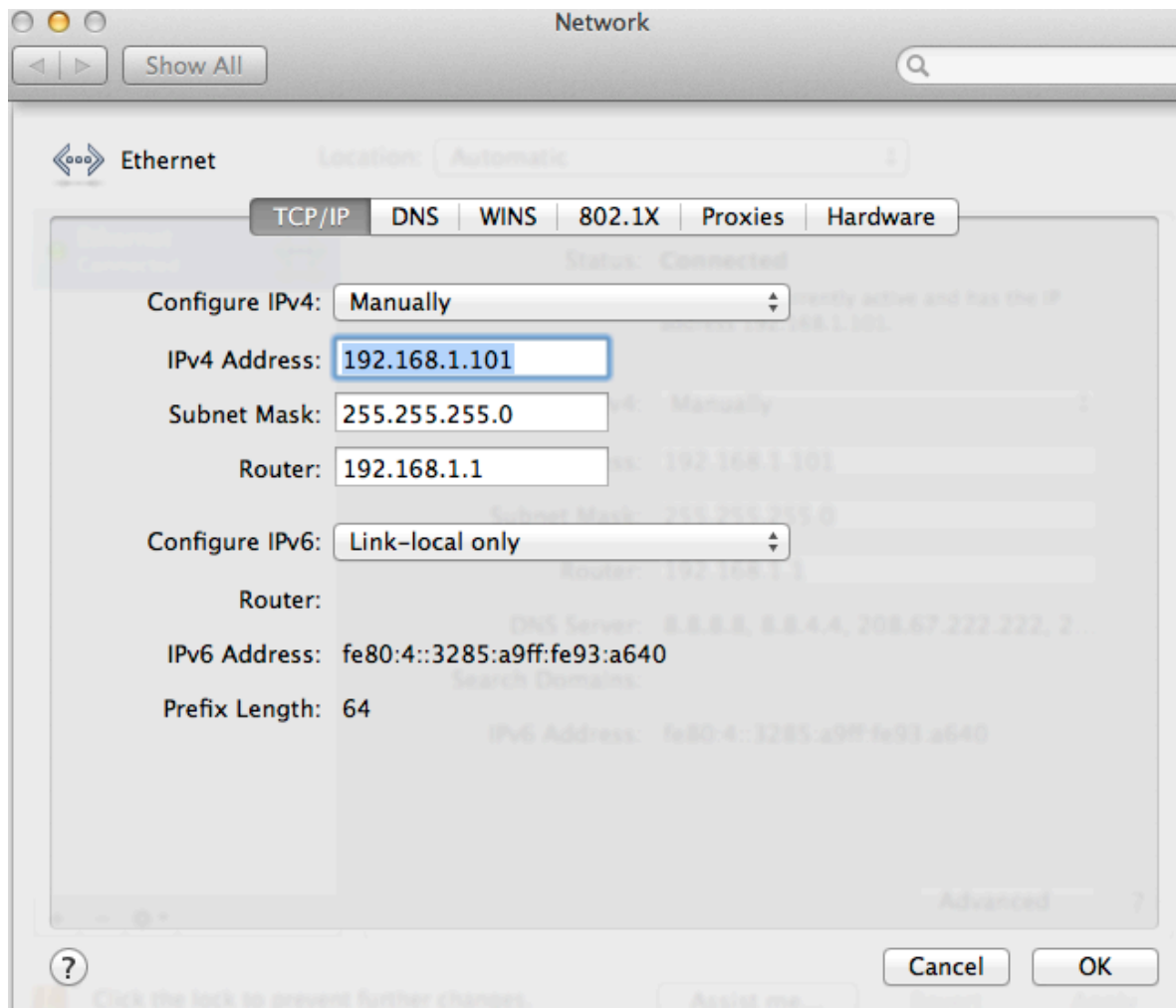
1- First remove any illegal characters from your computer name. Open System Preferences and select Sharing. Make sure the computer name is just alpha numerics, remove any spaces or ' characters. The ' and space (eg John's iMac) added by OSX often causes problems in Unix land and I have no clue on why Apple insists on doing it.



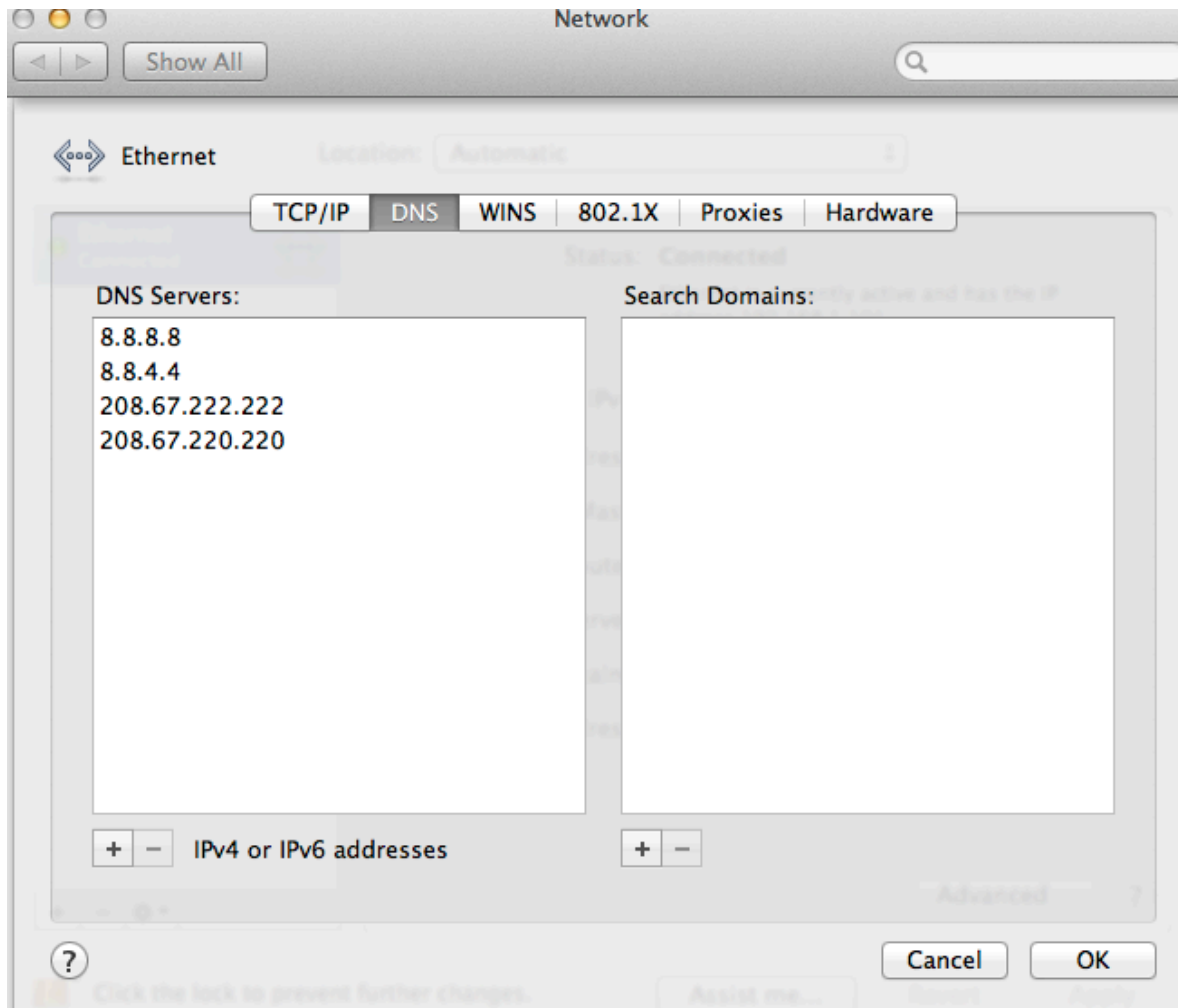
2- Open System Preferences and select Network. Click on the Ethernet port you created earlier and set its details. Configure IPv4, select Manually from the drop down and enter appropriate IP info with correct IP Address, subnet mask and router info.



Click on Advanced, change Configure IPv6 from 'Automatically' to 'Link-local' only from the drop down menu.



3- If you will be accessing the net via this ethernet port we may as well set the DNS servers to something a bit more efficient. Click on the DNS tab and add DNS servers by clicking on the + sign, add the google ones 8.8.8.8 and 8.8.4.4 and the open DNS ones 208.67.222.222 and 208.67.220.220 you can add your own ISPs as well if you want.



Click OK

Click Apply

Restart your Mac.

If DNS server optimisation is something that excites you, you can go a step further and grab Namebench from <http://code.google.com/p/namebench/>

This simple utility hunts out the fastest DNS servers available to you from your own ISPs to Google, Open DNS, DNSMadeEasy, EasyDNS, Enom and Ultra DNS it takes about 5 minutes to run and might speed up your web browsing by 10% or more.

Its worth the effort, here I get good results from Google but in Europe people swear by DNSmadeEasy. Your mileage may vary.

4- Lastly in terms of system configurations lets check that no one has messed with your hosts file.

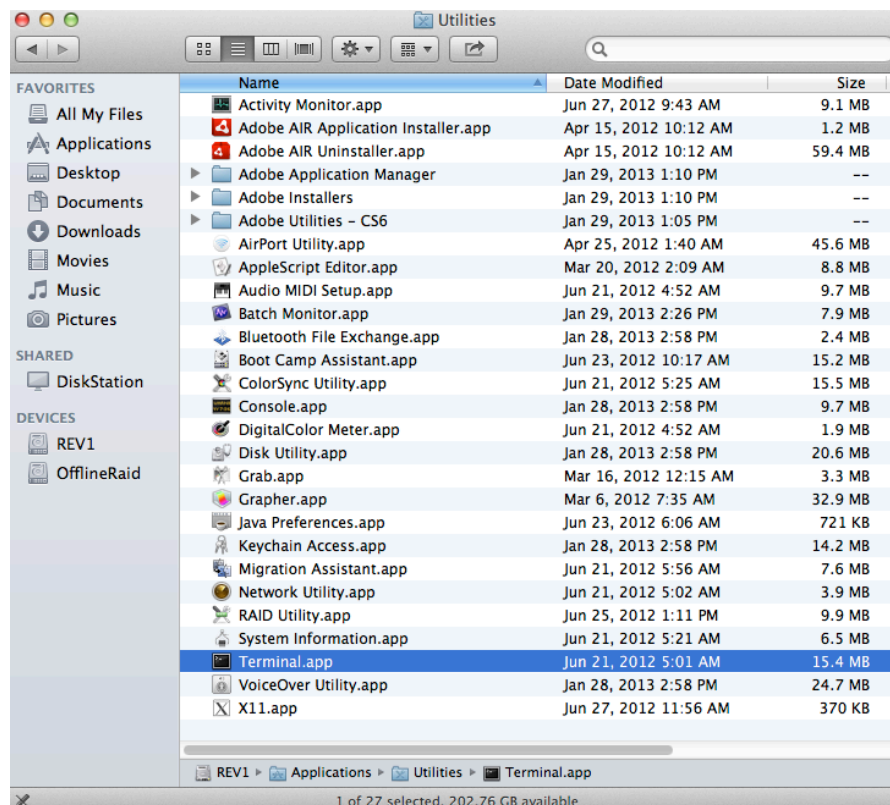
The hosts file is simply a text file buried deep in the system that maps hostnames to IP addresses, When OSX tries to access a hostname the hostfile redirects it to the the appropriate IP address or if no information is available it tries to resolve the IP address via the DNS servers we defined in the last step.

This is the bit where we get all hacker like and use some command line mojo, its not very scary as in this guide at least I keep all actual file editing in a graphical text editor.

To have a quick look at the hosts file we will use Terminal.

Terminal is an OSX application inside the Applications/Utilities folder. Remember the Go to Folder command (Shift ⌘G) well theres a handy one to jump to Utilities too, unsurprisingly it is Shift ⌘U.

Click on the desktop to make sure the Finder is active then press Shift ⌘U.

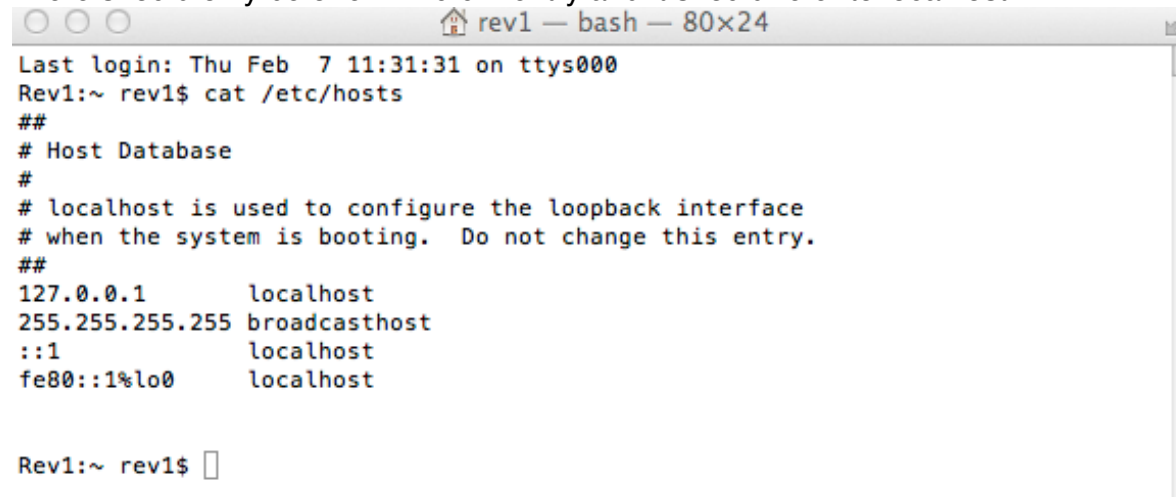


The Utilities folder pops up, double click on Terminal to open it.

click in the terminal window and type
cat /etc/hosts
and press return

Terminal now opens the hosts file and shows you its contents.

There should only be one 127.0.0.1 entry and it should refer to localhost

A terminal window titled 'rev1 — bash — 80x24' showing the output of the command 'cat /etc/hosts'. The output lists several IP addresses and their corresponding hostnames: 127.0.0.1 localhost, 255.255.255.255 broadcasthost, ::1 localhost, and fe80::1%lo0 localhost. The terminal prompt is 'Rev1:~ rev1\$'.

If for some reason it's been changed then you need to change it back. The hosts file is at /etc/hosts and you need to edit it in a proper text editor such as

coda <http://panic.com/coda/>

BEdit [http://www.barebones.com/products/bbedit/index.html?](http://www.barebones.com/products/bbedit/index.html?utm_source=thedeck&utm_medium=banner&utm_campaign=bbedit)

[utm_source=thedeck&utm_medium=banner&utm_campaign=bbedit](http://www.barebones.com/products/textwrangler/download.html)

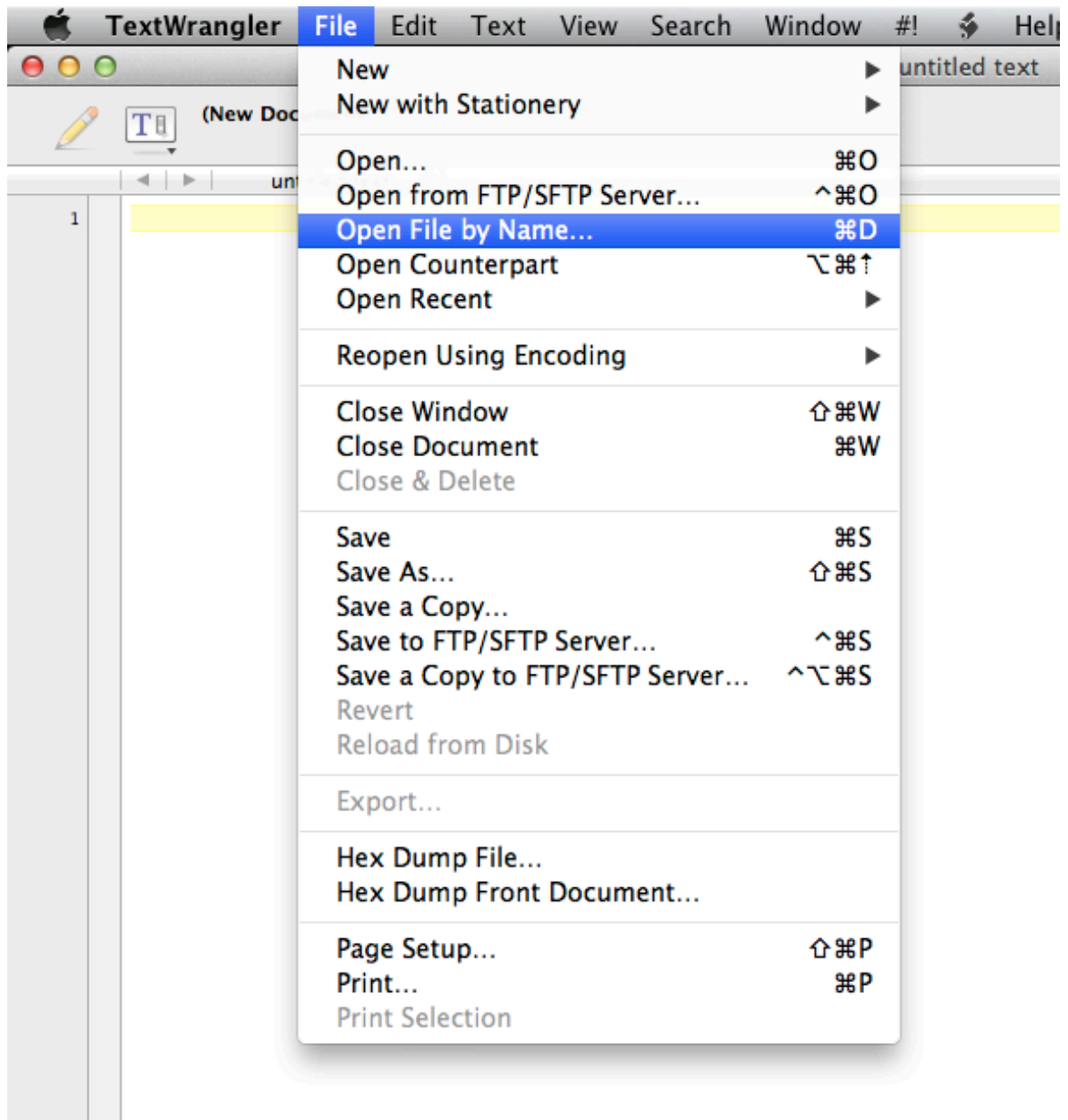
or the free TextWrangler <http://www.barebones.com/products/textwrangler/download.html>

Editing system files in a standard word processor such as TextEdit or Word is a recipe for confusion and possible disaster - TextWrangler is free and invaluable, go get it now.

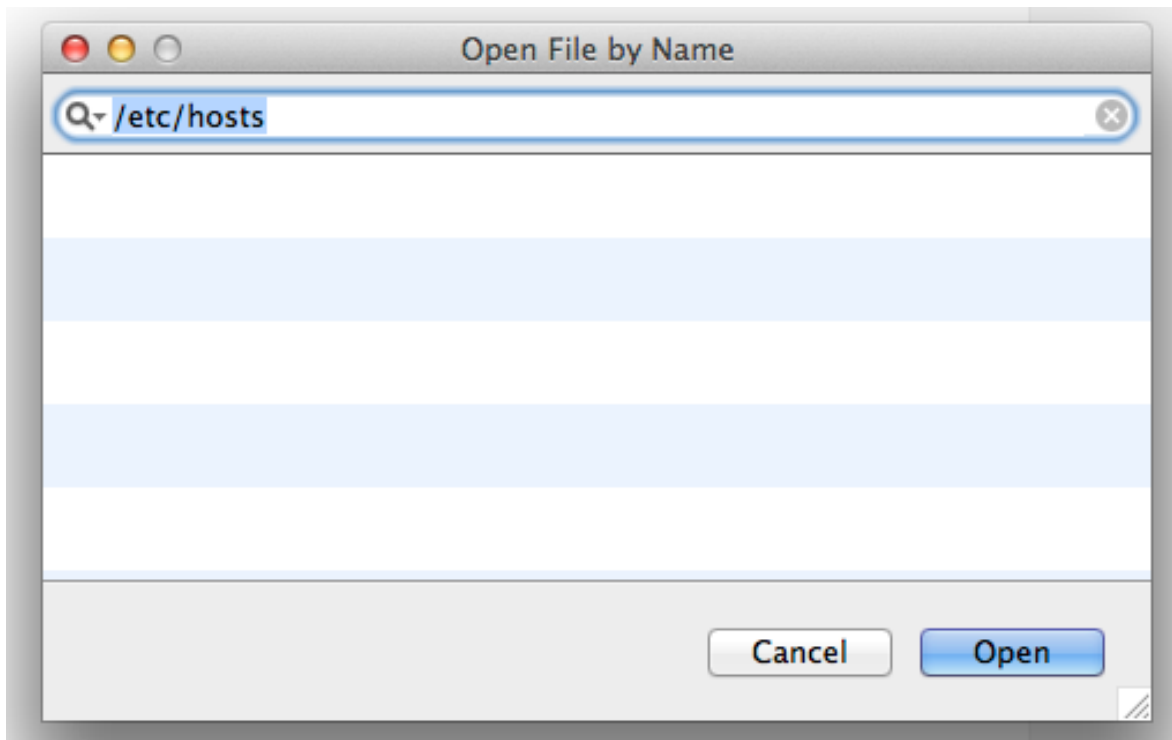
When editing the system files in OSX needs you to have a lot of permissions set just right. Sudo in nano will take care of that if launched as super user but TextWrangler makes it even easier simply requiring you to Authenticate as you save and avoiding permissions problems.

Launch TextWrangler by double clicking its icon.

Use the File Open by name command, (⌘D)



Then simply type type /etc/hosts and click 'Open'



You can now correct the hosts file however needed. When you are done save as usual. You will be prompted to authenticate. Authentication on save is as good as launching the application as root in my opinion and less work.

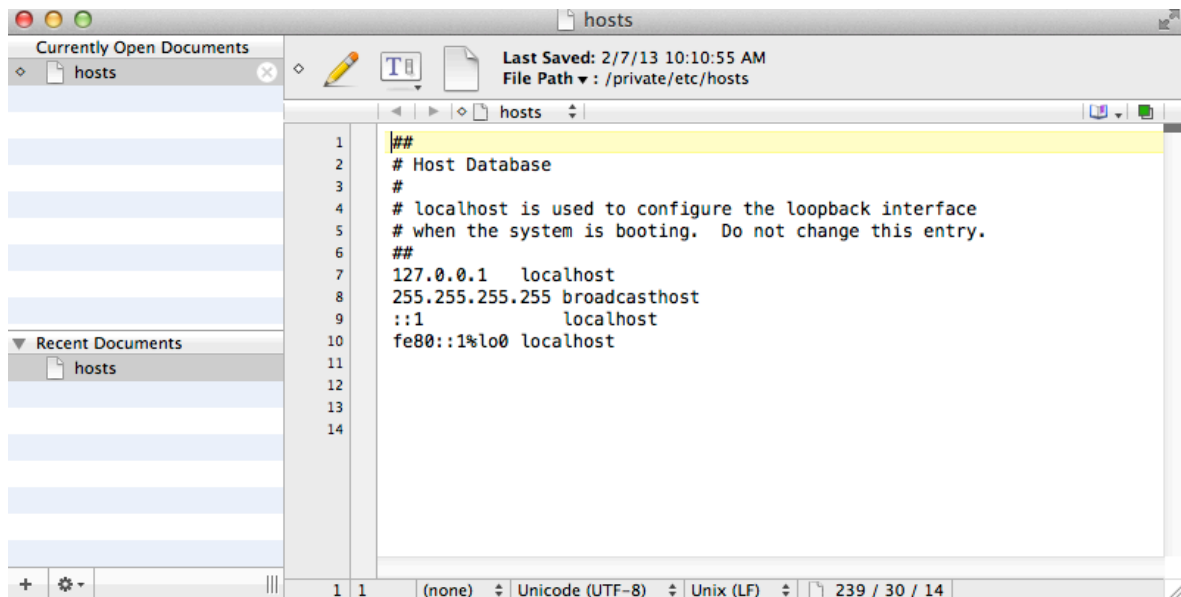
You want to end up with

```
127.0.0.1      localhost
255.255.255.255 broadcast local host
```

Once you've fixed it Save the file from the File menu or press `⌘S` as normal. OSX will ask you to Authenticate, do so by typing your password and press Authenticate. Once you've saved you hostfile quit TextWrangler.

A last word on Hosts file issues - this one got me for a few hours on a client's system the other day. I've only ever seen this once in my life and it was down to a windows IT guy moving his config files onto the Mac, so ONLY worry about this if you have problems when you get to the very end of this guide! Basically if someone has edited your hosts file by just hacking away in a text editor with no concern about carriage returns they may have inadvertently changed the line endings from Unix LF (line feed) returns to CRLF (carriage return line feed) you don't need to worry about what that all means just that if you have the wrong kind your hosts file is broken and will be ignored by OSX and you won't resolve your localhost. This can be fixed very quickly so don't panic.

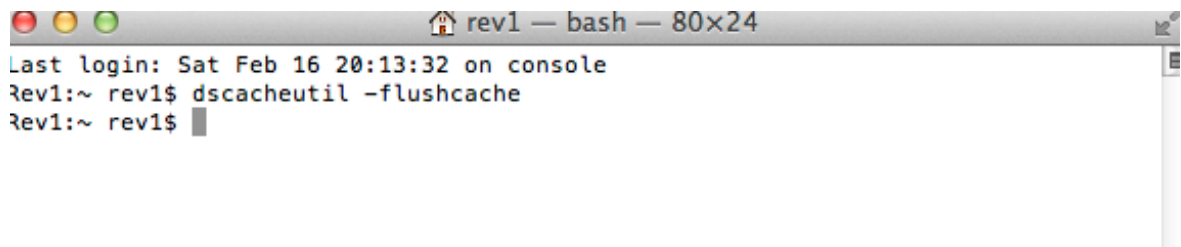
Using TextWrangler open your hosts file and look at the line feed type in the bottom status area next to the text encoding. It should say Unix (LF) if not change it to Unix LF and save the hosts file.



```
1 ##
2 # Host Database
3 #
4 # localhost is used to configure the loopback interface
5 # when the system is booting. Do not change this entry.
6 ##
7 127.0.0.1 localhost
8 255.255.255.255 broadcasthost
9 ::1 localhost
10 fe80::1%lo0 localhost
11
12
13
14
```

With your corrected hosts file safely saved open Terminal again (Applications/Utilities/Terminal) and flush the DNS cache to make your changes to the hosts file take immediate effect.

Type `dscacheutil -flushcache`
then press return



```
rev1 — bash — 80x24
Last login: Sat Feb 16 20:13:32 on console
rev1:~ rev1$ dscacheutil -flushcache
rev1:~ rev1$
```

As one last check to make sure yours hosts file is working properly open Terminal and type `scutil --dns`

The second entry is local with DNS being the first (since Lion - may be reversed if you are on Snow Leopard)

```
rev1 — bash — 112x46
Last login: Thu Feb  7 11:50:29 on console
Rev1:~ rev1$ scutil --dns
DNS configuration

resolver #1
  nameserver[0] : 8.8.8.8
  nameserver[1] : 8.8.4.4
  nameserver[2] : 208.67.222.222
  nameserver[3] : 208.67.220.220
  reach       : Reachable

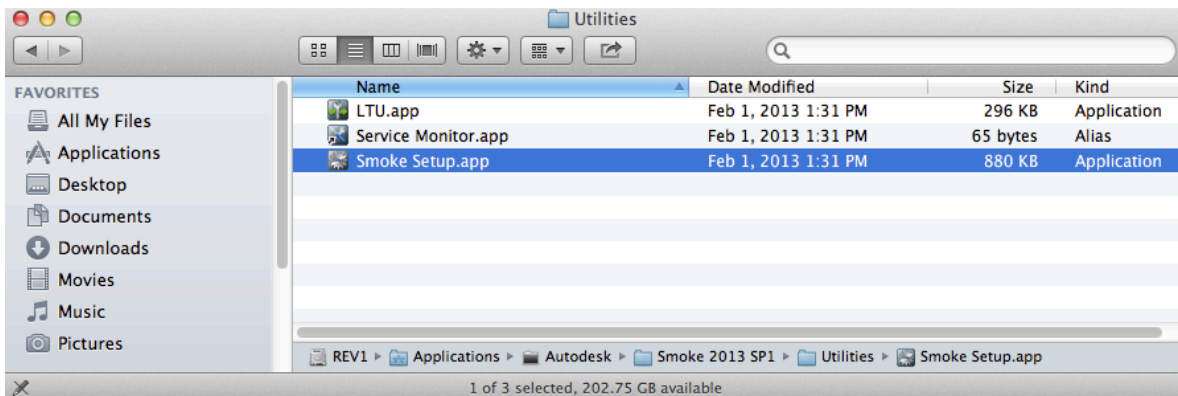
resolver #2
  domain      : local
  options     : mdns
  timeout     : 5
  order      : 300000

resolver #3
  domain      : 254.169.in-addr.arpa
  options     : mdns
```

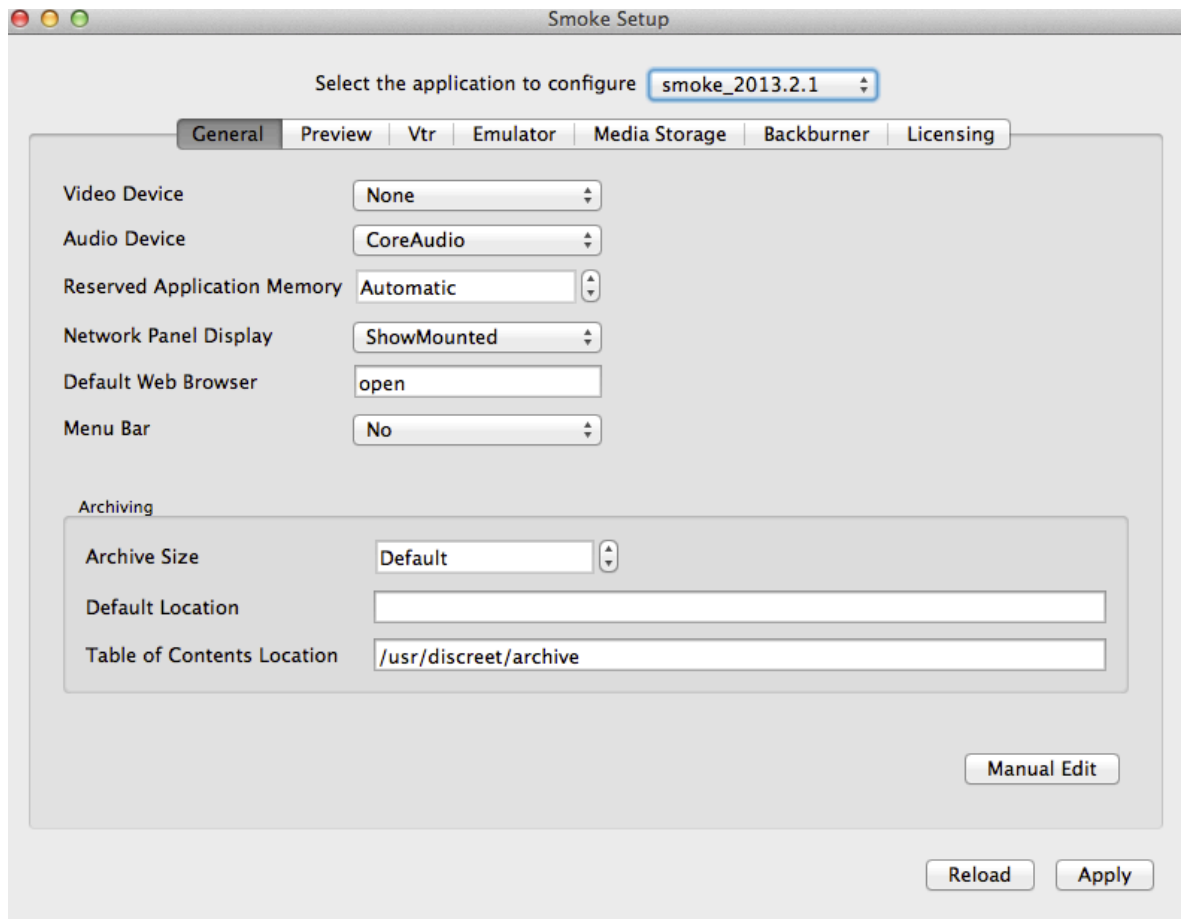
If your local resolver isn't there you probably need to reinstall OSX otherwise that's it for setting up the hardware and OSX.

D- CONFIGURE Backburner

1- Open Smoke Setup application (in /Applications/Autodesk/Smoke 2013 SP1/Utilities)



In the general menu click on 'manual edit'



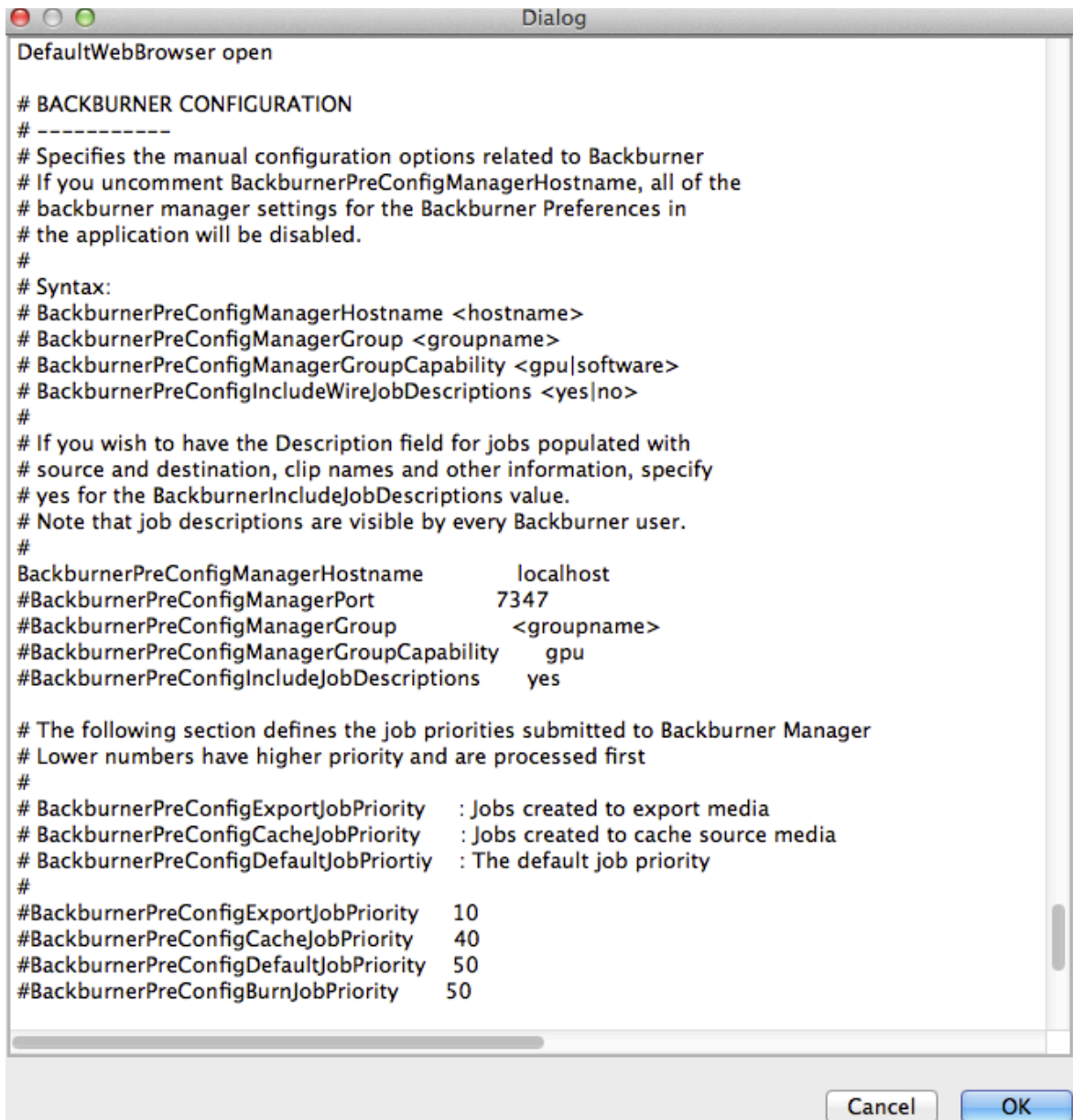
Scroll down to

BACKBURNER CONFIGURATION

18 or so lines down, just after the syntax example, is a line

“BackburnerPreConfigManagerHostname localhost”

If this line has a # at the start then delete just the # (any line with a '#' is commented out and ignored in Unix land so removing the # lets Smoke know to use the localhost for Backburner)

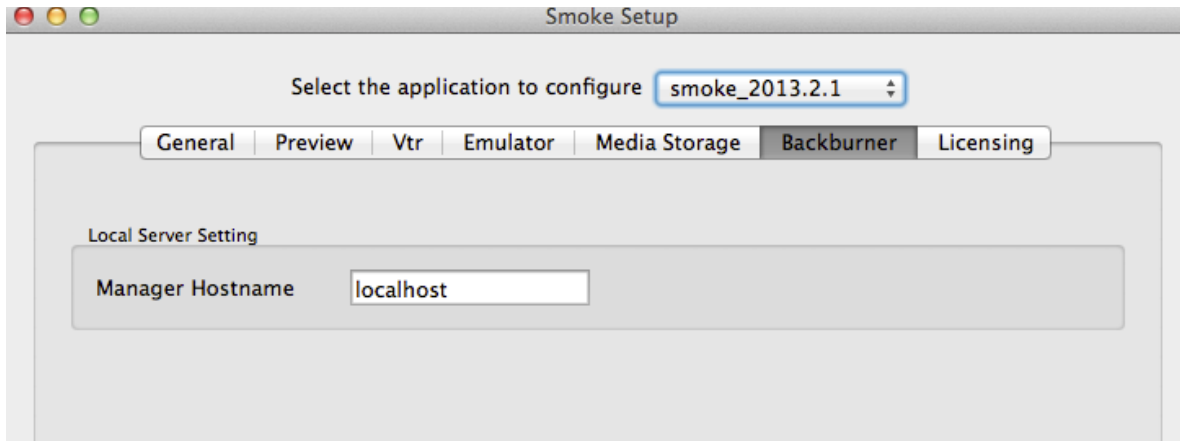


Click OK

Click Yes

Click Apply

Click on the Backburner tab and check that the Manager Hostname is 'localhost' - if you have to change it, click Apply



Quit Smoke Setup.

Restart your Mac.

2- Set the back burner XML to link to local host

Open `usr/discreet/backburner/Network/backburner.xml` in TextWrangler

There's a few things here that need to be correct to run back burner trouble free.

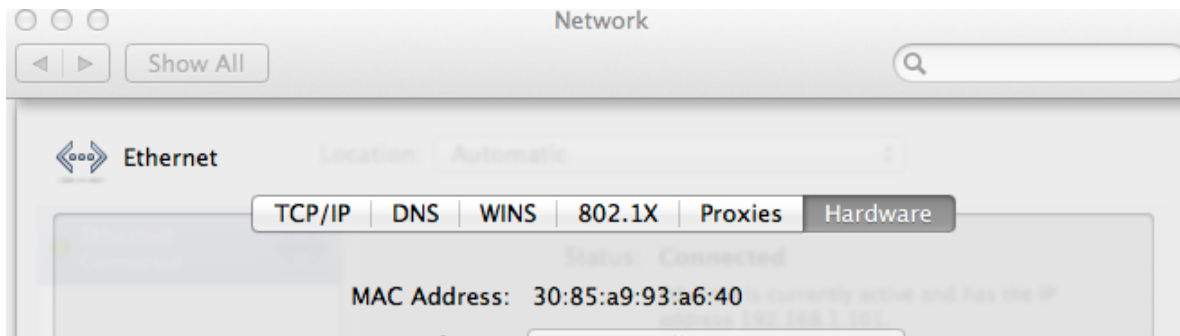
- Under `<ServerSettings>`

make sure that the manager points to localhost e.g. `<ManagerName>localhost</ManagerName>`

make sure that the server points to localhost e.g. `<ServerName>localhost</ServerName>`

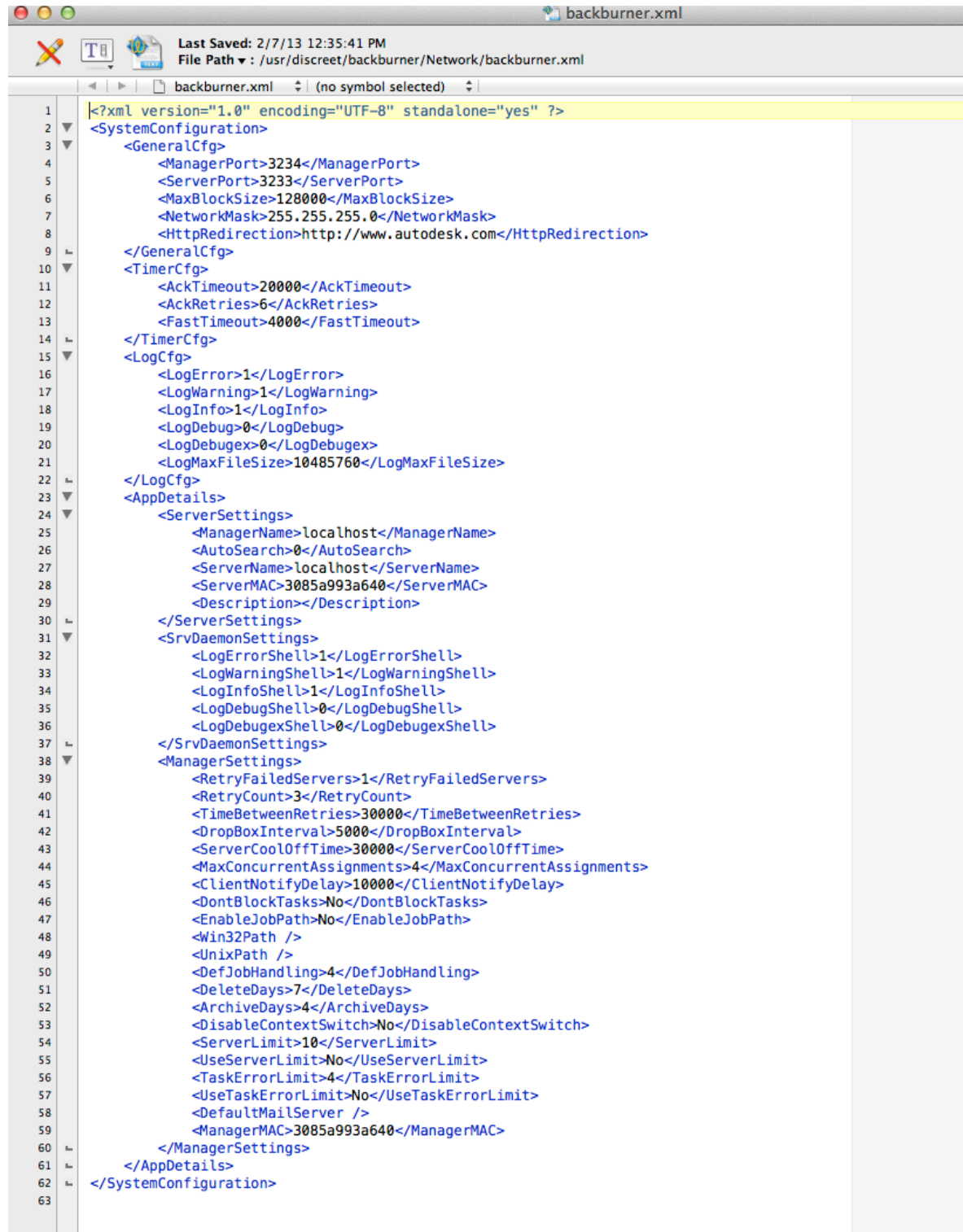
make sure the MAC address is your active ethernet connectors mac address e.g. `<ServerMAC>xxxxxxxxxxxx</ServerMAC>` where xxxxxxxxxxxx is the Mac address of your ethernet adapter

To find the MAC address of your Ethernet adapter open System Preferences, click on Network, select your Ethernet connection and click Advanced. Under the hardware tab is your MAC address.



Enter your MAC address instead of xxxxxxxxxxxx as the ServerMAC be careful to only enter the numbers don't type the : symbols.

Lastly make sure the ManagerMAC address is your Ethernet adapters address e.g. the same MAC address as above. e.g. <ManagerMAC> xxxxxxxxxxxx </ManagerMAC>



```
1 |<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
2 |<SystemConfiguration>
3 |  <GeneralCfg>
4 |    <ManagerPort>3234</ManagerPort>
5 |    <ServerPort>3233</ServerPort>
6 |    <MaxBlockSize>128000</MaxBlockSize>
7 |    <NetworkMask>255.255.255.0</NetworkMask>
8 |    <HttpRedirection>http://www.autodesk.com</HttpRedirection>
9 |  </GeneralCfg>
10 |  <TimerCfg>
11 |    <AckTimeout>2000</AckTimeout>
12 |    <AckRetries>6</AckRetries>
13 |    <FastTimeout>4000</FastTimeout>
14 |  </TimerCfg>
15 |  <LogCfg>
16 |    <LogError>1</LogError>
17 |    <LogWarning>1</LogWarning>
18 |    <LogInfo>1</LogInfo>
19 |    <LogDebug>0</LogDebug>
20 |    <LogDebugex>0</LogDebugex>
21 |    <LogMaxFileSize>10485760</LogMaxFileSize>
22 |  </LogCfg>
23 |  <AppDetails>
24 |    <ServerSettings>
25 |      <ManagerName>localhost</ManagerName>
26 |      <AutoSearch>0</AutoSearch>
27 |      <ServerName>localhost</ServerName>
28 |      <ServerMAC>3085a993a640</ServerMAC>
29 |      <Description></Description>
30 |    </ServerSettings>
31 |    <SrvDaemonSettings>
32 |      <LogErrorShell>1</LogErrorShell>
33 |      <LogWarningShell>1</LogWarningShell>
34 |      <LogInfoShell>1</LogInfoShell>
35 |      <LogDebugShell>0</LogDebugShell>
36 |      <LogDebugexShell>0</LogDebugexShell>
37 |    </SrvDaemonSettings>
38 |    <ManagerSettings>
39 |      <RetryFailedServers>1</RetryFailedServers>
40 |      <RetryCount>3</RetryCount>
41 |      <TimeBetweenRetries>3000</TimeBetweenRetries>
42 |      <DropBoxInterval>5000</DropBoxInterval>
43 |      <ServerCoolOffTime>3000</ServerCoolOffTime>
44 |      <MaxConcurrentAssignments>4</MaxConcurrentAssignments>
45 |      <ClientNotifyDelay>1000</ClientNotifyDelay>
46 |      <DontBlockTasks>No</DontBlockTasks>
47 |      <EnableJobPath>No</EnableJobPath>
48 |      <Win32Path />
49 |      <UnixPath />
50 |      <DefJobHandling>4</DefJobHandling>
51 |      <DeleteDays>7</DeleteDays>
52 |      <ArchiveDays>4</ArchiveDays>
53 |      <DisableContextSwitch>No</DisableContextSwitch>
54 |      <ServerLimit>10</ServerLimit>
55 |      <UseServerLimit>No</UseServerLimit>
56 |      <TaskErrorLimit>4</TaskErrorLimit>
57 |      <UseTaskErrorLimit>No</UseTaskErrorLimit>
58 |      <DefaultMailServer />
59 |      <ManagerMAC>3085a993a640</ManagerMAC>
60 |    </ManagerSettings>
61 |  </AppDetails>
62 |</SystemConfiguration>
63 |
```

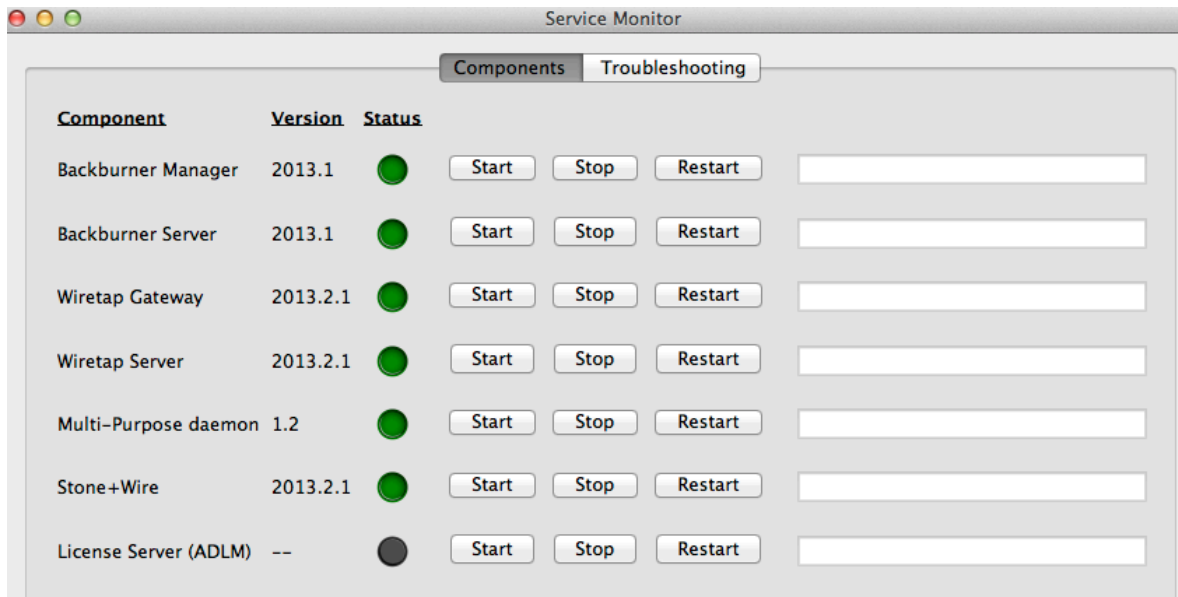
Once you have entered you MAC address correctly in all these places the save the

file and quit TextWrangler.

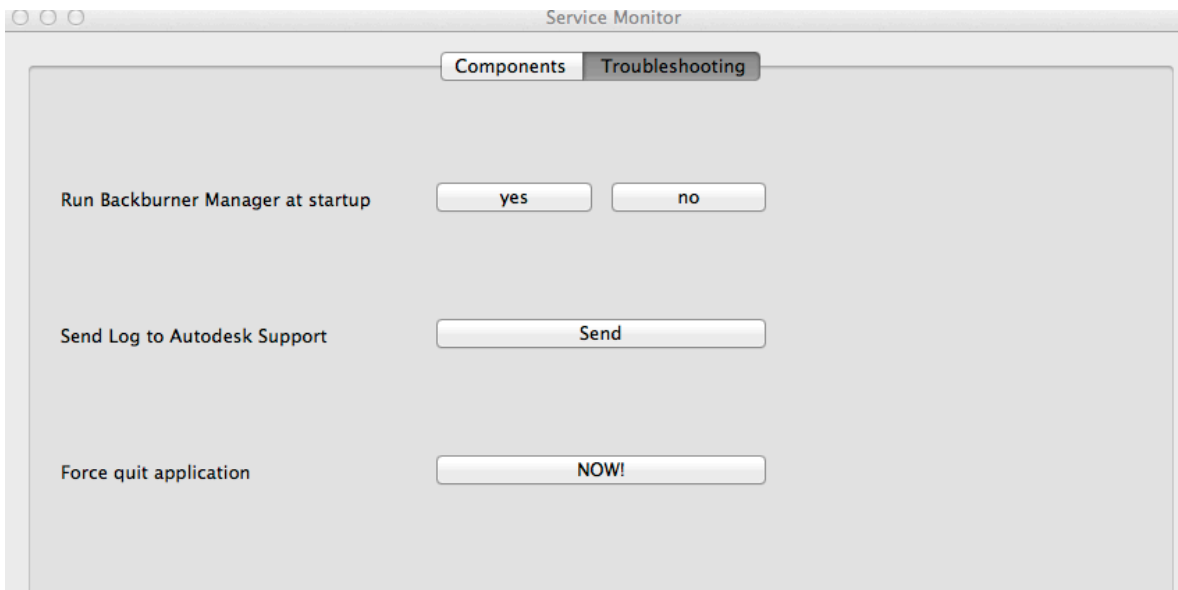
E- CHECK services

1- Open the services monitor app in /Applications/Autodesk/Smoke 2013 SP1/Utilities

Check everything is green across the board, if not try clicking restart on each service. If you are a standalone licence user the Licence Server will of course be off. Green is good.

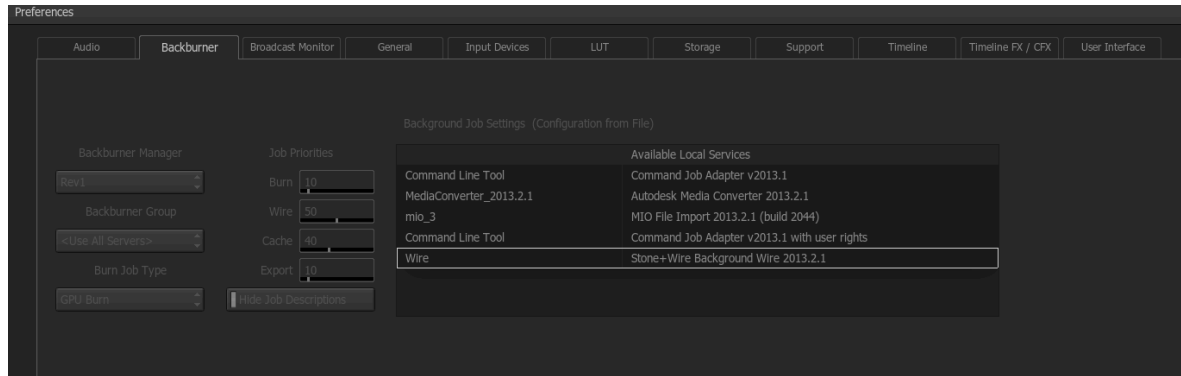


and while you have it open you can click on the troubleshooting tab and get the Backburner manager to run at startup by clicking on 'yes'. If you use your Mac for lots of things you may prefer to not do this but my Smoke Macs are just Smokes so I make it run on startup.



F- CONFIGURE Smoke

1- Really this is just to check that everything is as you expect.



Now go to your MediaHub and export some clips. Fun eh? Now export some more.

I think if after trying all these steps you are still not able to export you have a hardware problem rather than a configuration issue.

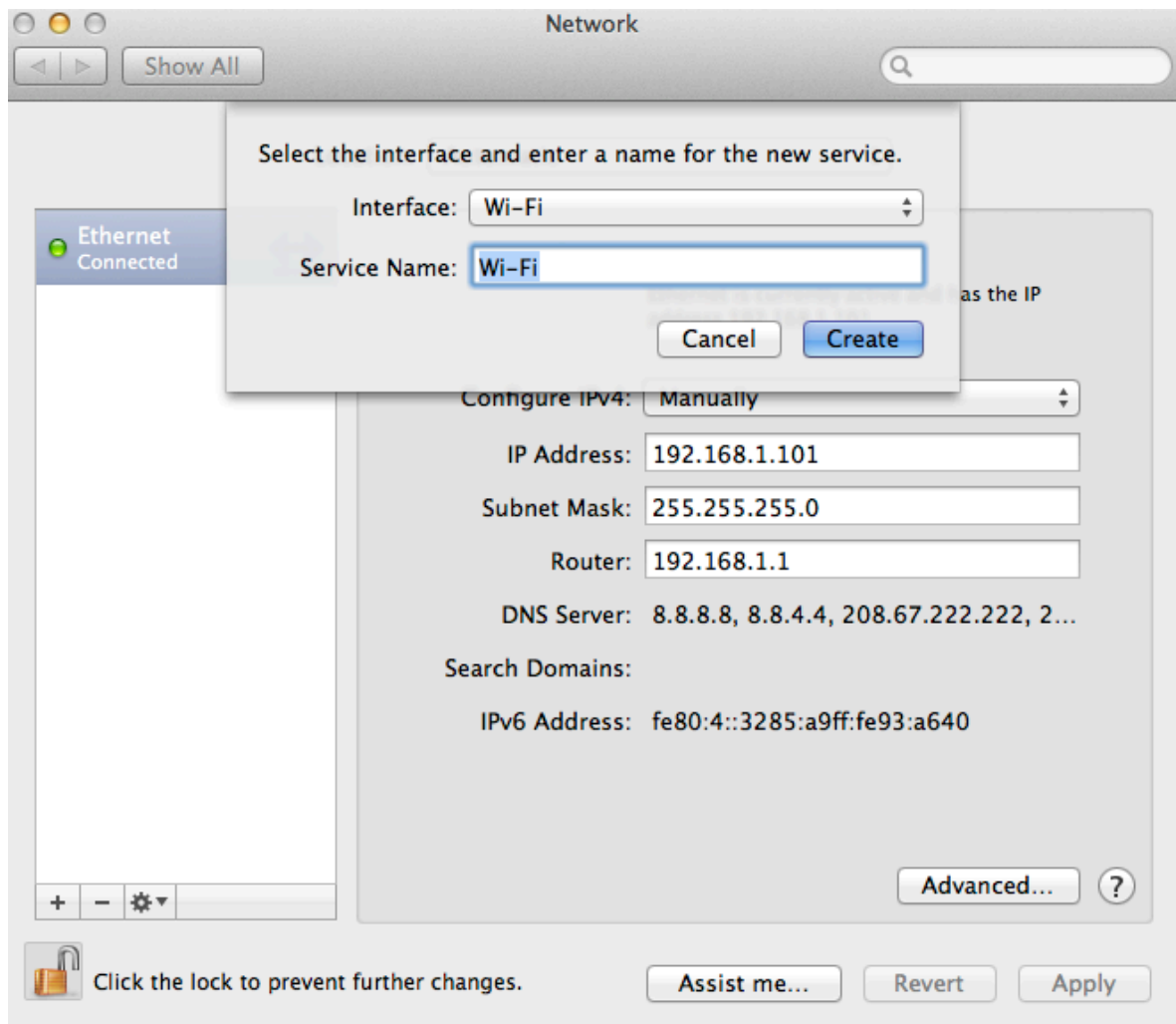
G- What if I really need Wi-Fi

1- Several people have emailed me saying they have to have wifi. On the systems I have fixed up so far following the above guide there have been no issues with using Wifi alongside Backburner.

Once you have followed this guide exactly you can add back the wifi port.

As with adding the Ethernet port go back to System Preferences and open Network.

Click to unlock and press the + symbol under the left hand panel. This time select Wi-Fi as the interface and give it a useful name such as 'Wi-Fi' click create.

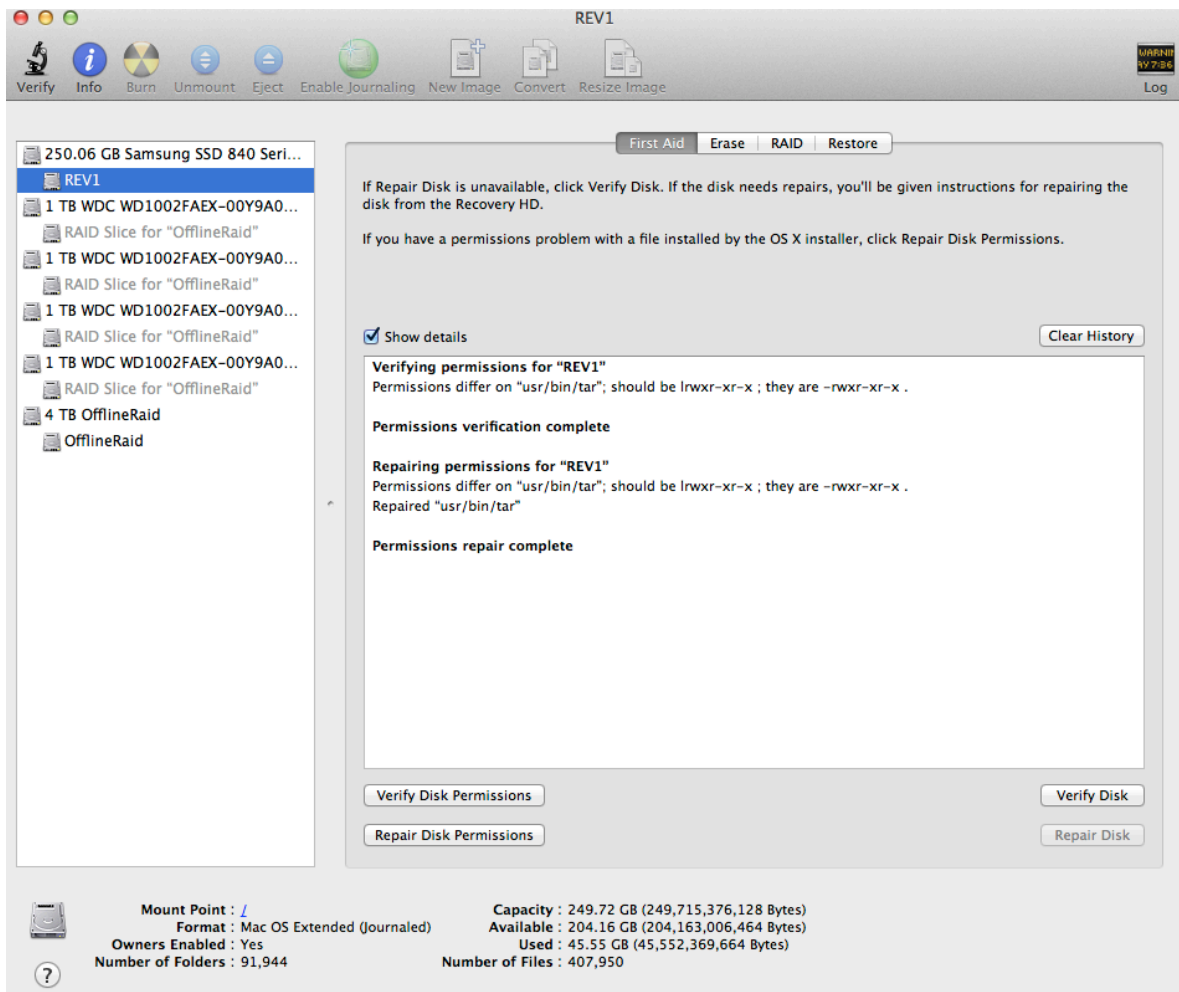


Then selecting Wi-Fi in the left hand panel configure it as you usually would. Personally I would still add the Google and Open DNS name servers as I showed earlier as they tend to be more responsive than your own ISPs and every microsecond counts when you need to log on to area.autodesk.com

H- Repair Permissions

No matter how careful you are in OSX doing pretty much anything will result in some permission errors. No idea why it just happens, you look in a folder permissions get screwed. Most of the time it doesn't matter at all but eventually you get slow downs, kernel errors and problems. So after a hour or so of the kind of stuff we just did I always repair permissions.

You repair permissions using disk utility which you can access by pressing Shift Command U in a finder window (shortcut to Utilities) then click Disk Utility to launch it.



Select your system disk, click on the 'First Aid' tab and then click 'Repair Disk Permissions'. Let it finish it do its thing and you're done.

I- What about those dire Apple warnings about enabling Root User?

Ok then, here's a reminder to disable Root user if that's what you feel like doing, just do the same steps as at the start of this guide but select Disable Root User.

J- And finally! Easier Network switching.

Lots of people have emailed me and thanked me for this post which seems to have made its way to the Creative Cow, Smoke and Flame News as well as here. But some people are still seeing odd errors which I think are mainly down to them switching their active network to wi-fi when trying to export.

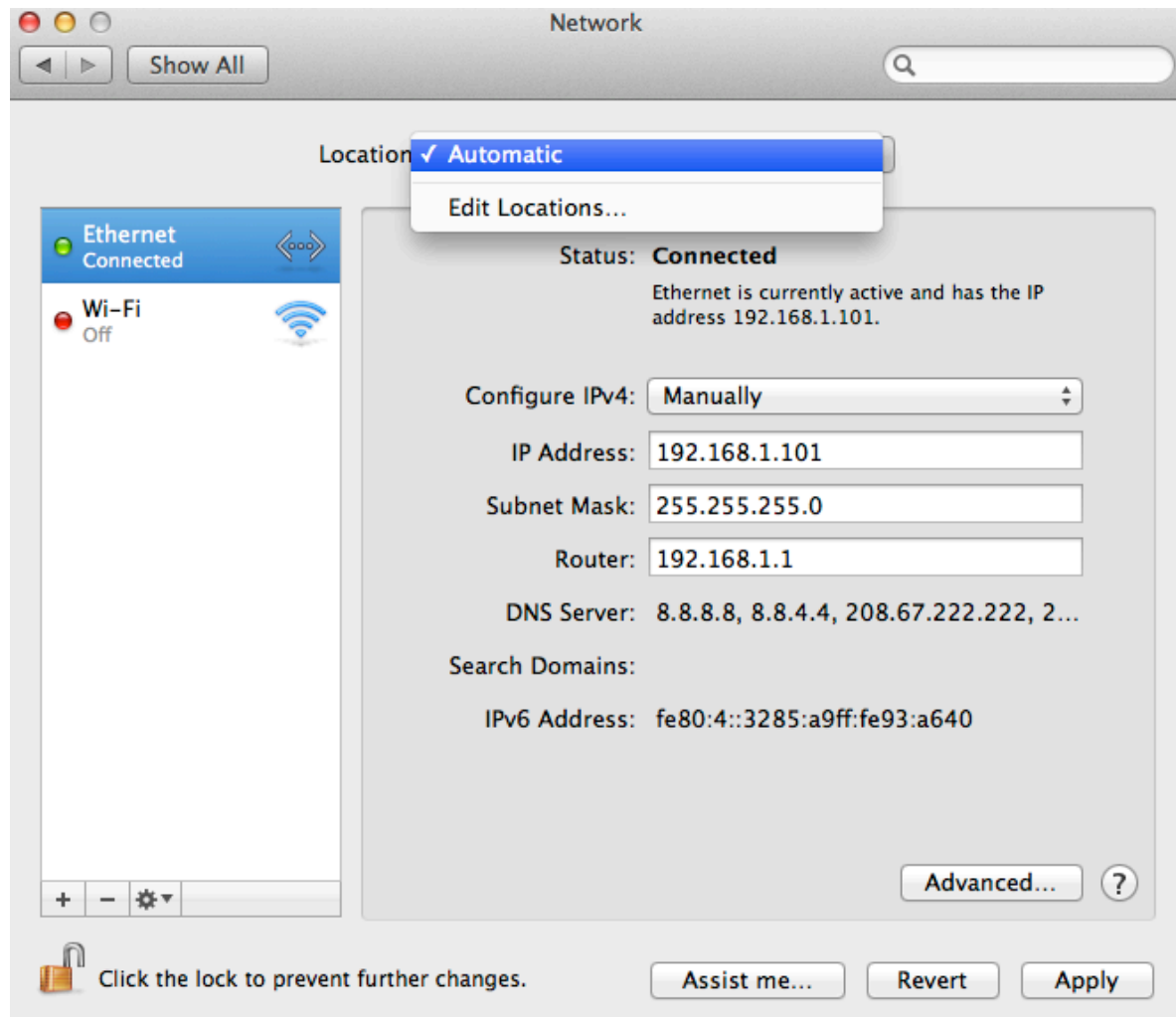
You can have wi-fi enabled and you can use it on your laptop BUT NOT when you want to export using Backburner. For the duration of your export you have to ensure that the active network port is the one you have assigned in the Backburner XML.

Yes this is a pain and will undoubtedly be addressed by Autodesk but for now the simple way to deal with this is to use the Location Manager in OSX.

To set this up

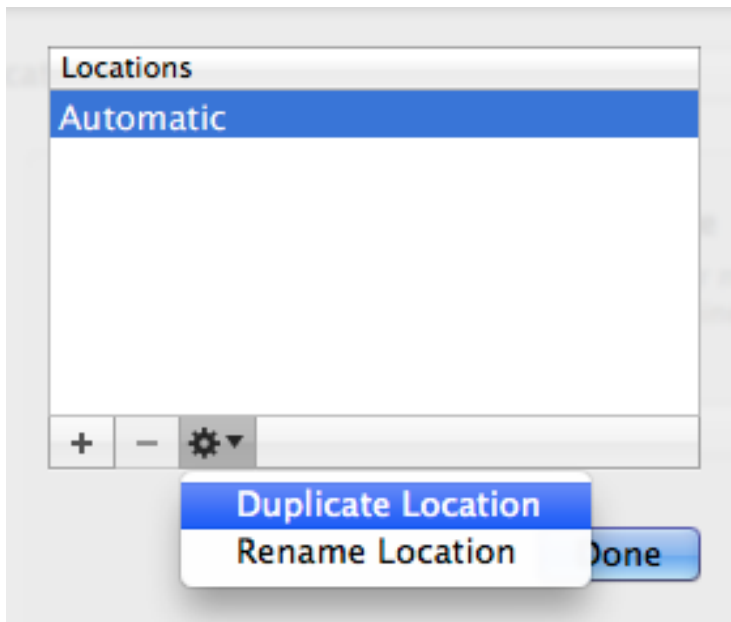
1- Open Preferences and select Network.

See the drop down at the top that probably says 'Automatic' this is where the Location magic can happen.



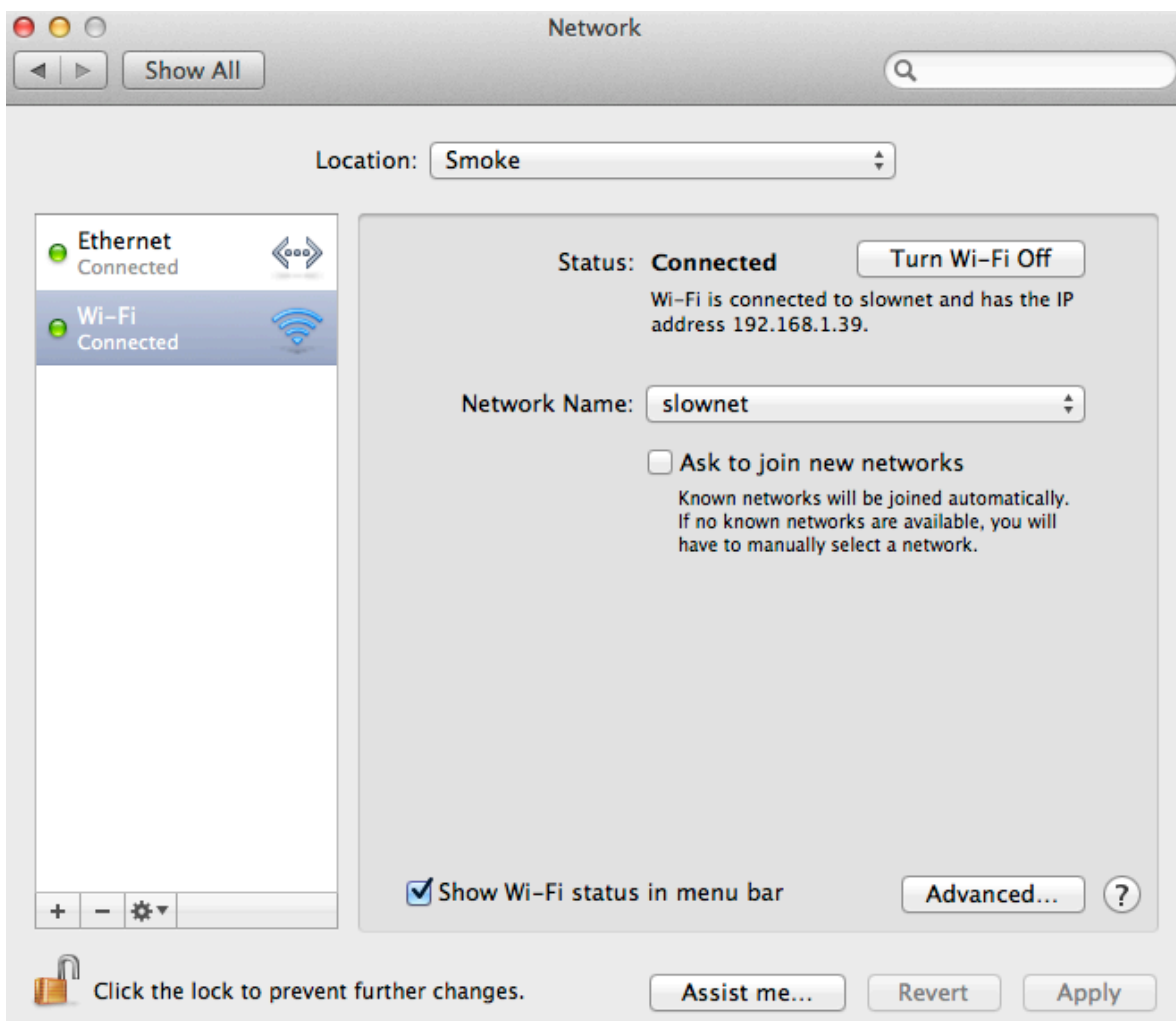
Click on the drop down and select Edit Locations.

Now click on the Cog symbol and from the drop down select duplicate location



Rename the 'Automatic Copy' to 'Smoke' then press 'Done'. Click Apply.

Making sure the new Smoke location is active on the location drop down select the wi-fi adapter on the list on the left then click Turn wi-fi off.



Click Apply.

You now have a known good Location for Smoke. You can leave Automatic however it is for general use but for stress free Smoking select the Smoke location before exporting.

You could of course do this just by visiting the Network control panel each time but a more convenient method is to install a piece of software called ControlPlane which will detect when Smoke is running and switch for you automatically. Unfortunately it hasn't been upgraded for Mountain Lion yet :(so keep checking at <http://www.controlplaneapp.com/2012/02/controlplane-and-os-x-10-8-mountain-lion/> and hopefully it will be out soon. Its a great app for a lot of reasons but being able to contextually aware switch network settings alone its worth having.

In the meantime lets go with the tried and tested NetworkLocation which is now called Sidekick (note it costs \$29 but you just spent 3500 so you deserve it).

Go get at it

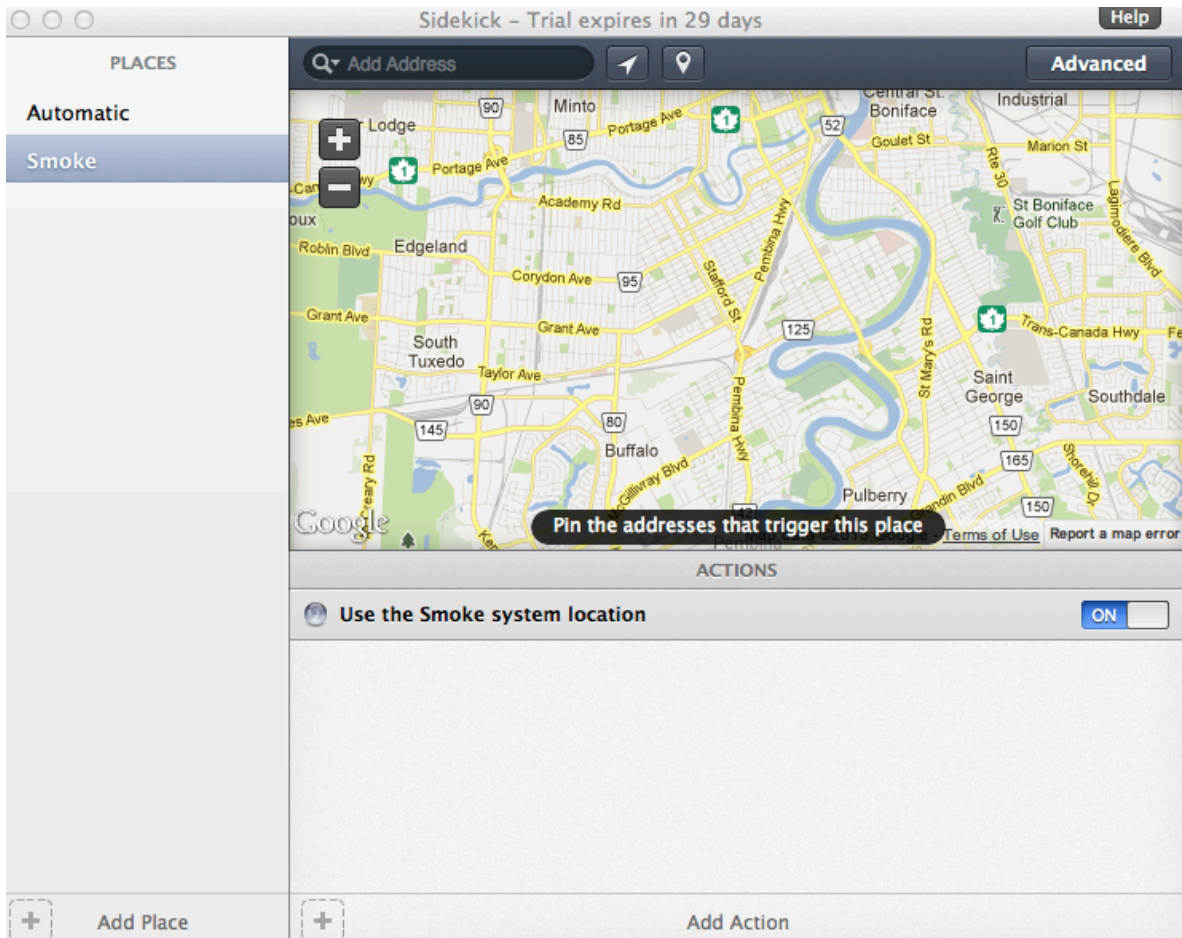
<http://oomphalot.com/sidekick/>

I'll assume you know how to install apps, but you will need to give it access to Location Services which means adding it to your Locations Services security settings. Don't panic the installer does it all for you - you just have to keep saying 'Ok' and Authenticate when told to.

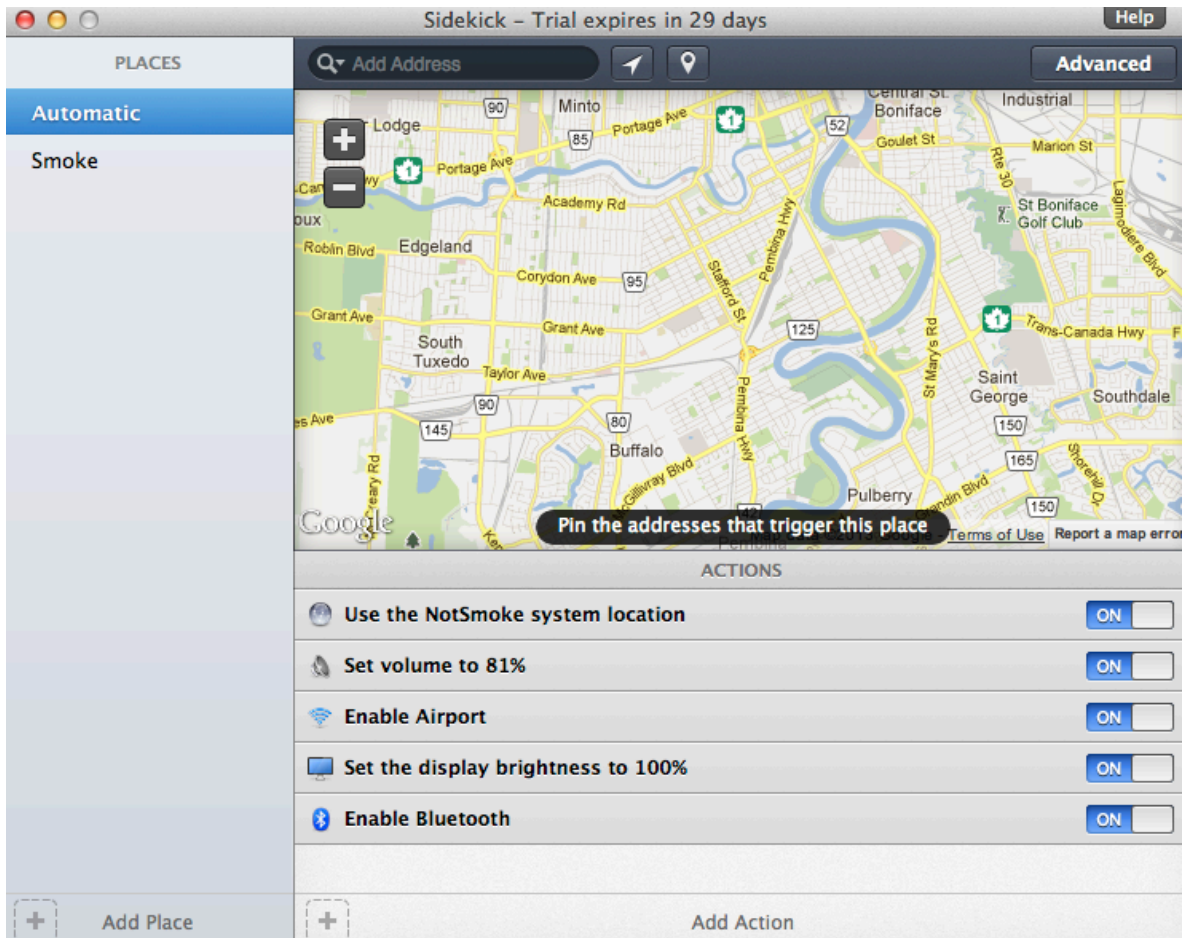
To configure Sidekick you need to create two locations - Smoke and Automatic. You can lock it to trigger a location at a certain geographic location and much more.

Here's the settings I made for Sidekick.

For Smoke

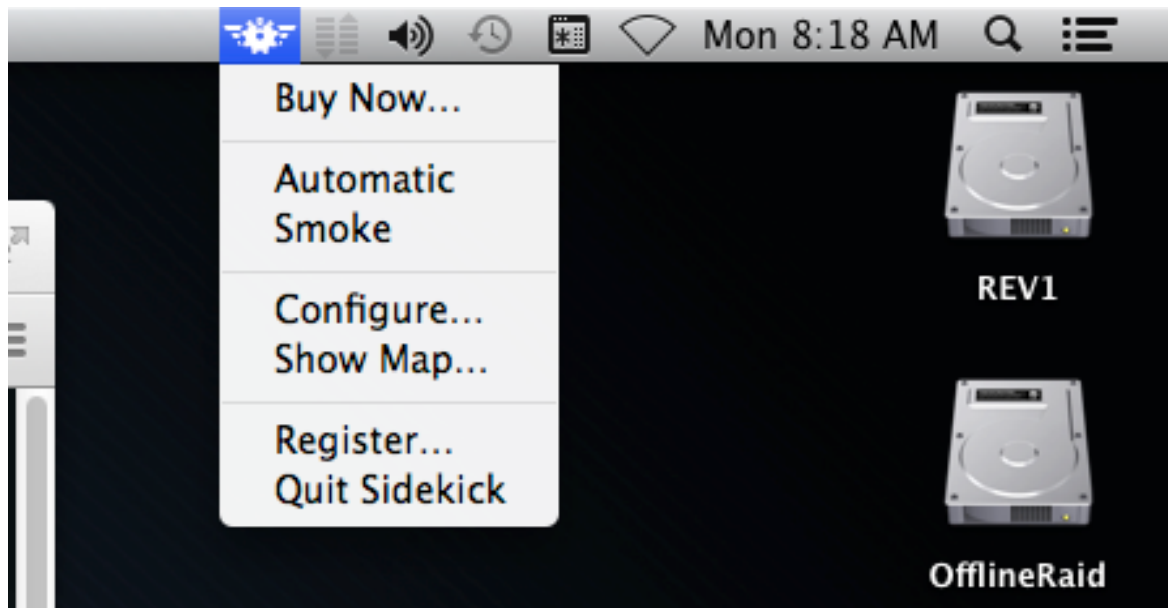


For everything else.



Note that's not my real location as I'm actually on a MacPro :) If you want you can trigger network changes by location but I wouldn't as we are just using it as a shortcut way of manually swapping just before we need to export.

Once you have defined these two locations you can then switch between them in a single click on the menu bar. Just click on the sidekick icon next to the Volume control and select the location you want.



And before you ask, YES if you are running Smoke full frame you will have to press ⌘Tab to switch application to see the menu bar to be able to switch network!

I prefer ControlPlane and hope its soon out as you don't need to remember to manually switch settings at all but for now this is easier than taking a trip to System Settings every time you launch Smoke. There are many other apps that put location selection in the menu bar but Sidekick has a long history and is solid and reliable in my experience. Disclaimer I personally don't use any location manager apps at all anymore as I edit in a nice air-conditioned edit suite using fixed computers but I have used both ControlPlane and Sidekick (beck when it was NetworkLocation) in the past with total satisfaction.

As a truly final tweak you can set Sidekick to launch an Application when it switches so you could effectively use the menu bar to launch smoke and make sure you're able to export all in one step, might not be a good idea though if you want to keep using Wi-Fi while editing and just switch when you actually want to export. And that folks is hopefully the last edit to this now fairly long document.

Happy editing!