FreeBSD post install configuration steps to make on fresh FreeBSD install to make ready for server and Desktop use

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1. Update binary packages

First thing to do just like on any new operating system install is to update / patch the server

```
# freebsd-update fetch
# freebsd-update install
```

2. Update FreeBSD port packages

As a FreeBSD administrator you will need ports every now and then so make sure you have them at

their latest release for your FBSD release

```
# pkg update
# pkg upgrade
```

3. Install editors and bash

```
# pkg install nano vim joe bash bash_completion
```

4. Install sudo

To be able to run commands without becoming superuser root just like on any Linux you will probably want to have sudo package installed

```
# pkg install sudo
```

Sudo config file is under **/usr/local/etc/sudoers**

To edit it with syntax check enabled use visudo

 # visudo

...

 # sudo pkg update

If you want a regular account to have root superuser edit / modify and do things permissions

 # pw groupmod wheel -M your_user_name

Then to make the wheel permissions work add to sudoers:

%wheel ALL=(ALL=ALL) ALL

5. FreeBSD modify personal information for account

```
# chpass your_user_name
```

To change your account and others to use bash instead of default freebsd csh

```
# csh -s /bin/bash your_user_name
```

7. Set a Static IP address for a FreeBSD server and configure DNS

Edit **/etc/rc.local** to look something like so

```
#ifconfig_em0="DHCP"
ifconfig_em0="inet 192.168.1.100 netmask 255.255.255.0"
# default gateway
defaultrouter="192.168.1.1"
```

/etc/rc.conf is also the file where you can **easily enable / disable freebsd startup scripts**

To **restart network interafaces just like Debian Linux's** ***/etc/init.d/networking restart*** **type**

```
# service netif restart
# service routing restart
```

To **set Google DNS in FreeBSD** just like in Linux add the IPs with nameserver prefix to **/etc/resolv.conf**

```
# echo 'nameserver 8.8.8.8' >> /etc/resolv.conf
# echo 'nameserver 8.8.8.8' >> /etc/resolv.conf
# echo 'search your-domain-name' >> /etc/resolv.conf
```

- If you need to change the hostname of the FreeBSD server change in /etc/rc.conf

```
hostname="your-freebsdhostname"
```

- To add multiple IP addresses to a network interface on FBSD add line like below to /etc/rc.conf

```
ifconfig_em0_alias0="192.168.1.5 netmask 255.255.255.255"
ifconfig_em0_alias1="192.168.1.6 netmask 255.255.255.255"
...
```

To apply changes and bring up the newly set multiple IPs

 # service netif restart

8. Setting up proper timezone

If for some reason the Time zone is improperly set during FreeBSD install, you can later set that with

 # tzsetup

9. Set up ntp time server synchronization daemon

 # vim /etc/rc.conf

ntpd_enable="YES"
ntpd_sync_on_start="YES"

First command will bring up NTP server at start up and second make it synchroniza with Internet NTP servers, to restart ntp so it set proper time
immediately

 # service ntpd start

10. Add additional SWAP space to FreeBSD server after install

- First we need to create the swap file with command and then set up proper permissions for it

```
# truncate -S 3G /swapf
# chmod 0600 /swapf
```

- Then to make the swapf being used on boot we need to add it to **/etc/fstab**

```
# echo "md99 none swap sw,file=/swapf,late 0 0" >> /etc/fstab
```

To immediately apply the new added swap to be used by the system run:

```
# swapon -aqL
```

To check various things on how swap is configured use

```
# swapinfo -g
```

11. Configure Firewall in FreeBSD

```
# vim /etc/rc.conf

firewall_enable="YES"
firewall_script="/usr/local/etc/ipfw.rules"
```

A very basic firewall to add to ipfw.rules file would be something like so:

```
$IPF 70 allow all from any to any out keep-state
$IPF 80 allow icmp from any to any
# open port ftp

$IPF 110 allow tcp from any to any 21 in
$IPF 120 allow tcp from any to any 21 out

# 22 for ssh
$IPF 130 allow tcp from any to any 22 in
$IPF 140 allow tcp from any to any 22 out

# mail port 25

$IPF 150 allow tcp from any to any 25 in
$IPF 160 allow tcp from any to any 25 out

# dns (53) udp and tcp in
$IPF 170 allow udp from any to any 53 in
$IPF 175 allow tcp from any to any 53 in

# dns (53) udp and tcp out
$IPF 180 allow udp from any to any 53 out
$IPF 185 allow tcp from any to any 53 out

# http (80),
$IPF 200 allow tcp from any to any 80 in
$IPF 210 allow tcp from any to any 80 out
# deny and log everything
$IPF 500 deny log all from any to any
```

To launch the firewall

```
# service ipfw start
```

To list current FreeBSD Firewall rules use

```
# ipfw list
```

Finally if you need to check your connections to the server just like Linux's netstat you might consider using **sockstat** comand

```
# sockstat -4 -6
...
```

- 4 -6 will list you network connections for **ipv4** and **ipv6** both **tcp** and **udp**