

# Linux " ! " # FreeBSD \$ % & ' ( )

\* +

, - . / O \$ % 1 2 3 4 5 Linux " ! " 6 7 FreeBSD # 8 3 9 : ; < =

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### 1. > ?

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g - . h i j k l m n o p q r FreeBSD = s t l u v w o p FreeBSD x y z FreeBSD # o p { | } ~ • + € • G , f , FreeBSD ... † # o p FreeBSD 8 ‡ =

### 2. Shell | ^ % v w Bash Š <

2 3 E Linux " { Ž # ! " n • • ' ' " Bash " O FreeBSD # • j Shell = - — U G Bash ~ ™ v w š > O FreeBSD # • j o p œ = • ž # Q G FreeBSD 1 ! t c s h ( 1 ) \_ k K L # • j Shell G Ÿ s g B Bash ; € £ l ¤ ¥ # Shell | ^ O FreeBSD # Packages | Ports | § " © ª H « ¬ =

s t l o p r € £ # Shell | ª H 1 ! c h s h ( 1 ) Ž - ® 8 - ! " # • j Shell = ° • ± ² ³ G ´ µ ¶ · " + , ¹ º root ! " # • j Shell = » ¼ Q O 3 Shell v w š > O 9 , ` a œ G ½ • ± ² ³ ¾ ¿ • À o p ¬ /usr/local/bin ; /usr/bin Á Â ³ = Ã 8 Ä Å /usr/local/bin ; /usr/bin # - § ` a " J À Æ Ç G O Ë ± ² ³ root @ " J É & K L • j # Shell G Æ È root @ " J È Ì Â É , = Í " O ¬ » ¼ G Î Ï ¬ ` a Ð Ñ Ò " toor Ó ¶ Ô 1 ! # Q W • j # Shell = O o Õ F A Q ª H Ö x ¬ Ø " toor Ò " # Û Ü =

### 3. Packages | Ports % O FreeBSD œ Û Ü Ý §

P r n B # UNIX " o p Ý § # } à á ³ Ç â ã š G ä å G æ ç â ã G æ è é ê G FreeBSD u è ì r í ê \ ] } à Ž o p î ! | ^ % packages | ports = l ª H O Ö " ¬ 8 R ï ð ª ! # ports ; packages # Ý § ñ ò =

#### 3.1. Packages

Packages Q ó æ è ç # î ! | ^ G O FreeBSD œ ô õ " 9 " Debian/Ubuntu # ` a œ # .deb Ý § š H ö 9 " Red Hat/Fedora # ` a œ # .rpm Ý § š = Packages 1 ! p k g \_ a d d ( 1 ) Ž É ÷ o p =

```
os G3 ~ # ù ú @! Ž op Apache 2.2%
```

```
# pkg_add /tmp/apache-2.2.6_2.tbz
```

```
1! -r ^ _ @ ù ù pkg_add(1) Ž K ý p ý V op 8 - Ý Š š GH ö ä ! " w # # $ Ø ` %
```

```
# pkg_add -r apache22
Fetching ftp://ftp.freebsd.org/pub/FreeBSD/ports/i386/packages-6.2-
release/Latest/apache22.tbz... Done.
Fetching ftp://ftp.freebsd.org/pub/FreeBSD/ports/i386/packages-6.2-release/All/expat-
2.0.0_1.tbz... Done.
Fetching ftp://ftp.freebsd.org/pub/FreeBSD/ports/i386/packages-6.2-release/All/perl-
5.8.8_1.tbz... Done.
[snip]
```

To run apache www server from startup, add `apache22_enable="YES"` in your `/etc/rc.conf`. Extra options can be found in startup script.

!

```
s t l ½% ÷ & release ' , # FreeBSD á 6.2G6.3G7.0ô G ° • Æ CD-ROM
Ä op # é pkg_add -r • k ç³ Ç ( ' k O3 ) i ' , * ¶ q # Ý Š š = O3 Ý Š š
ª J " Q + , - . # | ^ = l ª H1! PACKAGESITE / O Ž 1 2 • j # ý _ =
os G3 PACKAGESITE - ® 4
ftp://ftp.freebsd.org/pub/FreeBSD/ports/i386/packages-6-stable/Latest/ Ž ³ Ç 6.X
` 5 - . # š =
```

```
6r ä ¹ 7 # packages Ù Ú, Ö x FreeBSD ... † # 4.4 8 9 % 1 ! Packages ` a =
```

### 3.2. Ports

```
FreeBSD # Î ĩ ] op î ! | ^ # } à : Q1! Ports | $ r = Ports | $ Q FreeBSD U # 8 - ; !
Makefile | 83 < = - $ Ž ) i Æ ä ã i > op ? ] Ý Š | ^ # @ A = + op 8 - port
Ö ` a • p ý | ^ ä ã G î ! BC " • + # < = G æ è ä ã G
V op î ! | ^ á V D z # $ Ø ` HE È # } F op ä ! é =
```

```
Ports | $ G • Ä G _ ports HGª HO /usr/ports ³ « ¬ = h - Ports | $ mn O op FreeBSD
Ö op { r = s t Ports | $ u v w Ä opª H ° { sysinstall(8) Ž É ÷ op G x y 1! csup(1) x
portsnap(8) Ž Æ FreeBSD # l J K U ~ L ³ Ž = O ... † # 4.5.1 8 9ª H « ¬ op Ports
| $ # MN ? C =
```

```
op 8 - port : O É & port # Ä Ä V P Q * ¶ { | 8 È > ò á ° • ± ² ³ é G ³ ~ Q Æ Ports | $ op
Apache 2.2 # Ø R %
```

```
# cd /usr/ports/www/apache22
# make install clean
```

```
1! ports op Ý Š # - S q T : Q J È K i U op V W = os G Æ ports op Apache 2.2
Ö lª H ° { - ® WITH_LDAP make(1) / O Ž X ! mod_ldap %
```

```
# cd /usr/ports/www/apache22
```

```
# make WITH_LDAP="YES" install clean
```

, ÖY FreeBSD ... † # 4.5 89G1! Ports CollectionG Hpÿ¹ 7Ø" Ports Collection # ÛÚ=

### 3.3. Portsu QpackagesGZî [ 1! \ ^ <

Packages: Qóæèq# portsG " HËâ ã á portsé opDËĪ É > packages  
opO\yc] -w^SØ\_ = ` ] } à?wKL#ab%

PackagesáĪ É > é

```
¥ ¹ $%#op ácdS#î ! | ^ æèeŽ • f ^gÔcé =  
¥ | " • +; hscæèÝŠ =  
¥ " • +O^_` aUopæèK =
```

Portsa â ã é

```
¥ J Ēi >opVW= á Packages° • ©Q1! i j VW* ¶ # = 1! ports  
  I J Ēi U?] ? Ē#VWGcskl * ¶ mÜ#noxQ¹ ° oppqbk # = é  
¥ stl ħr #suª H1! KL#<==
```

stl vw83) F# • tG packagesª Juq- vwl # ±² = stl • +É8xi >G ports  
Q- vw#} àr = á, yl G stl • +i >ÉKLz¹ { ( " 1! packagesGĪª H1!  
make`package` Ē ports \* ¶ 8` i ># packageG| } ~>¬Φ£#ĪJK = é

### 4. ` a Xý %%% ÷ 5FO\ ` <

Linux` 1! Sysvinit • Q€` a GĒ FreeBSD 1! #Q• a# BSD, f# **init(8)**=O BSD, f# **init(8)**  
œv w% ÷ 5Fĵ /etc/inittabG • ž „ >Xý#Q**rc(8)** —! | ^ = /etc/rc..., †ÿ  
/etc/defaults/rc.confĵ /etc/rc.conf - § Ž! i \ ` Ī J @ĀXý = ) †Ī J Og} ^ T" /etc/rc.dĵ  
/usr/local/etc/rc.d/³ #%î Ī J • Q€..., - §" Xý = O3..., kl " Š" Linux` ` a œ#  
/etc/init.d/ĀĀ³ # ..., =

```
kC• w\ ` Ī J • Q€..., #ĀĀ< < /etc/rc.d/³ # ..., QĒ" "9, "  
` a 8• Ž#î ! | ^ " 1! # = á cron(8)Gsshd(8)Gsyslog(3)GHöΦ£ = é  
/usr/local/etc/rc.d/³ # ..., Q! " op#î ! | ^ s ApacheGSquid ô 1! # =
```

```
"9, "` aĵ ! " op#î ! | ^ bc#• FO• ' < FreeBSD  
Q8ĵ P' BŽ#Ī ð#^_` aG" : Q" GM• G` ak - Guw—! î ! | ^ á s ls(1)  
Gcat(1)Gcp(1) ô é Ō• Ā—k 8` ð~ 8eP' V™B=O: QĀĵ kšĒ"  
"9, "` a# | ^ =! " op# | ^ V" Q"9, "` a# 8• ŽGs ApacheGX11G Mozilla  
FirefoxGôô=O3! " op#î ! | ^ ° • Q1! FreeBSD# Packagesĵ Ports  
ĵ §opU, # = kr @O3 | ^ ĵ "9, "` a• ŽPŽG! " op#î ! | ^ ° • Āop -  
/usr/local/³ = ¼g! " op#Ī É >> ÷ - §œO" /usr/local/bin³ G• ®- §O  
/usr/local/etc³ GHgkž =
```

Ÿª H° { O /etc/rc.confá **rc.conf(5)**é - §œ ÜDbzî # **ServiceName\_enable="YES"**  
• ®ŽX! Ī J = Y8³ ` a • ĵ # /etc/defaults/rc.conf - §G O3• ĵ • ®ª H1! /etc/rc.conf  
- §Ž° / = ¼gG + opmÜĪ ! | ^ Ō- qĵ Φ³ - . Ž! i -É[ sCX! BC%Ø#Ī J =

³ ~ # 88ħ MN! ŽO /etc/rc.confœX! **sshd(8)**ĵ Apache 2.2= u¥i r ApacheĪ [ ° { SSL  
} FXý =

```
# enable SSHD  
sshd_enable="YES"
```

```
# enable Apache with SSL
apache22_enable="YES"
apache22_flags="-DSSL"
```

```
8 | I J mn O /etc/rc.conf œX! GI J @J Ě Ěù ú ÷ X ý á " • + § . X ý ` a é %
```

```
# /etc/rc.d/sshd start
```

```
s t l J u v w Å X! Ga H1! forcestart Ž Ěù ú ÷ X ý %
```

```
# /etc/rc.d/sshd forcestart
```

## 5. • © • ®

### 5.1. • ©<sup>a</sup> «

• Ž Linux " œ" 1! # i < " ©<sup>a</sup> « " • ! # ethX f F # QGFreeBSD  
1! - ý - ® } - 8 - ° ® Ž i < =<sup>3</sup> ~ **ifconfig(8)** # ± B<sup>2</sup> <sup>3</sup> r \ - Intel " Pro 1000 # " ©<sup>a</sup> « á em0  
i em1 é %

```
% ifconfig
em0: flags=8843<UP,BROADCAST,RUNNING,SIMPLEX,MULTICAST> mtu 1500
     options=b<RXCSUM,TXCSUM,VLAN_MTU>
     inet 10.10.10.100 netmask 0xfffff00 broadcast 10.10.10.255
     ether 00:50:56:a7:70:b2
     media: Ethernet autoselect (1000baseTX <full-duplex>)
     status: active
em1: flags=8843<UP,BROADCAST,RUNNING,SIMPLEX,MULTICAST> mtu 1500
     options=b<RXCSUM,TXCSUM,VLAN_MTU>
     inet 192.168.10.222 netmask 0xfffff00 broadcast 192.168.10.255
     ether 00:50:56:a7:03:2b
     media: Ethernet autoselect (1000baseTX <full-duplex>)
     status: active
```

### 5.2. IP • ®

8 - IP ' μ<sup>a</sup> H1! **ifconfig(8)** Ž ¥i - 8 - " ©<sup>a</sup> « = ° • G + ¶ . § X } # | J Ě 1! # IP  
• ® Ů Ů • + § , O /etc/rc.conf œ =<sup>3</sup> 5 Ø R ¥ i r 1 ° - GIP ' μ GHÖ • j " Ø %

```
hostname="server1.example.com"
ifconfig_em0="inet 10.10.10.100 netmask 255.255.255.0"
defaultrouter="10.10.10.1"
```

```
1! 3 ~ MN Ž k " ©a « • ® DHCP %
```



```
03***root /usr/sbin/freebsd-update cron
```

- } 8] 1 . #} à GÆOpÔÕŽ Ò5GQ~ àª #{ | = ÆOpÔÕXýVVá [ VWŽ 1 . =

## 8. procfs%0mQ{ , F x â ã Ä ä å

Linux: œGIª J • ° { Y 8Y /proc/sys/net/ipv4/ip\_forward Ž ] i IP • ' QæÀ X! = O FreeBSD  
œl î [ 1! sysctl(8) Ž ÖY O; Ç É} ~#` a - ®GO+, # FreeBSD' , œ procfs(5)  
mn" Ç 41! r = á è | `sysctl` O FreeBSD" E Èª ! = é

O IP • ' È øœGI î [ 1! ³ 5MNŽ ] i FreeBSD` a œQæmn P X r IP • ' %0

```
% sysctl net.inet.ip.forwarding
net.inet.ip.forwarding: 0
```

-a i é! Ž 5B" w#` a - ®%0

```
% sysctl -a
kern.ostype: FreeBSD
kern.osrelease: 6.2-RELEASE-p9
kern.osrevision: 199506
kern.version: FreeBSD 6.2-RELEASE-p9 0: Thu Nov 29 04:07:33 UTC 2007
î root@i386-builder.daemonology.net:/usr/obj/usr/src/sys/GENERIC

kern.maxvnodes: 17517
kern.maxproc: 1988
kern.maxfiles: 3976
kern.argmax: 262144
kern.securelevel: -1
kern.hostname: server1
kern.hostid: 0
kern.clockrate: { hz = 1000, tick = 1000, profhz = 666, stathz = 133 }
kern.posix1version: 200112
...
```

! | Ä 3 sysctl # f° QP† # =

• + procfs # ±² QG%÷ 83dê#Ý§G1! truss(1) Ž - è` a Ûi GHö Linux" Ĩ É > í N.  
á Ÿ GLinux" Ĩ É > í NÑ1! Ç, î # procfsGlinprocfs(5)=é s t l • +ÆÇ procfs lª HO  
/etc/fstab œÜ&s ³ MN%0

```
proc /proc procfs rw,noauto 0 0
```

! | noauto • » ĩ /proc OXý ÔÄK ýÆÇ=

| } 1! s 3 ù úÆÇ procfs%

```
# mount /proc
```

## 9. • ! ù ú

### 9.1. Ý Š š Đ

Linux ù ú (Red Hat/Debian)	FreeBSD ô õ ù ú	Á #
<code>yum install package / apt-get install package</code>	<code>pkg_add -r package</code>	ÆĐ   ñ – o p package
<code>rpm -ivh package / dpkg -i package</code>	<code>pkg_add -v package</code>	o p package
<code>rpm -qa / dpkg -l</code>	<code>pkg_info</code>	5Bmop # Ý Š š

### 9.2. ` a Đ

Linux ù ú	FreeBSD ô õ ù ú	Á #
<code>lspci</code>	<code>pciconf</code>	5B PCI - ò
<code>lsmod</code>	<code>kldstat</code>	5BmÇ&#M• no
<code>modprobe</code>	<code>kldload / kldunload</code>	Ç&/óÇM• no
<code>strace</code>	<code>truss</code>	` è ` a P!

## 10. Ù ô

W• õ ö O ÷ - . J Ë ø ù l ú Ë # € • Ž P Q I # FreeBSD b p = J û + ü , Y 8³ [FreeBSD ... t](#)  
 " è ñ # x V v w Å š , O , - . œ # 2 3 ¹ ý & p ý # ¹ ! =