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How To Upgrade FreeBSD Jail (OS Level Virtualization)

Posted by Vivek Gite <vivek@nixcraft.com>

Q. I've FreeBSD jail configured as explained in man pages using make world options. Now I've upgrade my base FreeBSD 7.0 system to FreeBSD 7 patch level 4. How do I upgrade my Jail (FreeBSD VPS) so that everything get updated inside jail?

FreeBSD [1]

A. The FreeBSD jail mechanism is an implementation of operating system-level virtualization that allows administrators to partition a FreeBSD-based computer system into several independent mini-systems called jails. FreeBSD jails offer security, ease of delegation and os level virtualization. To upgrade your jail using make world use the following commands.

Step # 1: Build world

Follow this guide to upgrade your running system [2]. Once done type the following command to build world for jail:

> **⚠ WARNING!** There are various ways of creating and upgrading jails. This method uses make world upgrade method as original jail was created using make build itself.

```
# JAIL=/path/to/jail
```

OR
```
# JAIL=/usr/home/jail/192.168.1.10
# cd /usr/src
# make buildworld DESTDIR=$JAIL
```

Please note that If you have just done make buildworld previously you can do make installworld and save the time.

Step # 2: Stop jail service

Type the following command to stop all jails:
```
# /etc/rc.d/jail stop
```

Step # 3: Upgrade jail

Type the following command to stop all jails:
```
# cd /usr/src
# make installworld DESTDIR=$JAIL
# mergemaster -i -C -D $JAIL
```

If you have multiple jail repeat above steps. You can also try something as follows:
```
# JPATHS="/jail/path1 /jail/path2 /jail/path3"
# for j in $JPATHS; make installworld DESTDIR=$j; done
```

Step # 4: Start all jails

Type the following command:
```
# /etc/rc.d/jail start
```

Make sure everything is running:

```
# jls
```

Try to connect to jail called www.example.com with 20 as jail id from host itself:

```
# jexec 20 sh
# hostname
# sockstat
```

Try to [upgrade FreeBSD ports](#) [3] inside jail:

```
# portsnap fetch update
# portversion -l '<'
# portupgrade -a
```

Exit from jail and go back to host:

```
# exit
```

Further readings

- jail related man pages
- [FreeBSD jail](#) [4]

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[1] Image: **http://www.cyberciti.biz/faq/category/freebsd/**
[2] this guide to upgrade your running system: **http://www.cyberciti.biz/faq/freebsd-cvsup-update-system-applications/**
[3] upgrade FreeBSD ports: **http://www.cyberciti.biz/tips/howto-keep-freebsd-system-upto-date.html**
[4] FreeBSD jail: **http://www.freebsd.org/doc/en/books/handbook/jails.html**