

Setting Up A Debian Jail on FreeNAS

03/19/2014 03:07 PM - Daniel Curtis

Status:	Closed	Start date:	03/19/2014
Priority:	Normal	Due date:	
Assignee:	Daniel Curtis	% Done:	100%
Category:	Jails / Containers	Estimated time:	1.00 hour
Target version:	FreeNAS 9.x	Spent time:	3.00 hours

Description

While setting up the VPS infrastructure, I learned that FreeBSD has to ability to run a Linux OS natively using its Linux Compatibility Layer, and so FreeNAS also supports this. To start, from the web interface go to [Jails -> Configuration](#) and make sure that the basic information for the Jails are configured. Next go to [Jails](#) and click **Add Jails**; then give the jail a **name**, select *Debian-7.1.0* as the **jail type**, and give the jail an **IP address**. Then click **OK** at the bottom to download Debian.

NOTE: I was using the old UFS filesystem (instead of ZFS) to hold the jails. There was a problem with Linux jails starting on UFS filesystems, however this was fixed in FreeNAS version 9.2.1.2.

Bootstrap the Debian jail

- Once the Debian jail has been created and is running, click the **Shell** icon to open up a shell. A command prompt will appear in the web browser.
- Now change the root passwd:

```
passwd
```

- And create a new ssh key pair:

```
ssh-keygen -t ecdsa
```

- At this point the Debian jail can also be accessed via SSH as well.

```
ssh root@debianjail.example.com
```

- To start, edit the `/etc/apt/sources.list` and comment out the cdrom repositories, like so:

```
nano /etc/apt/sources.list
```

```
#!/# deb-src cdrom:[Debian GNU/Linux 7.1.0 Wheezy - Official Multi-architecture i386/amd64/source DVD #1 20130615-23:45]/
wheezy main
#!/# deb cdrom:[Debian GNU/Linux 7.1.0 Wheezy - Official Multi-architecture i386/amd64/source DVD #1 20130615-23:45]/
wheezy main
#!/#
#!/#deb-src cdrom:[Debian GNU/Linux 7.1.0 Wheezy - Official Multi-architecture i386/amd64/source DVD #1 20130615-23:45]/
wheezy main
#!/#deb cdrom:[Debian GNU/Linux 7.1.0 Wheezy - Official Multi-architecture i386/amd64/source DVD #1 20130615-23:45]/
wheezy main
```

Then prevent the OS from updating the Linux kernel and GRUB bootloader. This is necessary since the actual kernel is the FreeBSD kernel; upgrading the kernel from the jail will break an upgrade and screw up the jail.

- To freeze kernel upgrades run:

```
echo linux-image-686-pae hold | dpkg --set-selections
echo linux-image-3.2.0-4-686-pae hold | dpkg --set-selections
echo initscripts hold | dpkg --set-selections
echo grub-common hold | dpkg --set-selections
echo grub-pc hold | dpkg --set-selections
echo grub-pc-bin hold | dpkg --set-selections
echo grub2-common hold | dpkg --set-selections
echo dmsetup hold | dpkg --set-selections
```

You can then check this worked like so:

```
dpkg -la | grep linux-image
```

hi linux-image-3.2.0-4-686-pae	3.2.46-1	i386	Linux 3.2 for modern PCs
hi linux-image-686-pae	3.2+46	i386	Linux for 64-bit PCs (meta-package)

NOTE: Notice the 'hi' at the bottom, h means held and i means currently installed. This package is installed but +will no+t be upgraded.

- Remove unneeded packages:

```
apt-get remove --purge virtualbox-* xserver-* linux-headers-*
```

- Clean up the package manager and remove orphaned packages:

```
apt-get autoremove
apt-get clean
```

NOTE: This will reduce the size of a system upgrade, and free up space.

- Update the package repository information and upgrade the OS by running:

```
apt-get update
apt-get upgrade
```

Now the Debian jail can upgrade its packages in a normal manner, without breaking the jail during an upgrade.

History

#1 - 03/27/2014 08:29 PM - Daniel Curtis

- Status changed from In Progress to Closed

#2 - 03/27/2014 09:30 PM - Daniel Curtis

- Description updated

#3 - 08/14/2014 06:37 PM - Daniel Curtis

- Description updated

#4 - 12/10/2014 11:21 AM - Daniel Curtis

- Project changed from 38 to FreeBSD Administration

#5 - 02/14/2015 10:34 AM - Daniel Curtis

- Target version set to 5

#6 - 02/14/2015 11:24 AM - Daniel Curtis

- *Category set to Jails / Containers*

- *Target version changed from 5 to FreeNAS 9.x*