FreeBSD Administration - Support #348

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