

Migrating FreeNAS Jails

12/21/2014 11:59 AM - Daniel Curtis

Status:	Closed	Start date:	12/21/2014
Priority:	Normal	Due date:	
Assignee:	Daniel Curtis	% Done:	100%
Category:	Jails / Containers	Estimated time:	3.00 hours
Target version:	FreeNAS 9.x	Spent time:	4.00 hours

Description

I have been using FreeNAS in my production environment for a few years and one of the many useful features are the Jails. Along the way I added more drives and in more advanced configurations, like RAID1 and RAIDZ1. Unfortunately there are no helper scripts to assist in migrating jails from one location to another; depending on whether UFS or ZFS is used and whether the destination is local or remote will determine the methods available for migration.

UFS to UFS Jail Migration

This migration method uses the tried-and-true rsync tool.

Local to local

In this example I will be migrating the jails from /mnt/default to /mnt/jails.

- 1. Begin by logging into the FreeNAS web panel and going to the Jails sections and turning of all jails
- 2. Next open a **Shell** in the FreeNAS web panel
- 3. Migrate the files to the new location:

```
rsync -avh -n /mnt/default /mnt/jails
```

- NOTE: Remove the -n to remove the dry-run option
- 4. Now go to the **Jails** section again, then the **Configuration** tab.
- 5. Change the **Jail root** from /mnt/default to /mnt/jails
- 6. **Reboot** the FreeNAS

Local to remote

In this example I will be migrating the jails from the local /mnt/default location to the /mnt/jails remote location. In order for this to work the local root user's public key must be copied over to the remote root users **SSH Public key** field, otherwise the transfer will likely fail.

- 1. Begin by logging into the local FreeNAS web panel and going to the Jails sections and turning of all jails
- 2. Next open a **Shell** in the FreeNAS web panel
- 3. Migrate the files to the new location:

```
rsync -avh -n /mnt/default -e ssh 192.168.0.2:/mnt/jails
```

- NOTE: Remove the -n to remove the dry-run option
- 4. Now go to the **Jails** section on the remote FreeNAS, then the **Configuration** tab.
- 5. Change the **Jail root** to /mnt/jails
- 6. **Reboot** the FreeNAS

UFS to ZFS Jail Migration

This migration method uses the rsync tool as well; however this method require a little more finesse since the entire jails folder cannot be transfered at once, but rather each jail individually migrated.

Local to local

In this example I will be migrating a single jail, node3, from /mnt/master to /mnt/jails.

1. Begin by logging into the FreeNAS web panel and going to the Jails sections and [turning of all jails](#)
2. Then go to the **Storage** section, select the [jails](#) zvol and then **Create ZFS Dataset** named [node3](#)
3. Next open a **Shell** in the FreeNAS web panel
4. Migrate the files to the new location:

```
rsync -avh -n /mnt/master/node3/ /mnt/jails/node3/  
rsync -avh -n /mnt/master/.node3.meta /mnt/jails/
```

- NOTE: Remove the -n to remove the dry-run option
 - NOTE: Make sure to copy over the .node3.meta or else FreeNAS will not see the jails metadata
5. Now go to the **Jails** section again, then the **Configuration** tab.
 6. Change the **Jail root** from /mnt/master to /mnt/jails
 7. **Reboot** the FreeNAS

NOTE: Repeat for each individual jail

Local to remote

In this example I will be migrating a single jail, node3, from /mnt/master to /mnt/jails. In order for this to work the local root user's public key **must** be copied over to the remote root users **SSH Public key** field, otherwise the transfer will likely fail.

1. Begin by logging into the local FreeNAS web panel and going to the Jails sections and [turning of all jails](#)
2. Then go to the **Storage** section on the remote FreeNAS, select the [jails](#) zvol and then **Create ZFS Dataset** named [node3](#)
3. Next open a **Shell** in the FreeNAS web panel
4. Migrate the files to the new location:

```
rsync -avh -n /mnt/master/node3/ -e ssh 192.168.0.2:/mnt/jails/node3/  
rsync -avh -n /mnt/master/.node3.meta -e ssh 192.168.0.2:/mnt/jails/
```

- NOTE: Remove the -n to remove the dry-run option
 - NOTE: Make sure to copy over the .node3.meta or else FreeNAS will not see the jails metadata
5. Now go to the **Jails** section on the remote FreeNAS, then the **Configuration** tab.
 6. Change the **Jail root** to /mnt/jails
 7. **Reboot** the FreeNAS

ZFS to ZFS Jail Migration

This method uses the built-in ZFS send/receive function.

Local to local

In this example I will be migrating jails from /mnt/shared to /mnt/jails.

1. Begin by logging into the FreeNAS web panel and going to the Jails sections and [turning of all jails](#)
2. Go to the **Storage** section and select the [shared](#) zvol, then **Create Snapshot** named [migrate](#)
3. Next open a **Shell** in the FreeNAS web panel
4. Migrate the files to the new location:

```
zfs send shared@migrate | zfs receive jails
```

- NOTE: Remove the -n to remove the dry-run option
5. Now go to the **Jails** section again, then the **Configuration** tab.
 6. Change the **Jail root** from /mnt/shared to /mnt/jails
 7. **Reboot** the FreeNAS

Local to remote

In this example I will be migrating jails from /mnt/shared to /mnt/jails. In order for this to work the local root user's public key **must** be copied over to the remote root users **SSH Public key** field, otherwise the transfer will likely fail.

1. Begin by logging into the local FreeNAS web panel and going to the Jails sections and turning of all jails
2. Go to the **Storage** section and select the shared zvol, then **Create Snapshot** named migrate
3. Next open a **Shell** in the FreeNAS web panel
4. Migrate the files to the new location:

```
zfs send shared@migrate | ssh -i /data/ssh/replication 192.168.0.2 zfs receive jails
```

- NOTE: Remove the -n to remove the dry-run option

5. Now go to the **Jails** section on the remote FreeNAS, then the **Configuration** tab.
6. Change the **Jail root** to /mnt/jails
7. **Reboot** the FreeNAS

Resources

- http://olddoc.freenas.org/index.php/Replication_Tasks

History

#1 - 12/21/2014 12:27 PM - Daniel Curtis

- Description updated
- Status changed from New to Resolved
- % Done changed from 0 to 100

#2 - 12/21/2014 12:28 PM - Daniel Curtis

- Description updated

#3 - 12/26/2014 07:15 PM - Daniel Curtis

- Status changed from Resolved to Closed

#4 - 02/14/2015 10:45 AM - Daniel Curtis

- Target version set to 5

#5 - 02/14/2015 11:25 AM - Daniel Curtis

- Category set to Jails / Containers
- Target version changed from 5 to FreeNAS 9.x