

FreeBSD Administration - Support #900

Install PiCluster on FreeBSD

06/09/2017 02:16 PM - Daniel Curtis

Status:	Closed	Start date:	06/09/2017
Priority:	Normal	Due date:	
Assignee:	Daniel Curtis	% Done:	30%
Category:	Jails / Containers	Estimated time:	1.50 hour
Target version:	FreeBSD 11	Spent time:	1.00 hour

Description

This is a guide for installing PiCluster on FreeBSD 11.

Prepare the Environment

- Make sure the system is up to date:

```
pkg update && pkg upgrade
```

- Install prerequisites:

```
pkg install docker-freebsd ca_root_nss git node npm
```

- Add the picluster user:

```
pw user add picluster -m -s /bin/sh
```

Install PiCluster

- Make the web app directory:

```
mkdir -p /usr/local/www
```

- Download the latest PiCluster version from GitHub:

```
git clone https://github.com/rusher81572/picluster.git /usr/local/www/picluster
```

- Change the ownership of picluster directory:

```
chown -R picluster /usr/local/www/picluster
```

- Switch to the picluster user and switch to the picluster directory:

```
su - picluster
```

- Edit the config.json file:

```
vi config.json
```

- And edit the config file to suit your environment:

NOTE: Use the `web_connect` key to the value of the host systems IP address. Otherwise you will get connection errors while starting the agent.

```
{
  "token": "45FG9A23DE12045E20BB854AC",
  "docker": "/usr/local/www/picluster/docker",
  "server_port": "3000",
  "agent_port": "3001",
  "layout": [
    { "node": "192.168.1.191", "mysql": "-p 3306:3306", "nginx": "-p 80:80" }
  ],
  "hb": [
    { "node": "192.168.1.191", "mysql": "3306", "nginx": "80" }
  ],
  "commandlist": [{
    "SystemUpdate": "pkg update && pkg upgrade -y"
  }],
  "autostart_containers": "enabled",
  "automatic_heartbeat": "enabled",
  "heartbeat_interval": "300000",
  "syslog": "dmesg",
  "web_username": "admin",
  "web_password": "admin",
  "web_connect": "192.168.1.191",
  "web_port": "3003"
}
```

NOTE: for aesthetics, I changed the `picluster_config` environment variable to all caps:

```
cd /usr/local/www/picluster/server
sed -i.bak -e "s/picluster_config/PICLUSTER_CONFIG/g" server.js
```

```
cd ../agent
sed -i.bak -e "s/picluster_config/PICLUSTER_CONFIG/g" agent.js
```

```
cd ../web
sed -i.bak -e "s/picluster_config/PICLUSTER_CONFIG/g" webconsole.js
```

- Install and run server:

NOTE: There is currently a problem with the `npm install` step not installing `microtime`. This can safely be ignored.

```
cd /usr/local/www/picluster/server
npm install
```

- Install and run agent:

NOTE: There is currently a problem with the `npm install` step not installing `microtime`. This can safely be ignored.

```
cd ../agent
npm install
```

- Install and run web console:

```
cd ../web
npm install
```

- Exit back into root shell:

```
exit
```

Init with pm2

- Install pm2:

```
npm install -g pm2
```

- Install the pm2 systemd init script as the picluster user:

```
pm2 startup rcd -u picluster --hp /home/picluster
```

- Switch to the picluster user:

```
su - picluster
```

- Export the picluster config filepath environment variable:

```
export PICLUSTER_CONFIG='/usr/local/www/picluster/config.json'
```

- Start the server, agent, and webconsole scripts:

```
pm2 start /usr/local/www/picluster/server/server.js  
pm2 start /usr/local/www/picluster/agent/agent.js  
pm2 start /usr/local/www/picluster/web/webconsole.js
```

- Save the pm2 session to restart at boot:

```
pm2 save
```

- Kill pm2 in order to test the service starting later on:

```
pm2 kill
```

- Exit back to the root shell:

```
exit
```

- Start and enable pm2 picluster instance at boot:

```
echo 'pm2_picluster_enable="YES"' >> /etc/rc.conf  
service pm2-picluster start
```

Resources

History

#1 - 06/27/2017 11:07 PM - Daniel Curtis

- Description updated
- % Done changed from 0 to 30
- Estimated time set to 1.50 h

#2 - 06/28/2017 04:37 PM - Daniel Curtis

- Description updated
- Status changed from New to In Progress

#3 - 07/09/2017 10:50 PM - Daniel Curtis

- Description updated

#4 - 03/19/2018 08:31 PM - Daniel Curtis

- Status changed from In Progress to Closed