

Vagrant Puppetmaster demo

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Abstract

First goal is to create a test environment for any application or set of applications using a central - but local! - vagrant box running puppetmaster, r10k and puppetdb.

In a different project we're creating a test environment with a combination of Elasticsearch, Logstash, Kibana (ELK-stack), combined with redis for caching. Having your own test environment allows you to develop and test your own puppetmodules, before pushing them on into a CI pipeline.

1 Prerequisites

Your environment should contain:

1. git
2. ruby
3. vagrant
4. virtualbox
5. and finally, some rubygems:
 - (a) vagrant-cachier (optional)
 - (b) vagrant-hostmanager
 - (c) vagrant-vbguest

Example: installing vagrant-cachier:

```
marc:~ marc$ sudo vagrant plugin install vagrant-cachier
```

2 Structure

The puppetmaster functionality is split up in 3 separate repositories.

1. puppetmaster
2. hiera
3. r10k

All three of them, are - separate - git repositories, with different purposes. The *puppetmaster* repo contains a Vagrantfile that serves as our starting point for building a puppetmaster. The other two repositories, *r10k* and *hiera* are being used during the puppetmaster install to create a complete production-like environment of puppetmaster on a vagrant box. Our first goal is to install puppetmaster, so we can leave the *hiera* and *r10k* repo's, for now.

So check out the puppetmaster repository in a directory of your liking.

```
marc:~ marc$ mkdir vagrant
marc:~ marc$ cd vagrant
marc:vagrant marc$ git clone https://github.com/mlambrichs/puppetmaster-vagrant.git --recursive puppetmaster
```

Now, you're ready to install your own puppetmaster.

3 Boxes

4 Step 1: Puppetmaster

4.1 Puppetmaster, r10k, puppetdb and foreman in one go

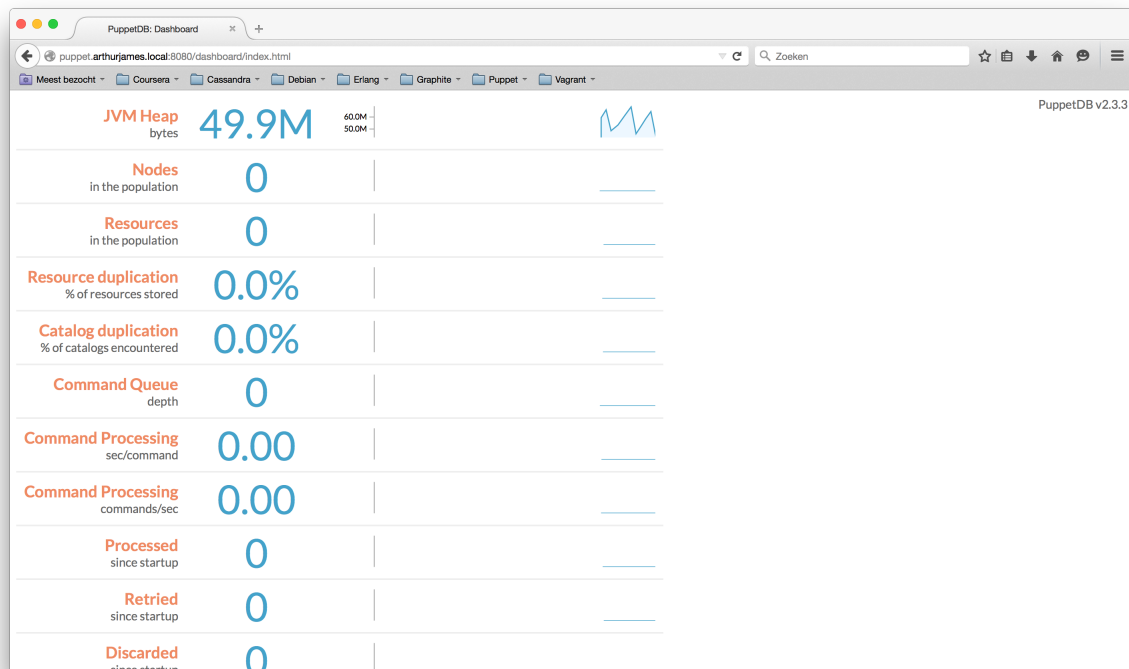
Cd into your puppetmaster-vagrant directory and start up vagrant.

```
marc:~ marc$ cd ~/vagrant/puppetmaster-vagrant
marc:puppetmaster-vagrant marc$ vagrant up
```

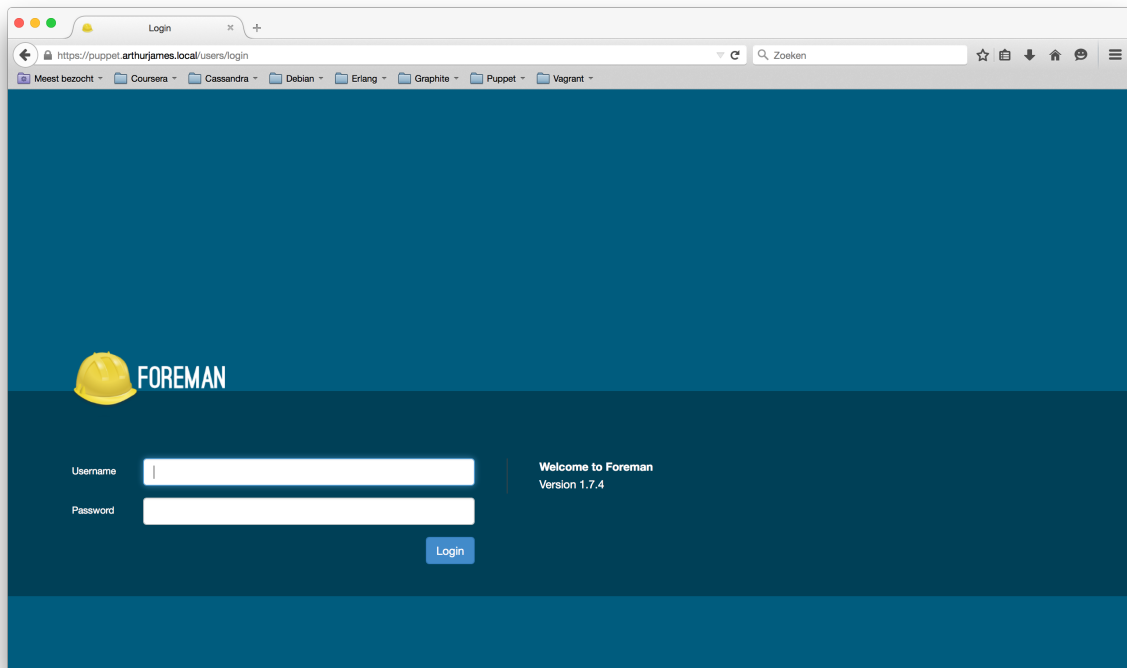
This will start off a lot of output, ending with a *puppet apply* on your vagrant box. Next thing to do, is to check if everything is working.

4.2 Check and doublecheck

First, let's check if your puppetdb is running. Open your browser with <http://puppet.arthurjames.vagrant:8080> and you should see something like this:



Next, check if you can access foreman. On the same host on port 80 you should see:



If you can, check if you can log in to foreman with credentials *admin/changeme*.

Go to Administer > Settings > PuppetDB and replace "puppetdb" in *puppetdb_address* and *puppetdb_dashboard_address* by "localhost".

In Administer > Settings > PuppetD set *puppetdb_enabled* to true.

Probably no nodes have been recognized, so there are two options here:

- wait for 30 min (the default setting inbetween puppet agent runs)
- ssh into your vagrant box to kick off a puppetrun.

```
marc:~ marc$ cd ~/vagrant/puppetmaster-vagrant
marc:puppetmaster-vagrant marc$ vagrant ssh
Linux debian 3.2.0-4-amd64 #1 SMP Debian 3.2.65-1+deb7u1 x86_64

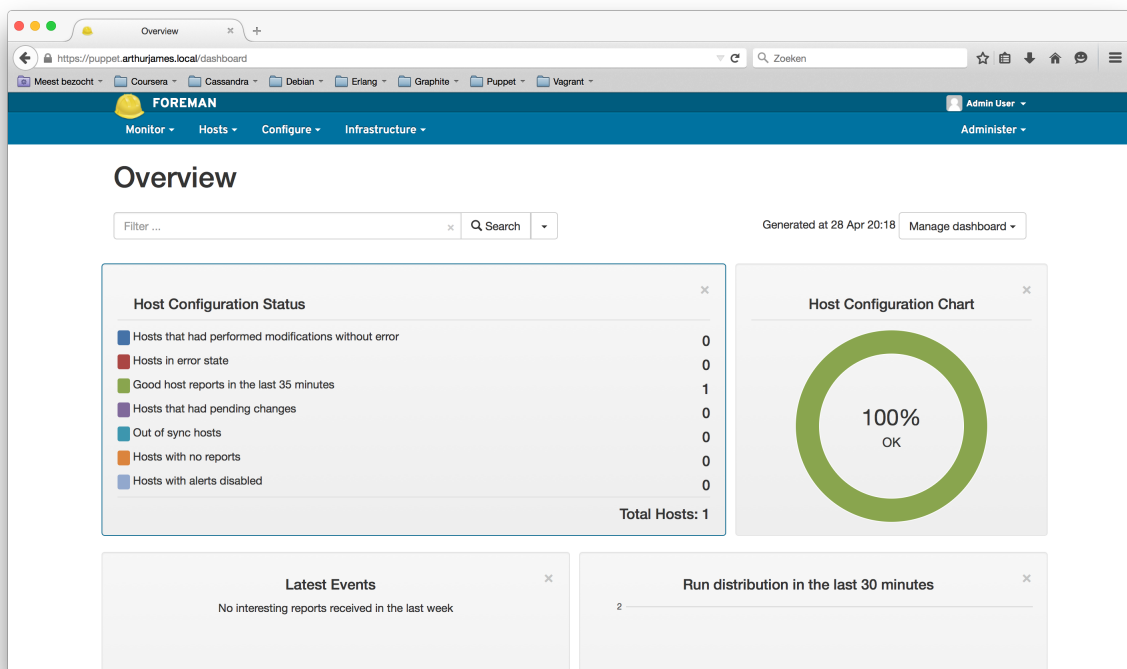
The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Tue Apr 28 12:47:02 2015 from 10.0.2.2
vagrant@puppet:~
```

Now you're logged in, do:

```
vagrant@puppet:~$ sudo puppet agent -v -t
```

After the puppetrun, you should be able to see 1 node defined.



5 Step 2: Elasticsearch box

5.1 native box

6 Clients

6.1 Elasticsearch

6.2 Kibana

6.2.1 Kibana 3

6.2.2 Kibana 4

6.3 Logstash

6.4 Redis