

Lab 03.1: Puppet - Initial Setup

IN719 Systems Administration

Introduction

Puppet is a tool that allows us to centralise and automate the configuration of computers. Set up properly, it will save you time and help you keep your server configurations consistent and accurate. Puppet is an extremely powerful tool.

Puppet uses a central server, called the *puppetmaster*, to manage clients, called *agents*.

1 Set up the puppetmaster

On your management server, use `apt` to install the `puppetmaster` package and its dependencies. Edit the file `/etc/puppet/puppet.conf` and add the following line under the `[master]` section marker:

```
[master]
certname=mgmt-x.foo.org.nz
```

Next, create the directory `/etc/puppet/code/environments/production/manifests/`. In this directory create the file `site.pp`. It should be empty for now.

Restart puppetmaster with the command `sudo systemctl restart puppetmaster`.

2 Installing and connecting an agent

On your db server, use `apt` to install the `puppet` package and its dependencies. Connect your agent to the puppet server manually with the following command:

```
sudo puppet agent --server=mgmt-x.foo.org.nz --no-daemonize --verbose --onetime
```

You should see output like the following:

```
info: Creating a new SSL key for db-x.foo.org.nz
info: Caching certificate for ca
info: Creating a new SSL certificate request for db-x.foo.org.nz
info: Certificate Request fingerprint (md5): A1:2C:E1:C1:2F:C5:AE:34:A9:A5:4F:C9:CA:7A:16:C6
```

Now, on the puppetmaster, run the command `sudo puppet cert --list`. You should see the signing request for your agent. Sign the key with the command `sudo puppet cert --sign --all`.

3 Sample agent configuration

Now we want to get Puppet to do something on our systems. To begin, make sure that `vim` is not installed on your db server by running `sudo apt remove vim`.

Next edit the `site.pp` you created earlier on your management server and put the following text in it:

```
node 'db-x.foo.org.nz' {  
  package { 'vim': ensure => present }  
}
```

This directs Puppet to be sure that `vim` is installed on our agent - Or at least it will, when you add the following line to `/etc/puppet/manifests/site.pp`:

```
import 'nodes.pp'
```

It is not necessary to restart the puppetmaster, but you will need to re-run the agent on the db server using the same command we used earlier since we're using it interactively. Log into your db server in another session and check to see that `vim` was installed.