## Lab 3. Schedule Cron with Puppet


In this lab, we will create a cron job to run bash script regularly . Of course, we could do this work manually, but isn't this course partly about the advantages of automation?

#### Setup Cron

Our Puppet manifest in `run-puppet-cron.pp` first install cron package and start cron service, copies bash script using a `file` resource, and then sets up a cron job to run it every 2 minutes, using a `cron` resource.

```
# Set up regular Puppet runs

package { 'cron':
  ensure => installed,
}

service { 'cron':
  ensure  => running,
  enable  => true,
}

file { '/usr/local/bin/run-puppet-cron':
  source => '/examples/run-puppet-cron.sh',
  mode   => '0755',
}

cron { 'run-puppet-cron':
  command => '/usr/local/bin/run-puppet-cron',
  hour    => '*',
  minute  => '*/2',
}
```

#### Applying the run-puppet-cron manifest

`puppet apply /examples/run-puppet-cron.pp`

You can see from Puppet's output that it has created the `/usr/local/bin/run-puppet-cron` script and the `run-puppet-cron` cron job. This will now run automatically every 2 minutes, pull any new changes from the Git repo, and apply the updated manifest.

### The run-puppet-cron script

run-puppet-cron script appends a line to `/tmp/cron.txt` file everytime it runs.

```
#!/bin/bash
echo '[Puppet Cron] Date:' $(date) >> /tmp/cron.txt
```

For now, just note that the `cron` resource has a name ( `run-puppet-cron` ), which is just for the benefit of us humans, to remind us what it does, and it also has a `command` to run and `hour` and `minute` attributes to control when it runs. The value `*/2` tells `cron` to run the job every 2 minutes.

#### Task: Testing automatic Puppet runs

Verify that following file is updated after sometime by cron we setup using puppet.

`cat /tmp/cron.txt`

**Task: Testing automatic Puppet runs**

To prove that the automatic Puppet run works, make a change to your manifest which creates a file ( `/tmp/hello.txt` , for example) and run puppet apply command. Wait 2 minutes, and check your target node. The file should be present. If not, something is broken. To troubleshoot the problem, try running `sudo run-puppet-cron` manually. If this works, check that the cron job is correctly installed by running `sudo crontab -l` . It should look something like the following:

```
# HEADER: This file was autogenerated at 2017-04-05 01:46:03 -0700 by puppet.
# HEADER: While it can still be managed manually, it is definitely not recommended.
# HEADER: Note particularly that the comments starting with 'Puppet Name' should
# HEADER: not be deleted, as doing so could cause duplicate cron jobs.
# Puppet Name: run-puppet-cron
*/2 * * * * /usr/local/bin/run-puppet-cron
```

## Summary

In this lab, we wrote a shell script and a Puppet manifest to install this script and run it regularly from `cron` .