

OPS635 Fall 2019 Assignment 1

In this assignment you will use puppet to configure several CentOS virtual machines to provide a typical network service, along with a nagios installation that will monitor the resources that make up that service.

Note that this is a solo assignment.

Network Structure

You may choose the hostnames and addresses of your individual machines, provided they fit within the domain name and network structure provided on blackboard.

The Service

Your network must include a master DNS server (non-recursive, only reachable by your own machines), two slave servers (non-recursive, reachable by anyone), and one caching-only forwarder (recursive, only reachable by your own machines).

Note that most of the details of configuring this service are being left up to you. The focus of this assignment is on applying puppet and nagios. The expectation is that you, as a capable administrator, will make sensible decisions with regards to how you configure this service. Be prepared to explain why you chose to use the configuration options you did (as the senior administrator may have questions about your configuration).

Puppet Manifest

Create a machine not involved in providing the service described above. It will act as the puppetmaster, with the other virtual machines acting as agents of that master. The manifest will configure the agents to match the specifications of the service described above. You may do this with any combination of manifests and modules you write yourself or install from the [puppet forge](#).

Nagios

The same machine acting as the puppet master will act as a nagios server, monitoring the other virtual machines, and the services they provide. You may do this with any combination of plugins you write yourself, official plugins, or community written plugins from the [exchange](#).

Note that it is not enough to check that a service is running. You must monitor configuration & behaviour of each service as well. A good solution will make use of NRPE, notifications, escalations, time periods, event handlers, service groups, and host groups.

Submission

Upload all configuration files used by nagios and puppet, along with an explanation document (approx. 1000 words) you would provide to another admin to guide them in the use of your nagios and puppet setup.



[This work is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.](https://creativecommons.org/licenses/by-nc-nd/4.0/)