**AIM:** Configuration Management using Puppet.

DESCRIPTION:

What is Puppet?

Puppet is a Configuration Management tool that is used for deploying, configuring and managing servers. It performs the following functions:

* Defining distinct configurations for each and every host, and continuously checking and confirming whether the required configuration is in place and is not altered (if altered Puppet will revert back to the required configuration) on the host.
* Dynamic scaling-up and scaling-down of machines.
* Providing control over all your configured machines, so a centralized (master-server or repo-based) change gets propagated to all, automatically.

Puppet uses a Master Slave architecture in which the Master and Slave communicate through a secure encrypted channel with the help of SSL.

Configuration Management:

System Administrators usually perform repetitive tasks such as installing servers, configuring those servers, etc. They can automate this task, by writing scripts, but it is a very hectic job when you are working on a large infrastructure. To solve this problem, Configuration Management was introduced. Configuration Management is the practice of handling changes systematically so that a system maintains its integrity over time. Configuration Management (CM) ensures that the current design and build state of the system is known, good & trusted; and doesn’t rely on the tacit knowledge of the development team. It allows access to an accurate historical record of system state for project management and audit purposes. Configuration Management overcame the following challenges:

* Figuring out which components to change when requirements change.
* Redoing an implementation because the requirements have changed since the last implementation.
* Reverting to a previous version of the component if you have replaced with a new but flawed version.
* Replacing the wrong component because you couldn’t accurately determine which component needed replacing.