Experiment 14

Roll No.	70
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Class	D15-B
Subject	DevOps Lab
LO Mapped	LO1: To understand the fundamentals of DevOps engineering and be fully proficient with DevOps terminologies, concepts, benefits, and deployment options to meet your business requirements LO2: To obtain complete knowledge of the "version control system" to effectively track changes augmented with Git and GitHub

Aim: To provision a LAMP/MEAN Stack using Puppet Manifest.

Theory:

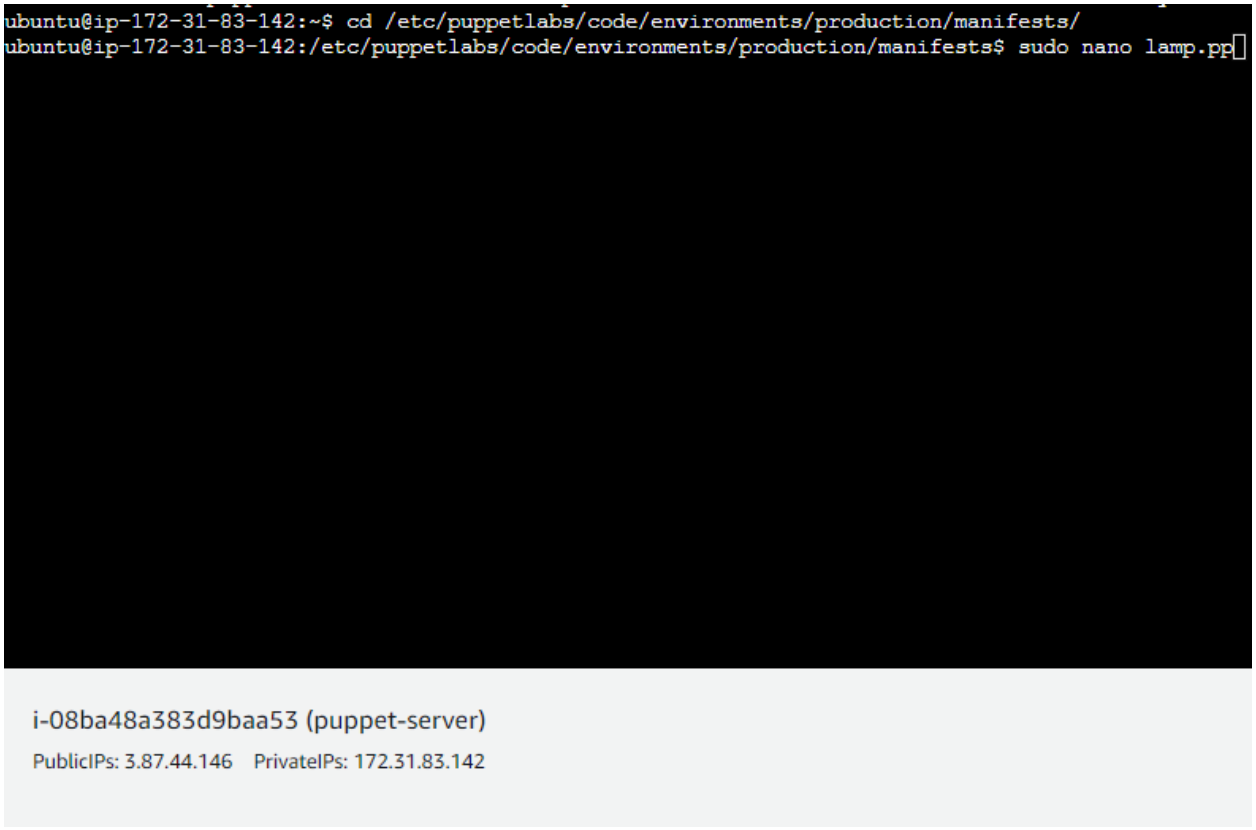
LAMP stack is an open source and free stack for web development that contains Linux OS, Apache web server, MySQL database, and PHP. It is still a popular choice among some developers because of its open-source nature and ease of deployment and customization.
It has a large community for support and works as an alternative to costly software packages. Both individuals and enterprise developers can use it for the development of web apps and servers.

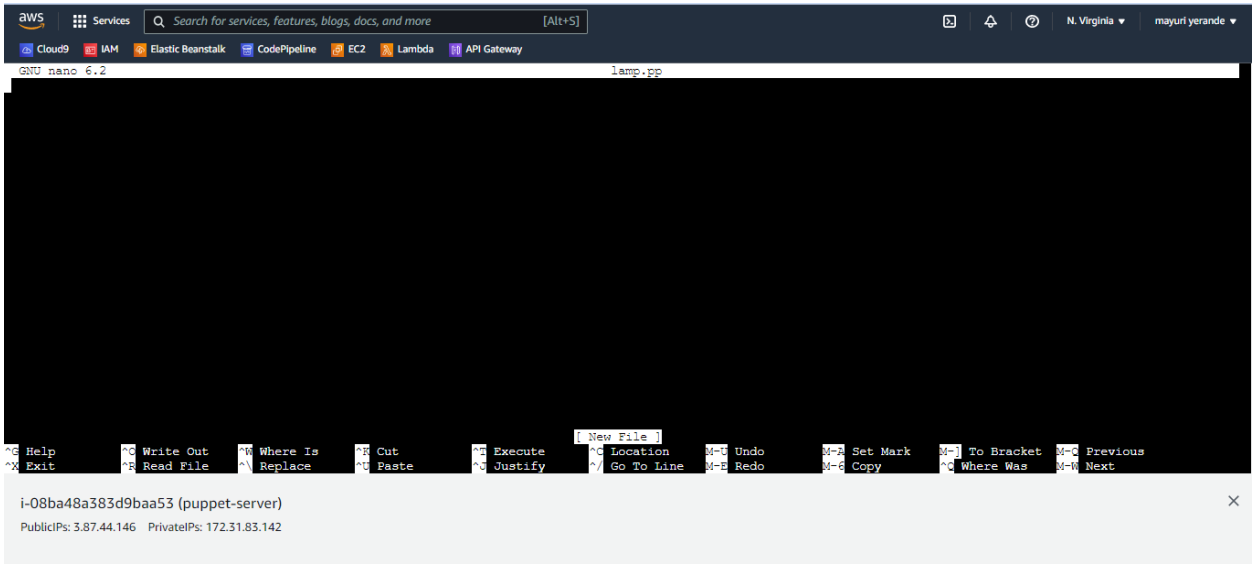
MEAN stack, on the other hand, contains MongoDB, Express.js, Angular.js and Node.js. This combination makes MEAN a simple and easy-to-use stack for web development.
What makes MEAN different and unique from LAMP is that it is entirely based on JavaScript. Big firms like Google, Uber and Netflix are using MEAN to power their web apps.

MEAN stack vs LAMP stack
One of the main reasons the developers are making their move from LAMP stack is because it is less flexible than MEAN. When it comes to simplicity and flexibility, MEAN is far better than LAMP.

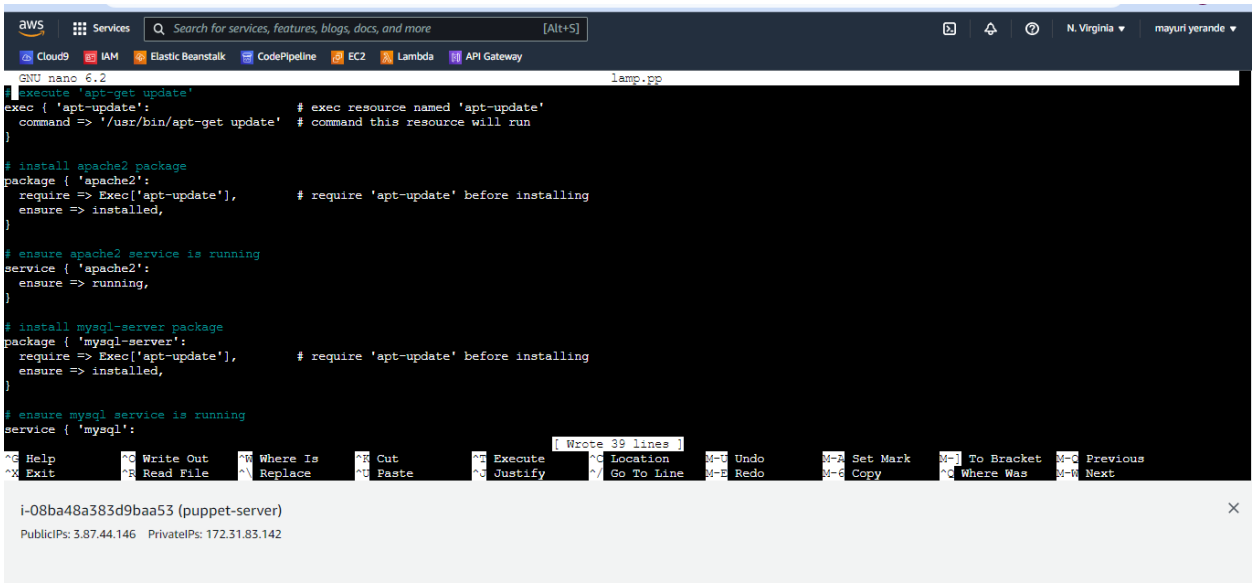
Implementation:

- On server: cd /etc/puppetlabs/code/environments/production/manifests/
- On server: sudo nano lamp.pp



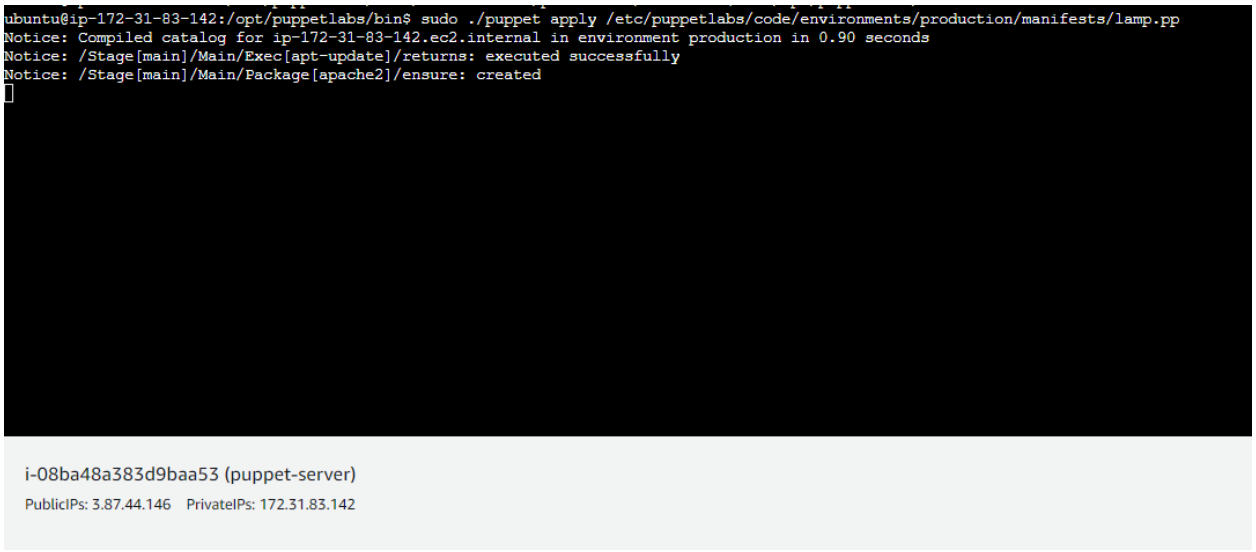


- Go to link: https://www.github.com/sreekeshiyer/sample-puppet-files/blob/main/lamp.pp
- Copy the code in that file and paste it in our nano file



- Ctrl s to save and Ctrl x to exit

- On server: cd /opt/puppetlabs/bin
- Then run this command



- Once done, go back to the EC2 Console, copy the public IP address of the client machine and put it in the browser. The URL is - http://ip_address_of_your_client/info.php
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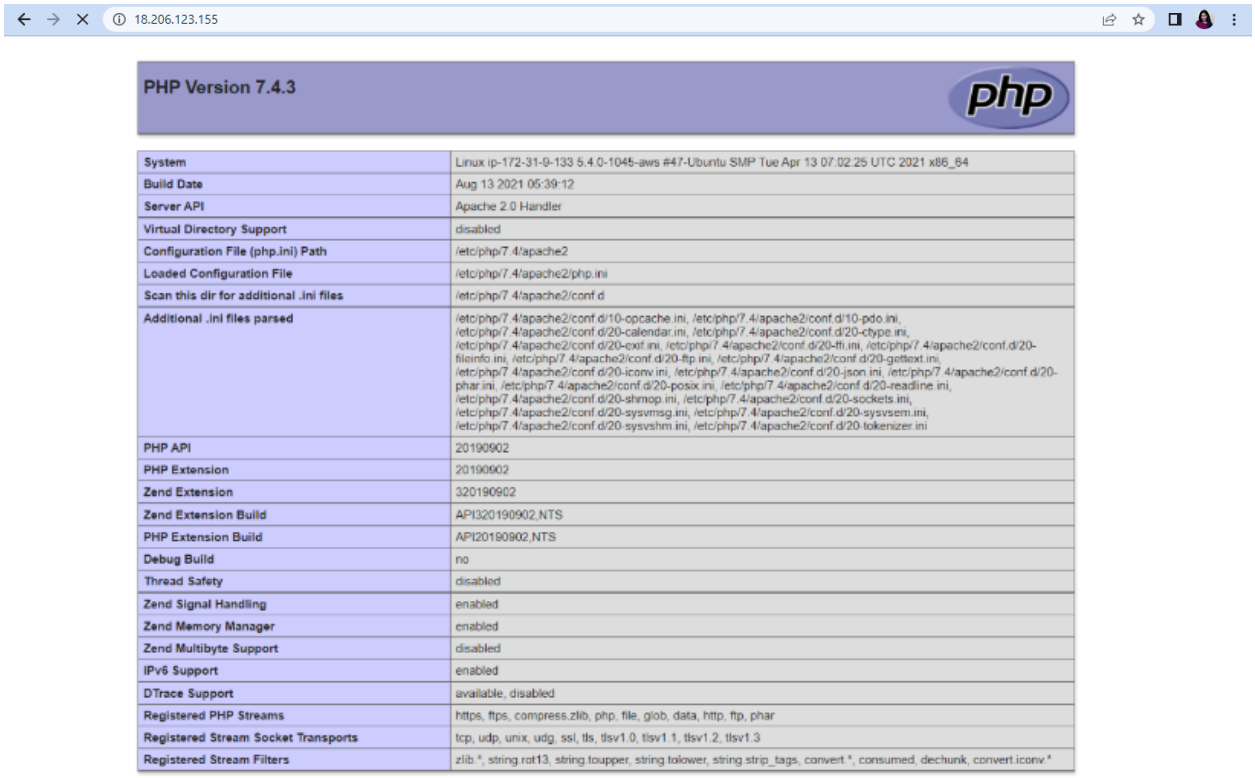

System	Linux ip-172-31-9-133 5.4.0-1045-aws #47-Ubuntu SMP Tue Apr 13 07:02:25 UTC 2021 x86_64
Build Date	Aug 13 2021 05:39:12
Server API	Apache 2.0 Handler
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc/php/7.4/apache2
Loaded Configuration File	/etc/php/7.4/apache2/php.ini
Scan this dir for additional .ini files	/etc/php/7.4/apache2/conf.d
Additional .ini files parsed	/etc/php/7.4/apache2/conf.d/10-opcache.ini, /etc/php/7.4/apache2/conf.d/10-pdo.ini, /etc/php/7.4/apache2/conf.d/20-calendar.ini, /etc/php/7.4/apache2/conf.d/20-ctype.ini, /etc/php/7.4/apache2/conf.d/20-exif.ini, /etc/php/7.4/apache2/conf.d/20-ffi.ini, /etc/php/7.4/apache2/conf.d/20-fileinfo.ini, /etc/php/7.4/apache2/conf.d/20-ftp.ini, /etc/php/7.4/apache2/conf.d/20-gettext.ini, /etc/php/7.4/apache2/conf.d/20-iconv.ini, /etc/php/7.4/apache2/conf.d/20-json.ini, /etc/php/7.4/apache2/conf.d/20-phar.ini, /etc/php/7.4/apache2/conf.d/20-posix.ini, /etc/php/7.4/apache2/conf.d/20-readline.ini, /etc/php/7.4/apache2/conf.d/20-shmop.ini, /etc/php/7.4/apache2/conf.d/20-sockets.ini, /etc/php/7.4/apache2/conf.d/20-sysvmsg.ini, /etc/php/7.4/apache2/conf.d/20-sysvsem.ini, /etc/php/7.4/apache2/conf.d/20-sysvshm.ini, /etc/php/7.4/apache2/conf.d/20-tokenizer.ini
PHP API	20190902
PHP Extension	20190902
Zend Extension	320190902
Zend Extension Build	API320190902,NTS
PHP Extension Build	API20190902,NTS
Debug Build	no
Thread Safety	disabled
Zend Signal Handling	enabled
Zend Memory Manager	enabled
Zend Multibyte Support	disabled
IPv6 Support	enabled
DTrace Support	available, disabled
Registered PHP Streams	https, ftps, compress.zlib, php, file, glob, data, http, ftp, phar
Registered Stream Socket Transports	tcp, udp, unix, udg, ssl, tls, tlsv1.0, tlsv1.1, tlsv1.2, tlsv1.3
Registered Stream Filters	zlib.*, string.rot13, string.toupper, string.tolower, string.strip_tags, convert.*, consumed, dechunk, convert.iconv.*

- This verifies the provision of a LAMP stack using puppet

Conclusion: Thus, we learned what a LAMP stack is and learned how to provision it using puppet scripts.