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Experiment 2

D.Bhargav

AIM: To create a LAMP instance in the AWS CLI.

PROCEDURE:

1. Firstly, type `sudo su` to become the root user.
2. To update all the packages in your instance type “`yum update -y`”.

```

root@ip-172-31-32-239/home/ec2-user
Using username "ec2-user".
Authenticating with public key "imported-openssh-key"
Last login: Sat Aug 27 04:29:33 2022 from 106.208.16.252

 _ _ | _ _ | _ _ |
 _ _ | _ _ | _ _ | Amazon Linux 2 AMI

https://aws.amazon.com/amazon-linux-2/
3 package(s) needed for security, out of 7 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-32-239 ~]$
[ec2-user@ip-172-31-32-239 ~]$
[ec2-user@ip-172-31-32-239 ~]$
[ec2-user@ip-172-31-32-239 ~]$ sudo su
[root@ip-172-31-32-239 ec2-user]# yum update -y
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core | 3.7 kB 00:00:00
Resolving Dependencies
--> Running transaction check
--> Package chrony.x86_64 0:4.0-3.amzn2.0.2 will be updated
--> Package chrony.x86_64 0:4.2-5.amzn2.0.2 will be an update
--> Package dhclient.x86_64 12:4.2.5-77.amzn2.1.6 will be updated
--> Package dhclient.x86_64 12:4.2.5-79.amzn2.1.1 will be an update
--> Package dhcp-common.x86_64 12:4.2.5-77.amzn2.1.6 will be updated
--> Package dhcp-common.x86_64 12:4.2.5-79.amzn2.1.1 will be an update
--> Package dhcp-libs.x86_64 12:4.2.5-77.amzn2.1.6 will be updated
--> Package dhcp-libs.x86_64 12:4.2.5-79.amzn2.1.1 will be an update
--> Package gnupg2.x86_64 0:2.0.22-5.amzn2.0.4 will be updated
--> Package gnupg2.x86_64 0:2.0.22-5.amzn2.0.5 will be an update
--> Package kernel.x86_64 0:5.10.135-122.509.amzn2 will be installed
--> Package kernel-tools.x86_64 0:5.10.130-118.517.amzn2 will be updated
--> Package kernel-tools.x86_64 0:5.10.135-122.509.amzn2 will be an update
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package Arch Version Repository Size
=====
Installing:
kernel x86_64 5.10.135-122.509.amzn2 amzn2extra-kernel-5.10 32 M
Updating:
chrony x86_64 4.2-5.amzn2.0.2 amzn2-core 302 k
dhclient x86_64 12:4.2.5-79.amzn2.1.1 amzn2-core 287 k
dhcp-common x86_64 12:4.2.5-79.amzn2.1.1 amzn2-core 177 k
dhcp-libs x86_64 12:4.2.5-79.amzn2.1.1 amzn2-core 132 k
gnupg2 x86_64 2.0.22-5.amzn2.0.5 amzn2-core 1.5 M
kernel-tools x86_64 5.10.135-122.509.amzn2 amzn2extra-kernel-5.10 176 k

```

3. To install Apache server in linux, type “`yum install httpd`”.

```
[root@ip-172-31-32-239 ec2-user]#
[root@ip-172-31-32-239 ec2-user]#
[root@ip-172-31-32-239 ec2-user]# yum install httpd
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
--> Package httpd.x86_64 0:2.4.54-1.amzn2 will be installed
--> Processing Dependency: httpd-tools = 2.4.54-1.amzn2 for package: httpd-2.4.54-1.amzn2.x86_64
--> Processing Dependency: httpd-filesystem = 2.4.54-1.amzn2 for package: httpd-2.4.54-1.amzn2.x86_64
--> Processing Dependency: system-logos-httpd for package: httpd-2.4.54-1.amzn2.x86_64
--> Processing Dependency: mod_http2 for package: httpd-2.4.54-1.amzn2.x86_64
--> Processing Dependency: httpd-filesystem for package: httpd-2.4.54-1.amzn2.x86_64
--> Processing Dependency: /etc/mime.types for package: httpd-2.4.54-1.amzn2.x86_64
--> Processing Dependency: libaprutil-1.so.0()(64bit) for package: httpd-2.4.54-1.amzn2.x86_64
--> Processing Dependency: libapr-1.so.0()(64bit) for package: httpd-2.4.54-1.amzn2.x86_64
--> Running transaction check
--> Package apr.x86_64 0:1.7.0-9.amzn2 will be installed
--> Package apr-util.x86_64 0:1.6.1-5.amzn2.0.2 will be installed
--> Processing Dependency: apr-util-bdb(x86-64) = 1.6.1-5.amzn2.0.2 for package: apr-util-1.6.1-5.amzn2.0.2.x86_64
--> Package generic-logos-httpd.noarch 0:18.0.0-4.amzn2 will be installed
--> Package httpd-filesystem.noarch 0:2.4.54-1.amzn2 will be installed
--> Package httpd-tools.x86_64 0:2.4.54-1.amzn2 will be installed
--> Package mailcap.noarch 0:2.1.41-2.amzn2 will be installed
--> Package mod_http2.x86_64 0:1.15.19-1.amzn2.0.1 will be installed
--> Running transaction check
--> Package apr-util-bdb.x86_64 0:1.6.1-5.amzn2.0.2 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package Arch Version Repository Size
=====
```

4. To install mysql or mariadb type “yum install mariadb mariadb-server”.

```
[root@ip-172-31-32-239 ec2-user]#
[root@ip-172-31-32-239 ec2-user]#
[root@ip-172-31-32-239 ec2-user]#
[root@ip-172-31-32-239 ec2-user]#
[root@ip-172-31-32-239 ec2-user]# yum install mariadb mariadb-server
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
--> Package mariadb.x86_64 1:5.5.68-1.amzn2 will be installed
--> Package mariadb-server.x86_64 1:5.5.68-1.amzn2 will be installed
--> Processing Dependency: perl-DBI for package: 1:mariadb-server-5.5.68-1.amzn2.x86_64
--> Processing Dependency: perl-DBD-MySQL for package: 1:mariadb-server-5.5.68-1.amzn2.x86_64
--> Processing Dependency: perl(Data:Dumper) for package: 1:mariadb-server-5.5.68-1.amzn2.x86_64
--> Processing Dependency: perl(DBI) for package: 1:mariadb-server-5.5.68-1.amzn2.x86_64
--> Running transaction check
--> Package perl-DBD-MySQL.x86_64 0:4.023-6.amzn2 will be installed
--> Package perl-DBI.x86_64 0:1.627-4.amzn2.0.2 will be installed
--> Processing Dependency: perl(RPC::PlServer) >= 0.2001 for package: perl-DBI-1.627-4.amzn2.0.2.x86_64
--> Processing Dependency: perl(RPC::PlClient) >= 0.2000 for package: perl-DBI-1.627-4.amzn2.0.2.x86_64
--> Package perl-Data-Dumper.x86_64 0:2.145-3.amzn2.0.2 will be installed
--> Running transaction check
--> Package perl-PlRPC.noarch 0:0.2020-14.amzn2 will be installed
--> Processing Dependency: perl(Net::Daemon) >= 0.13 for package: perl-PlRPC-0.2020-14.amzn2.noarch
```

5. To install php, type “yum install php php-mysql”.

```
[root@ip-172-31-32-239 ec2-user]#
[root@ip-172-31-32-239 ec2-user]#
[root@ip-172-31-32-239 ec2-user]# yum install php php-mysql
Loaded plugins: extras suggestions, langpacks, priorities, update-motd
Package php-mysql is obsoleted by php-mysqld, trying to install php-mysqld-5.4.16-46.amzn2.0.2.x86_64 instead
Resolving Dependencies
--> Running transaction check
---> Package php.x86_64 0:5.4.16-46.amzn2.0.2 will be installed
--> Processing Dependency: php-cli(x86-64) = 5.4.16-46.amzn2.0.2 for package: php-5.4.16-46.amzn2.0.2.x86_64
--> Processing Dependency: php-common(x86-64) = 5.4.16-46.amzn2.0.2 for package: php-5.4.16-46.amzn2.0.2.x86_64
---> Package php-mysqld.x86_64 0:5.4.16-46.amzn2.0.2 will be installed
--> Processing Dependency: php-pdo(x86-64) = 5.4.16-46.amzn2.0.2 for package: php-mysqld-5.4.16-46.amzn2.0.2.x86_64
--> Running transaction check
---> Package php-cli.x86_64 0:5.4.16-46.amzn2.0.2 will be installed
---> Package php-common.x86_64 0:5.4.16-46.amzn2.0.2 will be installed
--> Processing Dependency: libzip.so.2()(64bit) for package: php-common-5.4.16-46.amzn2.0.2.x86_64
```

6. Type “yum search php” to see all the packages installed in the server.

```
[root@ip-172-31-32-239 ec2-user]#
[root@ip-172-31-32-239 ec2-user]#
[root@ip-172-31-32-239 ec2-user]# yum search php
Loaded plugins: extras suggestions, langpacks, priorities, update-motd
===== N/S matched: php =====
graphviz-php.x86_64 : PHP extension for graphviz
php.x86_64 : PHP scripting language for creating dynamic web sites
php-bcmath.x86_64 : A module for PHP applications for using the bcmath library
php-cli.x86_64 : Command-line interface for PHP
php-common.x86_64 : Common files for PHP
php-dba.x86_64 : A database abstraction layer module for PHP applications
php-devel.x86_64 : Files needed for building PHP extensions
php-embedded.x86_64 : PHP library for embedding in applications
php-enchant.x86_64 : Enchant spelling extension for PHP applications
php-fpm.x86_64 : PHP FastCGI Process Manager
php-gd.x86_64 : A module for PHP applications for using the gd graphics library
php-intl.x86_64 : Internationalization extension for PHP applications
php-ldap.x86_64 : A module for PHP applications that use LDAP
php-mbstring.x86_64 : A module for PHP applications which need multi-byte string handling
php-mysql.x86_64 : A module for PHP applications that use MySQL databases
php-mysqld.x86_64 : A module for PHP applications that use MySQL databases
php-odbc.x86_64 : A module for PHP applications that use ODBC databases
php-pdo.x86_64 : A database access abstraction module for PHP applications
php-pear.noarch : PHP Extension and Application Repository framework
php-pgsql.x86_64 : A PostgreSQL database module for PHP
php-process.x86_64 : Modules for PHP script using system process interfaces
php-pspell.x86_64 : A module for PHP applications for using pspell interfaces
php-recode.x86_64 : A module for PHP applications for using the recode library
php-snmp.x86_64 : A module for PHP applications that query SNMP-managed devices
php-soap.x86_64 : A module for PHP applications that use the SOAP protocol
php-xml.x86_64 : A module for PHP applications which use XML
php-xmlrpc.x86_64 : A module for PHP applications which use the XML-RPC protocol
rrdtool-php.x86_64 : PHP RRDtool bindings
uuid-php.x86_64 : PHP support for Universally Unique Identifier library
php-pecl-memcache.x86_64 : Extension to work with the Memcached caching daemon
```

7. Enabling the mariadb server.

```
[root@ip-172-31-32-239 ec2-user]#
[root@ip-172-31-32-239 ec2-user]# systemctl start mariadb
[root@ip-172-31-32-239 ec2-user]# systemctl enable mariadb
Created symlink from /etc/systemd/system/multi-user.target.wants/mariadb.service to /usr/lib/systemd/system/mariadb.service.
[root@ip-172-31-32-239 ec2-user]#
[root@ip-172-31-32-239 ec2-user]#
[root@ip-172-31-32-239 ec2-user]#
[root@ip-172-31-32-239 ec2-user]#
```

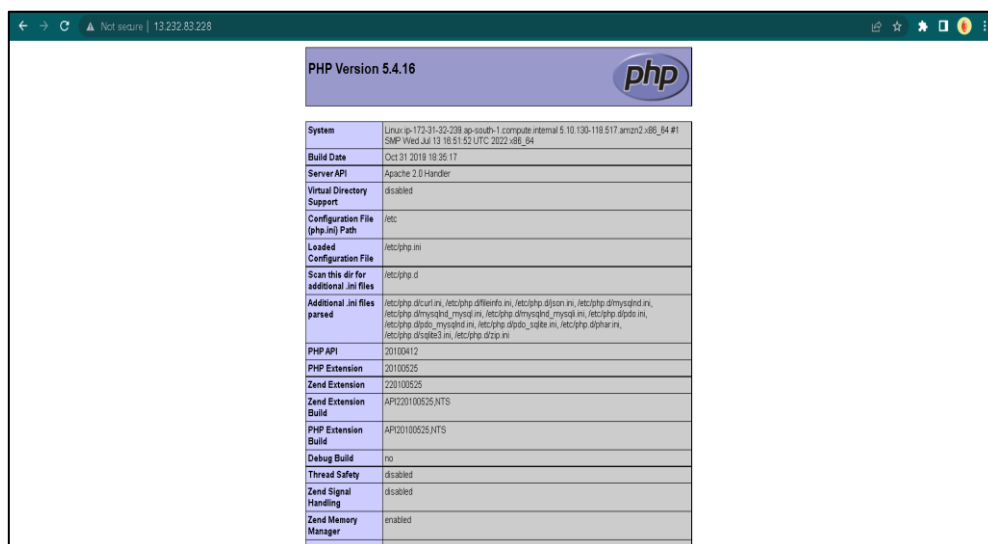
8. After enabling httpd (apache server) , go to the directory where cd /var/www/html/

9. Go to vim and type “<?php phpinfo(); ?>”.

```
root@ip-172-31-32-239:/var/www/html
[root@ip-172-31-32-239 ec2-user]# cd /var/www/html/
[root@ip-172-31-32-239 html]# ls
[root@ip-172-31-32-239 html]# pwd
/var/www/html
[root@ip-172-31-32-239 html]#
[root@ip-172-31-32-239 html]#
[root@ip-172-31-32-239 html]#
[root@ip-172-31-32-239 html]# vim index.php
```

Copy the public ip address or public domain name from the console and paste in the web browser.

We get the following output.



RESULT:

LAMP instance was successfully created and executed in AWS CLI.