

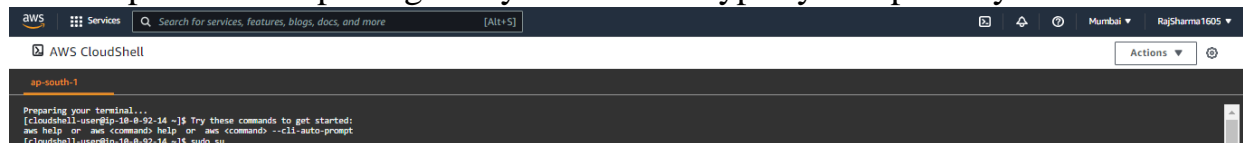
DCN Experiment -2

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

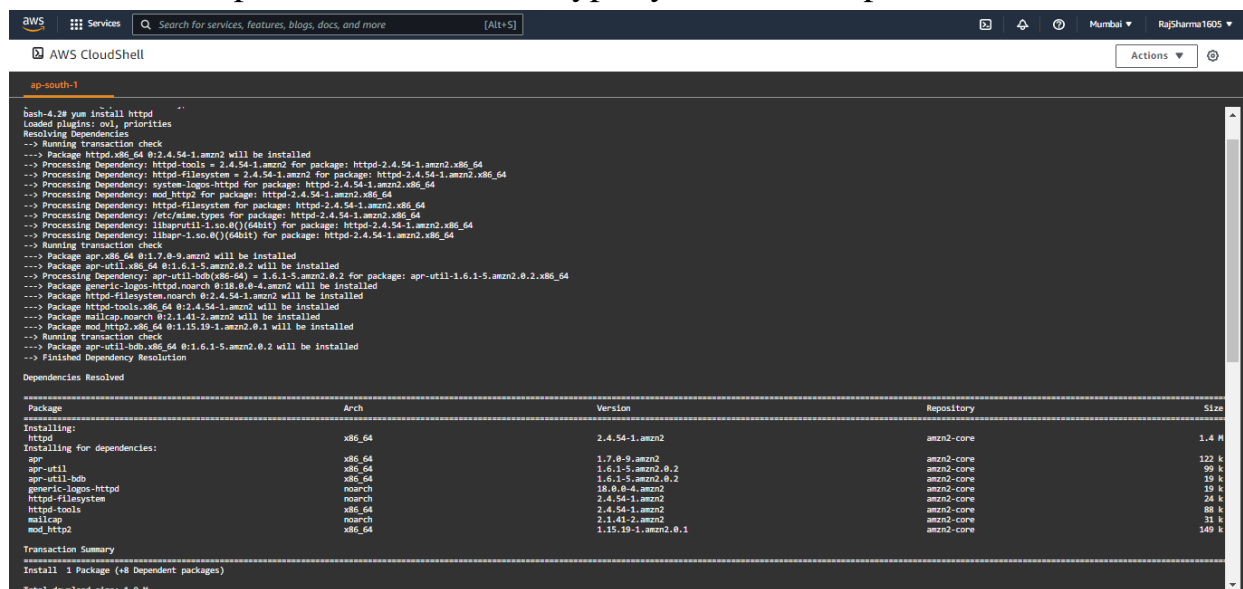
PROCEDURE:

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



```
aws
Services
Search for services, features, blogs, docs, and more [Alt+S]
Mumbai RajSharma1605
AWS CloudShell
ap-south-1
Preparing your terminal...
[cloudshell-user@ip-18-0-92-14 ~]$ Try these commands to get started:
aws help or aws <command> help or aws <command> --cli-auto-prompt
[cloudshell-user@ip-18-0-92-14 ~]$ sudo su
```

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



```
aws
Services
Search for services, features, blogs, docs, and more [Alt+S]
Mumbai RajSharma1605
AWS CloudShell
ap-south-1
bash-4.2# yum install httpd
Loaded plugins: ovl, priorities
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: httpdfilesystem = 2.4.54-1.amzn2 for package: httpd-2.4.54-1.amzn2.x86_64
--> Processing Dependency: sysvinit-httpd for package: httpd-2.4.54-1.amzn2.x86_64
--> Processing Dependency: mod_httpd for package: httpd-2.4.54-1.amzn2.x86_64
--> Processing Dependency: httpdfilesystem for package: httpd-2.4.54-1.amzn2.x86_64
--> Processing Dependency: /etc/xinetd.conf for package: httpd-2.4.54-1.amzn2.x86_64
--> Processing Dependency: libaprutil1-1.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-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_httpd.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
-----
Installing:
httpd x86_64 2.4.54-1.amzn2 amzn2-core 1.4 M
Installing for dependencies:
apr x86_64 1.7.0-9.amzn2 amzn2-core 122 k
apr-util x86_64 1.6.1-5.amzn2.0.2 amzn2-core 99 k
apr-util-bdb x86_64 1.6.1-5.amzn2.0.2 amzn2-core 19 k
generic-logos-httpd noarch 18.0.0-4.amzn2 amzn2-core 19 k
httpdfilesystem noarch 2.4.54-1.amzn2 amzn2-core 24 k
httpd-tools x86_64 2.4.54-1.amzn2 amzn2-core 88 k
mailcap noarch 2.1.41-2.amzn2 amzn2-core 31 k
mod_httpd x86_64 1.15.19-1.amzn2.0.1 amzn2-core 149 k

Transaction Summary
Install 1 Package (+8 Dependent packages)
Total download size: 1.9 M
```

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

```
AWS Services Search for services, features, blogs, docs, and more [Alt+S] Mumbai RajSharma1605

AWS CloudShell Actions

ap-south-1

ap-ec2.x86_64 0:1.7.0-9.amzn2 ap-util.x86_64 0:1.6.1-5.amzn2.0.2 ap-util-bdb.x86_64 0:1.6.1-5.amzn2.0.2 generic-logos-httpd.noarch 0:18.0.0-4.amzn2 httpdfilesystem.noarch 0:2.4.54-1.amzn2 httpd-tools.x86_64 0:2.4.54-1.amzn2
mailcap.noarch 0:2.1.41-2.amzn2 mod_httpd.x86_64 0:1.15.19-1.amzn2.0.1

Complete!
bash-4.2# yum install mariadb mariadb-server
Loaded plugins: ovl, priorities
Package 1:mariadb-5.5.68-1.amzn2.x86_64 already installed and latest version
Resolving Dependencies
--> Running transaction check
--> 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
--> Processing Dependency: libaio.so.1(LIBAIO_0.4)(64bit) for package: 1:mariadb-server-5.5.68-1.amzn2.x86_64
--> Processing Dependency: libaio.so.1(LIBAIO_0.1)(64bit) for package: 1:mariadb-server-5.5.68-1.amzn2.x86_64
--> Processing Dependency: libaio.so.1()(64bit) for package: 1:mariadb-server-5.5.68-1.amzn2.x86_64
--> Running transaction check
--> Package libaio.x86_64 0:0.3.109-13.amzn2.0.2 will be installed
--> 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:PISTon) >= 0.2001 for package: perl-DBI-1.627-4.amzn2.0.2.x86_64
--> Processing Dependency: perl(Data:Dumper) >= 0.2008 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-RPC-PISTon.noarch 0:0.2028-14.amzn2 will be installed
--> Processing Dependency: perl(Net:Daemon) >= 0.13 for package: perl-RPC-PISTon-0.2028-14.amzn2.noarch
--> Processing Dependency: perl(Net:Daemon:Test) for package: perl-RPC-PISTon-0.2028-14.amzn2.noarch
--> Processing Dependency: perl(Net:Daemon:IO) for package: perl-RPC-PISTon-0.2028-14.amzn2.noarch
--> Processing Dependency: perl(Compress:Zlib) for package: perl-RPC-PISTon-0.2028-14.amzn2.noarch
--> Running transaction check
--> Package perl-IO-Compress.noarch 0:2.061-2.amzn2 will be installed
--> Processing Dependency: perl(Compress:Raw:Zlib) >= 2.061 for package: perl-IO-Compress-2.061-2.amzn2.noarch
--> Processing Dependency: perl(Compress:Raw:Rzip2) >= 2.061 for package: perl-IO-Compress-2.061-2.amzn2.noarch
--> Package perl-Net-Daemon.noarch 0:0.48-5.amzn2 will be installed
--> Running transaction check
--> Package perl-Compress-Raw-Rzip2.x86_64 0:2.061-3.amzn2.0.2 will be installed
--> Package perl-Compress-Raw-Zlib.x86_64 1:2.061-4.amzn2.0.2 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package Arch Version Repository Size
=====
Installing:
mariadb-server x86_64 1:5.5.68-1.amzn2 amzn2-core 11 M
Installing for dependencies:
=====
```

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

```
AWS Services Search for services, features, blogs, docs, and more [Alt+S] Mumbai RajSharma1605

AWS CloudShell Actions

ap-south-1

Installed:
mariadb-server.x86_64 1:5.5.68-1.amzn2

Dependency Installed:
libaio.x86_64 0:0.3.109-13.amzn2.0.2 perl-Compress-Raw-Rzip2.x86_64 0:2.061-3.amzn2.0.2 perl-Compress-Raw-Zlib.x86_64 1:2.061-4.amzn2.0.2 perl-DBI-MySQL.x86_64 0:4.023-6.amzn2 perl-DBI.x86_64 0:1.627-4.amzn2.0.2
perl-Data-Dumper.x86_64 0:2.145-3.amzn2.0.2 perl-IO-Compress.noarch 0:2.061-2.amzn2 perl-Net-Daemon.noarch 0:0.48-5.amzn2 perl-RPC-PISTon.noarch 0:0.2028-14.amzn2

Complete!
bash-4.2# yum install php php-mysql
Loaded plugins: ovl, priorities
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 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 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 5:4.16-46.amzn2.0.2 will be installed
--> Package php-common.x86_64 5:4.16-46.amzn2.0.2 will be installed
--> Processing Dependency: libzip.so.1()(64bit) for package: php-common-5.4.16-46.amzn2.0.2.x86_64
--> Package php-pdo.x86_64 5:4.16-46.amzn2.0.2 will be installed
--> Running transaction check
--> Package libzip-compat.x86_64 0:0.18.1-9.amzn2.0.5 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package Arch Version Repository Size
=====
Installing:
php x86_64 5.4.16-46.amzn2.0.2 amzn2-core 1.4 M
php-mysqld x86_64 5.4.16-46.amzn2.0.2 amzn2-core 172 k
Installing for dependencies:
libzip-compat x86_64 0.18.1-9.amzn2.0.5 amzn2-core 30 k
php-cli x86_64 5.4.16-46.amzn2.0.2 amzn2-core 2.8 M
php-common x86_64 5.4.16-46.amzn2.0.2 amzn2-core 563 k
php-pdo x86_64 5.4.16-46.amzn2.0.2 amzn2-core 98 k
Transaction Summary
Install 2 Packages (+4 Dependent packages)
```

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

```
aws Services Search for services, features, blogs, docs, and more [Alt+S] Mumbai RajSharma1605
AWS CloudShell Actions
ap-south-1
Verifying : php-5.4.16-46.amzn2.0.2.x86_64 3/6
Verifying : php-pdo-5.4.16-46.amzn2.0.2.x86_64 4/6
Verifying : php-mysqlnd-5.4.16-46.amzn2.0.2.x86_64 5/6
Verifying : php-common-5.4.16-46.amzn2.0.2.x86_64 6/6
Installed:
php.x86_64 0:5.4.16-46.amzn2.0.2 php-mysqlnd.x86_64 0:5.4.16-46.amzn2.0.2
Dependency Installed:
libzip0-10-compat.x86_64 0:0.10.1-9.amzn2.0.5 php-curl.x86_64 0:5.4.16-46.amzn2.0.2 php-common.x86_64 0:5.4.16-46.amzn2.0.2 php-pdo.x86_64 0:5.4.16-46.amzn2.0.2
Complete!
bash-4.2# yum search php
Loaded plugins: ovl, priorities
===== 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-mysqlnd.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-pdo-pgsql.x86_64 : A PostgreSQL database module for PHP
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
Name and summary matches only, use "search all" for everything.
bash-4.2#
```

7. Enabling the mariadb server.

```
aws Services Search for services, features, blogs, docs, and more [Alt+S] Mumbai RajSharma1605
AWS CloudShell Actions
ap-south-1
Dependency Installed:
libzip0-10-compat.x86_64 0:0.10.1-9.amzn2.0.5 php-curl.x86_64 0:5.4.16-46.amzn2.0.2 php-common.x86_64 0:5.4.16-46.amzn2.0.2 php-pdo.x86_64 0:5.4.16-46.amzn2.0.2
Complete!
bash-4.2# yum search php
Loaded plugins: ovl, priorities
===== 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-mysqlnd.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-pdo-pgsql.x86_64 : A PostgreSQL database module for PHP
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
Name and summary matches only, use "search all" for everything.
bash-4.2# systemctl start mariadb
Failed to get D-Bus connection: Operation not permitted
bash-4.2#
bash-4.2#
bash-4.2# search all
bash: search: command not found
bash-4.2# systemctl enable mariadb
Created symlink /etc/systemd/system/multi-user.target.wants/mariadb.service, pointing to /usr/lib/systemd/system/mariadb.service.
bash-4.2#
```

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

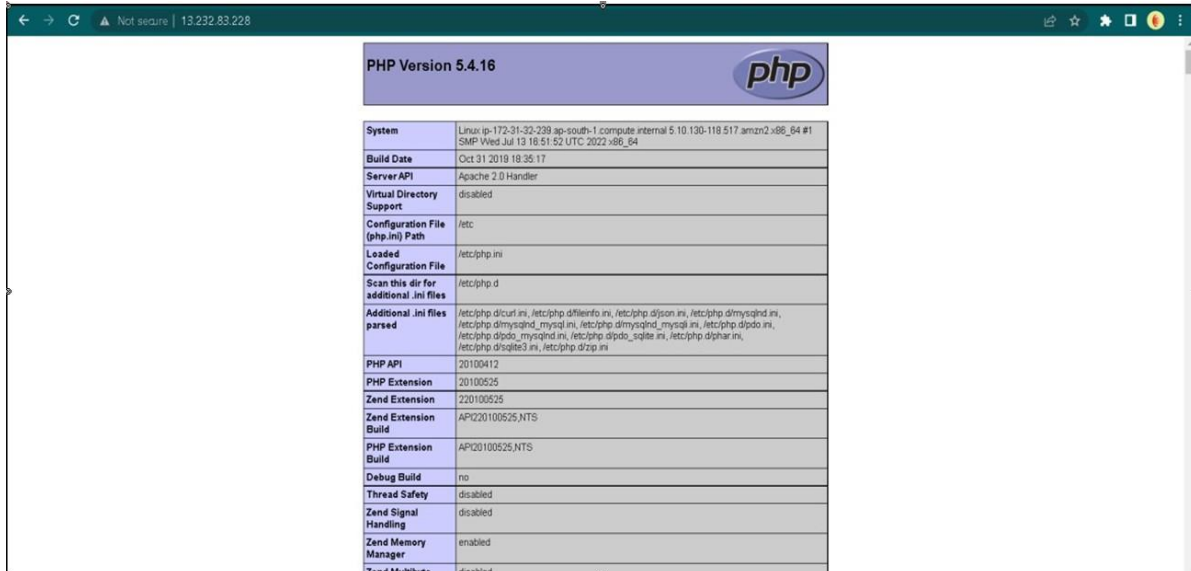
/var/www/html/

9. Go to vim and type “vim index.php”.

```
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-mysqli.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-smp.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
rrdtol-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

Name and summary matches only, use "search all" for everything.
[root@ip-172-31-95-84 ec2-user]# systemctl start mariadb
[root@ip-172-31-95-84 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-172-31-95-84 ec2-user]# cd /var/www/html
[root@ip-172-31-95-84 html]# ls
[root@ip-172-31-95-84 html]# pwd
/var/www/html
[root@ip-172-31-95-84 html]# vim index.php
[root@ip-172-31-95-84 html]#
```

Output:



PHP Version 5.4.16	
System	Linux ip-172-31-32-239 ap-south-1-compute-internal 5.10.130-118.517.amzn2.x86_64 #1 SMP Wed Jul 13 18:51:52 UTC 2022 x86_64
Build Date	Oct 31 2019 18:35:17
Server API	Apache 2.0 Handler
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc
Loaded Configuration File	/etc/php.ini
Scan this dir for additional .ini files	/etc/php.d
Additional .ini files parsed	/etc/php.d/curl.ini, /etc/php.d/fileinfo.ini, /etc/php.d/json.ini, /etc/php.d/mysqli.ini, /etc/php.d/mysqli_mysql.ini, /etc/php.d/mysqli_mysql.ini, /etc/php.d/pdo.ini, /etc/php.d/pdo_mysql.ini, /etc/php.d/pdo_sqlite.ini, /etc/php.d/pdo_sqlite.ini, /etc/php.d/soap.ini, /etc/php.d/xml.ini, /etc/php.d/xmlrpc.ini
PHP API	20100412
PHP Extension	20100525
Zend Extension	220100525
Zend Extension Build	APC20100525.NTS
PHP Extension Build	APC20100525.NTS
Debug Build	no
Thread Safety	disabled
Zend Signal Handling	disabled
Zend Memory Manager	enabled
Zend Multibyte	disabled

RESULT: LAMP instance was successfully created and executed in AWS CLI.