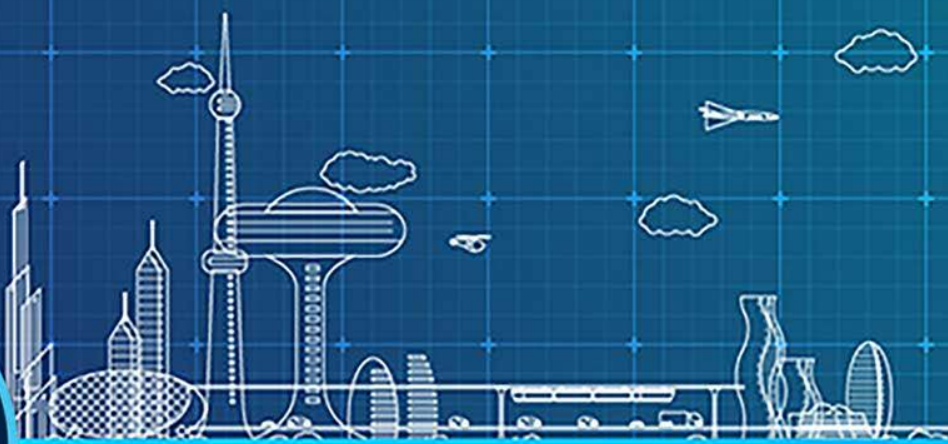


**INGRAM** MICRO<sup>®</sup>

**Azure**



# EASYLAMP UBUNTU

V1.0

DOCUMENT OWNER: OUDHUIS, JONATHAN

INGRAM MICRO CLOUD  
EUROPE

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## 1 INTRODUCTION

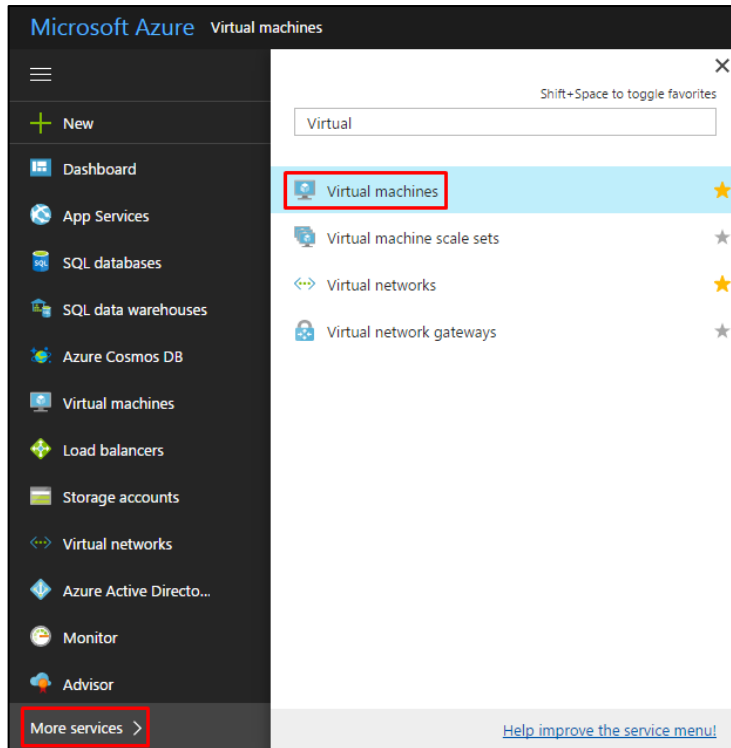
**LAMP** is an archetypal model of web service stacks, named as an acronym of the names of its original four open-source components: the **Linux** operating system, the **Apache** HTTP Server, the **MySQL** relational database management system (RDBMS), and the **PHP** programming language. The LAMP components are largely interchangeable and not limited to the original selection. As a solution stack, LAMP is suitable for building dynamic web sites and web applications.



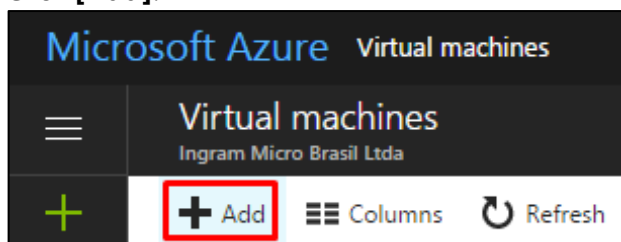
In this guide we'll install an Ubuntu machine with the above components. After following this guide, you have a ready to use machine which is configured with the components needed to host your website.

## 2 CREATING AND CONFIGURING A VIRTUAL MACHINE

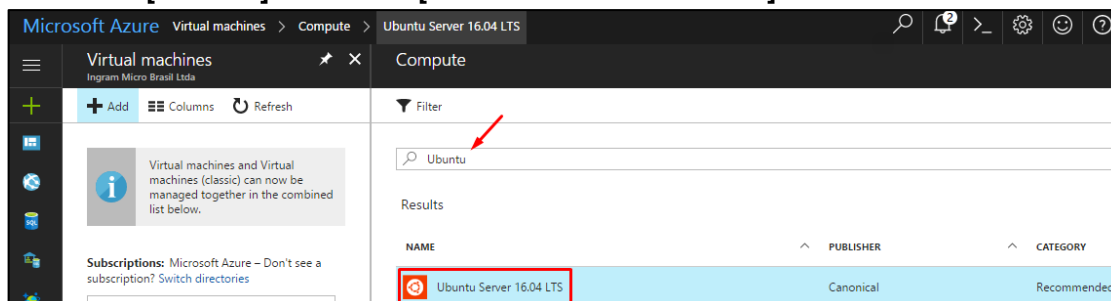
On the Azure Portal, click **[More Services]** and search for **[Virtual]**, in the showing list, select **[Virtual Machines]**:



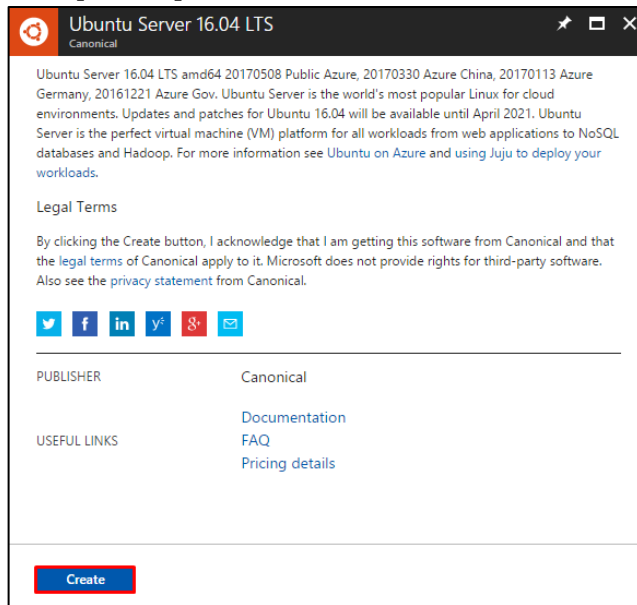
Click **[Add]**:



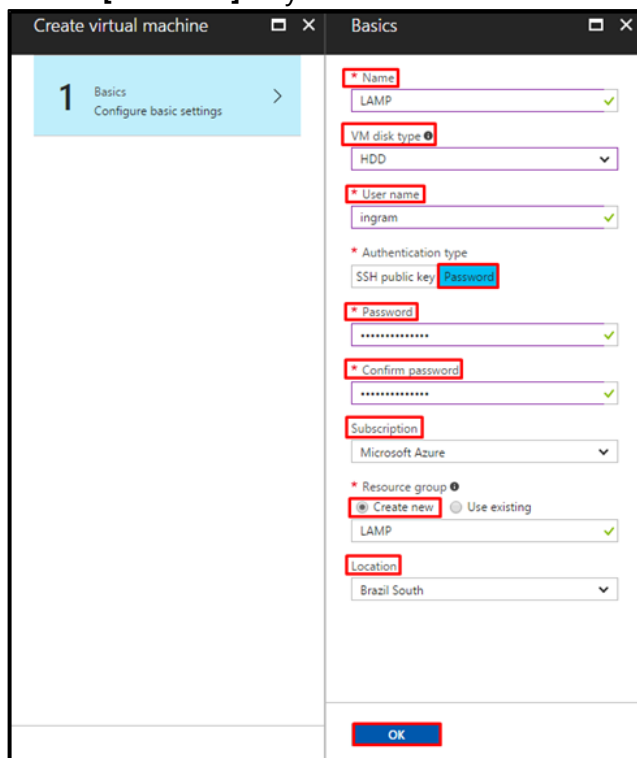
Search for **[Ubuntu]** and select **[Ubuntu Server 16.04 LTS]**:



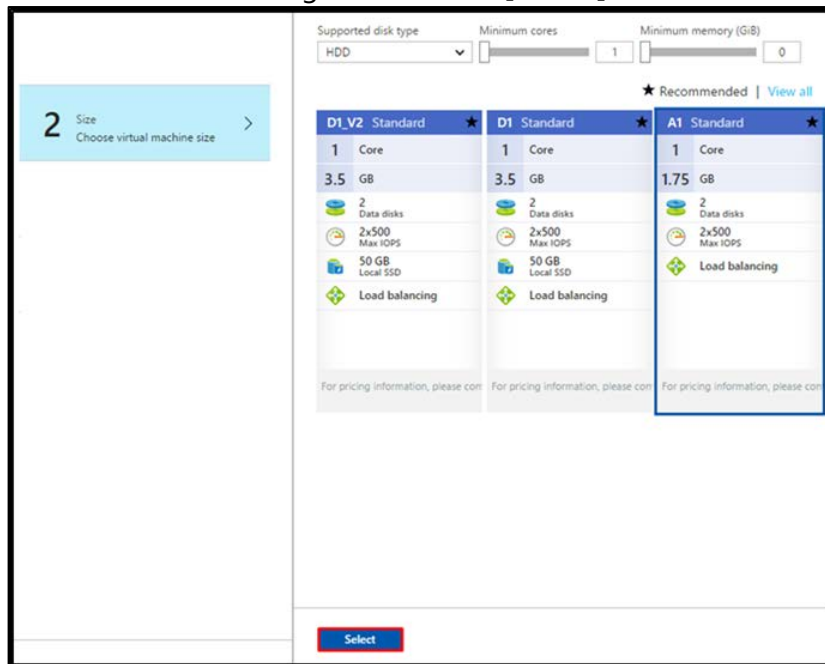
Click **[Create]**:



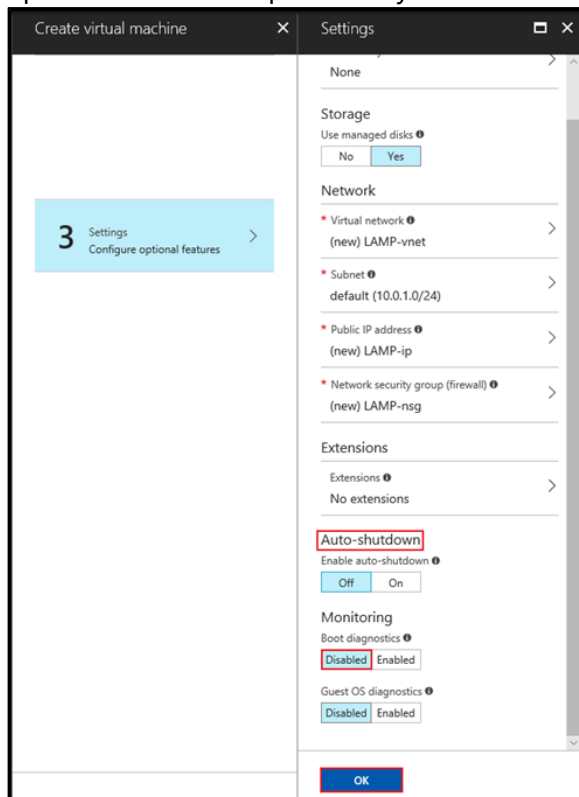
In the first step, choose a **[Name]**, a **[VM disk type]** (between HDD or SSD), **[User name]** that you will use to access the server, change **[Authentication type]** to **[Password]**, then type and confirm it, select **[Subscription]** and **[Create new Resource Group]**. Finally, choose the closest **[Location]** to you.



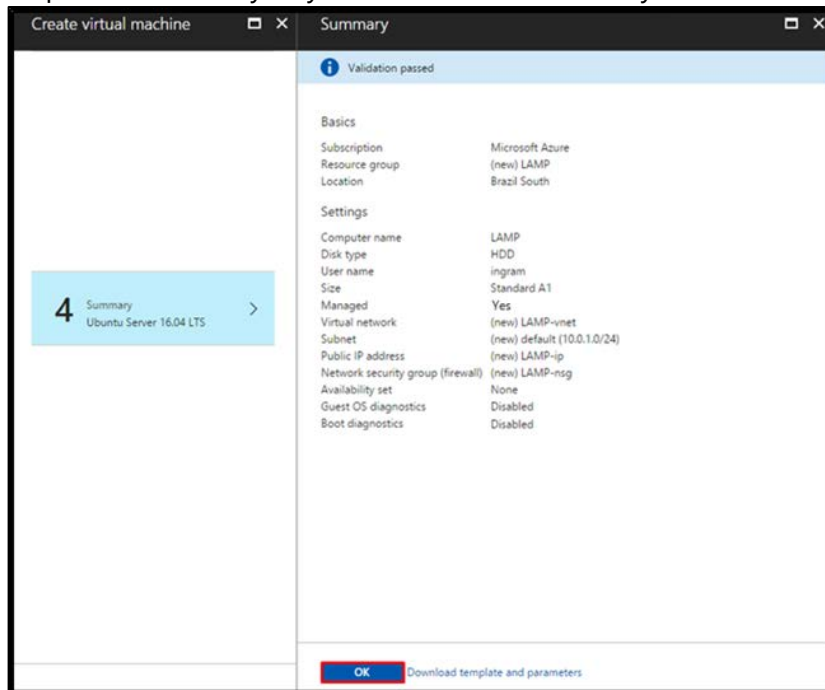
Second step is to choose the size of your virtual machine. In this example we'll use a lightweight configuration (A1). If you need a different configuration you can choose any size available. After selecting the size, click **[Select]**:



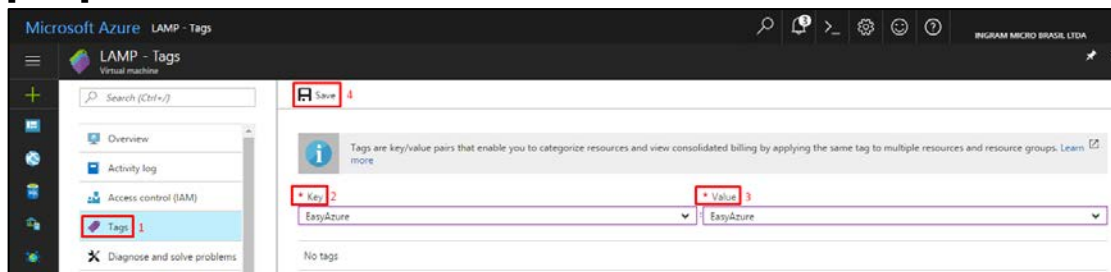
Verify if you want Automatic shutdown to be active, else turn it off. Disable the monitoring options. The other options may be left unchanged. Click **[OK]**:



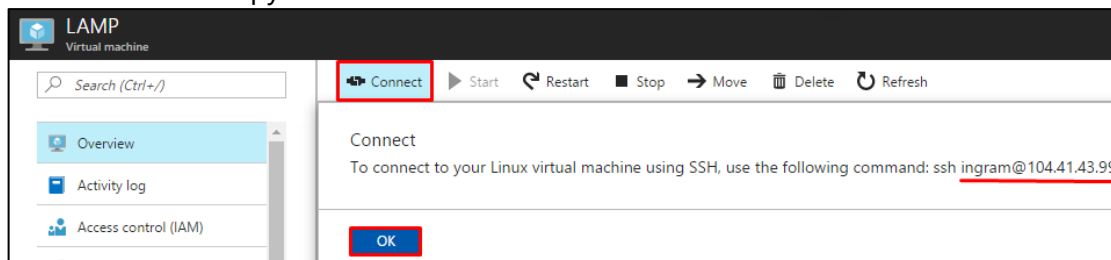
Step 4 is a summary of your virtual machine, verify all the information and click **[OK]**:



After its creation, click **[Tags]**, then type **[EasyAzure]** on both fields **[Key]** | **[Value]**, then click **[Save]** and wait for its conclusion.

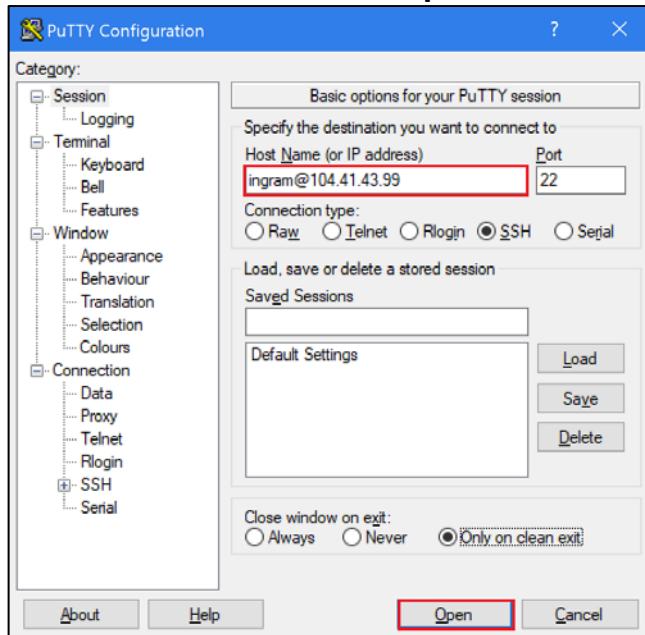


Click **[Overview]** and select **[Connect]**, it will show you the command you will need to connect to the machine. Copy it.

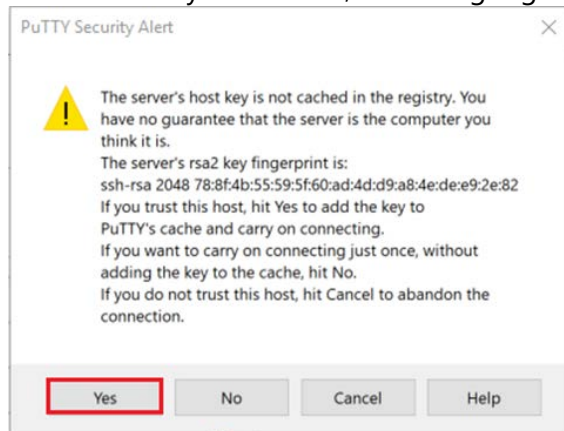


You can use your preferred SSH client, in this guide we will be using Putty (download it free here <http://www.putty.org/>).

Paste the command and click **[Open]**:



The first time you connect, a warning regarding the SSH key is displayed. Click **[Yes]**



Run the following command to become root:

**sudo su -**

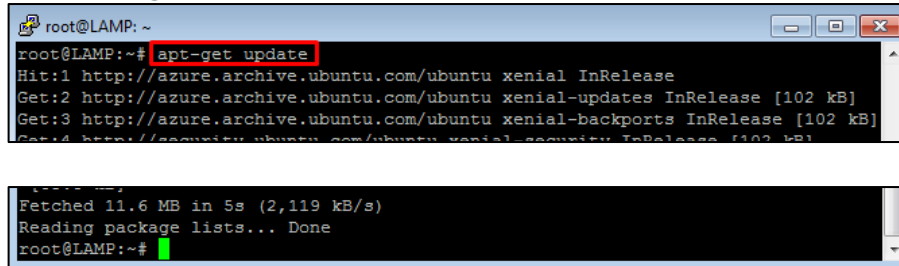




### 3 INSTALLING APACHE

1. Run the following command and wait until it is done:

**apt-get update**



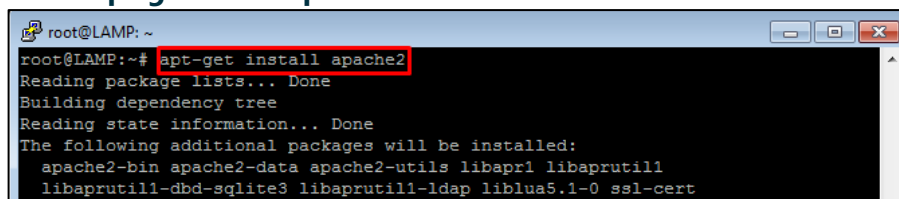
```

root@LAMP:~# apt-get update
Hit:1 http://azure.archive.ubuntu.com/ubuntu xenial InRelease
Get:2 http://azure.archive.ubuntu.com/ubuntu xenial-updates InRelease [102 kB]
Get:3 http://azure.archive.ubuntu.com/ubuntu xenial-backports InRelease [102 kB]
Get:4 http://security.ubuntu.com/ubuntu xenial-security InRelease [102 kB]
...
Fetched 11.6 MB in 5s (2,119 kB/s)
Reading package lists... Done
root@LAMP:~#

```

2. Then run the following to install Apache:

**apt-get install apache2**

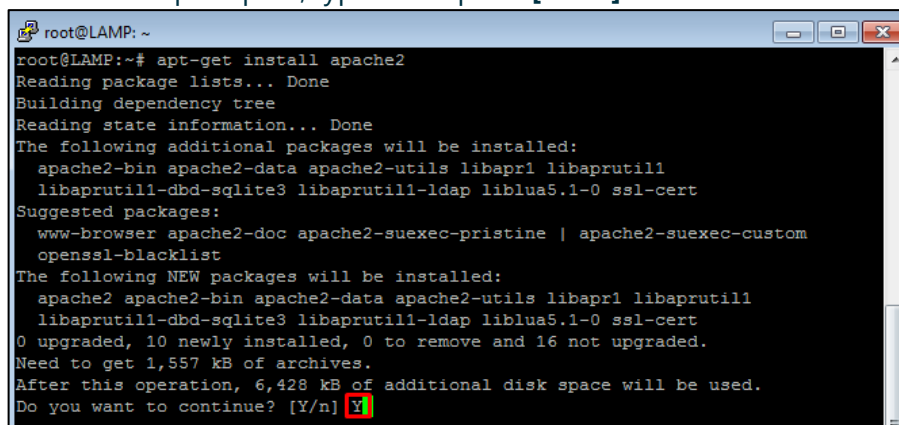


```

root@LAMP:~# apt-get install apache2
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
 apache2-bin apache2-data apache2-utils libapr1 libaprutil1
 libaprutil1-dbd-sqlite3 libaprutil1-ldap liblua5.1-0 ssl-cert

```

3. When prompted, type **Y** and press **[Enter]** and wait for it to finish:



```

root@LAMP:~# apt-get install apache2
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
 apache2-bin apache2-data apache2-utils libapr1 libaprutil1
 libaprutil1-dbd-sqlite3 libaprutil1-ldap liblua5.1-0 ssl-cert
Suggested packages:
 www-browser apache2-doc apache2-suexec-pristine | apache2-suexec-custom
 openssl-blacklist
The following NEW packages will be installed:
 apache2 apache2-bin apache2-data apache2-utils libapr1 libaprutil1
 libaprutil1-dbd-sqlite3 libaprutil1-ldap liblua5.1-0 ssl-cert
0 upgraded, 10 newly installed, 0 to remove and 16 not upgraded.
Need to get 1,557 kB of archives.
After this operation, 6,428 kB of additional disk space will be used.
Do you want to continue? [Y/n] Y

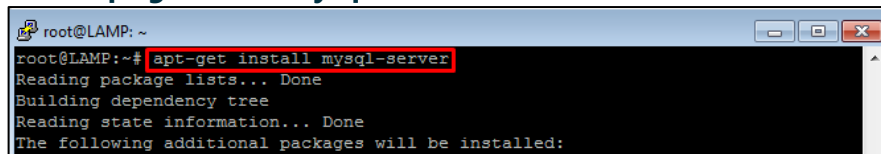
```

## 4 INSTALLING MYSQL

To install MySQL on Ubuntu, follow the next steps:

1. Run the following command and press **[Enter]**:

**apt-get install mysql-server**

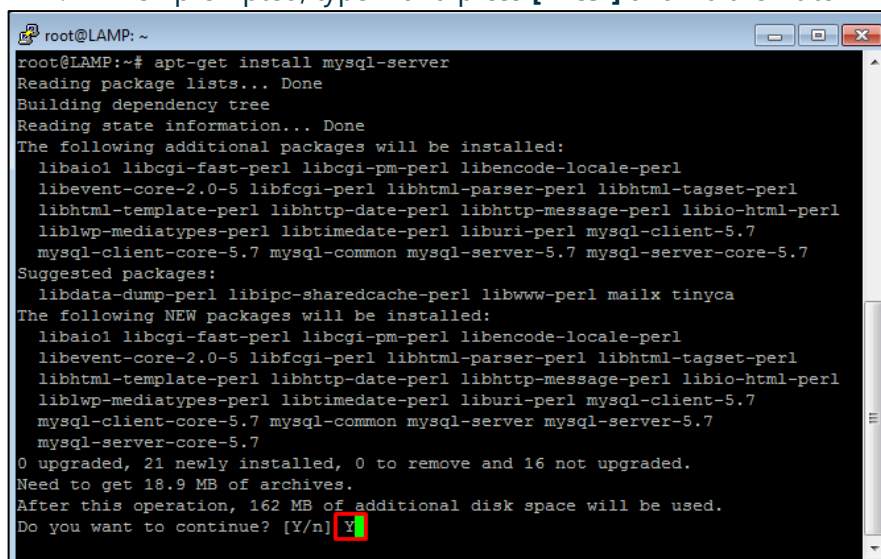


```

root@LAMP: ~
root@LAMP:~# apt-get install mysql-server
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:

```

2. When prompted, type **Y** and press **[Enter]** and wait for it to finish:

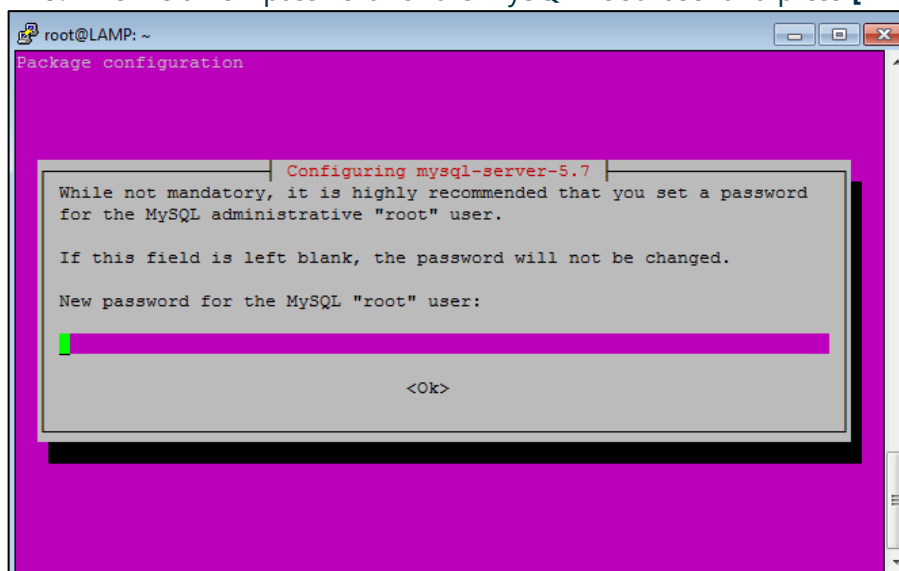


```

root@LAMP: ~
root@LAMP:~# apt-get install mysql-server
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  libaio1 libcgi-fast-perl libcgi-pm-perl libencode-locale-perl
  libevent-core-2.0-5 libfcgi-perl libhtml-parser-perl libhtml-tagset-perl
  libhtml-template-perl libhttp-date-perl libhttp-message-perl libio-html-perl
  liblwp-mediatypes-perl libtimedate-perl liburi-perl mysql-client-5.7
  mysql-client-core-5.7 mysql-common mysql-server-5.7 mysql-server-core-5.7
Suggested packages:
  libdata-dump-perl libipc-sharedcache-perl libwww-perl mailx tinyca
The following NEW packages will be installed:
  libaio1 libcgi-fast-perl libcgi-pm-perl libencode-locale-perl
  libevent-core-2.0-5 libfcgi-perl libhtml-parser-perl libhtml-tagset-perl
  libhtml-template-perl libhttp-date-perl libhttp-message-perl libio-html-perl
  liblwp-mediatypes-perl libtimedate-perl liburi-perl mysql-client-5.7
  mysql-client-core-5.7 mysql-common mysql-server mysql-server-5.7
  mysql-server-core-5.7
0 upgraded, 21 newly installed, 0 to remove and 16 not upgraded.
Need to get 18.9 MB of archives.
After this operation, 162 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y

```

3. Define a new password for the MySQL "root" user and press **[Enter]**:



```

root@LAMP: ~
Package configuration

Configuring mysql-server-5.7

While not mandatory, it is highly recommended that you set a password
for the MySQL administrative "root" user.

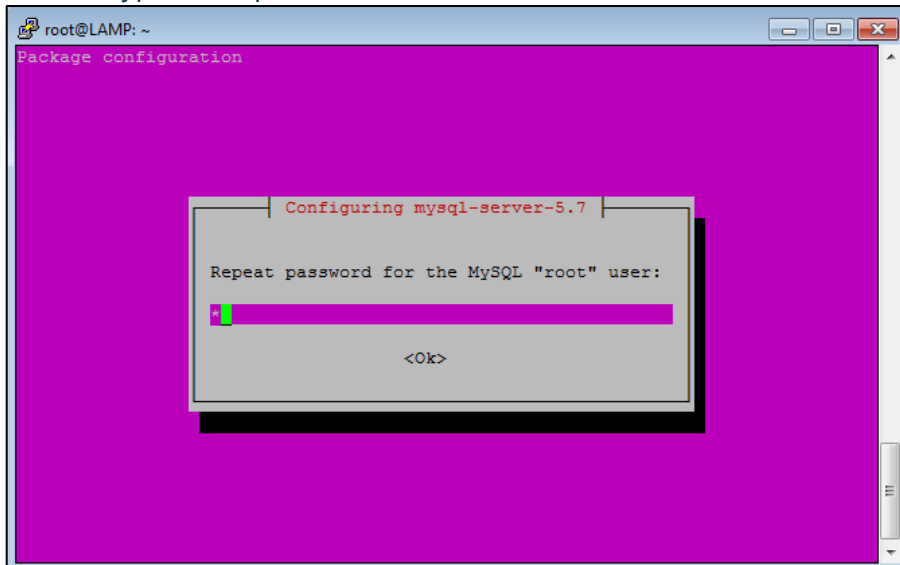
If this field is left blank, the password will not be changed.

New password for the MySQL "root" user:
_____

<Ok>

```

4. Retype it and press **[Enter]**:



5. When finished, you will see this information:

```
root@LAMP: ~  
Setting up mysql-server-core-5.7 (5.7.18-0ubuntu0.16.04.1) ...  
Setting up libevent-core-2.0-5:amd64 (2.0.21-stable-2ubuntu0.16.04.1) ...  
Setting up mysql-server-5.7 (5.7.18-0ubuntu0.16.04.1) ...  
update-alternatives: using /etc/mysql/mysql.cnf to provide /etc/mysql/my.cnf (my  
.cnf) in auto mode  
Renaming removed key_buffer and myisam-recover options (if present)  
Setting up libhtml-tagset-perl (3.20-2) ...  
Setting up liburi-perl (1.71-1) ...  
Setting up libhtml-parser-perl (3.72-1) ...  
Setting up libcgi-pm-perl (4.26-1) ...  
Setting up libfcgi-perl (0.77-1build1) ...  
Setting up libcgi-fast-perl (1:2.10-1) ...  
Setting up libencode-locale-perl (1.05-1) ...  
Setting up libhtml-template-perl (2.95-2) ...  
Setting up libtimedate-perl (2.3000-2) ...  
Setting up libhttp-date-perl (6.02-1) ...  
Setting up libio-html-perl (1.001-1) ...  
Setting up liblwp-mediatypes-perl (6.02-1) ...  
Setting up libhttp-message-perl (6.11-1) ...  
Setting up mysql-server (5.7.18-0ubuntu0.16.04.1) ...  
Processing triggers for libc-bin (2.23-0ubuntu7) ...  
Processing triggers for systemd (229-4ubuntu17) ...  
Processing triggers for ureadahead (0.100.0-19) ...  
root@LAMP:~#
```

## 5 INSTALLING PHP

1. To install PHP, you need to run the following command and press **[Enter]** when prompted:  
**add-apt-repository ppa:ondrej/php**

```

root@LAMP:~# add-apt-repository ppa:ondrej/php
Co-installable PHP versions: PHP 5.6, PHP 7.0, PHP 7.1 and most requested extensions are included.

PLEASE DON'T USE PHP 5.4 OR PHP 5.5. The PHP 5.5 and later are no longer supported with security updates, therefore they are not included in this repository.

You can get more information about the packages at https://deb.sury.org

BUGS&FEATURES: This PPA now has a issue tracker: https://deb.sury.org/#bug-reporting

PLEASE READ: If you like my work and want to give me a little motivation, please consider donating regularly: https://donate.sury.org/

WARNING: add-apt-repository is broken with non-UTF-8 locales, see https://github.com/oerdnj/deb.sury.org/issues/56 for workaround:

# LC_ALL=C.UTF-8 add-apt-repository ppa:ondrej/php
More info: https://launchpad.net/~ondrej/+archive/ubuntu/php
Press [ENTER] to continue or ctrl-c to cancel adding it

```

2. Then run this command:  
**apt-get update**

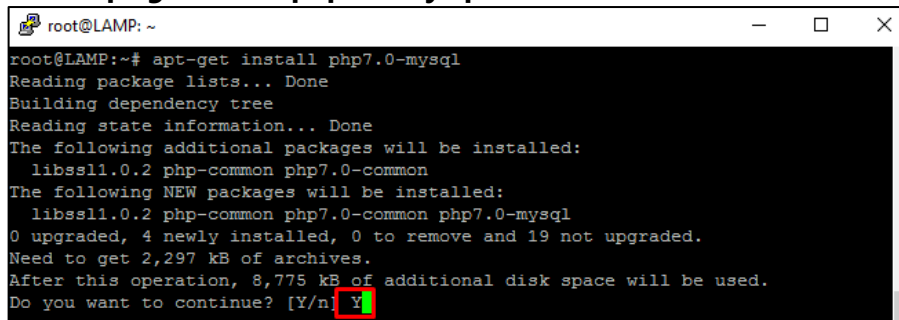
```

root@LAMP:~# apt-get update
Get:1 http://security.ubuntu.com/ubuntu xenial-security InRelease [102 kB]
Hit:2 http://azure.archive.ubuntu.com/ubuntu xenial InRelease
Get:3 http://azure.archive.ubuntu.com/ubuntu xenial-updates InRelease [102 kB]
Get:4 http://azure.archive.ubuntu.com/ubuntu xenial-backports InRelease [102 kB]
Get:5 http://ppa.launchpad.net/ondrej/php/ubuntu xenial InRelease [23.9 kB]
Get:6 http://azure.archive.ubuntu.com/ubuntu xenial-updates/main Sources [249 kB]
]
Get:7 http://azure.archive.ubuntu.com/ubuntu xenial-updates/universe Sources [155 kB]
Get:8 http://azure.archive.ubuntu.com/ubuntu xenial-updates/main amd64 Packages [540 kB]
Get:9 http://azure.archive.ubuntu.com/ubuntu xenial-updates/universe amd64 Packages [468 kB]
Get:10 http://azure.archive.ubuntu.com/ubuntu xenial-updates/universe Translation-en [184 kB]
Get:11 http://ppa.launchpad.net/ondrej/php/ubuntu xenial/main amd64 Packages [43.4 kB]
Get:12 http://ppa.launchpad.net/ondrej/php/ubuntu xenial/main Translation-en [25.3 kB]
Fetched 1,996 kB in 2s (969 kB/s)
Reading package lists... Done
root@LAMP:~#

```

- Now you have to run the following command and when prompted to continue, type **Y** and press **[Enter]**:

**apt-get install php7.0-mysql**



```
root@LAMP: ~  
root@LAMP:~# apt-get install php7.0-mysql  
Reading package lists... Done  
Building dependency tree  
Reading state information... Done  
The following additional packages will be installed:  
  libssl1.0.2 php-common php7.0-common  
The following NEW packages will be installed:  
  libssl1.0.2 php-common php7.0-common php7.0-mysql  
0 upgraded, 4 newly installed, 0 to remove and 19 not upgraded.  
Need to get 2,297 kB of archives.  
After this operation, 8,775 kB of additional disk space will be used.  
Do you want to continue? [Y/n] Y
```

You have setup a **Linux** server with **Apache**, **MySQL** and **PHP** in Azure which is ready to use.

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