014_Installing MySQL and PHP Connection

Notebook:	\<Inbox\>		
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Install MySQL

packages that will assist us in getting our components to communicate with each other:

sudo su

sed -i 's/archive.ubuntu.com/mirror.amberit.com.bd/g' /etc/apt/sources.list
echo 'Acquire::http { Proxy "http://192.168.108.8:4444"; };' > /etc/apt/apt.conf.d/50apt-cacher

apt update
apt install mysql-server

Note: In this case, you do not have to run sudo apt-get update prior to the command. This is because we recently ran it in the commands above to install Apache. The package index on our computer should already be up-to-date.

Allow Remote Connection

Uncommented in /etc/mysql/mysql.conf.d/mysqld.cnf and assigned to your computers IP address and not loopback

#Replace xxx with your IP Address
bind-address = 0.0.0.0

Then stop and restart MySQL with the new my.cnf entry.

systemctl status mysql.service

Once running go to the terminal and enter the following command.

lsof -i -P | grep :3306

That should come back something like this with your actual IP in the xxx's

```
mysqld 1046 mysql 10u IPv4 5203 0t0 TCP xxx.xxx.xxx.xxx:3306 (LISTEN)
```

If the above statement returns correctly you will then be able to accept remote users. However for a remote user to connect with the correct privileges you need to have that user created in both the localhost and '%' as in.

Run MySql Shell by typing 'mysql'

```
CREATE USER 'bdnog8'@'localhost' IDENTIFIED BY '123789';
CREATE USER 'bdnog8'@'%' IDENTIFIED BY '123789';
GRANT ALL ON *.* TO 'bdnog8'@'localhost';
GRANT ALL ON *.* TO 'bdnog8'@'%';
FLUSH PRIVILEGES;
EXIT;
```

If you don't have the same user created as above, when you logon locally you may inherit base localhost privileges and have access issues.

Creating Database

```
CREATE database bdnog8;

use bdnog8;

CREATE TABLE mytable (
id INT(6) UNSIGNED AUTO_INCREMENT PRIMARY KEY,
firstname VARCHAR(30) NOT NULL,
lastname VARCHAR(30),
email VARCHAR(50),
reg_date TIMESTAMP
);
```

```
INSERT INTO mytable (firstname,lastname,email) VALUES
("Ahmed","Sultan","ahmed@somewhere.com");
INSERT INTO mytable (firstname,lastname,email) VALUES
("Kabir","Ahmed","kabir@anywhere.com");

INSERT INTO mytable (firstname,lastname,email) VALUES
("Saiful","Kabir","saiful@anyemail.com");
```

Connectivity from other Nodes

```
<?php
$servername = "Server IP";
$username = "bdnog8";
```

```php
$password = "123789";
$dbname = "bdnog8";

// Create connection
$conn = new mysqli($servername, $username, $password, $dbname);
// Check connection
if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

$sql = "SELECT id, firstname, lastname FROM mytable";
$result = $conn->query($sql);

if ($result->num_rows > 0) {
    // output data of each row
    while($row = $result->fetch_assoc()) {
        echo "id: " . $row["id"]. " - Name: " . $row["firstname"]. " " .
$row["lastname"]. "<br>";
    }
} else {
    echo "0 results";
}
$conn->close();

$myIp = getHostByName(getHostName());
echo "Hosted from: ".$myIp;

?>
```

Now check HAPROXY web panel for status.It shows connection status of each server and availability of web servers.
To check High availability stop one web service from one LXC container and check still web server is showing from other web server.