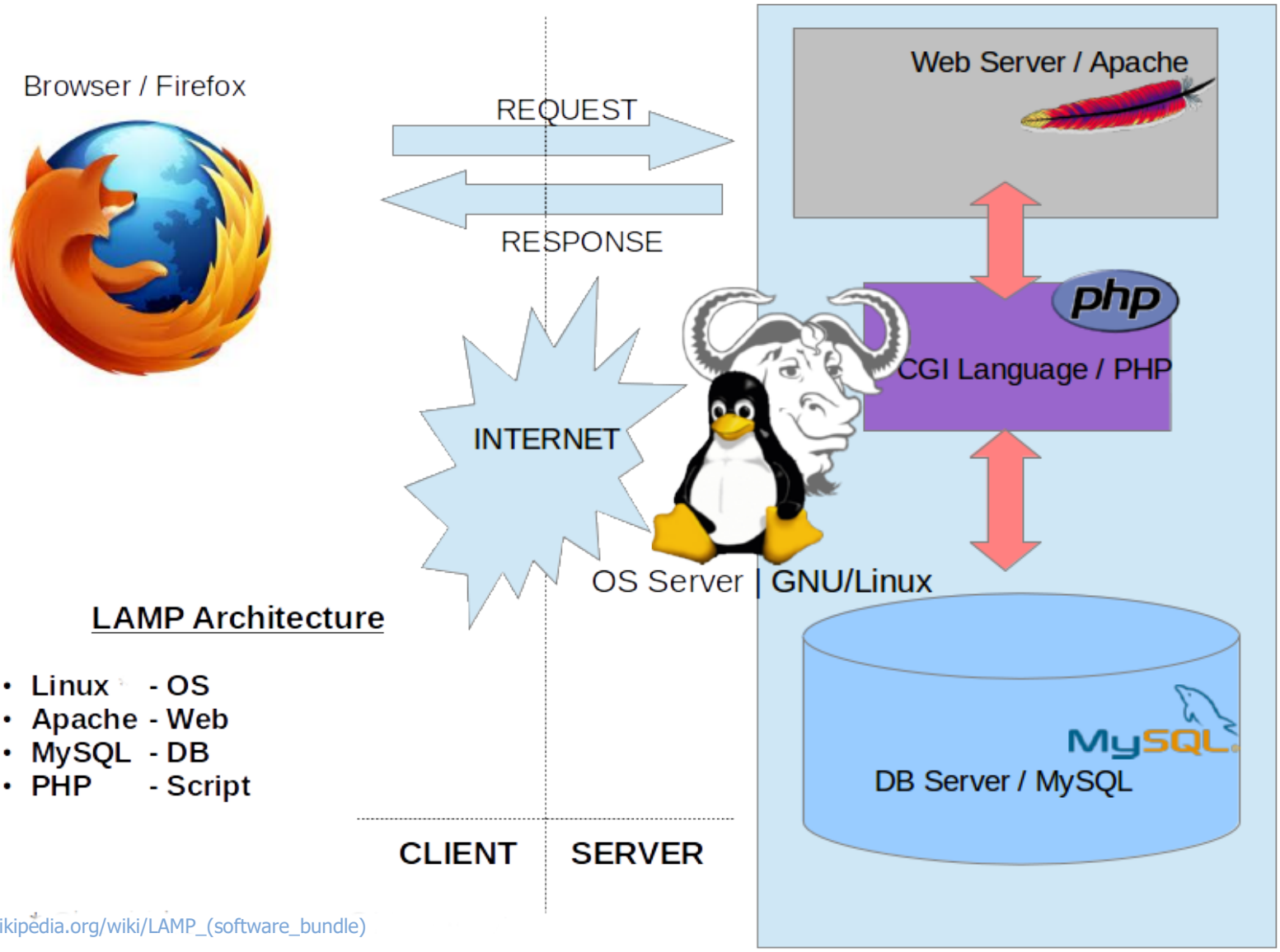
CPSC 4620/6620

Web presentation of Database Information

Architecture

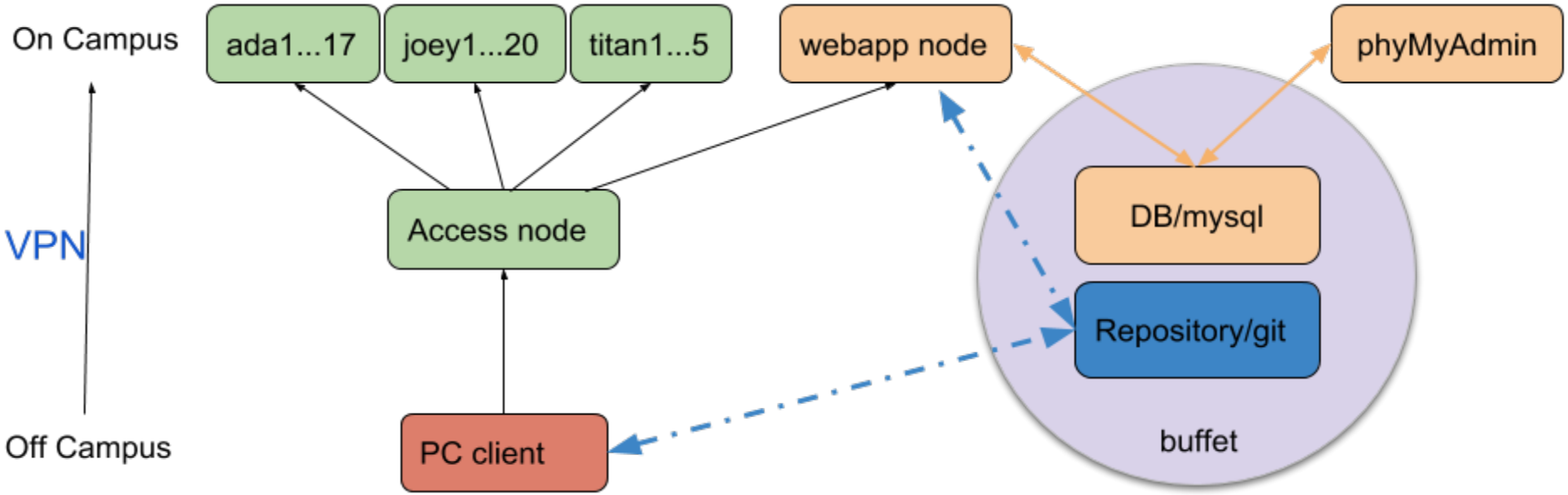


LAMP Architecture

- Linux - OS
- Apache - Web
- MySQL - DB
- PHP - Script

https://en.wikipedia.org/wiki/LAMP_(software_bundle)

SOC Resources



Access the web server

Web server: webapp.computing.clemson.edu

Off-Campus Access

- For off-campus access you MUST first *ssh*, *scp* or *sftp* to the machine "**access.computing.clemson.edu**" (don't forget username@access on SSH).
- Once you have logged on to access via ssh, you MUST then *ssh* to the webapp server.
- The dedicated server webapp.computing.clemson.edu is not visible to the outside world. If you want to display a web page on this web server, you also need to be on campus or use VPN (discussed later) to connect to the campus network.

On-Campus Access

From on-campus, you can "ssh" directly to webapp.computing.clemson.edu:

$ssh ClemsonUserName@webapp.computing.clemson.edu

Access the web server

VPN for Off-Campus Access

A **virtual private network** (**VPN**) is a **network** that is constructed using public wires — usually the Internet — to connect to a private **network**, such as a company's internal **network** (or intranet).

- You can use a VPN to make your system appear to be on-campus
- Once you establish the VPN connection, you can access webapp.computing.clemson.edu as if you are on campus.

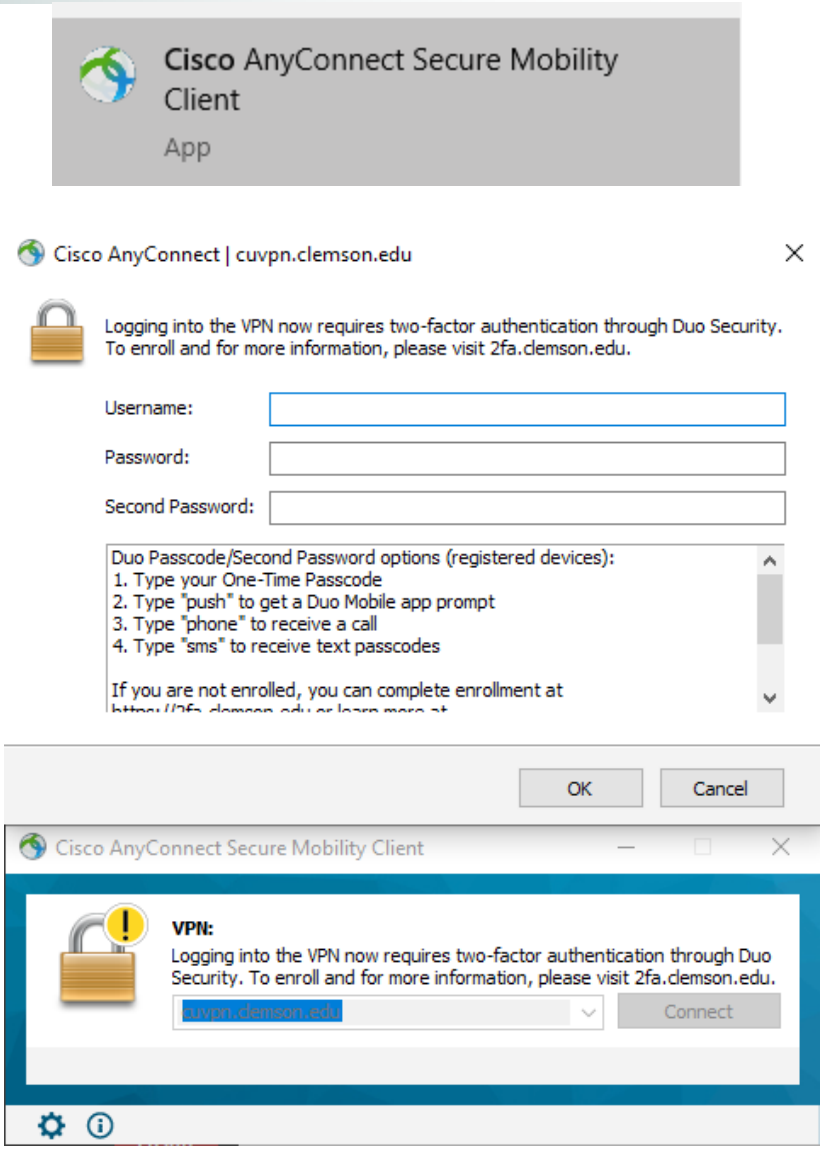
Access the web server

VPN for Off-Campus Access

- Visit cuvpn.clemson.edu on your machine and log in with your Clemson username and password.

You should be redirected to a page to download the installer for the VPN Cisco client.

After installing, you can use the same cuvpn.clemson.edu URL to access to the Clemson network server.



Using buffet

1. Create your database at buffet.cs.clemson.edu

2. After creating the database, you will see the command for connecting the database:

Connect to your database from the command line:

```
mysql -h mysql1.cs.clemson.edu -u metube_uo38 -p metube_zyvf
```

which means:

—the MySQL hostname is *mysql1.cs.clemson.edu*

—the username is *metube_uo38*

—the database you are using is *metube_zyvf*

3. After connecting to the database, you can create tables either from command line, using a PHP script, or https://www.cs.clemson.edu/phpmyadmin/.

Web service

- Your HTML and PHP files should be stored on the webapp server. For instance, you have a php file named test.php. You should put the file under the directory public_html. Make sure your file is given appropriate access permissions.
- You can access your HTML and PHP files through any web browser using URL: webapp.cs. clemson.edu/~USERID/filename. For instance, I have created a test.php file and put it in my public_html directory. This PHP file execute a MySQL query to a MySQL database at mysql1.cs.clemson.edu, and output the results as a table in the web browser. If you click the following link, you will see the results: http://webapp.computing.clemson.edu/~jzwang/test.php
- There are also some sample files in your public_html directory that you can access through a web browser.

Permissions

- Linux file permissions

  Three octets: owner permissions, group permissions, permissions for others

drwxrwxrwx

d = Directory
r = Read
w = Write
x = Execute

7	rwx	111
6	rw-	110
5	r-x	101
4	r--	100
3	-wx	011
2	-w-	010
1	--x	001
0	---	000

chmod 777

rwx|rwx|rwx

Owner|Group|Others

Permissions

- PHP files just need to be readable by user (600) in order for the web server to read them. We would also like to be able to edit our PHP files, so we use rw- (6) instead of just r-- (4).

- All other files (html, jpg, gif, etc) need to be readable by everyone (644) in order for the web server to read them or to play or download the uploaded media. Run the chmod command in your PHP script after the upload:

  chmod($file, 0644)

- Folders need to have permission (755). If you'd like the web server to access directories, you need to make sure the desired directory is readable and searchable by all.