PHP & MYSQL

II

ABOUT ME

- ➤ Majid Fatemian

- ➤ majidfn@gmail.com

- ➤ Web / Online / Software Engineer
    - ➤ Red Ventures (2 years)
    - ➤ UbiSoft Montreal (5 years)
    - ➤ Start-ups (3 years)
    - ➤ Web Studios (3 years)
- ➤ Conference speaker:
    - ➤ Confoo (x2)
    - ➤ PHPTek
- ➤ Concordia Alumni

ABOUT YOU!

➤ Programming experiences

➤ Databases

➤ HTML / JavaScript

➤ Source controls

➤ Testing

➤ Previous Projects

➤ Linux

COURSE OBJECTIVES

➤ Detailed PHP/MySQL techniques

➤ Modern Web Applications design

➤ Software development life cycle

➤ Best Coding practices

➤ Unit-Testing, Dependency Injection

➤ Cloud

➤ Development Tools and Environments

➤ Virtualization and Containerization/Docker

➤ Security

➤ Build and Deploy process

BONUS TOPICS

➤ Caching

➤ Queuing

➤ Logging and Monitoring

COURSE ORGANIZATION

➤ Evolving E-Commerce Project

➤ Final Project

SETUP

TEXT EDITOR VS. IDE

- ➤ Visual Studio Code
- ➤ Atom
- ➤ Sublime Text
- ➤ PHPStorm IDE

GIT

➤ Installing Git & Git bash

➤ Cloning the repo

➤ https://gitlab.com/Majidfn/CEWP-559-fall-2017

MYSQL CLIENT

➤ SQLYog

➤ MySQL WOrkBench

DOCKER

- ➤ Windows 10
- ➤ Windows 7
- ➤ Mac OSX
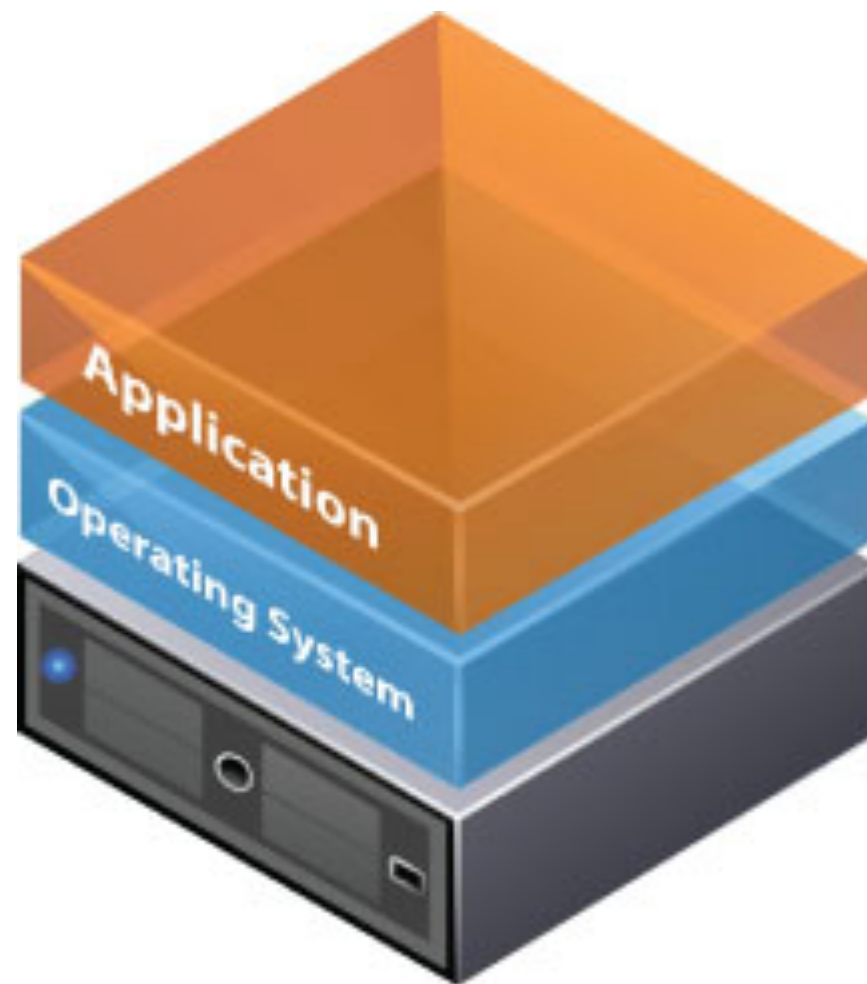
VAGRANT

➤ VirtualBox

➤ Vagrant

WHY DOCKER

Or Vagrant

WHY? VAGRANT OR DOCKER

➤ Consistency of the tools

➤ Isolation of environments

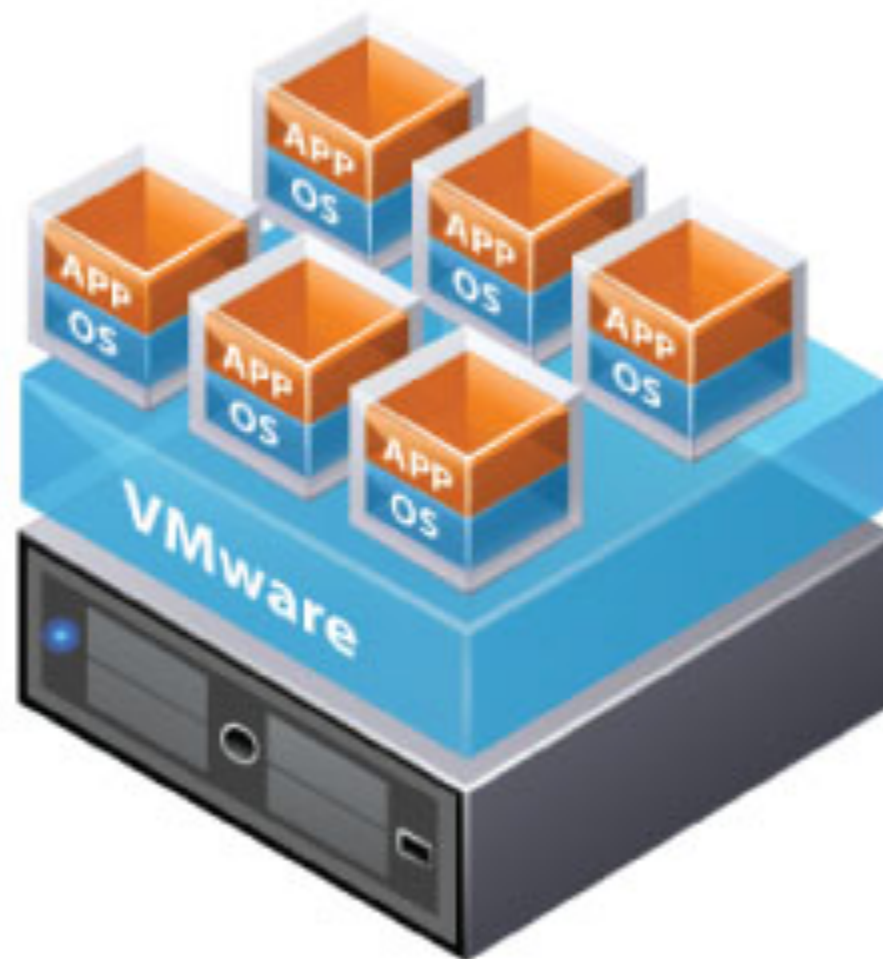➤ Ease of upgrade
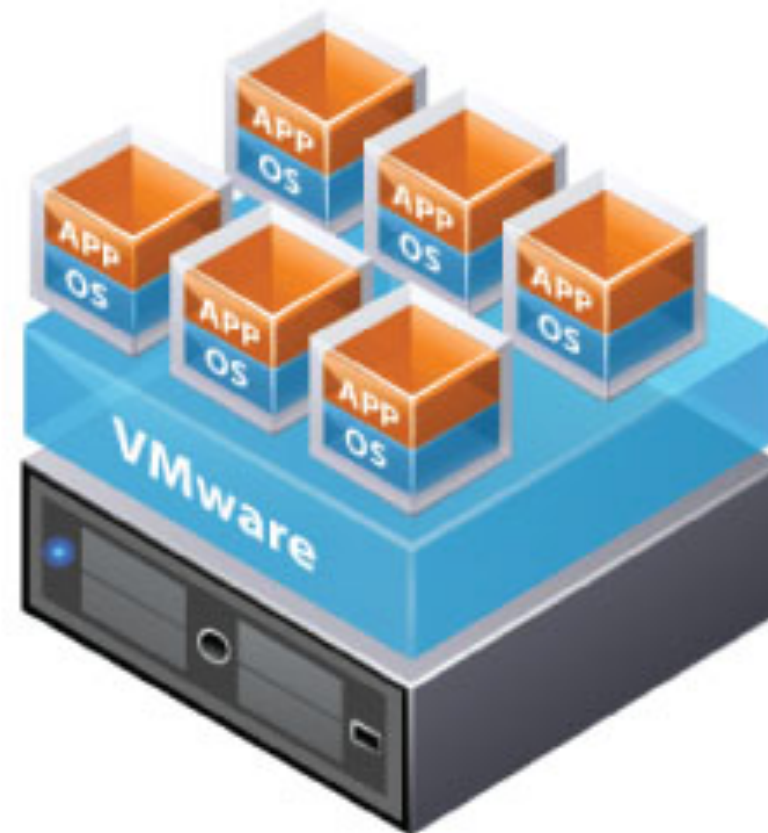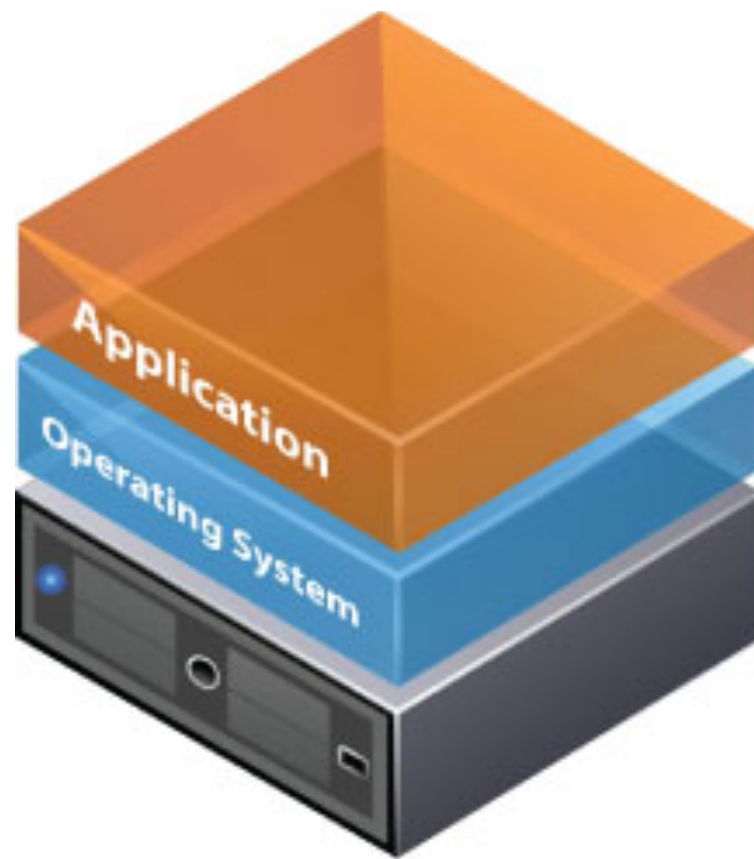
➤ Reproducibility

VIRTUALIZATION ARCHITECTURE

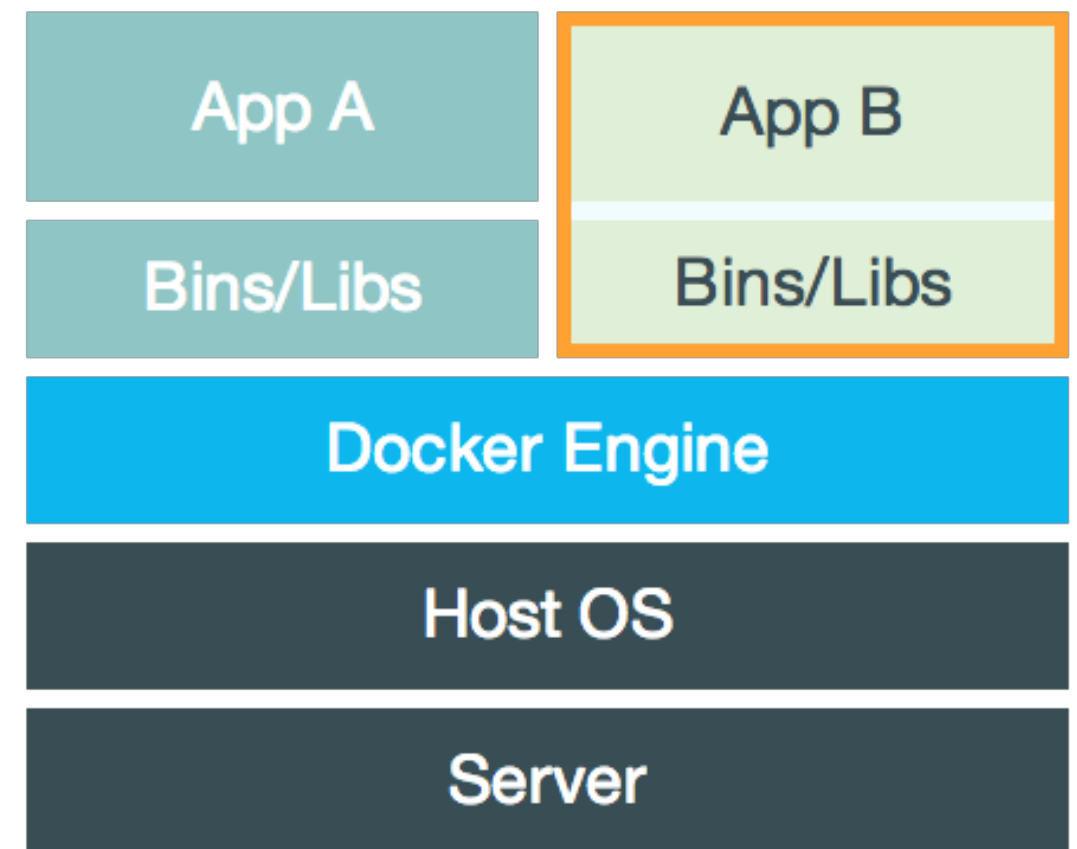## VIRTUALIZATION ARCHITECTURE
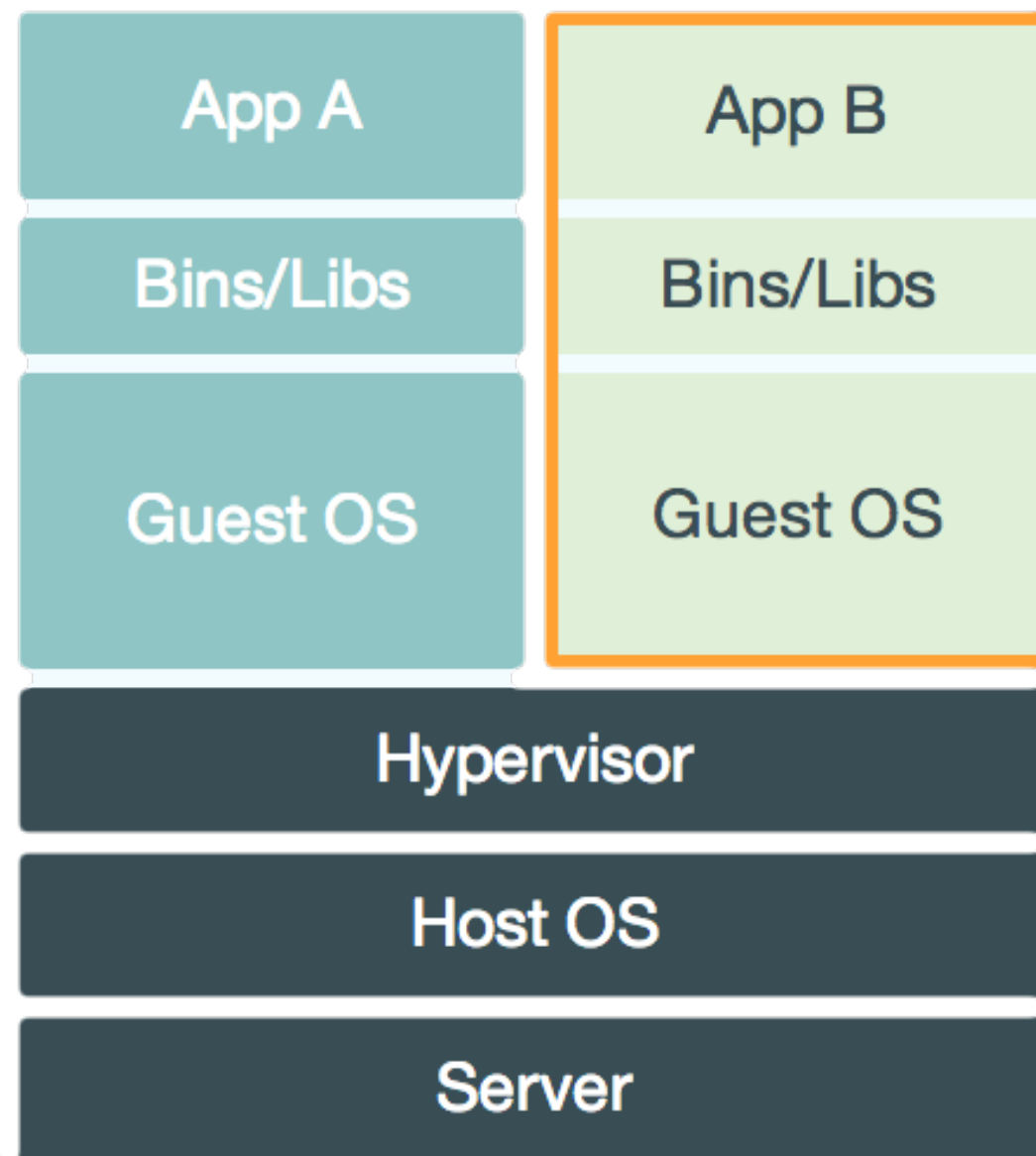
VIRTUALIZATION

VIRTUALIZATION ARCHITECTURE

VIRTUALIZATION

➤ Server Consolidation 10 virtual servers in 1 physical server

➤ Testing and development

➤ Dynamic Load Balancing and Disaster Recovery

➤ Improved System Reliability and Security: Isolated crashes

CONTAINERS

App A	App B
Bins/Libs	Bins/Libs
Guest OS	Guest OS

Hypervisor

Host OS

Server

App A	App B
Bins/Libs	Bins/Libs

Docker Engine

Host OS

Server

CONTAINERS

➤ Much less overhead: No multiple OSs

➤ Rapid deployment

➤ Start time

  ➤ 50 ms vs. 60 seconds or more

➤ Same environment in development, Staging, Production: No more "It works on my machine!"

REVIEW

VARIABLES

```php
<?php

$txt = "Hello world!";
$x = 5;
$y = 10.5;
```

PRINT / ECHO

```php
<?php
echo "Hello world!<br>";
echo "Concat ", "strings ", "easily ";

$school = "Concordia";
echo "Study PHP/MySQL at $school";
```

DATA TYPES | STRING

```php
<?php

$school = "Concordia";
echo "Study PHP/MySQL at $school";

echo strlen("Hello world!");
echo str_word_count("Hello world!");
echo strrev("Hello world!");
echo strpos("Hello world!", "world");
echo str_replace("world", "Dolly", "Hello world!");
```

DATA TYPES | INTEGER

```php
<?php

$num = 1876255;
var_dump($num);
```

```php
<?php

$num = 10.365;
var_dump($num);
```

```php
<?php

$x = true;
$y = false;
```

DATA TYPES | ARRAY

```php
<?php

$schools = array("Concordia","McGill","UdeM", UQAM");
var_dump($schools);

$schools[2] = "UdeMontreal";
echo count($schools);


for($i = 0; $i < count($schools); $i++) {
    echo $schools[$i];
}
```

DATA TYPES | ASSOCIATIVE ARRAY

```php
<?php

$age = array("Peter"=>"35", "Ben"=>"37", "Joe"=>"43");

foreach($age as $x => $x_value) {
    echo "Key=" . $x . ", Value=" . $x_value;
}
```

```php
<?php

class Person {
    function Person($name) {
        $this->name = $name;
    }
}

// create an object
$john = new Person("John");

// object properties
echo $john->name;
```

```php
<?php

$x = "Hello world!";
$x = null;
var_dump($x);
```

OPERATORS

- ➤ Comparison Operators

- ➤ Assignment Operators

- ➤ Arithmetic Operators

- ➤ Increment / Decrement

- ➤ Logical Operators

- ➤ String Operators

- ➤ Array Operators

FLOW AND CONDITIONS | IF – ELSEIF – ELSE

```php
<?php
$t = date("H");

if ($t < "10") {
    echo "Have a good morning!";
} elseif ($t < "20") {
    echo "Have a good day!";
} else {
    echo "Have a good night!";
}
```

```php
<?php
switch ($i) {
    case "apple":
        echo "i is apple";
        break;
    case "bar":
        echo "i is bar";
        break;
    case "cake":
        echo "i is cake";
        break;
}
```

```php
<?php
$x = 1;

while($x <= 5) {
    echo "The number is: $x";
    $x++;
}
```

```php
<?php

for ($i = 1; $i <= 10; $i++) {
    echo $i;
}
```

FUNCTIONS

```php
<?php
function sum($x, $y) {
    $z = $x + $y;
    return $z;
}

echo "5 + 10 = " . sum(5, 10);
```

SUPER GLOBALS

➤ Super Globals

$GLOBALS
$_SERVER
$_GET
$_POST
$_FILES
$_COOKIE
$_SESSION
$_REQUEST
$_ENV