

# vhost Service Migration to AWS

## Planned Technical Changes

### 1 Overview:

The purpose of this document is to make users of the vhost service aware of the upcoming technical upgrades and changes as it is migrated from on-prem to hosted in Amazon Web Services (AWS). The goal is to provide all Site Factory Managers (SFMs) and Site Owners as much information as possible regarding the technical baselines that users will be required to refactor and remediate sites to accommodate.

Basic platform architecture:

- Production Servers will run on a cluster of Linux servers.
- Servers will conform to Minimum Standards for Connecting to UCR's Network.
- Servers will be behind an AWS Load Balancer to provide load balancing and an extra level of security.
- Connections to SFTP/SSH/MySQL will be connected through `vhuser.aws.ucr.edu`.
- The staging environment and its websites are temporary. All '*sitename-staging.ucr.edu*' URLs will be cutover to production during the Go-Live event, after UAT.
- Site Owners will continue to utilize VPN/Campus IP to SFTP or SSH into individual websites.

### 2 Vhost Server Baseline Software Versions

All baseline software will be updated regularly per the ITS Systems Engineering & Operations patching policies.

- Amazon Linux 2 AMI
- Apache 2.4
- PHP 7.4
- MariaDB 5.5

### 3 PHP Packages Supported

The following packages are supported and will be installed and updated by ITS.

|              |      |          |         |      |            |
|--------------|------|----------|---------|------|------------|
| bcmath       | gd   | mbstring | odbc    | pdo  | pecl-apcu  |
| fpm          | ldap | mysql    | opcache | pear | pecl-geoip |
| pecl-imagick | soap | xml      | xmlrpc  |      |            |

### 4 Changes to Access

All site owners should follow the steps below to gain access to their individual website(s) to conduct any refactoring and/or testing. Moving forward, post-cutover, this is the method all site owners will use to gain access to the new environment.

- Step 1 – Sign into campus VPN (Global Protect)
- Step 2 – Open SSH or SFTP client and connect to `vhuser.aws.ucr.edu`
  - Credentials to connect are the same as the current vhost environment
- Step 3 – Change directory (or `cd`) to `/vhome/siteusername/htdocs`
  - This step may be transparent to some users.
- Step 4 – After uploading/refactoring as needed, validate functionality by navigating to `sitename-staging.ucr.edu` via a web browser.

## **5 SFMs and Site Owners - Additional Responsibility and Recommendations**

All site owners of custom websites will be expected to update and maintain the most up-to-date versions of related scripts and software used by their individual websites (examples include but are not limited to Webcal, Wordpress, etc.).

### **Changes to MySQL Database**

For websites utilizing a database, note that PHP 7 has deprecated mysql\_connect calls, therefore websites may be required to update to newer methods. Refer to the resource materials below.

- <https://dzone.com/articles/convert-mysql-to-mysqli>

### **Cron Jobs**

Site Owners utilizing database Cron Jobs are responsible for recreating these specific jobs from the on-prem service to the new AWS service.

### **PHP Updates**

For non-custom applications we recommend users to update their software to the latest stable version that supports PHP 7.

For customized PHP applications, below are resources to assist in potential required changes.

- <https://www.php.net/manual/en/migration70.php>
- <https://www.php.net/manual/en/migration70.deprecated.php>
- <https://www.cloudways.com/blog/php-7-upgrade-guide/>