

# CentOS 7.4

# Alicloud Image Startup Guide v1.0

INFINITY GLOBAL SOLUTIONS PTE LIMITED

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As the first official global service partner of Alibaba in Singapore, **Infinity Global Solution Pte. Ltd (IGS)** is a business and enterprise system consulting company. The core team is mainly based in Singapore with a full fleet of operational & technical supports located in Yangon, Myanmar. The company in Myanmar is ranked as the biggest IT Company in the country.

IGS' mission is to assist the SMEs in Singapore for overseas market expansion and productivity improvement through utilizing ecommerce services and solutions. IGS aims at providing comprehensive and professional business solutions, in particular Alibaba B2B business consultation services, digital marketing, one stop integrated solutions for SMEs productivity improvement and daily operation optimization. Our objective is to help the companies in creating value and achieving sustainable growth through the effective use of integrated IT system and well defined business processes.

Specialized in providing ecommerce solutions, Cloud ERP solutions, Human Resource Management solutions, Trading Business ERP solution and Manufacturing ERP solutions, IGS' products and services are also including Business Consultation, System Analysis, Design, Configuration, Customization, Data Migration, Training, Support and Maintenance.

**Important:**

Due to security concern, advice to change all preconfigured password immediately after image installation.

# 1 Introduction

We, IGS, provide a list of images pre-integrated with most popular software for web solution. It includes ready-to-run versions of Apache/Nginx, MySQL, PHP, phpMyAdmin and all of the other software required to run each of those components. IGS image greatly simplifies the development and deployment of web applications. All our images are regularly updated to make sure that you always have access to the latest stable releases of each of the bundled components.

## 1.1 LEMP & LAMP

Images include LEMP and LAMP stack that are mostly used for both developing and deploying web applications.

LAMP stack is a group of open source software used to get web servers up and running. The acronym stands for Linux, Apache, MySQL, and PHP.

LAMP is the most popular web service solution stack on the public Internet.

LEMP stack is a group of open source software to get web servers up and running. The acronym stands for Linux, nginx (pronounced Engine x), MySQL, and PHP.

## 1.2 WordPress and others

Images include most popular open-source content management system (CMS). Example, WordPress, Joomla!, Drupal etc.

WordPress is one of the world's most popular web publishing platforms for building blogs and websites. It can be customized via a wide selection of themes, extensions and plug-ins.

### Feature Highlight

- Full Theme System: Change the look and feel of your site with a few clicks by using existing free or commercial Wordpress themes
- Standards-compliant: Wordpress is in full compliance with the standards of the ECS.
- Thousands of plugins and widgets available

## 2 CentOS 7.4 64bits LAMP

This image is built with CentOS 7.4 and bundled with following popular software for web service solution. The image is optimized to address your security concern.

The LAMP platform consists of four components that are structured in a layered way. Each layer provides a critical part of the entire software stack:

- **Linux.** Linux is the lowest-level layer and provides the operating system. Linux actually runs each of the other components. You are not specifically limited to Linux, however; you can easily run each of the other components on Microsoft®; Windows®, Mac OS X, or UNIX® if you need to.
- **Apache.** The next layer is Apache, the Web server. Apache provides the mechanics for getting a Web page to a user. Apache is a stable, mission-critical-capable server, and it runs more than 65 percent of all Web sites on the Internet. The PHP component actually sits inside Apache, and you use Apache and PHP together to create your dynamic pages.
- **MySQL.** MySQL provides the data-storage side of the LAMP system. With MySQL, you have access to a very capable database suitable for running large and complex sites. Within your Web application, all your data, products, accounts, and other types of information will reside in this database in a format that you can easily query with the SQL language.
- **PHP.** PHP is a simple and efficient programming language that provides the glue for all the other parts of the LAMP system. You use PHP to write dynamic content capable of accessing the data in the MySQL database and some of the features that Linux provides.

### 2.1 Software Components

All applications are installed from standard yum repository.

- Operating System  
CentOS 7.4 64bits
- Apache  
Apache 2.4.6 (CentOS)  
/usr/sbin/
- MySQL  
Ver 15.1 Distrib 5.5.56-MariaDB, for Linux (x86\_64) using readline 5.1  
/usr/bin/
- PHP  
5.4.16 (cli) (built: Nov 15 2017 16:33:54)  
/usr/bin/
- phpMyAdmin  
Web GUI for the administration of MySQL  
4.4.15.10-2.el7
- Webmin  
Web-based interface for system administration  
https://hostname:10000
- openssh-server  
- Secure remote console for server management  
7.2p2 Ubuntu-4ubuntu2.2, OpenSSL 1.0.2g



- openssh-sftp-server
  - Secure FTP for file uploading
  - 7.2p2 Ubuntu-4ubuntu2.2, OpenSSL 1.0.2g
- Time server
  - chrony-3.1-2.el7.centos.x86\_64

## 2.2 Default Website

To access, using following URL

```
http://<Global IP Address>
```

## 2.3 Upload web page files

Place your files into a directory called the "document root" of the server. The document root is at `/var/www/html/` by default. Place your files there.

When you are finished (provided that your domain name has been updated around the world), you should be able to access your site in your web browser.

## 2.4 Default Account

For list of default account and password, refer to `/root/password.pwd`

## 2.5 phpMyAdmin

Use following URL to open phpMyAdmin page. Refer to `/root/password.pwd` for default password.

```
http://<Global IP Address>/phpMyAdmin
```

For more configurations, refer to section 8: Access phpMyAdmin on CentOS

## 2.6 Start-up configuration

### 2.6.1 Set Global Server Name to Suppress Syntax Warnings

You need to add a single line to the `/etc/apache2/apache2.conf` file to suppress above warning message. While harmless, if you do not set Server Name globally, you will receive the following warning when checking your Apache configuration for syntax errors:

```
sudo apache2ctl configtest
```

Output

```
AH00558: apache2: Could not reliably determine the server's fully
qualified domain name, using 127.0.1.1. Set the 'Server Name' directive
globally to suppress this message
Syntax OK
```



Open up the main configuration file with your text edit:

```
sudo nano /etc/apache2/apache2.conf
```

Inside, at the bottom of the file, add a Server Name directive, pointing to your primary domain name. If you do not have a domain name associated with your server, you can use your server's public IP address:

```
/etc/apache2/apache2.conf
```

```
. . .  
ServerName server_domain_or_IP
```

Save and close the file when you are finished.

Next, check for syntax errors by typing:

```
sudo apache2ctl configtest
```

Since we added the global Server Name directive, all you should see is:

```
Output  
Syntax OK
```

Restart Apache to implement your changes:

```
sudo systemctl restart apache2
```

## 2.6.2 Check apache status

Issue following command to check apache status.

```
sudo systemctl status apache2
```

## 2.6.3 Available options for PHP modules and libraries

Use the arrow keys to scroll up and down, and **q** to quit.

```
apt-cache search php- | less
```

To get more information about what each module does, you can either search the internet, or you can look at the long description of the package by typing:

```
apt-cache show package_name
```

## 2.6.4 Test php on your server

The address you want to visit will be:

```
http://your_server_IP_address/info.php
```





Delete info.php page

```
sudo rm /var/www/html/info.php
```

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## 3 CentOS 7.4 64bits LEMP

This image is built with CentOS 7.3 and bundled with following popular software for web service solution. In order to display web pages to our site visitors, we employ Nginx, a modern, efficient web server. Optimized to address your security concern.

### 3.1 Software Components

- Operation System  
CentOS 7.4 64bits
- Nginx  
High-performance web server software  
nginx/1.12.2  
/usr/sbin
- MariaDB  
5.5.49-MariaDB-38.0  
Relational database management system  
/usr/bin
- PHP  
PHP 5.4.16 (cli) (built: Nov 15 2017 16:33:54)  
/usr/bin
- phpMyAdmin  
Web GUI for the administration of MySQL  
4.4.15.10-2.el7
- Webmin  
Web-based interface for system administration  
https://hostname:10000
- openssh-server  
Secure remote console for server management  
7.4p1-13.el7\_4
- openssh-sftp-server  
Secure FTP for file uploading  
7.4p1-13.el7\_4

### 3.2 Default Website

To access, using following URL

<http://<Global IP Address>>

### 3.3 Upload web page files

Place your files into a directory called the "document root" of the server. The document root is at `/usr/share/nginx/html` by default. Place your files there.

When you are finished (provided that your domain name has been updated around the world), you should be able to access your site in your web browser.

### 3.4 Default Account

For list of default account and password, refer to `/root/password.pwd`

### 3.5 phpMyAdmin

Use following URL to open phpMyAdmin page

<http://<Global IP Address>/phpMyAdmin>

For more configurations, refer to section 8: Access phpMyAdmin on CentOS

### 3.6 Software Operation Command

Nginx

```
service nginx {start|stop|status|restart|reload|configtest}
```

Mysql

```
service mysqld {start|stop|restart|reload|status}
```

Apache

```
service httpd {start|restart|stop}
```



## 4 Setup DNS

Once you have your LAMP/LEMP stack installed, your server is ready to start serving web content. However, right now, you can only access it using the server's public IP address.

You can set up a domain name (like example.com) so that visitors can access your site easier. You'll need to purchase your desired domain name from a domain name registrar.

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## 5 Connect to Server Instance

Download following utilities

PuTTY - a free SSH and telnet client for Windows

[www.putty.org/](http://www.putty.org/)

WinSCP - free SFTP and FTP client for Windows

<https://winscp.net/>

Follow respect use guide from the tool official website and connect with your root account configured during your ECS installation.

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## 6 Apache v.s. Nginx

Both Apache and Nginx are powerful, flexible, and capable. Deciding which server is best for you are largely a function of evaluating your specific requirements and testing with the patterns that you expect to see.

There are differences between these projects that have a very real impact on the raw performance, capabilities, and the implementation time necessary to get each solution up and running. However, these usually are the result of a series of trade-offs that should not be casually dismissed. In the end, there is no one-size-fits-all web server, so use the solution that best aligns with your objectives.

Reference:

<https://www.digitalocean.com/community/tutorials/apache-vs-nginx-practical-considerations>

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## 7 Change Default Password

To change (or update) mysql root password, you need to use the following command:

```
$ mysqladmin -u root -p'oldpassword' password newpass
```

For example, if the old password is abc, you can set the new password to 123456, enter:

```
$ mysqladmin -u root -p'abc' password '123456'
```

**Note:** 123456 password is used for demonstration purpose only. You must select a strong password. It is an important protection to help you have safer MySQL database transactions.

## 8 Access phpMyAdmin on CentOS

In order to access phpMyAdmin, we will need to modify apache configuration a bit to get it to work correctly.

Open the file in your text editor now so that we can make a few changes:

```
sudo vim /etc/httpd/conf.d/phpMyAdmin.conf
```

Inside, we see some directory blocks with some conditional logic to explain the access policy for our directory. There are two distinct directories that are defined, and within these, configurations that will be valid for both Apache 2.2 and Apache 2.4 (which we are running).

Currently, this setup is configured to deny access to any connection not being made from the server itself. Since we are working on our server remotely, we need to modify some lines to specify the IP address of your *home* connection.

Change any lines that read `Require ip 127.0.0.1` or `Allow from 127.0.0.1` to refer to your home connection's IP address. If you need help finding the IP address of your home connection, check out the next section. There should be four locations in the file that must be changed:

```
. . .
Require ip your_workstation_IP_address
. . .
Allow from your_workstation_IP_address
. . .
Require ip your_workstation_IP_address
. . .
Allow from your_workstation_IP_address
. . .
```

When you are finished, restart the Apache web server to implement your modifications by typing:

```
sudo systemctl restart httpd.service
```

With that, our phpMyAdmin installation is now operational. To access the interface, go to your server's domain name or public IP address followed by `/phpMyAdmin`, in your web browser:

```
http://server_domain_or_IP/phpMyAdmin
```





Welcome to phpMyAdmin

Language

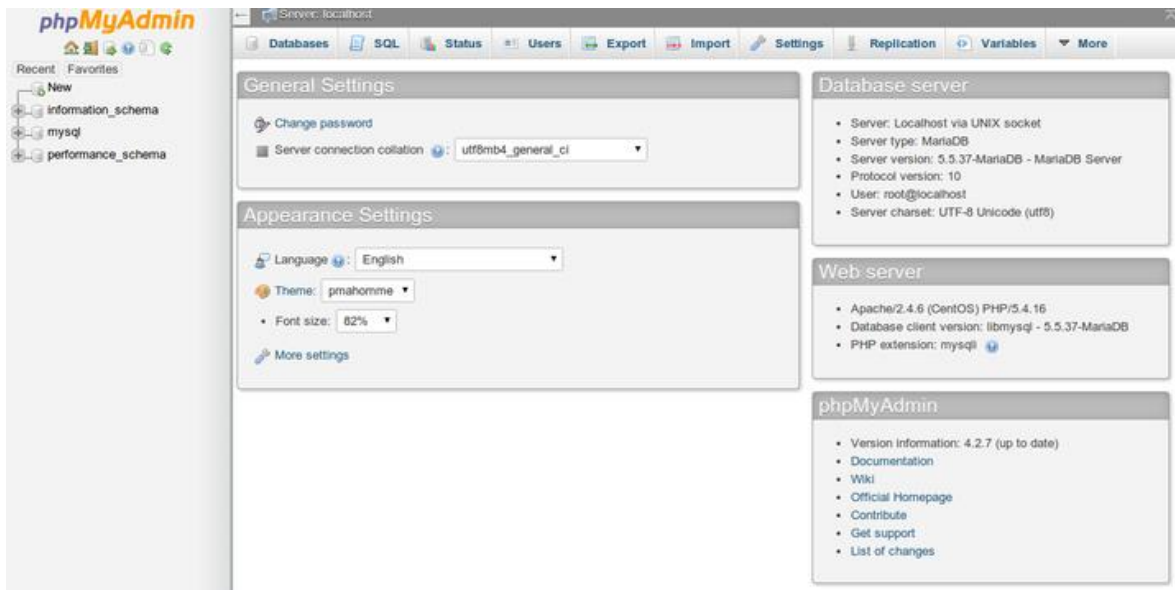
English ▼

Log In

**Username:**

**Password:**

To sign in, use a username/password pair of a valid MariaDB user. The `root` user and the MariaDB administrative password is a good choice to get started. You will then be able to access the administrative interface:



## 9 Customer Support

We provide free fix for existing bugs in the image. We offer competitive price for below services, example

- Website template design
- Password reconfiguration for SFT, MySQL, etc
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- Bundle DNS server
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- Security scan
- Firewall installation and configuration
- etc

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