### WordPress on Image Guide

<table>
<thead>
<tr>
<th>Date</th>
<th>Version</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>7.9/2017</td>
<td>V1.2</td>
<td>Alibaba cloud Image doc V1.2</td>
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<tr>
<td>1.5/2017</td>
<td>V1.1</td>
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https://oneinstack.com
1 Image environment description

《How to install WordPress》

1.1 Image version description

Software version:
- Wordpress 4.7.4
- Nginx 1.12.0
- PHP 7.1.7, PHP 7.0.21, PHP 5.6.30, PHP 5.5.38, PHP 5.4.45, PHP 5.3.29
- MySQL 5.6.36 or MariaDB 10.1.24
- Redis 3.2.9
- Memcached 1.4.38
- Jemalloc 4.5.0
- Pure-FTPD 1.0.46
- phpMyAdmin 4.4.15.10

Image Feature:
1. Source compiler installation, download the latest and most stable version from the official, security optimization
2. Providing multiple PHP versions (PHP-7.1, PHP-7.0, PHP-5.6, PHP-5.5, PHP-5.4, PHP-5.3)
3. Jemalloc optimize MySQL/MariaDB
4. Providing add a virtual host script, include Let’s Encrypt SSL certificate
5. Add ftp account to nginx via the shell script menu
6. Provide MySQL, PHP, Redis, Memcached, phpMyAdmin upgrade script
7. Provide local backup and remote backup (rsync between servers)、Alibaba cloud OSS backup (Intranet) script
1.2 Application Installation Directories

Nginx install directory: /usr/local/nginx

Database install directory: /usr/local/mysql or /usr/local/mariadb

Database data directory: /data/mysql or /data/mariadb

Database Configuration File: /etc/my.cnf

PHP install directory: /usr/local/php

PHP Configuration Path: /usr/local/php/etc

PHP Configuration File: /usr/local/php/etc/php.ini

PHP Additional .ini File: /usr/local/php/etc/php.d

Memcached install directory: /usr/local/memcached

Memcached Configuration File: /etc/init.d/memcached

Redis install directory: /usr/local/redis

Redis Configuration File: /usr/local/redis/etc/redis.conf

Web Context document root: /data/wwwroot/default

phpMyAdmin install directory: /data/wwwroot/default/phpMyAdmin

Web logs directory: /data/wwwlogs

Index demo url: http://<Public net IP>

Opcache Control Panel url: http://<Global IP Address>/ocp.php

phpmyadmin url: http://<Public net IP>/phpMyAdmin  #Pay attention to upper and lower case, rename or delete for security advice

PHP Prober url: http://<Public net IP>/prober.php

The default ip direct access to the contents of the corresponding root directory:/data/wwwroot/default , This directory contains the home pagedemo,Opcache Control Panel,phpinfo,phpmyadmin,Probes and other documents , Directory inside the file can be deleted, the directory can not be deleted.
1.3 How do use scripts to optimize the parameters

Because this image was build based on 1 Core 1G ECS, the configuration and parameters for MySQL/MariaDB, PHP are original without any change, highly recommended. If this is not the case, run the following optimization script:

```bash
cd /root/oneinstack  # Must enter the directory execution under oneinstack
./optimize.sh       # Do not sh optimize.sh or bash optimize.sh such execution
```

**NOTE:**

1. It may take 1 minute, do not interrupt

2. This script will automatically optimize MySQL, PHP and other parameters according to the system configuration

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2 How to Change your PHP Version

cd /root/oneinstack  #Must enter the directory execution under oneinstack

./change_php_version.sh  #Do not sh change_php_version.sh such execution

[root@OneinStack oneinstack]# ./change_php_version.sh

# OneinStack for CentOS/RadHat 5+ Debian 6+ and Ubuntu 12+
# Change your PHP version
# For more information please visit https://oneinstack.com

Current PHP Version: 5.4

Please select a version of the PHP:
  1. php-7.1
  2. php-7.0
  3. php-5.6
  4. php-5.5
  5. php-5.4
  6. php-5.3

Please input a number:(Default 3 press Enter) 2
Gracefully shutting down php-fpm . done
Starting php-fpm done

You have successfully changed to 7.0

[root@OneinStack oneinstack]#
3 Migrating website from OS disk to Data disk

**Note:** If you purchased a data disk (And only one data disk), it is recommended to mount the data disk first, the site content, database storage data cloud disk. If there is no purchase data cloud disk Ignore the tutorial!

`cd /root/oneinstack` #Must enter the directory execution under oneinstack

`./move_auto_fdisk.sh` #mount data disk and migrate

As shown below:

```bash
# OneinStack for CentOS/RadHat 5+ Debian 6+ and Ubuntu 12+
# Auto fdisk
# For more information please visit http://oneinstack.com

```

**Step 1:** No lock file, begin to create lock file and continue

**Step 2:** Begin to check free disk
You have a free disk, now will fdisk it and mount it
This system have free disk:
/dev/vdb

**Step 3:** Begin to fdisk free disk

**Step 4:** Begin to make directory

**Step 5:** Begin to write configuration to /etc/fstab and mount device

```
```
4 MySQL/MariaDB databases management

NOTE:

Use following URL to open phpMyAdmin page:

http://<Public net IP>/phpMyAdmin

phpMyAdmin is an application for MySQL databases management. With it you can create, alter, drop, delete, import and export MySQL database tables. You can also run MySQL queries, optimize, repair and check tables, change collation.

4.1 Display default MySQL root password

cd /root/oneinstack  #Must enter the directory execution under oneinstack
grep dbrootpwd options.conf  #Display MySQL root password
4.2 Change MySQL root password

```
cd /root/oneinstack  # Must enter the directory execution under oneinstack
./reset_db_root_password.sh
```

```
[oneinstack@oneinstack ~]# ./reset_db_root_password.sh

# OneinStack for CentOS/RadHat 5+ Debian 6+ and Ubuntu 12+
# Reset Database root password for OneinStack
# For more information please visit https://oneinstack.com

Please input the root password of database: oneinstack
Password reset successfully!
The new password: oneinstack
```

```
[oneinstack@oneinstack ~]# mysql -u root -p
Enter password:
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 5
Server version: 5.6.34-log MySQL Community Server (GPL)

Copyright (c) 2000, 2016, Oracle and/or its affiliates. All rights reserved.
Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
MySQL [(none)]>
```
4.3 Create a MySQL Database

For example: create a database named ‘oneinstack’

# mysql -uroot -p  # enter mysql console

Enter password:  # Enter mysql root password

MySQL [(none)]> create database oneinstack;  # Notice the semicolon at the end

MySQL [(none)]> show databases;

MySQL [(none)]> exit;  # quit mysql console, Notice the semicolon at the end
4.4 Delete a MySQL Database

MySQL [(none)]> drop database oneinstack;  #delete oneinstack database

MySQL [(none)]> exit;  # quit mysql console, Notice the semicolon at the end
4.5 Create a Database User

For security purposes, we usually create a unique database connection account for each web application (Account name can not be root).

E.g: add a user named: db_user, password:123456, Authorization for the localhost to the oneinstack database all permissions, the commands are as follows:

```
# mysql -u root -p
MySQL [(none)]> grant all privileges on oneinstack.* to db_user@'localhost'
identified by '123456';  # Notice the semicolon at the end
MySQL [(none)]> flush privileges;
MySQL [(none)]> exit;  # quit mysql console, Notice the semicolon at the end
```
4.6 How to setup a remote MySQL connection

For security reasons, OneinStack only allows the cloud host localhost to connect to the database, if you need a remote connection to the database, the following operations are required:

1. You must open port 3306 for Security groups

2. Database authorization

Remote Connection Create a new account (Account name can not be root)

E.g: add a user named db_user, password db_pass, Authorized as % ( % Represents all ip can connect, you can set the designated ip ) db_name database all authority, the commands are as follows

```
# mysql  -uroot  
MySQL [(none)]> grant all privileges on db_name.* to db_user@'%' identified by 'db_pass';  # Authorization statement, Special attention to the semicolon
MySQL [(none)]> flush privileges;
MySQL [(none)]> exit;   # Quit the database console, Special attention to the semicolon
```

As shown below:
Welcome to the MySQL monitor. Commands end with ; or \g.
Your MySQL connection id is 112
Server version: 5.6.35-log MySQL Community Server (GPL)

Copyright (c) 2000, 2016, Oracle and/or its affiliates. All rights reserved.

Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MySQL [(none)]> grant all privileges on db_name.* to db_user@'%' identified by 'db_pass';
Query OK, 0 rows affected (0.00 sec)

MySQL [(none)]> flush privileges;
Query OK, 0 rows affected (0.00 sec)

MySQL [(none)]> exit;
Bye
5 How to manage virtual host

5.1 How to add a virtual host

```bash
cd /root/oneinstack  # Must enter the directory execution under oneinstack
./vhost.sh #NOTE: If no SSL certificate is purchased, SSL under Nginx please enter n
```

In the above figure, the directory is the root directory of the Web site, the script is created automatically, Upload the code to the directory when deploying the site.

https://oneinstack.com
(the directory, subdirectories, and file permissions are all:www) correspond Nginx

the configuration file path is:

/usr/local/nginx/conf/vhost/demo.oneinstack.com.conf (demo.oneinstack.com Is

the domain name that is bound)

Nginx rewrite rule: /usr/local/nginx/conf/rewrite/wordpress.conf

Add a virtual host will automatically create this directory
5.2 How to delete a virtual host

    cd  /root/oneinstack  # Must enter the directory execution under oneinstack

    ./vhost.sh del
6 How to manage FTP User Accounts

```bash
cd /root/oneinstack  # Must enter the directory execution under oneinstack
./pureftpd_vhost.sh  # Do not sh pureftpd_vhost.sh such execution
```

```
[root@oneinstack ~]# ./pureftpd_vhost.sh

# Oneinstack for CentOS/RadHat 5+ Debian 6+ and Ubuntu 12+
# FTP virtual user account management
# For more information please visit https://oneinstack.com

What Are You Doing?
  1. UserAdd
  2. UserMod
  3. UserPasswd
  4. UserDel
  5. ListAllUser
  6. ShowUser
  q. Exit

Please input the correct option: 1

Please input a username: yeho
Please input the password: oneinstack
Please input the directory(Default directory: /data/wwwroot):
Password:
Enter it again:

[yeho] create successful!

You user name is : yeho
You Password is : oneinstack
You directory is : /data/wwwroot
```
7 How to backup

Backup Set Parameters

```bash
cd /root/oneinstack  # Must enter the directory execution under oneinstack
./backup_setup.sh
```

![Backup Setup Screenshot](https://oneinstack.com)
Perform the backup immediately:

```
cd /root/oneinstack  #Must enter the directory execution under oneinstack
./backup.sh
```

Set Scheduled Task Automatic Scheduled Backup:

Example: Can be added to scheduled tasks, such as automatic backups every day 1:00

```
# echo '0 1 * * * cd ~/oneinstack;/backup.sh > /dev/null 2>&1 & ' >> /var/spool/cron/crontabs/root
```

View the backup:

View the local backup:

```
ls -l /data/backup/
```
8  How to manage service

Nginx:

\[\text{service nginx \{reload|start|stop|status|restart \}}\]

PHP:

\[\text{service php-fpm \{reload|start|stop|status|restart \}}\]

MySQL:

\[\text{service mysqld \{start|stop|restart|reload|status\}}\]

Pure-Ftpd:

\[\text{service pureftpd \{start|stop|restart|status\}}\]

Redis:

\[\text{service redis-server \{start|stop|status|restart|reload\}}\]

Memcached:

\[\text{service memcached \{start|stop|status|restart|reload\}}\]
9 How to upgrade

`cd /root/oneinstack`  # Must enter the directory execution under oneinstack

`.upgrade.sh`  # Do not sh upgrade.sh or bash upgrade.sh such execution

```
# OneinStack for CentOS/RadHat 5+ Debian 6+ and Ubuntu 12+
# upgrade Web, Database, PHP, Redis, phpMyAdmin for OneinStack
# For more information please visit https://oneinstack.com

What Are You Doing?
  1. Upgrade Nginx/Tengine/OpenResty
  2. Upgrade MySQL/MariaDB/Percona
  3. Upgrade PHP
  4. Upgrade Redis
  5. Upgrade Memcached
  6. Upgrade phpMyAdmin
  q. Exit

Please input the correct option: 1

Current Nginx Version: 1.10.2

Please input upgrade Nginx Version(example: 1.9.15): 1.11.5
[openssl-1.0.2j.tar.gz] found
[pcre-8.39.tar.gz] found
Download [nginx-1.11.5.tar.gz] successfully!
[nginx-1.11.5.tar.gz] found
Press Ctrl+c to cancel or Press any key to continue...
```
10 How to add Extensions

`cd /root/oneinstack`  # Must enter the directory execution under oneinstack

`./addons.sh`  #NOTE: Support install and uninstall function

```
# OneinStack for CentOS/RadHat 5+ Debian 6+ and Ubuntu 12+  
# Install/Uninstall PHP Extensions  
# For more information please visit https://oneinstack.com

What Are You Doing?

1. Install/Uninstall PHP opcode cache
2. Install/Uninstall ZendGuardLoader/ionCube PHP Extension
3. Install/Uninstall ImageMagick/GraphicsMagick PHP Extension
4. Install/Uninstall fileinfo PHP Extension
5. Install/Uninstall memcached/memcache
6. Install/Uninstall Redis
7. Install/Uninstall Let's Encrypt client
q. Exit

Please input the correct option: 7

Please select an action:
1. install
2. uninstall

Please input a number: (Default 1 press Enter)
```

https://oneinstack.com
11 How to uninstall

Some items can be uninstalled separately, such as RDS database, the database can be uninstalled separately.

```
cd /root/oneinstack  # Must enter the directory execution under oneinstack
./uninstall.sh  # NOTE: Please backup your data
```

![Image of uninstall process]

You will uninstall OneinStack. Please backup your configure files and DB data!
Do you want to uninstall? [y/n]: n
12  More

12.1 How to install WordPress

1. Create the database required for the site, reference [Create a database]

2. Add a virtual host, reference [How to add a virtual host]

3. Create an FTP account, reference [How to manage FTP accounts]

4. Install WordPress

**NOTE:** Ftp upload code do not need to modify permissions, default is already www;

Download the code in server, you must modify the site root and subdirectories,

Directory file permissions are www; If there is a problem with site permissions,

Please refer to [Proper permissions for files/folders]

1) Open your domain name via browser

   eg: https://demo.oneinstack.com

2) Select the language, Click "Continue"
3) Click "Let's go"

Welcome to WordPress. Before getting started, we need some information on the database. You will need to know the following items before proceeding.

1. Database name
2. Database username
3. Database password
4. Database host
5. Table prefix (if you want to run more than one WordPress in a single database)

We’re going to use this information to create a wp-config.php file. If for any reason this automatic file creation doesn’t work, don’t worry. All this does is fill in the database information to a configuration file. You may also simply open wp-config-sample.php in a text editor, fill in your information, and save it as wp-config.php. Need more help? We got it.

In all likelihood, these items were supplied to you by your Web Host. If you don’t have this information, then you will need to contact them before you can continue. If you’re all ready...

   Let's go!

4) Set your database user, password, and database name, Click "Submit"

Below you should enter your database connection details. If you’re not sure about these, contact your host.

<table>
<thead>
<tr>
<th><strong>Database Name</strong></th>
<th>oneinstack</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Username</strong></td>
<td>root</td>
</tr>
<tr>
<td><strong>Password</strong></td>
<td>KeYpZrZx</td>
</tr>
<tr>
<td><strong>Database Host</strong></td>
<td>localhost</td>
</tr>
<tr>
<td><strong>Table Prefix</strong></td>
<td>wp_</td>
</tr>
</tbody>
</table>

Submit

5) Click "Run the install"

All right, sparky! You’ve made it through this part of the installation. WordPress can now communicate with your database. If you are ready, time now to...

Run the install

6) Set administrator user, password and E-mail, Click "Install WordPress"
Congratulations, it has been installed successfully!

Your index page: http://<domain name>

Your administration page: Use http://<domain name>/wp-admin/
12.2 About the PHP opcode cache

by default, in order to reduce PHP compile time, improve performance ( Opcode is recommended for production environments ), The PHP environment loads the Opcode module by default ( PHP7.1,7.0,5.6,5.5 ), Please refer to the principle: 《In-depth understanding of PHP Opcode caching principles》

But this will appear PHP code updates, take 2 to 3 minutes to take effect, This affects the efficiency of the site during the commissioning phase suggest that you close or refresh the cache every time there is a code update ( Recommended method two )

Method 1: Uninstall Opcode

cd /root/oneinstack  #Must enter the directory execution under oneinstack

./addons.sh

https://oneinstack.com
Method 2: Refresh the PHP cache

Access http://<Public net IP>/ocp.php,

Or direct access http://<Public net IP>/ocp.php?RESET=1

As shown below:
12.3 Proper permissions for files/folders

Web site root permissions to follow:

file 644 , folder 755 , Permissions Users and groups www

If there is a file permissions problem, execute the following three commands:

```
chown  -R  www.www  /data/wwwroot/
find  /data/wwwroot/  -type  d  -exec  chmod  755  {}  \
find  /data/wwwroot/  -type  f  -exec  chmod  644  {}  \
```
12.4 About Redis and Memcached

Redis default port:6379

Memcached default port:11211

default only listen IP:127.0.0.1

1. How to increase the maximum memory size of Redis

   vi  /usr/local/redis/etc/redis.conf

   maxmemory 1024000000  # <bytes>

   service redis-server restart  # restart the redis for changes to take effect

2. How to increase the maximum memory size of memcached

   vi  /etc/init.d/memcached

   CACHESIZE=256   # <Megebyte>

   service memcached restart  # restart the memcached for changes to take effect

3. How to change the listening port for redis

   vi  /usr/local/redis/etc/redis.conf

   bind 127.0.0.1 changed to bind 0.0.0.0

   service redis-server restart  # restart the redis for changes to take effect

4. How to change the listening port for memcached

   vi /etc/init.d/memcached

   OPTIONS="-l 127.0.0.1"  changed to  OPTIONS=""

   service memcached restart  # restart the memcached for changes to take effect

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12.5 About iptables Firewall

By default, iptables firewall is not running.