Alma Linux 8 – Moodle 4.2

Version:	1.0.0
Created by:	cloudimg

Table of Contents

1.) Overview

This document is provided as a user guide for the Alma Linux 8 – Moodle 4.2 product offering on the Azure Marketplace. Please reach out to support@cloudimg.co.uk if any issues are encountered following this user guide for the chosen product offering.

2.) Access & Security

Please update the security group of the target instance to allow the below ports and protocols for access and connectivity.

Protocol	Type	Port	Description
SSH	TCP	22	SSH connectivity
Custom TCP	TCP	3306	MySQL Database Listener Port for remote access
Custom TCP	TCP	80	Moodle Front End Access (HTTP)
Custom TCP	TCP	443	Moodle Front End Access (HTTPS)

3.) System Requirements

The minimum system requirements for the chosen product offering can be found below

Minimum CPU	Minimum RAM	Required Disk Space
1	1 GB	20 GB

4.) Connecting to the Instance

Once launched in the Azure Virtual Machines Service, please connect to the instance via an SSH client using the **azureuser** with the key pair associated at launch. Once connected as the **azureuser**, you will be able to **sudo** to the **root** user by issuing the below command.

Switch to the root user

```
sudo su -
```

5.) On Startup

An OS package update script has been configured to run on boot to ensure the image is fully up to date at first use. You can disable this feature by removing the script from /stage/scripts/ and deleting the entry in crontab for the root user.

Disable the OS update script from running on reboot

```
rm -f /stage/scripts/initial_boot_update.sh

crontab -e

#DELETE THE BELOW LINE. SAVE AND EXIT THE FILE.
```

Alibaba Cloud
Partner Network

Registered
Technology
Partner

cloudimg
(+44) 02045382725
3rd Floor 86-90 Paul Street London EC2A 4NE
support@cloudimg.co.uk
https://cloudimg.co.uk

```
@reboot /stage/scripts/initial_boot_update.sh
```

6.) Filesystem Configuration

Please see below for a screenshot of the server disk configuration and specific mount point mappings for software locations.

```
Filesystem        Size   Used  Avail Use% Mounted on
devtmpfs          1.9G      0   1.9G   0% /dev
tmpfs             2.0G      0   2.0G   0% /dev/shm
tmpfs             2.0G   8.5M   1.9G   1% /run
tmpfs             2.0G      0   2.0G   0% /sys/fs/cgroup
/dev/nvme0n1p2     38G   3.1G    33G   9% /
/dev/nvme1n1      9.8G   234M   9.0G   3% /var/lib/mysql
/dev/nvme0n1p1    2.0G   121M   1.7G   7% /boot
tmpfs             391M      0   391M   0% /run/user/1002
tmpfs             391M      0   391M   0% /run/user/0
/dev/nvme2n1      9.8G   361M   8.9G   4% /var/www/html
```

Mount Point	Description
/boot	Operating System Kernel files
/var/lib/mysql	MySQL data directory
/var/www/html/moodle	Moodle installation directory

7.) Server Components

Please see below for a list of installed server components and their respective installation paths. The below versions are subject to change on initial boot based on the initial_boot_update.sh script finding new versions of the software in the systems package repositories.

Component	Version	Software Home
Cloud-Init	19.4	/etc/cloud

MySQL 8	8.0.30	/etc/my.cnf
PHP	8.1.24	/etc/php.ini
Apache HTTP	2.4.6	/etc/httpd
Moodle	4.2.2	/var/www/html/moodle
Azure CLI	2.53.1	/lib64/az

8.) Scripts and Log Files

The below table provides a breakdown of any scripts & log files created to enhance the useability of the chosen offering.

Script/Log	Path	Description
Initial_boot_update.sh	/stage/scripts	Update the Operating System with the latest updates available.
Initial_boot_update.log	/stage/scripts	Provides output for initial_boot_update.sh
mysql_root_password.log	/stage/scripts	MySQL root database password file

9.) Using System Components

Instructions can be found below for using each component of the server build mentioned in section 7 of this user guide document.

Azure CLI

Using Azure CLI – as any OS user.

```
az
```

Cloud-Init

Edit the /etc/cloud/cloud.cfg file to reflect your desired configuration. A link to the cloud-init official documentation can be found below for referencing best practise for your use case.

https://cloudinit.readthedocs.io/en/latest/

```
vi /etc/cloud/cloud.cfg
```

cloudimg
(+44) 02045382725
3rd Floor 86-90 Paul Street London EC2A 4NE
support@cloudimg.co.uk
https://cloudimg.co.uk

Alibaba Cloud
Partner Network

Registered
Technology
Partner

MySQL 8

The MySQL Database service has been configured to start on boot, please use the below commands to start, stop and check the status of the service.

```
#Check the MySQL service is running

service mysqld status


#Stop the MySQL service

service mysqld stop


#Start the MySQL service

service mysqld start
```

You can access the mysql database server as the root user by referring to the instructions in the /stage/scripts/mysql_root_password.log file. The root database user has been disabled for remote login as per best practise and therefore only a local login from the server command line will be allowed for the root user.

```
mysql -u root -p


#Enter the randomly generated password found in the /stage/scripts/mysql_root_password.log
file
```

PHP

PHP 8.1 has been preinstalled on the system along with the required extensions required to run Moodle. You may check the PHP version being used by the server via the below command.

```
php -v
```

Alibaba Cloud
Partner Network

Registered
Technology
Partner

Moodle

On first use of the system, an interactive script has been created so that the Front-End URL of Moodle can be set based on your requirements. Initiate the /stage/scripts/set-moodle-front-end-url.sh script as the **root** user to run the script.

```
#Initiate the set-moodle-front-end-url.sh script
/stage/scripts/set-moodle-front-end-url.sh
```

EXPECT AND RESPOND (INPUTS HIGHLIGHTED IN RED, ALTER INPUTS BASED ON YOUR REQUIREMENTS)

```
 [root@ip-172-31-89-144 scripts]# /stage/scripts/set-moodle-front-end-url.sh


Moodle Front-end URL Configuration Options:
1. IP Address (HTTP) - Use this option if your Moodle site is accessible via an IP address
using HTTP.
2. IP Address (HTTPS) - Use this option if your Moodle site is accessible via an IP address
using HTTPS.
3. Domain Name (HTTP) - Use this option if your Moodle site is accessible via a domain name
using HTTP.
4. Domain Name (HTTPS) - Use this option if your Moodle site is accessible via a domain name
using HTTPS.


Enter the number of your choice (1-4): 1
Please enter the IP address (e.g., IP address or domain name): 18.205.191.237
Moodle front-end URL updated to: http://18.205.191.237/moodle
[root@ip-172-31-89-144 scripts]#
```

You will now be able to access the Moodle Front End via the URL shown above in **GREEN,** this value will differ based on your inputs.

Installation

Moodle - Modular Object-Oriented Dynamic Learning Environment
Copyright notice

Copyright (C) 1999 onwards Martin Dougiamas (https://moodle.com)

This program is free software: you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation, either version 3 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

See the Moodle License information page for full details: https://moodledev.io/general/license

Confirm

Have you read these conditions and understood them?

Cancel   Continue

Once the URL for Moodle has loaded, a screen matching the above will appear.
Click Continue.

You will now be taken to a screen matching the above showing that the system meets the requirements for installation of Moodle. You may see in the 'Other checks' section information related to 'site not https' this will only be applicable if you selected an option for the front-end URL to be HTTP and can therefore be ignored.

Click Continue.

Installation

System

For a few moments the above will appear, at this point the installation of Moodle will now take place. After some time, the screen will begin updating as below.

Success (0.17 seconds)

mod_assign

Success (1.56 seconds)

mod_bigbluebuttonbn

Success (0.94 seconds)

mod_book

Success (0.36 seconds)

mod_chat

Success (0.75 seconds)

mod_choice

Success (0.58 seconds)

mod_data

The Moodle installation is now underway. Average runtime for a t3a.medium instance type is 3:30mins.

Once complete you will be able to scroll to the bottom of the webpage to find a Continue button.

Success (0.11 seconds)

tiny_link

Success (0.10 seconds)

tiny_media

Success (0.09 seconds)

tiny_recordrtc

Success (0.12 seconds)

logstore_database

Success (0.11 seconds)

logstore_standard

Success (0.22 seconds)

Continue

Click Continue

Installation

On this page you should configure your main administrator account which will have complete control over the site. Make sure you give it a secure username and password as well as a valid email address. You can create more admin accounts later on.

Expand all

⌄ General

Username	❓	admin
Choose an authentication method	❓	Manual accounts

The password must have at least 8 characters, at least 1 digit(s), at least 1 lower case letter(s), at least 1 upper case letter(s), at least 1 special character(s) such as *, -, or #

New password	❗❓	Click to enter text ✏️ 👁
		☐ Force password change ❓
First name	❗	Admin
Last name	❗	User
Email address	❗	
Email visibility	❓	Visible to everyone
City/town		
Select a country		Select a country...
Timezone		Server timezone (Europe/London)

We may not begin to customize our Moodle site. The following steps will use example and templatised values, please edit these values based on your own requirements.

Installation

On this page you should configure your main administrator account which will have complete control over the site. Make sure you give it a secure username and password as well as a valid email address. You can create more admin accounts later on.

Expand all

∨ **General**

Username	?	admin
Choose an authentication method	?	Manual accounts

The password must have at least 8 characters, at least 1 digit(s), at least 1 lower case letter(s), at least 1 upper case letter(s), at least 1 special character(s) such as *, -, or #

New password	❗ ?	············ ✏ 👁
		☐ Force password change ?
First name	❗	Admin
Last name	❗	User
Email address	❗	example@cloudimg.co.uk
Email visibility	?	Hidden ⬍
City/town		London
Select a country		United Kingdom ⬍
Timezone		Server timezone (Europe/London) ⬍
Description	?	THIS IS AN EXAMPLE MOODLE SITE

?

Username = admin
New Password = Enter a strong password value
First name = Admin
Last name = User
Email Address = example@cloudimg.co.uk
Email visibility = Hidden
City/Town = London
Select a Country = United Kingdom
Timezone = Europe/London
Description = THIS IS AN EXAMPLE MOODLE SITE

letter(s), at least 1 special character(s) such as *, -, or #

New password	❗ ?	············ ✏ 👁
		☐ Force password change ?
First name	❗	Admin
Last name	❗	User
Email address	❗	example@cloudimg.co.uk
Email visibility	?	Hidden ⬍
City/town		London
Select a country		United Kingdom ⬍
Timezone		Server timezone (Europe/London) ⬍
Description	?	THIS IS AN EXAMPLE MOODLE SITE

HTML format ⬍

> **Additional names**

> **Optional**

[Update profile] [Cancel]

❗ Required

?

Click Update profile

Installation

New settings - Site home settings

Full site name
fullname

example-moodle

Short name for site (eg single word)
shortname

example-moodle

Site home summary
summary

Edit   View   Insert   Format   Tools   Table   Help

↶ ↷   B   I   H·P   𝒮   ⚿   ☰ ☰ ☰   ¶T   ¶◁   ⇥ ⇤   ☰ ☰   ▦

THIS IS AN EXAMPLE MOODLE SITE

p   6 words   ⓣ tiny

This summary can be displayed on the site home using the course/site summary block.

New settings - Location settings

Default timezone
timezone

Europe/London   ⇕   Default: Europe/London

This is the default timezone for displaying dates – each user can override this setting in their profile. Cron tasks and other server settings are specified in this timezone. You should change the setting if it shows as "Invalid timezone"

New settings - Manage authentication

Self registration
registerauth

Disable   ⇕   Default: Disable

If an authentication plugin, such as email-based self-registration, is selected, then it enables potential users to register themselves and create accounts. This results in the possibility of spammers creating accounts in order to use forum posts, blog entries etc. for spam. To avoid this risk, self-registration should be disabled or limited by *Allowed email domains* setting.

New settings - Support contact

?

Full site name = example-moodle

Short name for site (eg single word) – example-moodle

Site home summary - THIS IS AN EXAMPLE MOODLE SITE

↶ ↷   B   I   H·P   𝒮   ⚿   ☰ ☰ ☰   ¶T   ¶◁   ⇥ ⇤   ☰ ☰   ▦

THIS IS AN EXAMPLE MOODLE SITE

p   6 words   ⓣ tiny

This summary can be displayed on the site home using the course/site summary block.

New settings - Location settings

Default timezone
timezone

Europe/London   ⇕   Default: Europe/London

This is the default timezone for displaying dates – each user can override this setting in their profile. Cron tasks and other server settings are specified in this timezone. You should change the setting if it shows as "Invalid timezone"

New settings - Manage authentication

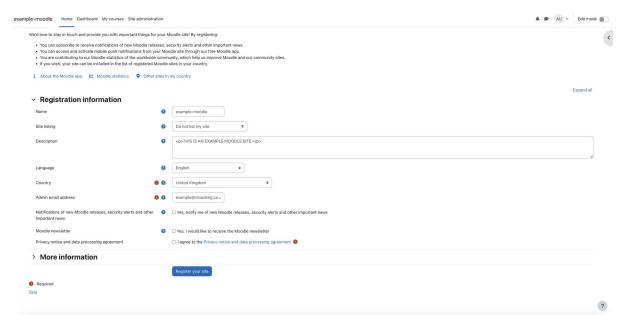Self registration
registerauth

Disable   ⇕   Default: Disable

If an authentication plugin, such as email-based self-registration, is selected, then it enables potential users to register themselves and create accounts. This results in the possibility of spammers creating accounts in order to use forum posts, blog entries etc. for spam. To avoid this risk, self-registration should be disabled or limited by *Allowed email domains* setting.

New settings - Support contact

Support email
supportemail

example@cloudimg.co.uk

If SMTP is configured on this site and a support page is not set, this email address will receive messages submitted through the support form. If sending fails, the email address will be displayed to logged-in users.

New settings - Outgoing mail configuration

No-reply address
noreplyaddress

noreply@cloudimg.co.uk   Default: noreply@3.86.210.68

Emails are sometimes sent out on behalf of a user (eg forum posts). The email address you specify here will be used as the "From" address in those cases when the recipients should not be able to reply directly to the user (eg when a user chooses to keep their address private). This setting will also be used as the envelope sender when sending email.

Save changes

?

Support email = example@cloudimg.co.uk

No-reply address = noreply@cloudimg.co.uk

Click Save Changes

Alibaba Cloud
Partner Network

Registered
Technology
Partner

cloudimg
(+44) 02045382725
3rd Floor 86-90 Paul Street London EC2A 4NE
support@cloudimg.co.uk
https://cloudimg.co.uk

We'd love to stay in touch and provide you with important things for your Moodle site! By registering:

- You can subscribe to receive notifications of new Moodle releases, security alerts and other important news.
- You can access and activate mobile push notifications from your Moodle site through our free Moodle app.
- You are contributing to our Moodle statistics of the worldwide community, which help us improve Moodle and our community sites.
- If you wish, your site can be included in the list of registered Moodle sites in your country.

i About the Moodle app   Moodle statistics   Other sites in my country

Expand all

Registration information

Name		example-moodle
Site listing		Do not list my site
Description		THIS IS AN EXAMPLE MOODLE SITE
Language		English
Country		United Kingdom
Admin email address		example@cloudimg.co.u
Notifications of new Moodle releases, security alerts and other important news		☐ Yes, notify me of new Moodle releases, security alerts and other important news
Moodle newsletter		☐ Yes, I would like to receive the Moodle newsletter
Privacy notice and data processing agreement		☐ I agree to the Privacy notice and data processing agreement

More information

Register your site

Required
Skip
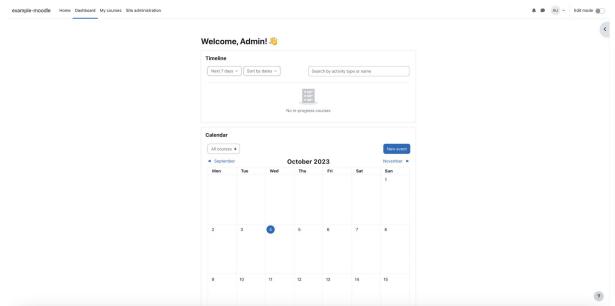
Select 'I agree to the Privacy notice and data processing agreement'
Select Register your site once all values match your expectation.

example-moodle

General   Users   Courses   Grades   Plugins   Appearance   Server   Reports   Development

Site registration confirmed

Thank you for registering your site. Registration information will be kept up to date by the 'Site registration' scheduled task.   ✕

Continue

Click Continue

Moodle is now up and running, available for use.