Alma Linux 8 - Moodle 3.9

Version:	1.0.0
Created by:	cloudimg

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1.) Overview

This document is provided as a user guide for the Alma Linux 8 – Moodle 3.9 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	Туре	Port	Description
SSH	TCP	TCP 22 SSH connectivity	
Custom TCP	TCP	3306	MySQL Database Listener Port for
			remote access
Custom TCP	TCP	80 Moodle Front End Access (H	
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.
```



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	7.4	/etc/php.ini
Apache HTTP	2.4.6	/etc/httpd
Moodle	3.9	/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		
I			

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



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
```



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)

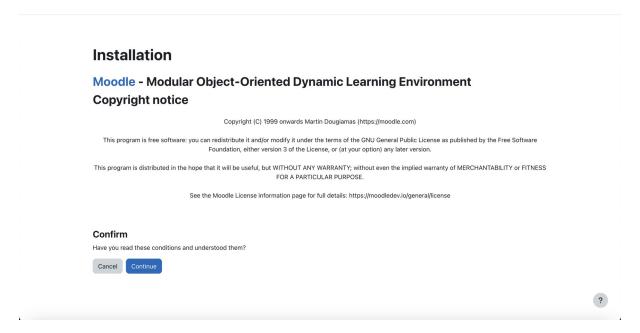
```
[root@ip-172-31-89-144 scripts]# /stage/scripts/set-moodle-front-end-url.sh

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.

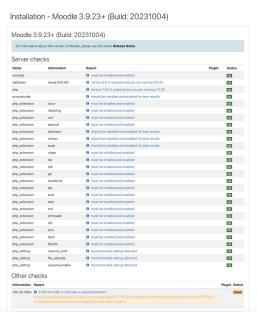
Enter the number of your choice (1-4): 1
Please enter the IP address (e.g., IP address or domain name): 18.205.191.237
Moodle front-end URL updated to: http://18.205.191.237/moodle
[root@ip-172-31-89-144 scripts]#
```

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.





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

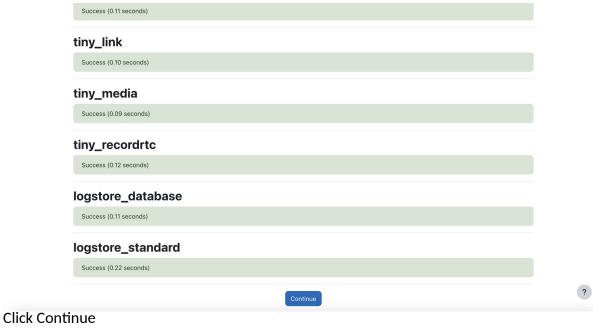
For a few moments the above will appear, at this point the installation of Moodle will now take place. After some time, the screen will begin updating as below.

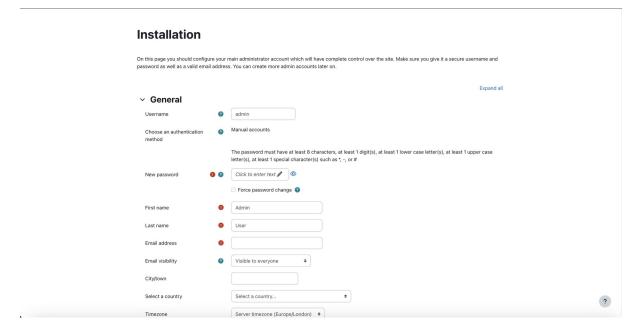


The Moodle installation is now underway. Average runtime for a t3a.medium instance type is 3:30mins.

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

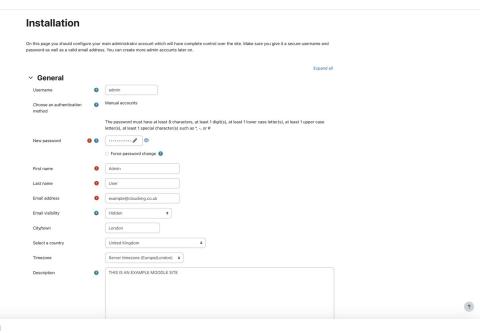






We may not begin to customize our Moodle site. The following steps will use example and templatised values, please edit these values based on your own requirements.





Username = admin

New Password = Enter a strong password value

First name = Admin

Last name = User

Email Address = example@cloudimg.co.uk

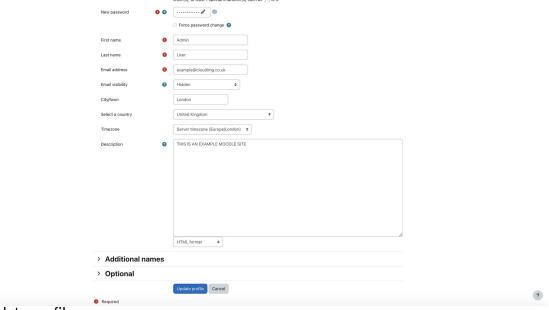
Email visibility = Hidden

City/Town = London

Select a Country = United Kingdom

Timezone = Europe/London

Description = THIS IS AN EXAMPLE MOODLE SITE



Click Update profile



Installation New settings - Site home settings Site home summary Edit View Insert Format Tools Table Help 5 ∂ B I H* 8 % F E E M Tk @ @ ⊞ ⊞ THIS IS AN EXAMPLE MOODLE SITE 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 New settings - Manage authentication Self registration Disable **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 New settings - Location settings

Support email = example@cloudimg.co.uk No-reply address = <a href="mailto:normalization.normalizat

New settings - Manage authentication

Support email example@cloudimg.co.uk

New settings - Outgoing mail configuration

New settings - Support contact

Self registration registerauth Disable

Disable

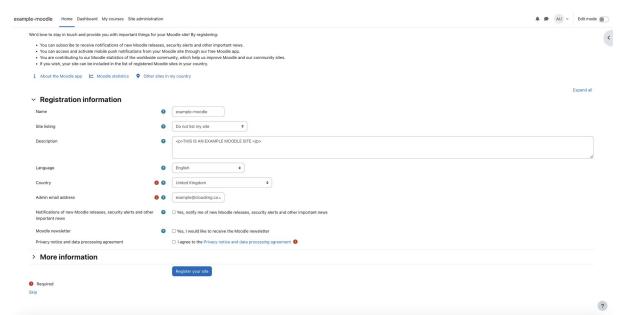
If an authentication plugin, such as email-based self-negistration, is selected, then it enables potential users to rep themselves and create accounts. This results in the possibility of spammers creating accounts in order to use forur posts, bog entries etc. for spam. To evoid this risk, self-registration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

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

Click Save Changes



?

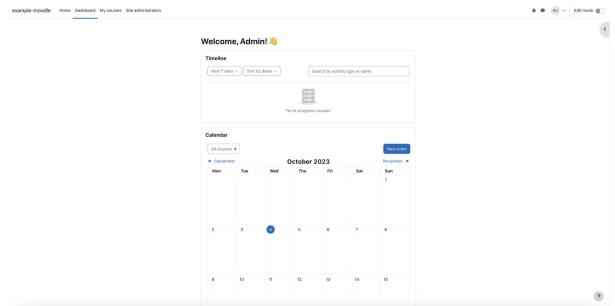


Select 'I agree to the Privacy notice and data processing agreement' Select Register your site once all values match your expectation.



Click Continue





Moodle is now up and running, available for use.

