

# Alma Linux 8 – Oracle Database Client 21c

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 – Oracle Database Client 21c product offering on the Azure Marketplace. Please reach out to [support@cloudimg.co.uk](mailto:support@cloudimg.co.uk) if any issues are encountered following this user guide for the chosen product offering.



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## 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

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



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## 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           1.9G   0 1.9G   0% /dev/shm
tmpfs           1.9G  8.5M 1.9G   1% /run
tmpfs           1.9G   0 1.9G   0% /sys/fs/cgroup
/dev/nvme0n1p2  38G  3.5G  32G  10% /
/dev/nvme1n1    20G  6.5G  13G  35% /u01
/dev/nvme0n1p1  2.0G  143M  1.7G   8% /boot
tmpfs           389M   0  389M   0% /run/user/1002
tmpfs           389M   0  389M   0% /run/user/0
```

Mount Point	Description
/boot	Operating System Kernel files
/u01	Oracle software 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	22.1-1	/etc/cloud
Oracle Client 21c - Administrator	21.3.0.0	/u01
Azure CLI	2.53.1	/lib64/az



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## 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

## 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/topics/datasources/ec2.html>

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

### Oracle Database Client

Oracle Database Client has been preinstalled on the system. Please follow the below instructions for setting the environment variables required to use the software.



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Run – Once logged into the server as the root, switch to the oracle user. (Please type this command instead of copy paste)

```
sudo su - oracle
```

Run – A script has been created under the \$HOME directory of the oracle user.

- setEnv.sh – This script will set the Oracle environment variables allowing the use of utilities such as sqlplus.

Run – Create a tnsnames.ora file. An example has been provided below. Please edit the below values in **RED** to match that of the database instance you wish to connect to.

```
#Set the Oracle environment variables
cd $HOME
. ./setEnv.sh

echo EXAMPLE_SID =
(DESCRIPTION =
  (ADDRESS_LIST =
    (ADDRESS = (PROTOCOL = TCP) (HOST = EXAMPLE_IP_OR_DNS_HOSTNAME) (PORT = 1521))
  )
  (CONNECT_DATA =
    (SERVER = DEDICATED)
    (SERVICE_NAME = EXAMPLE_SERVICE_NAME)
  )
)' > "$ORACLE_HOME/network/admin/tnsnames.ora"
```

Run – Set the Oracle environment variables and access your database via SQLPLUS (Replace the values in **RED** to match that used above in the tnsnames.ora file)

```
#Set the Oracle environment variables and access SQLPLUS
cd $HOME
. ./setEnv.sh

sqlplus 'system/password@(DESCRIPTION=(ADDRESS=(PROTOCOL=TCP) (HOST=orcl.us.oracle.com) (PORT=1521)) (CONNECT_DATA=(SERVICE_NAME=orcl.us.oracle.com)))'
```



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---

## EXPECTED OUTPUT

SQL\*Plus: Release 21.3.0.0.0 Production on Wed Apr 5 06:43:09 2023

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Connected to:

Oracle Database 21c Standard Edition Release 21.3.0.0.0 - 64bit Production



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