

# Alma Linux 8 – Grafana & Prometheus

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 – Grafana & Prometheus 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
TCP	TCP	3000	Grafana Web Interface

## 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           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/nvme0n1p1  2.0G 121M  1.7G   7% /boot
tmpfs           391M   0  391M   0% /run/user/1002
/dev/nvme1n1    9.8G  37M  9.2G   1% /var/lib/grafana
```

Mount Point	Description
/boot	Operating System Kernel files
/var/lib/grafana	Grafana Data 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
Grafana	9.3.6	/etc/grafana
Prometheus	2.34	/opt/prometheus-2.34.0
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/>

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

### Prometheus



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A system service has been created for Prometheus. You may stop, start or check the status of the service via the below commands.

```
#START THE PROMETHEUS SERVICE
systemctl start prometheus

#STOP THE PROMETHEUS SERVICE
systemctl stop prometheus

#CHECK THE STATUS OF THE PROMETHEUS SERVICE
systemctl status prometheus
```

## Grafana

The Grafana service has been configured to start on boot. You can stop, start and check the status of the service via the below commands.

```
#START THE GRAFANA SERVICE
systemctl start grafana-server

#STOP THE GRAFANA SERVICE
systemctl stop grafana-server

#CHECK THE STATUS OF THE GRAFANA SERVICE
systemctl status grafana-server
```

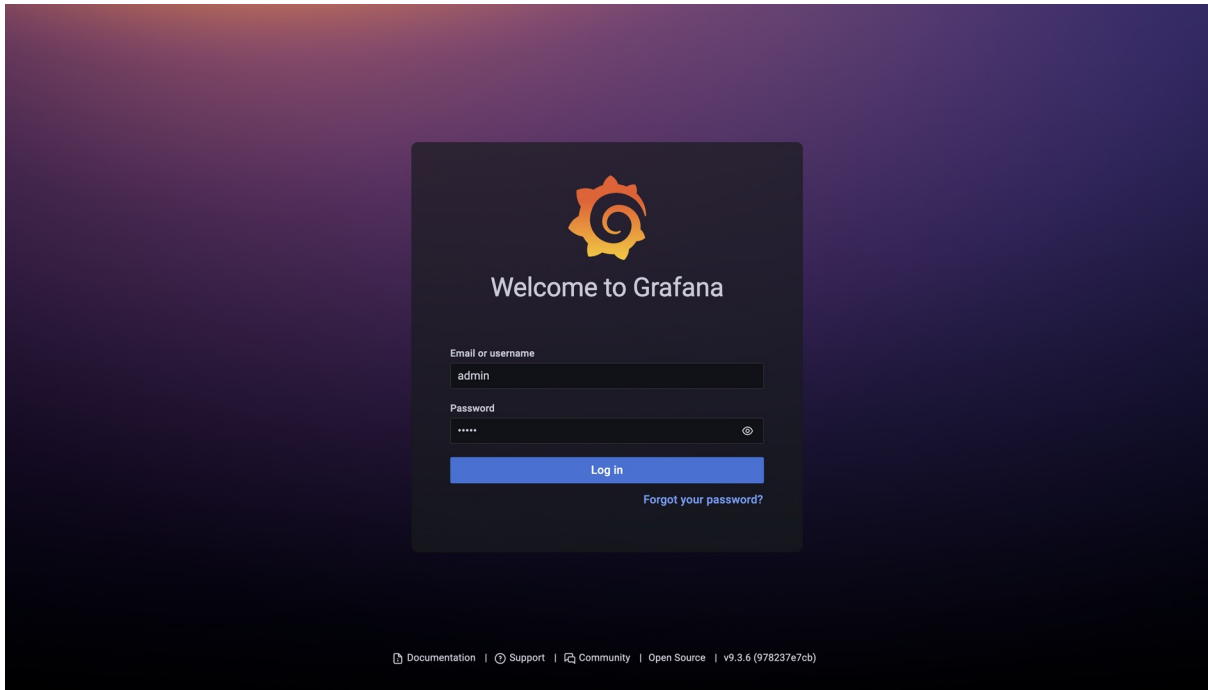
Once the service has been started, the Grafana Web Interface will be available from the below URL. Please exchange the values between <> to match that of your instance.

<PUBLIC/PRIVATEIP>:3000



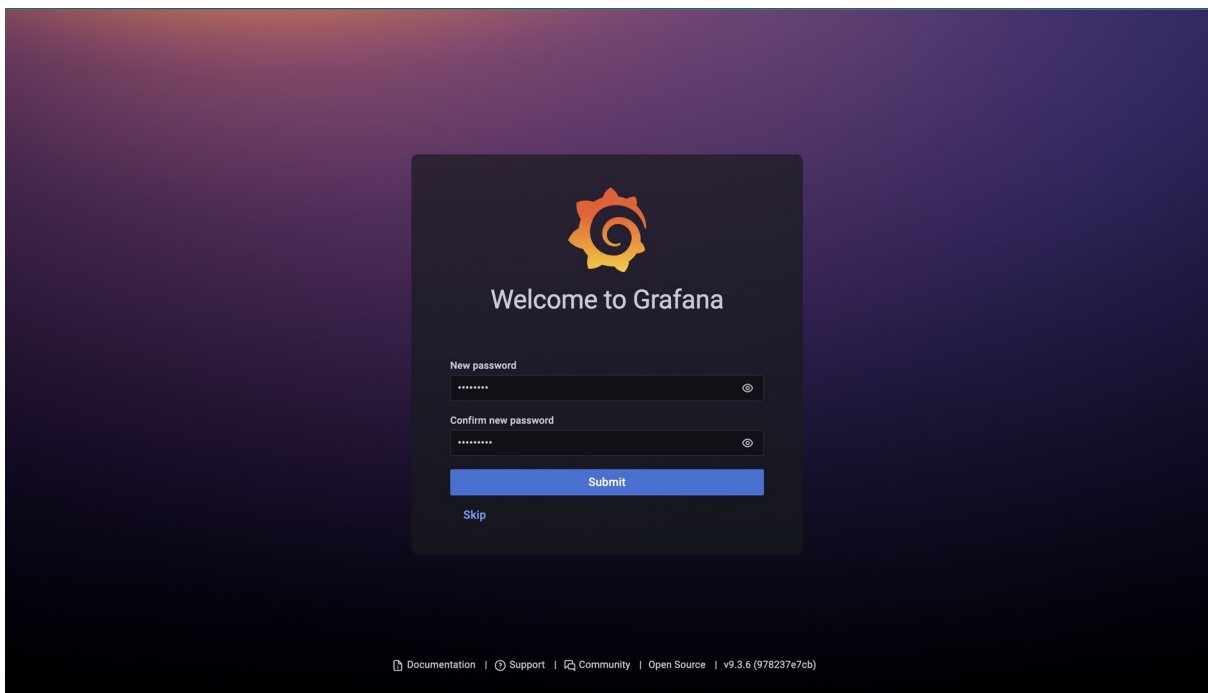
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Enter default username – admin  
Enter default password – admin

Click Log in

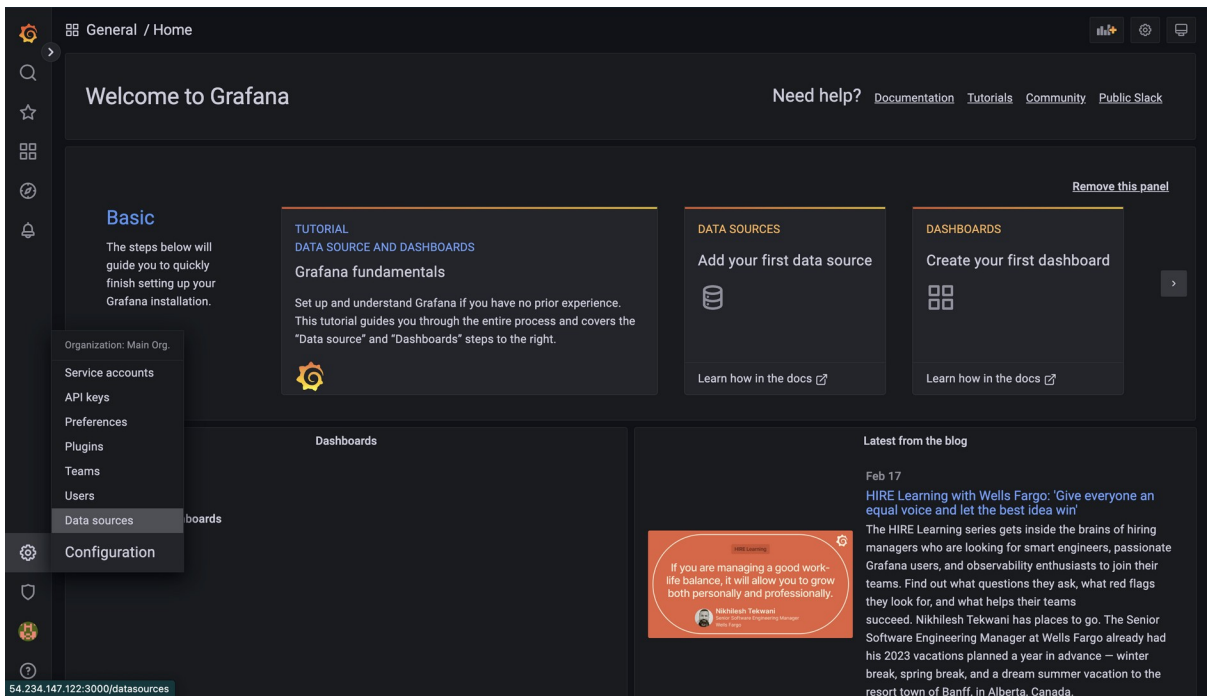


Set a new password for the admin user  
Click Submit

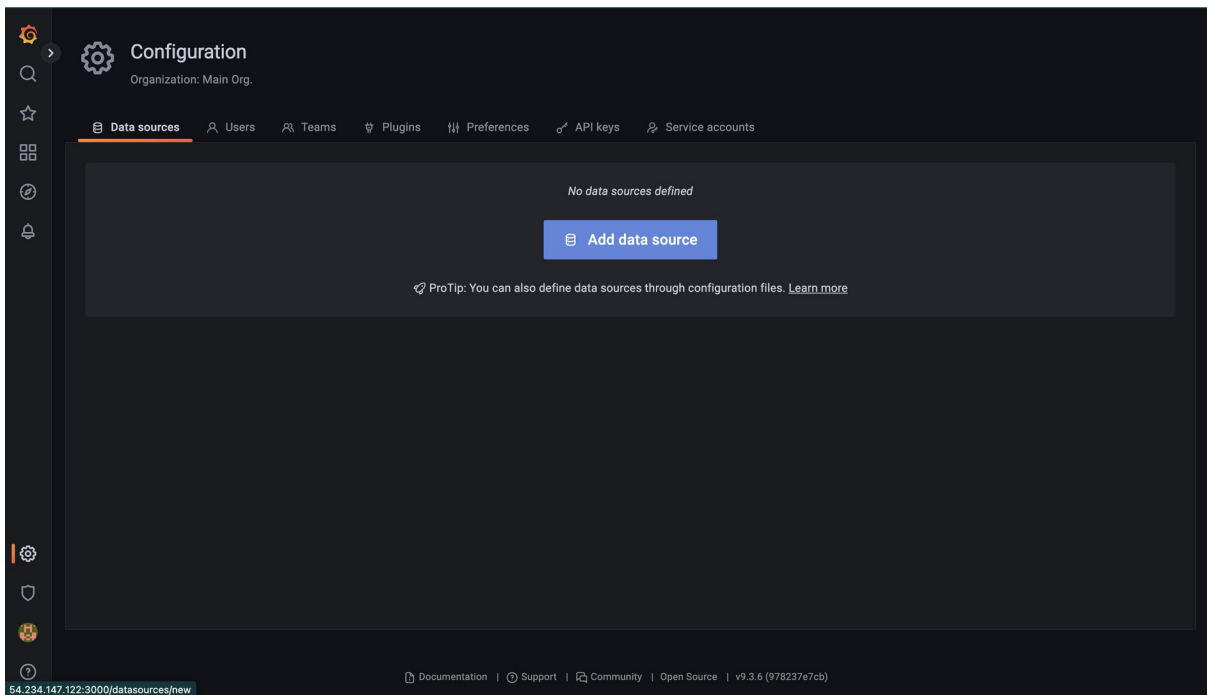


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Click Configuration > Data Sources, in the left-hand pane

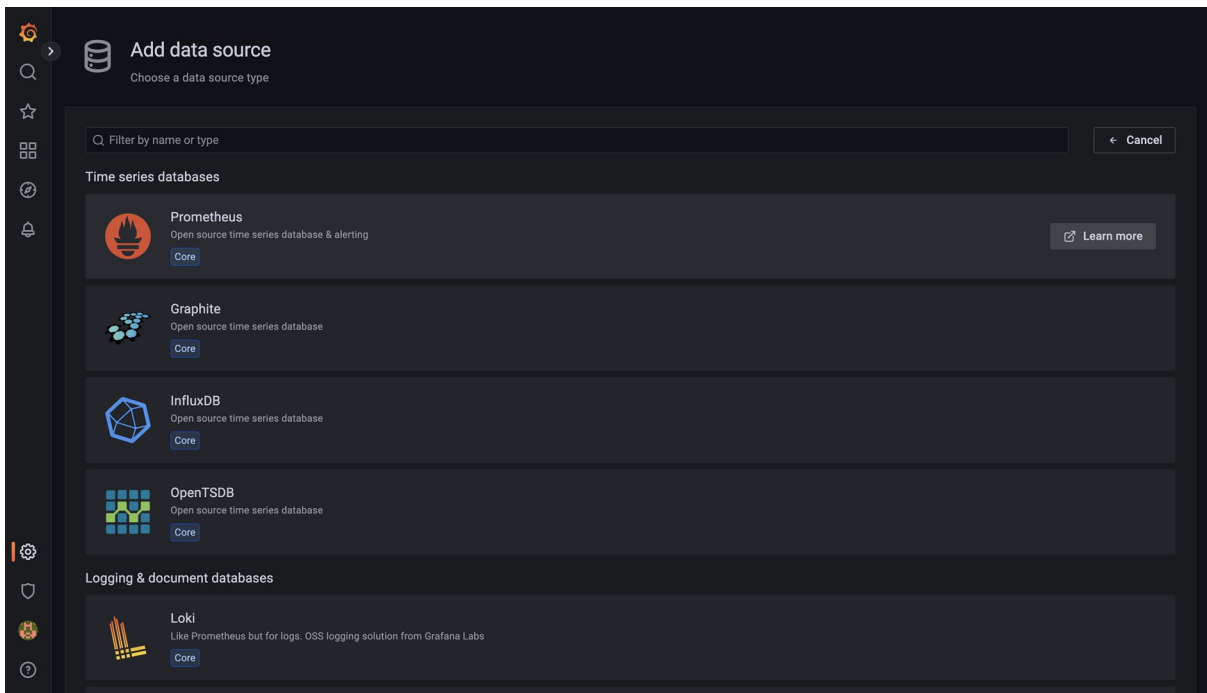


Click Add data source

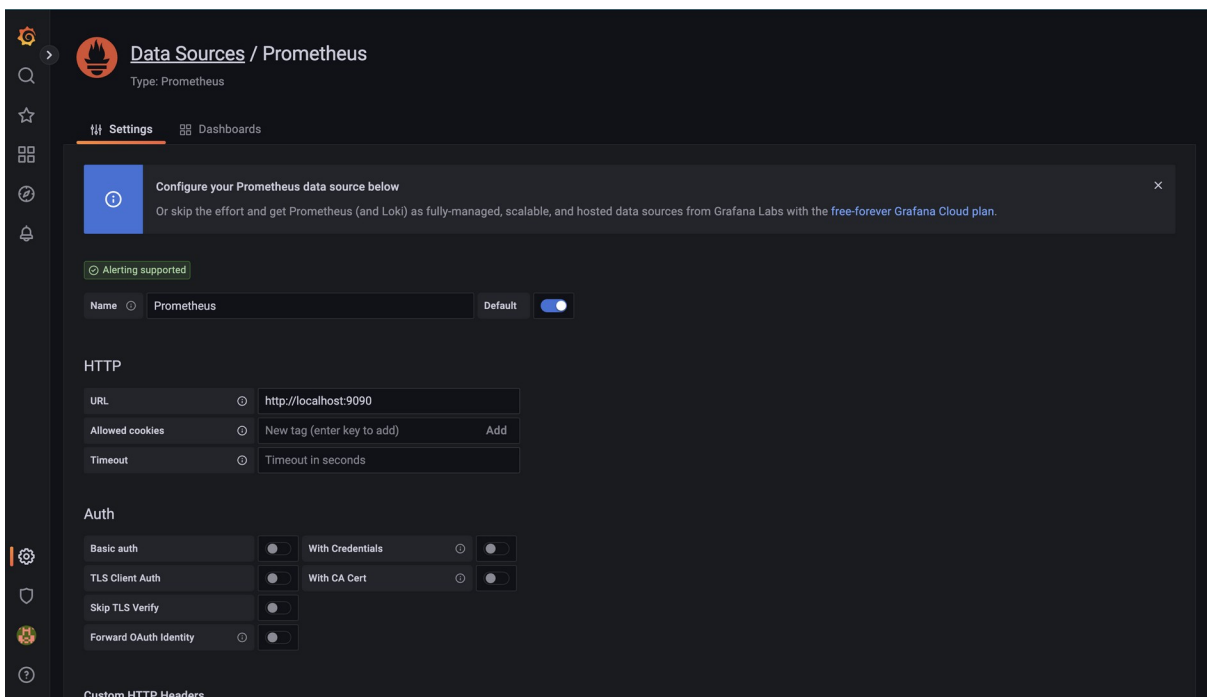


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Select Prometheus



In the URL field enter: <http://localhost:9090>

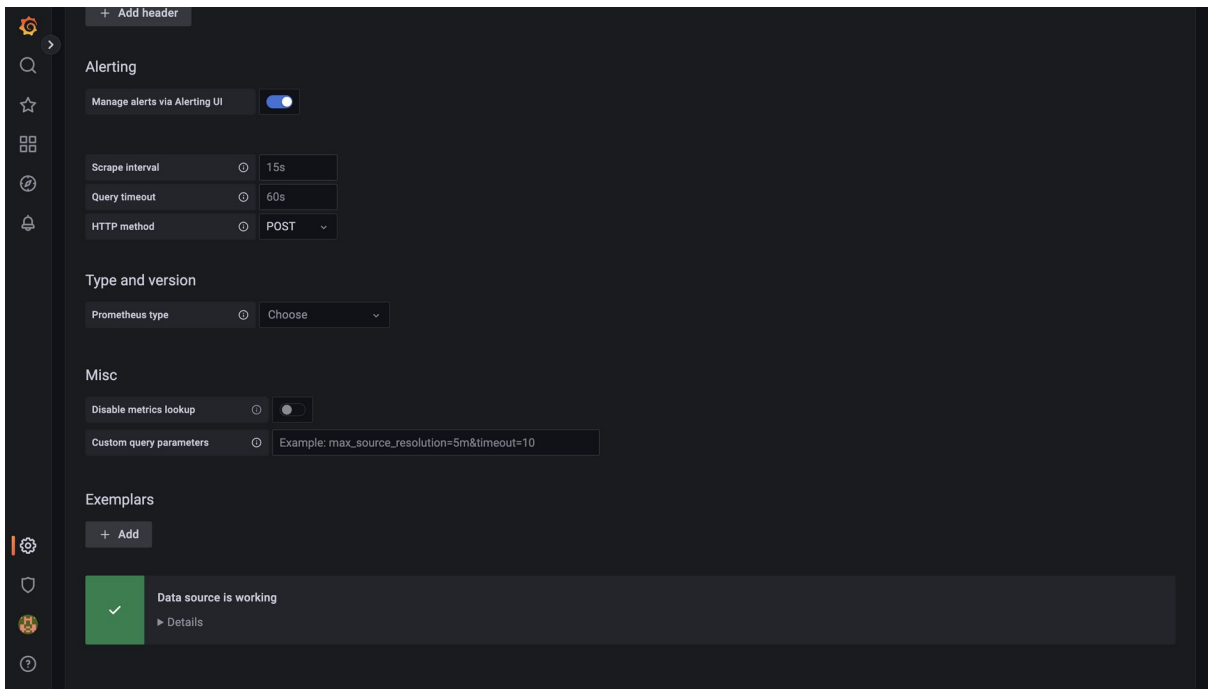
Leave all other options as default & scroll to the bottom of the page and select Save & test



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A pop up will appear stating that the Data source (Prometheus) is now working.

You may now continue to use Grafana & Prometheus as per your requirements.



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