# Vaidio Core

# Installation Guide

Version: 9.0.0

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# 1. Requirements

## I. Hardware Requirements:

**CPU**: support AVX and SSE4 instructions.

**GPU**: Only support Nvidia GPU card of Turing/Ampere/Ada lovelace framework and INT8 precision with minimum driver 535.183.06. https://docs.nvidia.com/deeplearning/tensorrt/support-matrix/index.html for more detail.

Hardware Recommendations on the last page.

## II. OS Requirements:

**Ubuntu 20.04 or 22.04**

Please reference Ubuntu installation guide for more details.

# 2. Before Vaidio installation

## I. Switch boot target to text.

When you go to install the nvidia drivers it will disable the user interface so this will enable terminal mode.

```
sudo systemctl set-default multi-user.target
```

## II. Install basic utilities

(1) sudo apt-get update
(2) sudo apt install curl
(3) sudo apt install ntpdate
(4) sudo apt install ssh

## III. Setup Network

Make sure the network that you use can reach the internet in order to download the necessary files for Vaidio.

*Note: You can skip this section if you've already set up your network through the Ubuntu UI. This will just mean you can not use Admin Portal in the future to change the server's network settings.*

(1) Install netplan in your environment if not already installed.

```
sudo apt install net-tools
```

(2) Check if a netplan file already exists and edit file otherwise create file

```
ls /etc/netplan

# if file is there edit it by running
sudo nano /etc/netplan/*.yaml

#if file does not exist then create it
sudo nano /etc/netplan/01-netcfg.yaml
```

(3) Edit file with your network setup. <span style="color:red">(The suggested syntax for YAML files is to use 2 spaces for indentation)</span>

```
#example file - swap out enp3s0 for the name of your interface. (to check interface names run ifconfig)

Reference for Ubuntu 20.04
network:
 version: 2
 renderer: NetworkManager
 ethernets:
  enp3s0:
   dhcp4: false
   addresses:
   - 192.168.100.100/24
   gateway4: 192.168.100.1
   nameservers:
     addresses: [8.8.8.8]

Reference for Ubuntu 22.04  (gateway4 has been deprecated, using routes instead.)
network:
 version: 2
 renderer: NetworkManager
 ethernets:
  enp3s0:
   dhcp4: false
   addresses:
   - 192.168.100.100/24
   routes:
   - to: default
    via: 192.168.100.1
   nameservers:
    addresses: [8.8.4.4, 8.8.8.8]
```

(4) Apply config

```
sudo netplan apply
```

Reference: https://netplan.readthedocs.io/en/stable/examples/

# IV.  Configure Storage

Before running the container, you have to mount the data volume in advance. If you do not have an additional drive installed for data, please skip this step but note everything will install on the Sys volume drive so make sure it's large enough. Refer to the Hardware Recommendations section for storage sizes.

```
Sys volume (OS & Vaidio Database) : suggests using SSD
Data volume (Vaidio Metadata)  : suggests using a separate HDD.
e.g.
Data volume [Vaidio] Mount drive: /dev/sdb
Data volume [Vaidio] Mount partition: /dev/sdb1
Data volume [Vaidio] Mount point: /mnt/data
```

(1) Check HDD name that needs to be mounted *(in the example below the HDD name is sd**b**, but your system may be different depending on drive type and drive order).*

lsblk

```
root@vaidio:/home/superuser# lsblk
NAME    MAJ:MIN RM    SIZE RO TYPE MOUNTPOINT
loop0     7:0    0     4K  1 loop /snap/bare/5
loop1     7:1    0  55.6M  1 loop /snap/core18/2566
loop2     7:2    0  63.5M  1 loop /snap/core20/1891
loop3     7:3    0  63.2M  1 loop /snap/core20/1623
loop5     7:5    0   219M  1 loop /snap/gnome-3-34-1804/77
loop6     7:6    0  64.8M  1 loop /snap/gtk-common-themes/1514
loop7     7:7    0 346.3M  1 loop /snap/gnome-3-38-2004/119
loop8     7:8    0 349.7M  1 loop /snap/gnome-3-38-2004/140
loop9     7:9    0  91.7M  1 loop /snap/gtk-common-themes/1535
loop10    7:10   0  45.9M  1 loop /snap/snap-store/599
loop12    7:12   0  53.2M  1 loop /snap/snapd/19122
loop13    7:13   0  73.1M  1 loop /snap/core22/634
loop14    7:14   0  12.3M  1 loop /snap/snap-store/959
loop15    7:15   0 460.6M  1 loop /snap/gnome-42-2204/102
loop16    7:16   0  55.7M  1 loop /snap/core18/2745
loop17    7:17   0 218.4M  1 loop /snap/gnome-3-34-1804/93
sda       8:0    0 447.1G  0 disk
 ─sda1    8:1    0   487M  0 part /boot/efi
 ─sda2    8:2    0   7.6G  0 part [SWAP]
 ─sda3    8:3    0   439G  0 part /
sdb       8:16   0   1.8T  0 disk
```

(2) Partition Drive *(if not already done)* swapping out sdb for your drive name.

sudo fdisk /dev/sd**b**

gpt #only if HDD is larger than 1TB

n #new partition

press **enter** to select default settings for Partition number, First sector, and Last sector

w #write

```
root@vaidio:/home/superuser# fdisk /dev/sdb

Welcome to fdisk (util-linux 2.34).
Changes will remain in memory only, until you decide to write them.
Be careful before using the write command.


Command (m for help): n
Partition number (1-128, default 1):
First sector (34-3907029134, default 2048):
Last sector, +/-sectors or +/-size{K,M,G,T,P} (2048-3907029134, default 3907029134):

Created a new partition 1 of type 'Linux filesystem' and of size 1.8 TiB.

Command (m for help): w
The partition table has been altered.
Calling ioctl() to re-read partition table.
Syncing disks.
```

(3) Format partition swapping out sdb for your drive name.

sudo mkfs.ext4 /dev/sd**b**1

(4) Create mount directory

sudo mkdir /mnt/data

(5) Mount drive to /mnt/data swapping sdb for your drive name

```
sudo mount -t ext4 /dev/sdb1 /mnt/data
```

(6) Grab the UUID for the drive name you mounted to /mnt/data

```
sudo blkid
```

```
root@VAIDIO-112:/home/superuser# blkid
/dev/sda2: UUID="f833bfb2-e5f6-4422-9ad1-bdc9a8d896de" TYPE="swap" PARTUUID="bd6ed8bd-b512-467c-8156-80cc8cb6ca30"
/dev/sda3: UUID="b7c3d087-ef69-4621-b308-2625aedf6363" TYPE="ext4" PARTUUID="664d6f0a-d5ee-403a-9498-751dece39a1a"
/dev/loop0: TYPE="squashfs"
/dev/loop1: TYPE="squashfs"
/dev/loop2: TYPE="squashfs"
/dev/loop3: TYPE="squashfs"
/dev/loop4: TYPE="squashfs"
/dev/loop5: TYPE="squashfs"
/dev/loop6: TYPE="squashfs"
/dev/loop7: TYPE="squashfs"
/dev/sda1: UUID="6967-9F1D" TYPE="vfat" PARTUUID="7fd98627-ac05-42c5-881b-4035e24b6cc4"
/dev/sdb1: UUID="5eb4570c-7828-49f7-b817-6fce35e81cd1" TYPE="ext4" PARTUUID="dd32ad20-01"
```

(7) Use that UUID to mount the drive permanently.

```
sudo nano /etc/fstab
#add below line to bottom of file
UUID=a12460c7-e287-4aa4-89e6-fd44b4357bae  /mnt/data    ext4  defaults 0 0
```

```
  GNU nano 4.8                     /etc/fstab                    Modified
# /etc/fstab: static file system information.
#
# Use 'blkid' to print the universally unique identifier for a
# device; this may be used with UUID= as a more robust way to name devices
# that works even if disks are added and removed. See fstab(5).
#
# <file system> <mount point>   <type>  <options>       <dump>  <pass>
# / was on /dev/sda3 during installation
UUID=b7c3d087-ef69-4621-b308-2625aedf6363 /             ext4    errors=remoun>
# /boot/efi was on /dev/sda1 during installation
UUID=6967-9F1D  /boot/efi       vfat    umask=0077       0       1
# swap was on /dev/sda2 during installation
UUID=f833bfb2-e5f6-4422-9ad1-bdc9a8d896de none           swap    sw           >
UUID=5eb4570c-7828-49f7-b817-6fce35e81cd1 /mnt/data ext4 defaults 0 0

^G Get Help   ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify    ^C Cur Pos
^X Exit       ^R Read File  ^\ Replace    ^U Paste Text ^T To Spell   ^  Go To Line
```

(8) Check drive is mounted

```
lsblk
```

```
root@vaidio:/home/superuser# lsblk
NAME    MAJ:MIN RM    SIZE RO TYPE MOUNTPOINT
loop0     7:0    0      4K  1 loop /snap/bare/5
loop1     7:1    0   55.6M  1 loop /snap/core18/2566
loop2     7:2    0   63.5M  1 loop /snap/core20/1891
loop3     7:3    0   63.2M  1 loop /snap/core20/1623
loop5     7:5    0    219M  1 loop /snap/gnome-3-34-1804/77
loop6     7:6    0   64.8M  1 loop /snap/gtk-common-themes/1514
loop7     7:7    0  346.3M  1 loop /snap/gnome-3-38-2004/119
loop8     7:8    0  349.7M  1 loop /snap/gnome-3-38-2004/140
loop9     7:9    0   91.7M  1 loop /snap/gtk-common-themes/1535
loop10    7:10   0   45.9M  1 loop /snap/snap-store/599
loop12    7:12   0   53.2M  1 loop /snap/snapd/19122
loop13    7:13   0   73.1M  1 loop /snap/core22/634
loop14    7:14   0   12.3M  1 loop /snap/snap-store/959
loop15    7:15   0  460.6M  1 loop /snap/gnome-42-2204/102
loop16    7:16   0   55.7M  1 loop /snap/core18/2745
loop17    7:17   0  218.4M  1 loop /snap/gnome-3-34-1804/93
sda       8:0    0  447.1G  0 disk
├─sda1    8:1    0    487M  0 part /boot/efi
├─sda2    8:2    0    7.6G  0 part [SWAP]
└─sda3    8:3    0    439G  0 part /
sdb       8:16   0    1.8T  0 disk
└─sdb1    8:17   0    1.8T  0 part /mnt/data
```

# 3.  Prepare for repository

## I. Add apt key

sudo curl -s --compressed "https://ironyun.github.io/Vaidio-APT/KEY.gpg" | sudo apt-key add -

## II. Setup apt-repository

sudo add-apt-repository ppa:deadsnakes/ppa

#this command is all one line
sudo curl -s --compressed -o /etc/apt/sources.list.d/ironyun-release.list
"https://ironyun.github.io/Vaidio-APT/ironyun-release.list"

sudo apt update

# 4.  Install Admin Portal

## I. Install Admin Portal

sudo apt install admin-portal=9.0.0-1

Admin portal provides the following functions:
- Port configuration
- Time
- Network
- Upgrade
- Factory Reset

## II. Access Admin Portal (optional)

*Note: The Admin Portal will only be available after completing the Vaidio installation.*

http://*vaidioip*:8000
switch out *vaidioip* for the ip address of your server
e.g. http://192.168.100.100:8000
Default username: admin
Default password: admin888
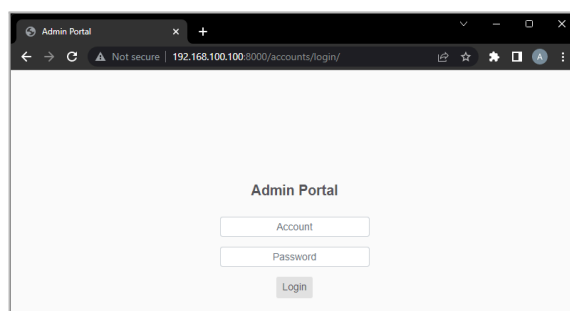
# 5.  Install docker utility and preinstall

### I.  Install debian file

```
sudo apt install ainvr-docker-utilities=9.0.0-1
```

*Note: If you run into an error after this command, please refer to the Troubleshooting section.*

### II.  Run preinstall to install drivers.

*The server will reboot when the script is done.*

```
sudo preinstall
```

```
OK
OK
[Nvidia driver]
OK
[Docker]
OK
[Nvidia Docker]
OK
superuser@vaidio200:~$
```

*If you run into any errors, please refer to the troubleshooting section at the end of this document*

# 6.  Launch Vaidio Container

### I.  Copy profile.bin to /etc/vaidio

Download profile*.bin file from link below and place in the /etc/vaidio directory
https://drive.google.com/file/d/1c8GjzM0xbYcQedYSBqCUjADQxgBZPEsV/view?usp=drive_link

```
sudo mkdir /etc/vaidio
sudo mv profile_x86.bin /etc/vaidio
```

### II.  Generate a configuration for installation

```
sudo container_tool -s /opt/data/sys -d /mnt/data -b /etc/vaidio/profile_x86.bin init

# The config file for installation was generated at: /etc/vaidio/vaidio.conf
```

### III.  Run the container

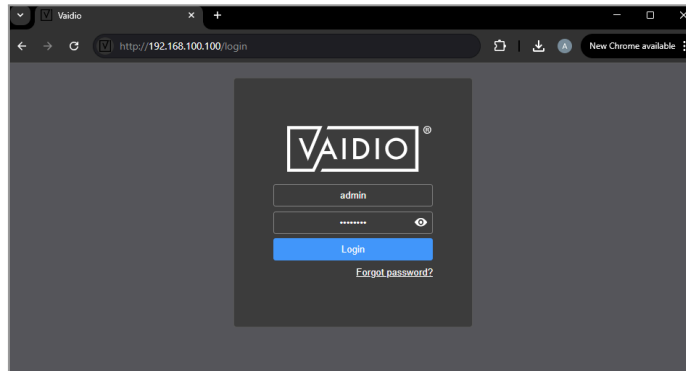Run the container tool with the configuration file generated at the previous section.

```
sudo container_tool run
```

# 7. Logging in to Vaidio
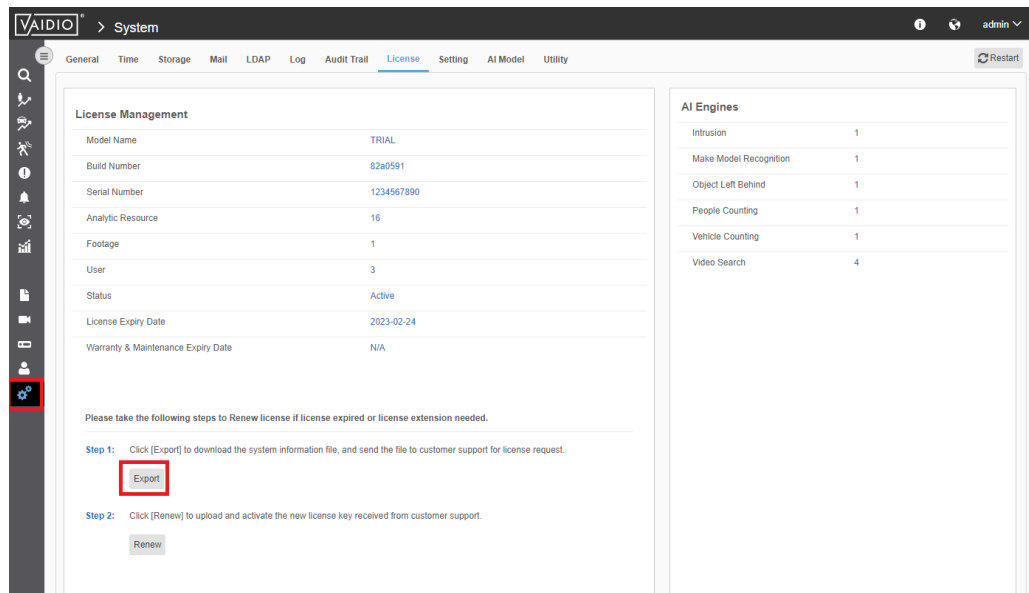
It is recommended to use a Chrome or Edge browser.

http://*vaidioip*
switch out *vaidioip* for the ip address of your server
e.g. http://192.168.100.100
Default username: admin
Default password: admin888



# 8. Getting a License

## I. Get License File

In Vaidio go to System > License and click "Export".



## II. Submit License Request Ticket

Once you have your license file please go to our Customer Support Portal and fill out a request ticket. Once logged in with your Google or Microsoft email, click Submit a Ticket > Licensing > New License and fill out the required information.

*If you are unable to access the customer support portal, please refer to the Portal Troubleshooting section below to get a license.*

### III.  Apply License

Once you have received your license key from Support, upload the file to Vaidio under System > License > Renew. Depending on how many analytics you have enabled the license can take up to 30-40 minutes to apply. Once the license has finished applying, the page will automatically refresh on its own.

# 9.   Check status of the container

## I.  Get container tool help

```
sudo container_tool -H
```

```
USAGE:
  container_tool [FLAGS] [SUBCOMMAND]
  container_tool -s <system volume> -d <data volume> -r <data volume for recorder> -b <bin file> init
  container_tool run
  container_tool stop
  container_tool start
  container_tool –u <vaidio_admin> -p <vaidio_admin_pwd> upgrade
  container_tool remove
  container_tool status
  container_tool prune
  container_tool check_disk_space
  container_tool -H print help information
  container_tool -V print version
  container_tool -v print version of .conf file
FLAGS:
  -c  clean old images
  -s  system volume
  -d  data volume
  -r  data volume for recorder
  -b  application bin file
  -f  config file
  -u  vaidio username
  -p  vaidio password
  -E  to exclude some data when remove container
  -I  Skip pull image from Docker Hub
  -H  help information
  -V  version
  -v  version of .conf file
SUBCOMMANDS:
  init        Generate a default configuration for container installation
  run         Run a app container
  stop        Stop a running container
  start       Start a stopped container
  remove        Remove a container
  status         Show status of container
  upgrade          Upgrade
  prune         Remove old image/container
```

## II.  Get the status

```
sudo container_tool status
```

## III.  Lifecycle of the container

```
#Stop
sudo container_tool stop
#Start
sudo container_tool start
#Remove
sudo container_tool remove

Do you want to remove vaidio? [y/N]
Do you want to purge data? [y/N]
# enter 'y' if you want to purge all data
# enter 'N' if you want to keep the data
```

# 10. Upgrade

## I.  Via Admin-portal Online & Offline options

For more info upgrades, please refer to our Upgrade Guide. The latest Upgrade Guide can also be found on our Partner Portal under User Guides.

# 11. Support

If you run into any issues during your install, please refer to the Troubleshooting Section below first. If you still have questions, please fill out a ticket on our Customer Support Portal.

**Support Portal Registration:**
If you haven't done so, register at vaidio.ai/support (skip this step if you've previously been in contact with IronYun).

**Support Portal Log In:**
- If your business email is provided by Google or Microsoft, sign in with your account.
  - Otherwise, click "Sign up" using the same email address and follow these steps:
    - Set a password.
    - Check your inbox for an activation email from DoNotReply@connectwise.com, and follow the link to validate your email.
    - Sign in at vaidio.myportallogin.com using your email and password.
  - If you see "Request Permission to the Portal," return to the registration step.

For **User Guides** please access our Partner Portal at https://www.vaidio.ai/partner-resources/vaidio/support
*Note: You will need to register for an account in order to access the guides if you haven't already.*

Issues with support portal, click here.

# 12. Appendix

## I.  Make the service accessible

Enable firewall with allow ssh, http, https, ONVIF protocol and Admin Portal. **If your Ubuntu firewall is disabled, please skip this step.**

```
sudo apt install ufw
sudo chmod 644 /etc/ufw/after6.rules
sudo ufw allow 22 #SSH port
sudo ufw allow 80   #Depend on Vaidio-Core http port number.
sudo ufw allow 443  #Depend on Vaidio-Core https port number.
sudo ufw allow 8000  #Depends on Admin portal access port.
sudo ufw allow 18888 #Required by ONVIF auto discovery function.
sudo ufw enable
```

## II.  Adding additional drive for Internal Recorder

If you are using the internal recorder feature and want to add an additional drive for this so it's not going on the Metadata drive.

*Note: If you've already installed the Vaidio container, you will want to remove it first.*

1.  Mount your drive swapping sdc out for your drive name.

---

**(sys/data/recorder in separate drive)**

Sys volume (OS & Vaidio Database) : suggests using SSD
Data volume (Vaidio Metadata)  : suggests using a separate HDD.
Data volume (Recorder) : suggests using separate drive

**Data volume [Recorder] Mount drive**: /dev/sdc
**Data volume [Recorder] Mount partition**: /dev/sdc1
**Data volume [Recorder] Mount point**: /mnt/data-rec

### partition, format, mount - Data volume [Recorder]
fdisk /dev/sdc
p #check partition
n (new) p enter w (write) #new partition
lsblk
mkfs.ext4 /dev/sdc1
mkdir /mnt/data-rec
mount -t ext4 /dev/sdc1 /mnt/data-rec

### auto mount HDD
blkid # grab UUID of your drive partition
vim /etc/fstab
UUID=a12460c7-e287-4aa4-89e6-fd44b4357bae  /mnt/data-rec ext4  defaults 0 0

---

2.  Generate configuration file for installation.

```
sudo container_tool -s /opt/data/sys -d /mnt/data -b /etc/vaidio/profile_x86.bin init

# The config file for installation was generated at: /etc/vaidio/vaidio.conf
```

3.  Run container

```
sudo container_tool run
```

## III.  Remove old images

This command will delete the old images, please confirm again and back up your data.

Note: If you run this command and want to keep your current Vaidio container, make sure that the container_tool version is the same as the container before doing so.

```
sudo container_tool prune
```

## IV.  Review the configuration file and modify if necessary

Only edit this file if you need to make a change from the default configuration. This can happen if you want to change the directories where vaidio mounts to or if you need to change the number of GPUs vaidio looks at. If you make changes to this file after Vaidio is already running then you will need to remove the container (keeping the data) and run it again for the changes to take effect.

```
sudo nano /etc/vaidio/vaidio.conf
```

```
NAME="vaidio"
VERSION="X.Y.Z"
DATA_VOLUME="/mnt/data/vaidio"
SYSTEM_VOLUME="/opt/data/sys/vaidio"
GPU_ID=0,1
# GPU_ID=0,1,2,3

# Please provide the application configuration (profile.bin) file path.
APP_CONFIG_BIN="/etc/vaidio/profile.bin"
DATA_VOLUME_FOR_RECORDER="/mnt/data-rec/recorder"
```

## V.  How to configure the default bridge (docker0) network for Docker Engine to a different subnet

While docker engine default bridge network conflicts with our internal hosts access. You can configure the default bridge network by providing the **bip** option along with desired subnet in the **daemon.json**. (Default location **/etc/docker/daemon.json**). A restart of docker will be needed in order to have the changes take effect.

```
{
   "bip":"172.26.0.1/16"
}
```

Further information, refer to https://docs.docker.com/network/bridge/

## VI.  How to check upgrade status?

```
sudo cat /opt/data/sys/vaidio/log/app/start_service.log
```

## VII.  Hardware change preparation:

Changing hardware like GPU card or others, might cause the container to fail to resume.

It has the risk of FR license becoming invalid if the container cannot resume well.  If you need to change hardware, please remove the container (keeping the data)  before you power off the machine.

# 13. Troubleshooting

Please give the troubleshooting steps below a try first if you run into any errors. If this does not solve the problem, then please reach out to Support.

## I.  Failed to install admin-portal or ainvr-docker-utilities packages

If you get an "*E: Unable to locate package …*" error message, this means something went wrong when installing the repositories.

```
root@VAIDIO:/etc/apt/sources.list.d# apt install admin-portal=6.2.0-1
Reading package lists... Done
Building dependency tree
Reading state information... Done
E: Unable to locate package admin-portal
root@VAIDIO:/etc/apt/sources.list.d# apt install ainvr-docker-utilities=6.2.0-1
Reading package lists... Done
Building dependency tree
Reading state information... Done
E: Unable to locate package ainvr-docker-utilities
```

Try running through the commands in Step 3 again and make sure there were no errors or typos. A common mistake is forgetting the *sudo* in front of the curl commands or missing  a "*gpg: no valid OpenPGP data found*" error when installing the repositories.

If you are seeing "*gpg: no valid OpenPGP data found.*" this can indicate:
- Curl is not installed. Step 2.2
- A DNS server is not setup in the network file under Step 2.3
- If none of the above work then it's most likely a network firewall issue or a proxy needs to be set up.
   - To test this, run **curl https://ironyun.github.io/Vaidio-APT/KEY.gpg**. It should return the public key block as shown below. Any other message means it's a network issue.

```
root@ubuntu-server:/home/superuser# curl https://ironyun.github.io/Vaidio-APT/KEY.gpg
-----BEGIN PGP PUBLIC KEY BLOCK-----

mQINBF9OFxsBEACtbjWmjhYqn5y3XXqcLgI+WmsULenf7YBBwBpN7npsgfyXUUCU
mPWc2PMWnxjh56zsz1y83j8KSKb8+mG4JJK3xhNfHwZkqpqT8vbRL0bnt9VJgiwP
```

## II.  Admin Portal No such file or config /etc/vaidio/vaidio.conf does not exist

1. This error message occurs when Vaidio has not been installed yet.
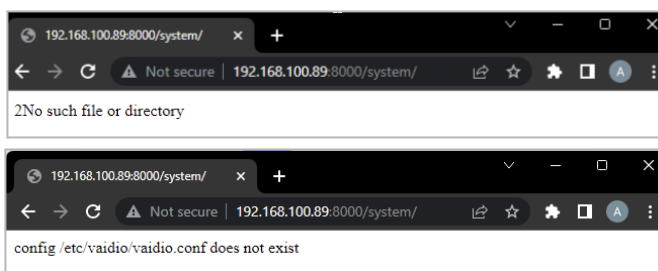
   

2. If you are still seeing "2No such file or directory" after Vaidio has been installed, it could indicate that systemd-timesync service was not installed.

   Check if systemd-timesyncd.service exists

   > sudo systemctl status systemd-timesyncd.service

   If the service is not there then install it:

   > sudo apt install systemd-timesyncd
   >
   > sudo systemctl enable systemd-timesyncd.service

## III. Preinstall - Failed to install nv driver

If you get **[ERROR] Fail to install nv driver** at the end of running preinstall, this could mean you are not on a version of Ubuntu that we support. Please refer to the OS Requirements section in the beginning of the document for what OS version we support.

```
# check Ubuntu version
uname -v
```

If you are on the correct version of Ubuntu, please follow the same steps as shown in the next section.

## IV. Failed to run/start container

If you get the below error "*Failed to run docker container*", please check nvidia card and drivers.



To check the drivers run:

```
nvidia-smi
```

Should look like this *(driver version will depend on the version of Vaidio you are installing)*:



---

If you get "NVIDIA-SMI has failed because it couldn't communicate with the NVIDIA driver…", then it could indicate an issue with the gpu card or the drivers installed.

```
root@VAIDIO:/home/superuser# nvidia-smi
NVIDIA-SMI has failed because it couldn't communicate with the NVIDIA driver. Make
sure that the latest NVIDIA driver is installed and running.
```

Check if nvidia graphics card is installed:

```
lshw -C display
```

```
superuser@VAIDIO_105:~$ lshw -C display
WARNING: you should run this program as super-user.
  *-display
       description: VGA compatible controller
       product: NVIDIA Corporation
       vendor: NVIDIA Corporation
       physical id: 0
       bus info: pci@0000:01:00.0
       version: a1
       width: 64 bits
       clock: 33MHz
       capabilities: vga_controller bus_master cap_list rom
       configuration: driver=nvidia latency=0
       resources: iomemory:2f0-2ef iomemory:2f0-2ef irq:140 memory:de000000-deff
ffff memory:2fe0000000-2fefffffff memory:2ff0000000-2ff1ffffff ioport:e000(size=
128) memory:df000000-df07ffff
  *-display
       description: VGA compatible controller
       product: ASPEED Graphics Family
       vendor: ASPEED Technology, Inc.
       physical id: 0
       bus info: pci@0000:05:00.0
       version: 30
       width: 32 bits
       clock: 33MHz
       capabilities: vga_controller bus_master cap_list rom
       configuration: driver=ast latency=0
       resources: irq:18 memory:dc000000-dcffffff memory:dd000000-dd01ffff iopor
t:b000(size=128) memory:c0000-dffff
```

If you do not see the nvidia card listed, please check your hardware. If you do see the card listed, please follow the below steps.

```
#purge nvidia drivers

sudo apt-get remove --purge '^nvidia-.*'

sudo apt-get remove --purge '^libnvidia-.*'

sudo apt-get remove --purge '^cuda-.*'

sudo apt autoremove -y

#reboot server

reboot

#run preinstall again

preinstall
```

If the above does not work, check if Secure Boot is enabled. If it's enabled then please access the BIOS/UEFI settings to manually disable Secure Boot and run above steps to purge and reinstall drivers. If it's not enabled, then reach out to Support on next steps to fix this issue.

```
mokutil --sb-state
```

```
root@vaidio185:/home/superuser# mokutil  --sb-state
SecureBoot disabled
Platform is in Setup Mode
```

## V.  Unable to access Support Portal

If you are unable to log in to our portal, please make sure you follow all the steps under <u>Support</u>. .

If the Support section doesn't solve your issues, please email <u>support@vaidio.ai</u> with the problem you are running into. Please include screenshots or any errors.

If you need to submit a license request at the same time, please include the below information:

- Company
- Sales Rep
- Analytics you want to test and how many channels you need
  - Video Search, Intrusion, Face Recognition, License Plate Recognition, People Counting, Vehicle Counting, Object Left Behind, PPE, Make & Model Recognition, Fire Detection, Weapons Detection, Age & Gender
- Hardware Specs of your server (GPU, CPU, RAM)
  - Refer to page 10 for recommendations
  - If you are using a VM, please let us know what VM you are using (e.g. AWS, GCP)
- Attach .info file

# 14. Hardware Recommendations

**Vaidio v9.0.0 Hardware Specifications Recommendation (3/25/2025)**

1. To ensure optimal performance, it is recommended to populate as many memory module slots as possible. Please refer to the following configuration of memory.

2. System storage: Select Mixed Use SSDs for balanced performance and endurance; AI-Storage: Options include SATA 7.2k, SAS 10k, or high-IOPS HDD/SSD.

3. For optimal reliability and performance, hardware RAID should be utilized in preference to software RAID.

| Models | FF | CPU Selection (or above) | RAM | NVIDIA GPU | H/W Model Reference | SYS Storage | AI-Storage |
|---|---|---|---|---|---|---|---|
| VSB-110 | PC | i5-9600/i5-10400/i5-12500 (>=6C/6T) | 16GB (8GBx2) | GTX 1660 SU or RTX 3050Ti or RTX A2000-6GB | Dell 3650 / 3660 PSU >= 460W | 240GB SSD | 1TB |
| VSB-130 | PC | i7-9700/i7-11700/i7-12700 (>=8C/8T) | 32GB (16GBx2) | RTX 3060 or RTX 3060Ti or A2000-12GB | Dell 3650/3660 PSU >= 550W | 480GB SSD | 2TB |
| VSB-150 | PC | i7-12700 (>=12C/20T) | 32GB (16GBx2) | RTX A4000 or RTX 4070Ti S | Dell 3660 PSU >= 550W | 960GB SSD | 3TB |
| VSB-510 | 1U | Xeon Silver 4410Y (>=12C/24T) | 32GB (16GBx2) | RTX A4000 or L4 ada | Dell 3930R PSU >= 550W | 960GB SSD | 3TB |
| VSB-550 | 2U | Dual Xeon Silver 4216/4314 (>=16C/32T) | 128GB (16GBx8) | Dual RTX A4000 or Dual RTX 4000 ada | Dell R740/R750/7920R RPSU >= 1100W | 960GB SSD (960GB SSDx2, RAID1) | 6TB (2TBx4, RAID5) |
| VSB-610 | 1U | Intel Xeon-Gold 5416S (16C/32T) | 64GB (16GBx4) | Nvidia L4 | HPE DL320 Gen11 4LFF | 960GB SSD (960GB SSDx2, RAID1) | 3TB (1TBx4, RAID 5) |
| VSB-620 | 2U | Dual Intel Xeon-Gold 5416S (16C/32T) | 128GB (16GBx8) | Dual Nvidia L4 | HPE DL380 Gen11 8LFF | 1.92TB SSD (1.92TB SSDx2, RAID1 | 6TB (2TBx4, RAID 5) |
| VSB-630 | 2U | Dual Intel Xeon-Gold 6430, (32C/64T) | 256GB (32GBx8) | 4 x Nvidia L4 | HPE DL380 Gen11 8LFF | 3.84TB SSD (3.84TB SSDx2, RAID1 | 12TB (4TBx4, RAID 5) |