

ARO Client Bare-Metal Installation Tutorial

1. Pre-Installation Preparation

Ensure the computer is connected to the internet before system burning.

1.1 Download the System Burning Software "Rufus"

Rufus-4.9.exe Download link: <https://github.com/pbatard/rufus/releases/download/v4.9/rufus-4.9.exe>

1.2 Download the ARO Client Image

Please go to the original page on Docs (<https://docs.aro.network/user-guides/software-setup>) for the latest ARO Client Software Image and the MD5 sum value.

After downloading the image, please use an MD5 sum verification tool to check the file's integrity by comparing it with the official MD5 sum value.

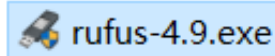
1.3 Prepare a USB Drive with at Least 8GB Capacity

1.4 Prepare a Physical Host, Monitor, and Keyboard

2. Creating a Bootable USB Drive on Windows

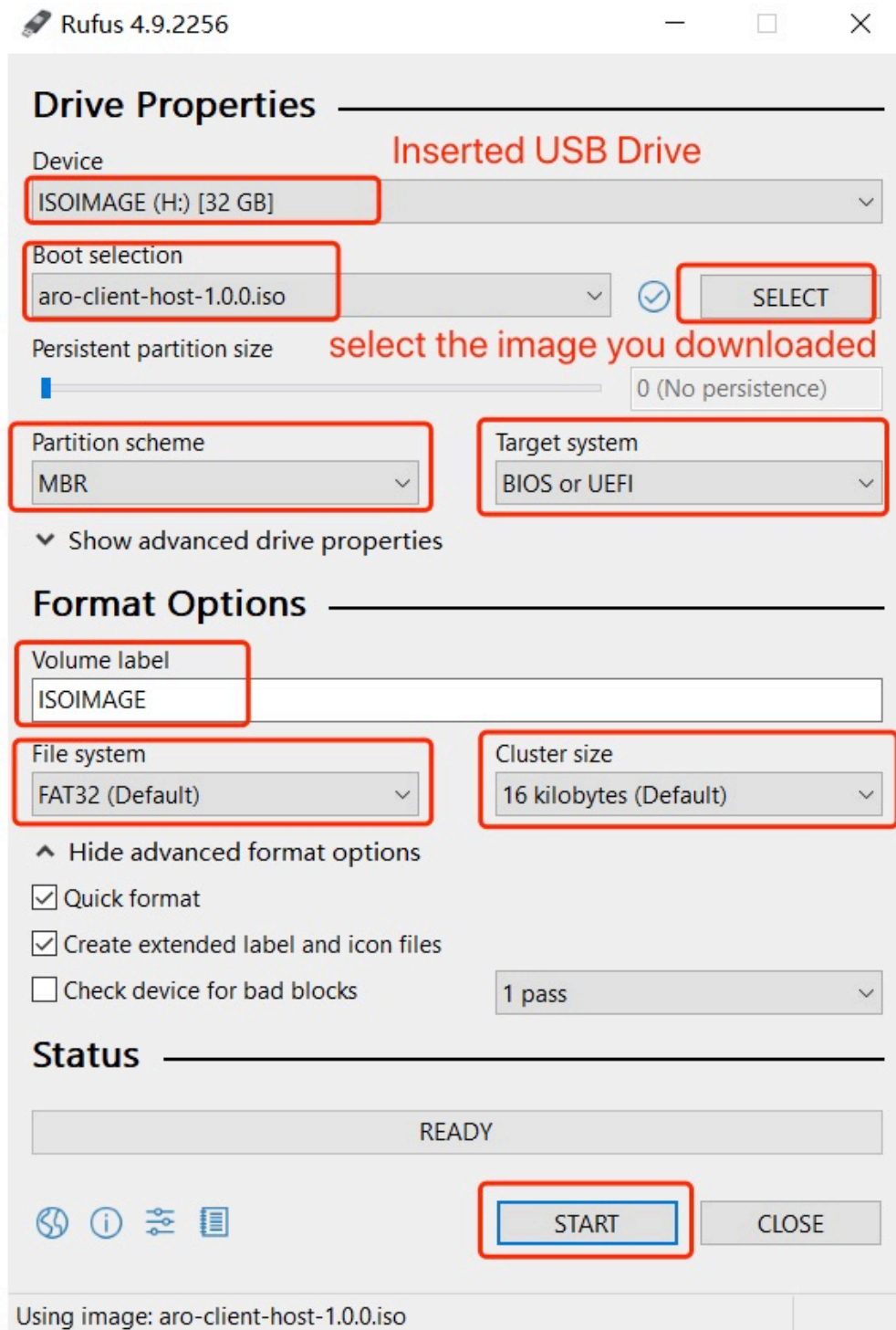
2.1 Launch the Rufus Application

Double-click `rufus-4.9.exe` to start the Rufus application.



2.2 Burn the System Image

In the “Device” option, select the USB drive you want to use for burning the system. For the boot selection, click the “Select” button and choose the downloaded system image `aro-client-host-1.0.0.iso`. Other settings can remain as shown in the default configuration.



Since the burning process will erase all data on the USB drive, please back up any important data before proceeding.

Select “Write in ISO Image mode” and click “OK” to start burning.

ISOHybrid image detected



The image you have selected is an 'ISOHybrid' image. This means it can be written either in ISO Image (file copy) mode or DD Image (disk image) mode.

Rufus recommends using ISO Image mode, so that you always have full access to the drive after writing it.

However, if you encounter issues during boot, you can try writing this image again in DD Image mode.

Please select the mode that you want to use to write this image:

☒ Write in ISO Image mode (Recommended)

☐ Write in DD Image mode

OK

Cancel

Rufus



WARNING: ALL DATA ON DEVICE 'ISOIMAGE (H:) [32 GB]' WILL BE DESTROYED.

To continue with this operation, click OK. To quit click CANCEL.

OK

Cancel

After the burning process is complete, safely eject the USB drive.

Drive Properties

Device

ISOIMAGE (H:) [32 GB]

Boot selection

aro-client-host-1.0.0.iso

☒

SELECT

Persistent partition size

0 (No persistence)

Partition scheme

MBR

Target system

BIOS or UEFI

☒ Show advanced drive properties

Format Options

Volume label

ISOIMAGE

File system

FAT32 (Default)

Cluster size

16 kilobytes (Default)

☒ Hide advanced format options

☒ Quick format





☒ Create extended label and icon files

☐ Check device for bad blocks

1 pass

Status

READY



START

CLOSE

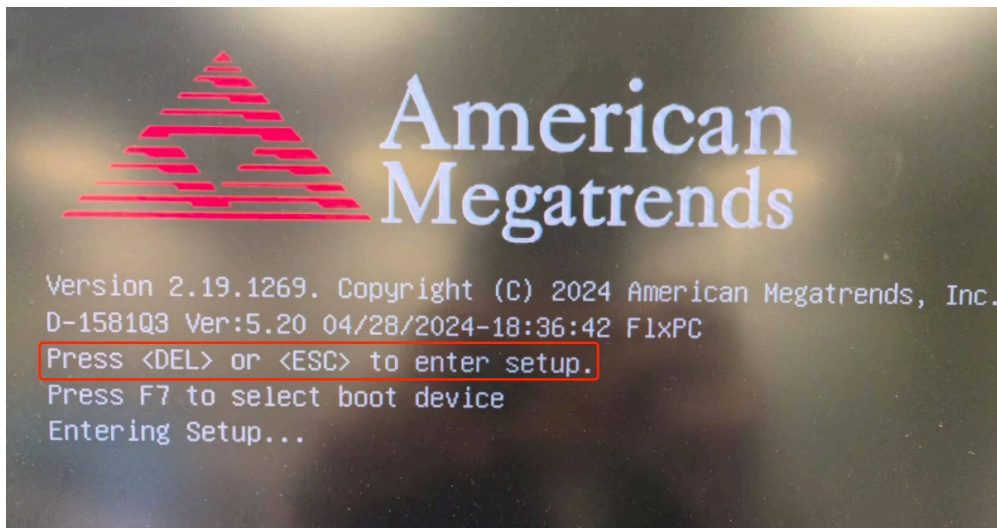
1 device found00:06:46

3. System Installation

The physical host used for installing the image must be connected to the internet via an Ethernet cable.

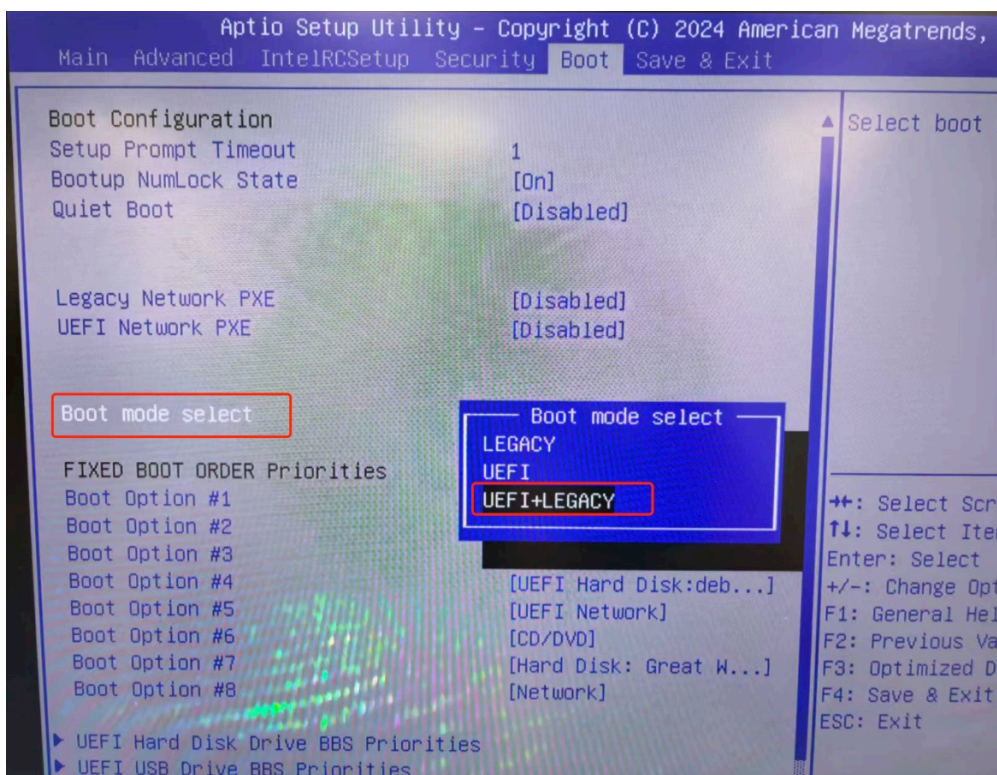
3.1 Configure USB Boot and Boot Mode

Enter the BIOS setup interface to configure the boot settings. The method to access the BIOS varies depending on the x86 device (the boot screen typically provides instructions, with common keys including F2, F12, ESC, Enter, or Delete). Follow the on-screen prompts; here, press DEL or ESC to enter the setup interface.

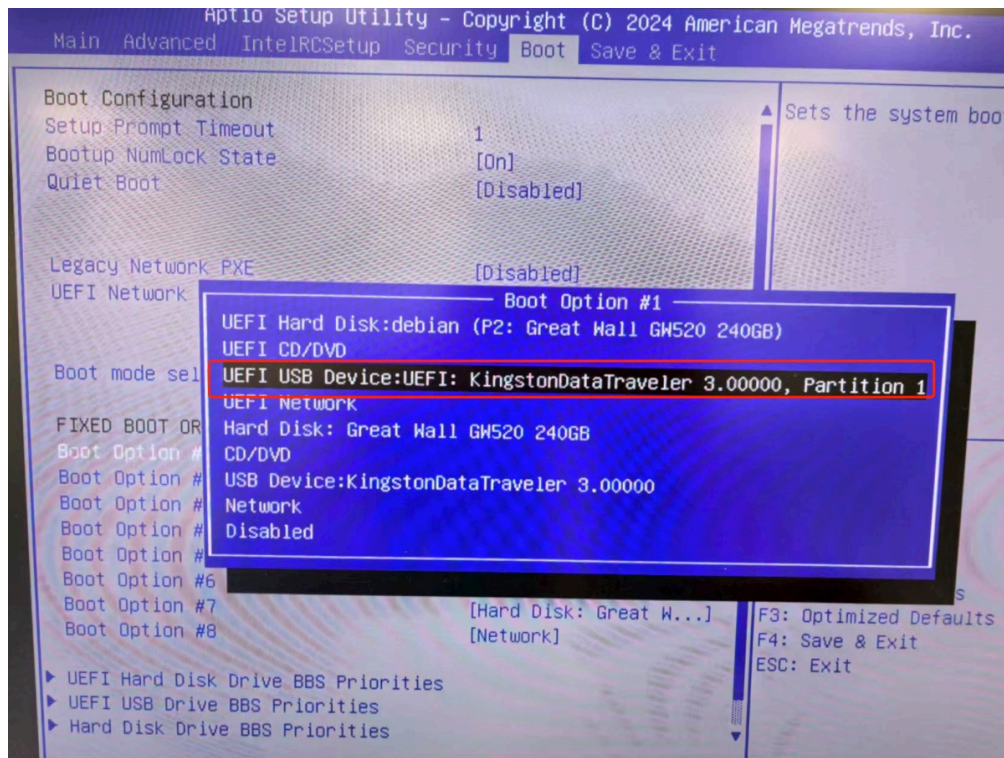


3.1.1 Set Boot Mode

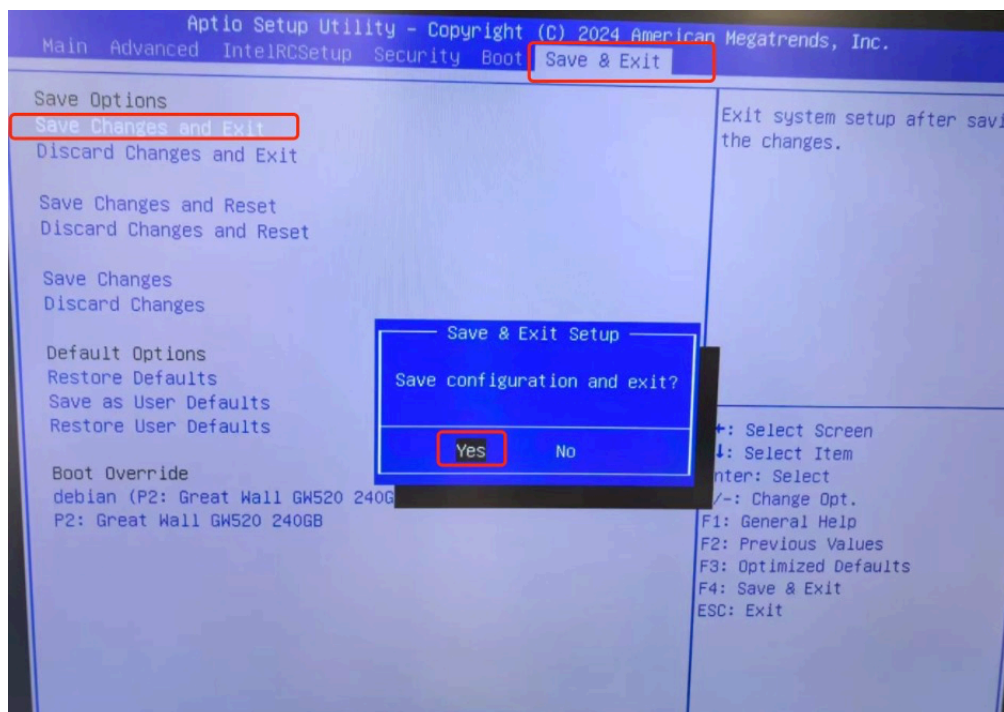
Set the Boot Mode to “UEFI + LEGACY” .



3.1.2 Set the USB Drive as the First Boot Device



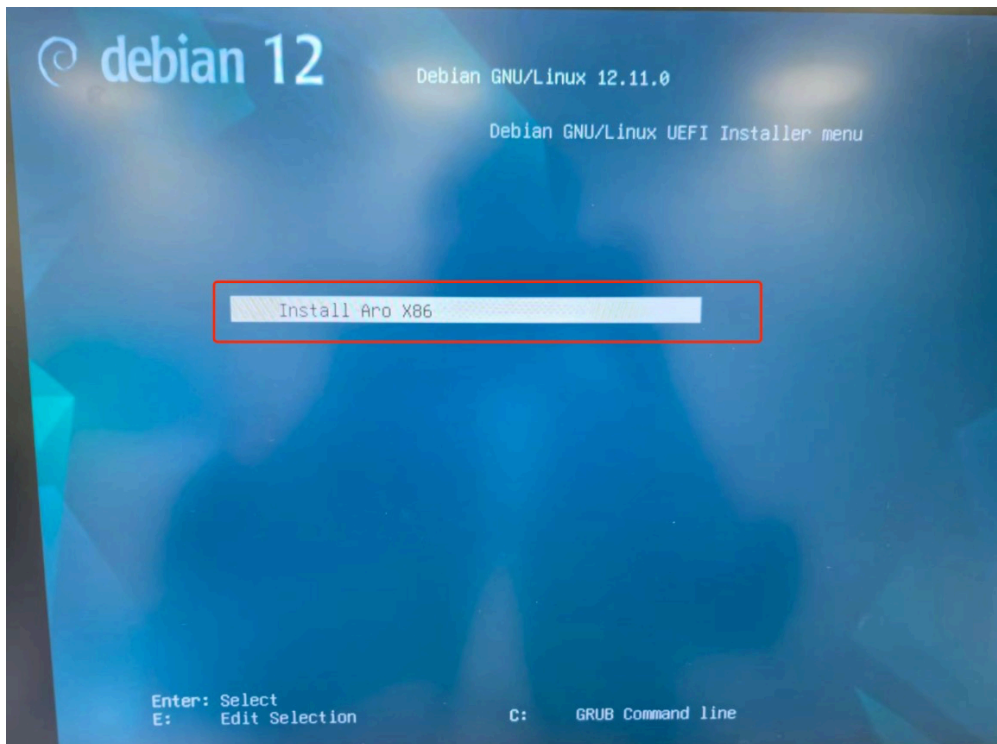
3.1.3 Save Settings and Exit



3.2 Image Installation

3.2.1 Enter the Installation Interface

After saving the BIOS settings, the system will restart and enter the installation interface. Select “Install ARO X86” and press Enter to begin the system installation.

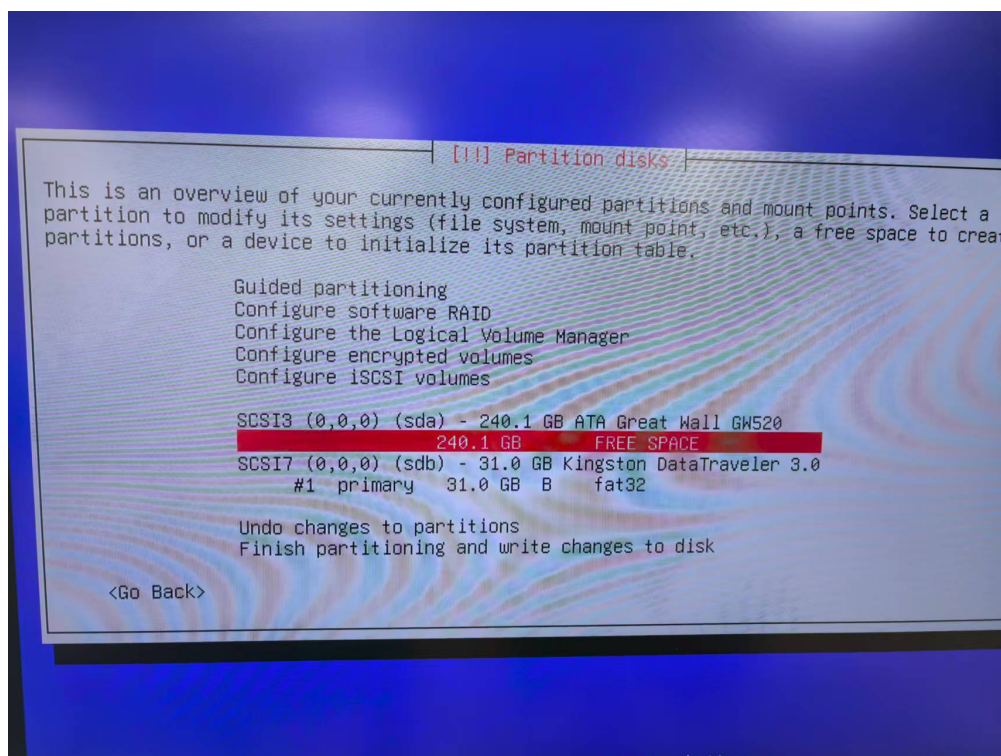
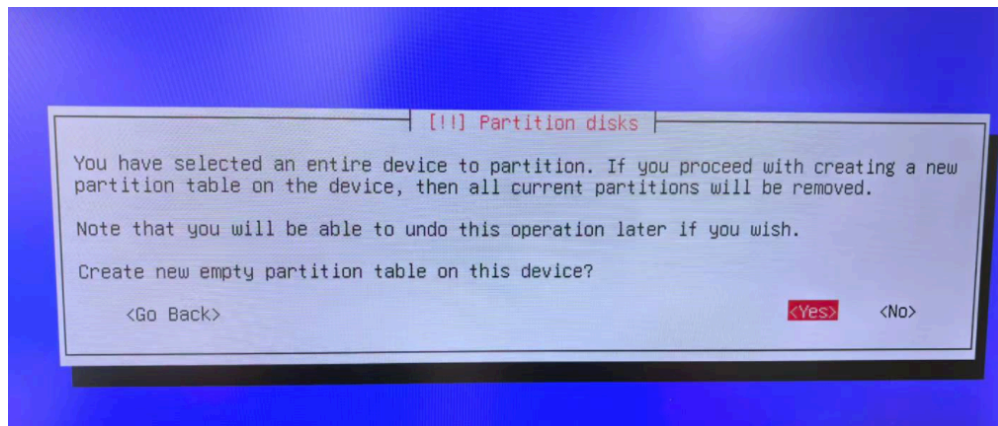
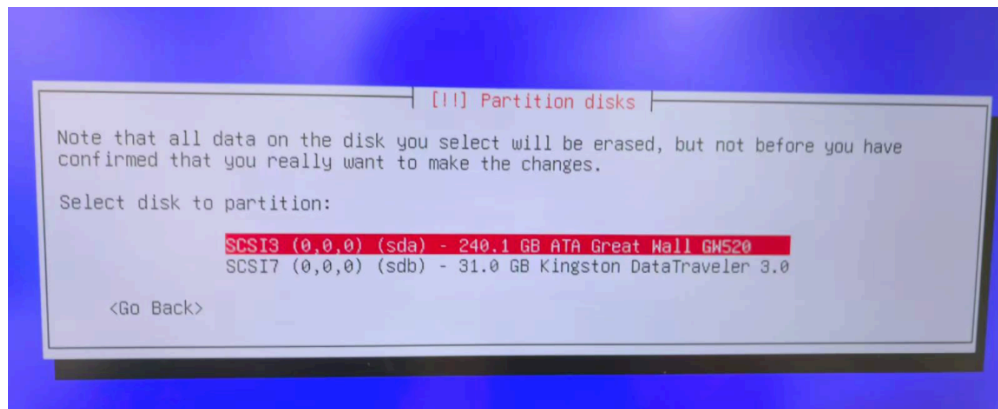


3.2.2 Select Disk

During the installation, you need to manually select the disk. It is recommended to format the disk data after selecting the disk.

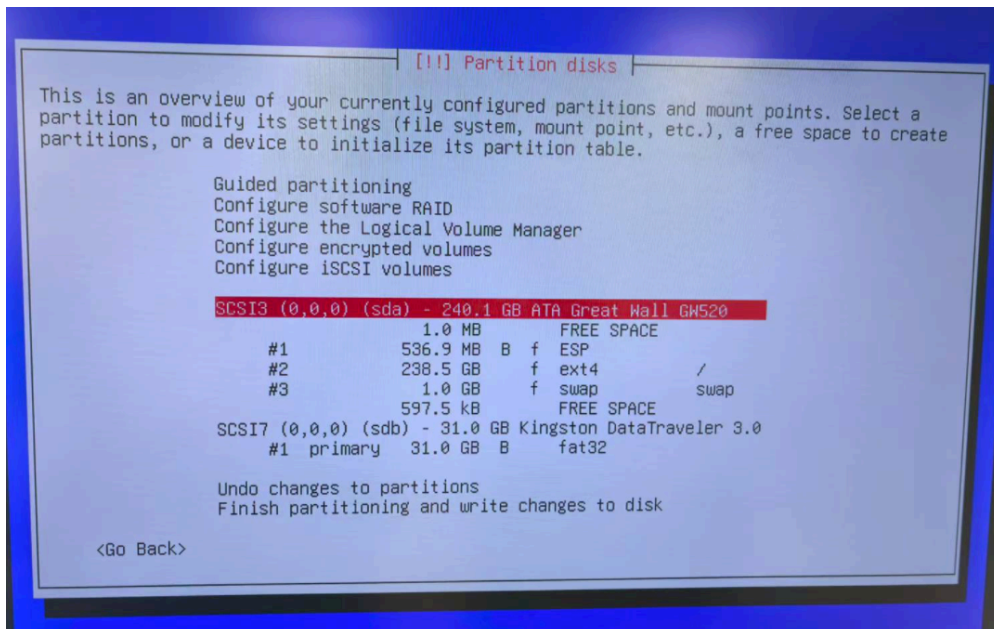
3.2.2.1 Single Disk

If the system has only one disk, select the target disk for installation (ensure it is not the USB drive). Refer to <https://docs.aro.network/edge-node/device-specs> for disk capacity requirements.

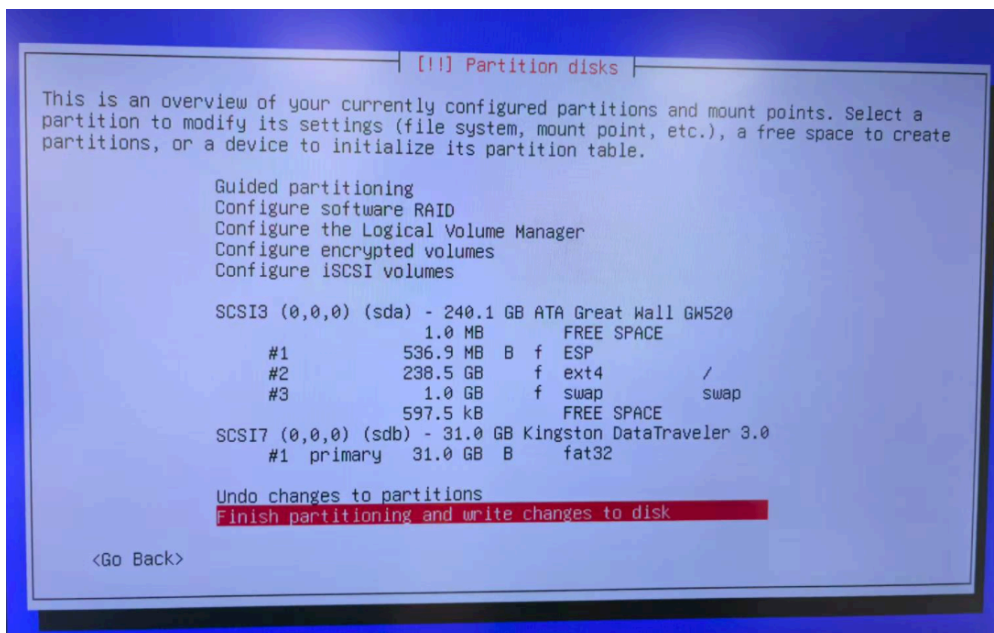


Select automatic partitioning.

]]/Users/lf/Library/Application Support/typora-user-images/image-20250917163430674.png)



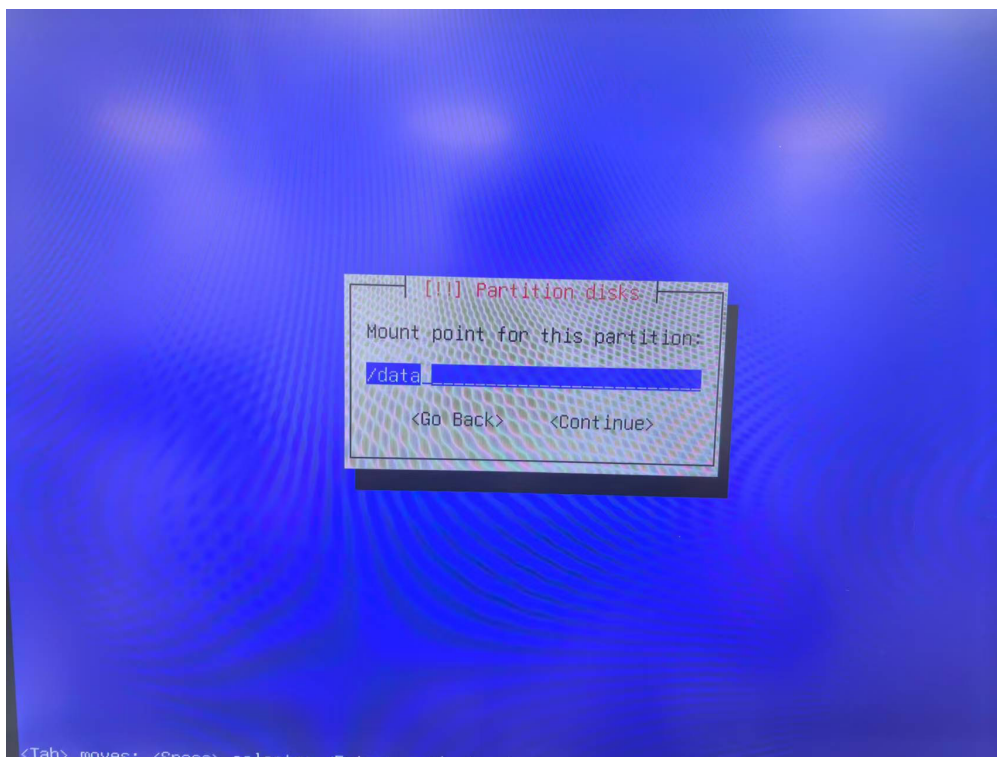
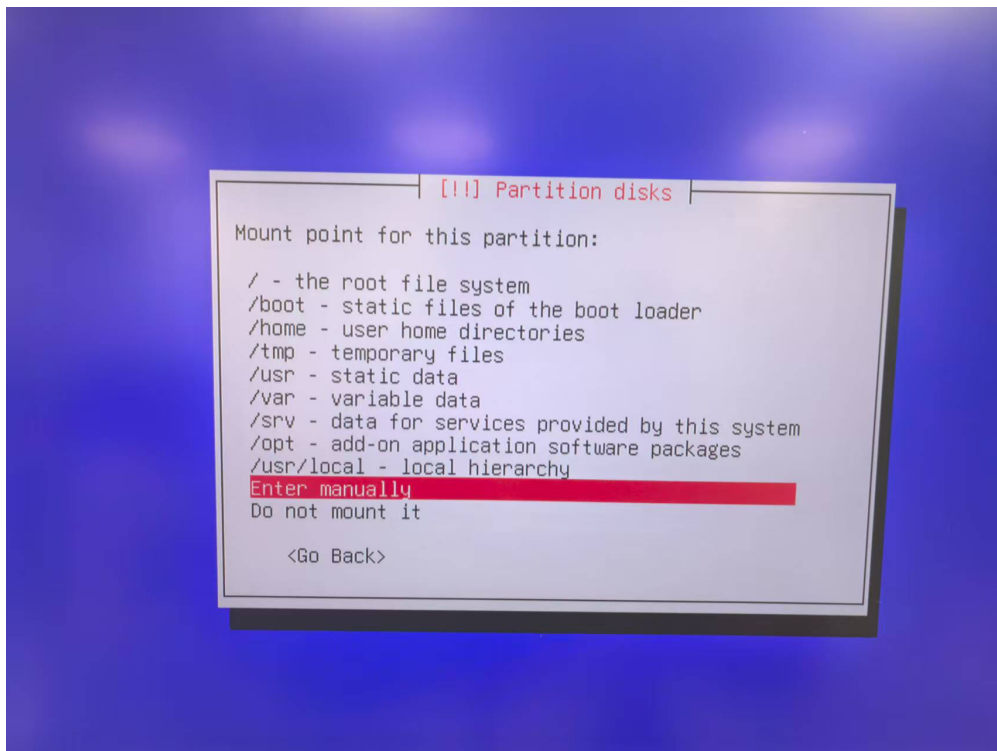
After partitioning is complete, select “Finish” and write to the disk.

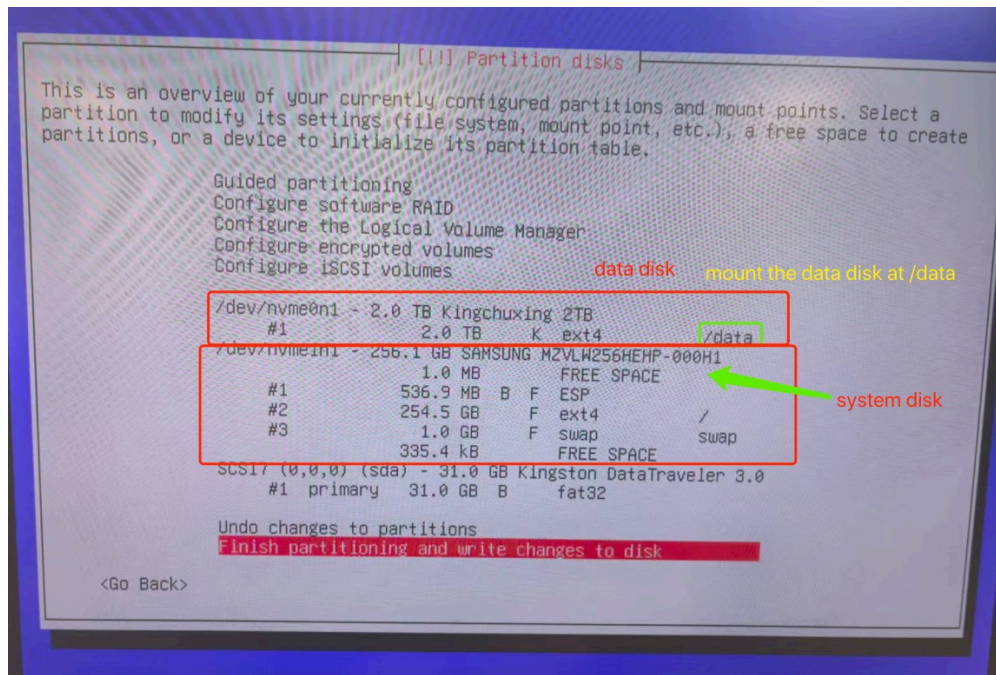


3.2.2.2 Multiple Disks

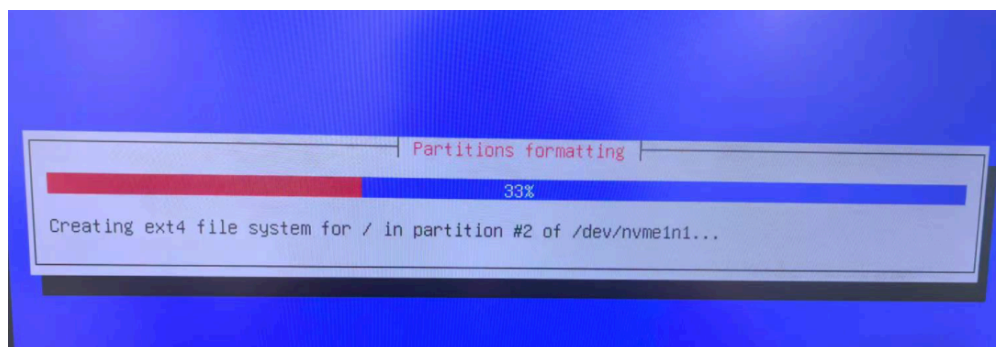
For systems with multiple disks (e.g., two disks), select one smaller disk as the system disk, following the same steps as for a single disk. **The system disk must have a capacity of at least 100GB.**

Data disks can be organized in various ways, such as RAID or LVM, but **the data disk must be mounted to the /data directory.** Refer to <https://docs.arlo.network/edge-node/device-specs> for data disk capacity requirements.

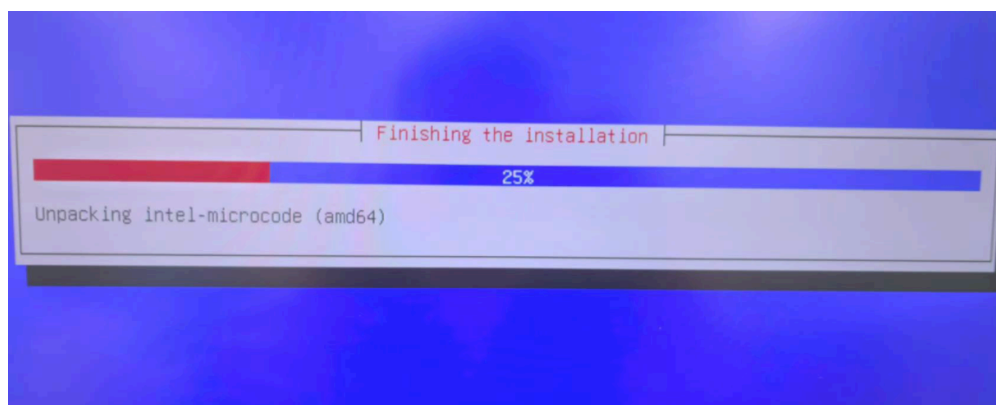




After configuration, proceed to the partitioning execution phase.



The installation will complete automatically, and the system will restart.



3.2.3 Initialization

After the restart, the system will perform initialization operations.


```

[ 51.738467] rc.local[803]: Preparing to unpack .../libxcb-dr13-0_1.15-1_amd64.deb ...
[ 51.744317] rc.local[803]: Unpacking libxcb-dr13-0:amd64 (1.15-1) ...
[ 51.814138] rc.local[803]: Selecting previously unselected package libxcb-glx0:amd64.
[ 51.819357] rc.local[803]: Preparing to unpack .../libxcb-glx0_1.15-1_amd64.deb ...
[ 51.824724] rc.local[803]: Unpacking libxcb-glx0:amd64 (1.15-1) ...
[ 51.895345] rc.local[803]: Selecting previously unselected package libxcb-present0:amd64.
[ 51.898713] rc.local[803]: Preparing to unpack .../libxcb-present0_1.15-1_amd64.deb ...
[ 51.904674] rc.local[803]: Unpacking libxcb-present0:amd64 (1.15-1) ...
[ 51.976227] rc.local[803]: Selecting previously unselected package libxcb-randr0:amd64.
[ 51.980290] rc.local[803]: Preparing to unpack .../libxcb-randr0_1.15-1_amd64.deb ...
[ 51.985815] rc.local[803]: Unpacking libxcb-randr0:amd64 (1.15-1) ...
[ 52.060576] rc.local[803]: Selecting previously unselected package libxcb-render0:amd64.
[ 52.064412] rc.local[803]: Preparing to unpack .../libxcb-render0_1.15-1_amd64.deb ...
[ 52.070666] rc.local[803]: Unpacking libxcb-render0:amd64 (1.15-1) ...
[ 52.143194] rc.local[803]: Selecting previously unselected package libxcb-shm0:amd64.
[ 52.147824] rc.local[803]: Preparing to unpack .../libxcb-shm0_1.15-1_amd64.deb ...
[ 52.160219] rc.local[803]: Unpacking libxcb-shm0:amd64 (1.15-1) ...
[ 52.246346] rc.local[803]: Selecting previously unselected package libxcb-sync1:amd64.
[ 52.251295] rc.local[803]: Preparing to unpack .../libxcb-sync1_1.15-1_amd64.deb ...
[ 52.257029] rc.local[803]: Unpacking libxcb-sync1:amd64 (1.15-1) ...
[ 52.329131] rc.local[803]: Selecting previously unselected package libxcb-xfixes0:amd64.
[ 52.336848] rc.local[803]: Preparing to unpack .../libxcb-xfixes0_1.15-1_amd64.deb ...
[ 52.338801] rc.local[803]: Unpacking libxcb-xfixes0:amd64 (1.15-1) ...
[ 52.408373] rc.local[803]: Selecting previously unselected package libxcomposite1:amd64.
[ 52.412659] rc.local[803]: Preparing to unpack .../libxcomposite1_0.4.5-1_amd64.deb ...
[ 52.418659] rc.local[803]: Unpacking libxcomposite1:amd64 (1:0.4.5-1) ...
[ 52.478266] rc.local[803]: Selecting previously unselected package libxcursor1:amd64.
[ 52.482281] rc.local[803]: Preparing to unpack .../libxcursor1_1.2.1-1_amd64.deb ...
[ 52.488268] rc.local[803]: Unpacking libxcursor1:amd64 (1:1.2.1-1) ...
[ 52.548975] rc.local[803]: Selecting previously unselected package libxdamage1:amd64.
[ 52.551915] rc.local[803]: Preparing to unpack .../libxdamage1_1.1.6-1_amd64.deb ...
[ 52.557739] rc.local[803]: Unpacking libxdamage1:amd64 (1:1.1.6-1) ...
[ 52.618632] rc.local[803]: Selecting previously unselected package libxencall1:amd64.
[ 52.622972] rc.local[803]: Preparing to unpack .../libxencall1_4.17.5+23-ga4e5191dc0-1+deb12u1_amd64.deb ...
[ 52.628867] rc.local[803]: Unpacking libxencall1:amd64 (4.17.5+23-ga4e5191dc0-1+deb12u1) ...
[ 52.717248] rc.local[803]: Selecting previously unselected package libxendevicemodel1:amd64.
[ 52.724657] rc.local[803]: Preparing to unpack .../libxendevicemodel1_4.17.5+23-ga4e5191dc0-1+deb12u1_amd64.deb ...
[ 52.731106] rc.local[803]: Unpacking libxendevicemodel1:amd64 (4.17.5+23-ga4e5191dc0-1+deb12u1) ...
[ 52.795094] rc.local[803]: Selecting previously unselected package libxenevtchn1:amd64.
[ 52.803764] rc.local[803]: Preparing to unpack .../libxenevtchn1_4.17.5+23-ga4e5191dc0-1+deb12u1_amd64.deb ...
[ 52.810135] rc.local[803]: Unpacking libxenevtchn1:amd64 (4.17.5+23-ga4e5191dc0-1+deb12u1) ...
[ 52.873734] rc.local[803]: Selecting previously unselected package libxenforeignmemory1:amd64.
[ 52.881667] rc.local[803]: Preparing to unpack .../libxenforeignmemory1_4.17.5+23-ga4e5191dc0-1+deb12u1_amd64.deb ...
[ 52.888208] rc.local[803]: Unpacking libxenforeignmemory1:amd64 (4.17.5+23-ga4e5191dc0-1+deb12u1) ...
[ 52.954437] rc.local[803]: Selecting previously unselected package libxengnttab1:amd64.
[ 52.959613] rc.local[803]: Preparing to unpack .../libxengnttab1_4.17.5+23-ga4e5191dc0-1+deb12u1_amd64.deb ...
[ 52.965986] rc.local[803]: Unpacking libxengnttab1:amd64 (4.17.5+23-ga4e5191dc0-1+deb12u1) ...

```

3.2.4 Complete Installation

Once initialization is complete, the system will automatically enter the terminal.

```

[Initial Configuration > Network Config]
You are configuring your ARO Node.
Please make sure the network cable is connected.

[1] Name:[enp8s0] MAC:[70:70:4d:6c:1d:16] Speed:[0Mbit] Network:[Up]
[2] Name:[enp9s0] MAC:[70:70:4d:6c:1d:17] Speed:[0Mbit] Network:[Up]

(Q quit Initial Configuration)
Please input the No. of network adapter [1-2]: > █

```

At this point, the system installation is complete. For subsequent operations, refer to the ARO Client Configuration part and further steps at <https://docs.aro.network/user-guides/software-setup>.