Shed Check-In System Central Server Install Procedure
Version 1.0

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Document Information

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1   Introduction

1.1   Document Purpose

This document describes the installation of server software for the Shed Check-In System version 1.0, released on 7/7/2024.

1.2   Who this guide is for

This guide is intended for Administrators who wish to set up a Shed Check-In System and utilise the features it provides (User Checkin/Checkout and Device Access Control).

1.3   Preparation

1.3.1   Hardware Requirements

You will need to have cabled up the Central Server to an active Internet Connection, by using a physical port, or alternatively if the Server has a wireless capability, you can add this connection during the install phase. The Monitor, Keyboard and Mouse will need to be correctly connected. You will also need to know how to interrupt the boot sequence of your server and select a bootable device. Your server will need to able to boot from an USB Device.

For LinuxLite Install, you will need a memory stick of at least 4GB capacity, and a separate Internet Connected Host to download and burn the image.

1.3.2   Software Requirements

You will need to download the ISO image for LinuxLite 6.4, which will be approx. 3.5GB in size. Download the latest tarball image from the github website. You will also need to download an ISO Image Burner (We recommend BalenaEtcher from https://etcher.balena.io/).

1.4   Setup

To download the Linux Lite image, visit https://www.linuxliteos.com/mirrors.php and select the link in the "Download" column nearest to you. Select the "6.4" directory and click on the "linux-lite-6.4-64bit.iso".

Place a blank USB Memory Stick in a PC and use the BalenaEtcher tool to write the Linux Lite Image to the Memory Stick.

To download the Installer for SCIS, right click on the file "tmz_[version].tar.gz" and select "Save Link as".

Setup your dedicated modem, with the following values (configuration methods vary greatly so no screenshots provided).

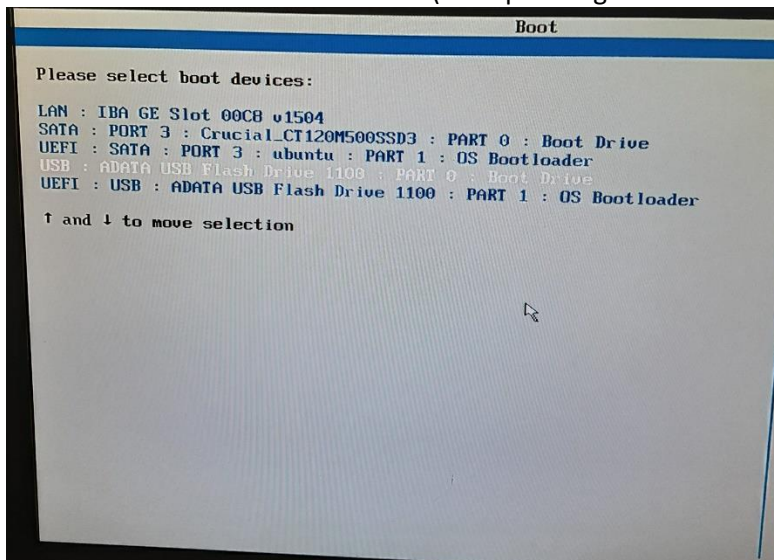| Field	Value	Rationale
Router IP	192.168.0.1/24	Primary IP of the Router and Gateway for the Server
DHCP Service	Enabled	Allow provision of IP Addresses
DHCP Range	192.168.0.2-99	IP Address ranges serviced by DHCP

1.5   Installation of Operating System

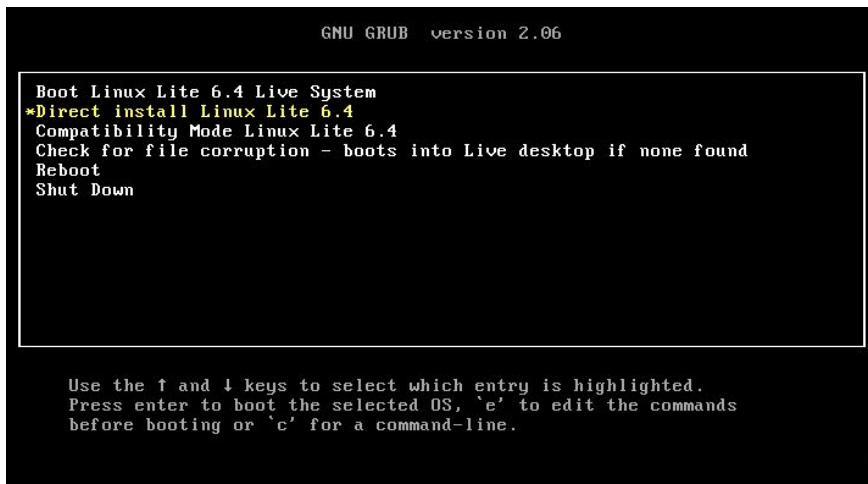If you are using hard-wired internet, connect this now to the Server.

Boot the Server and interrupt the boot sequence at the appropriate time (example shown is Intel NUC).
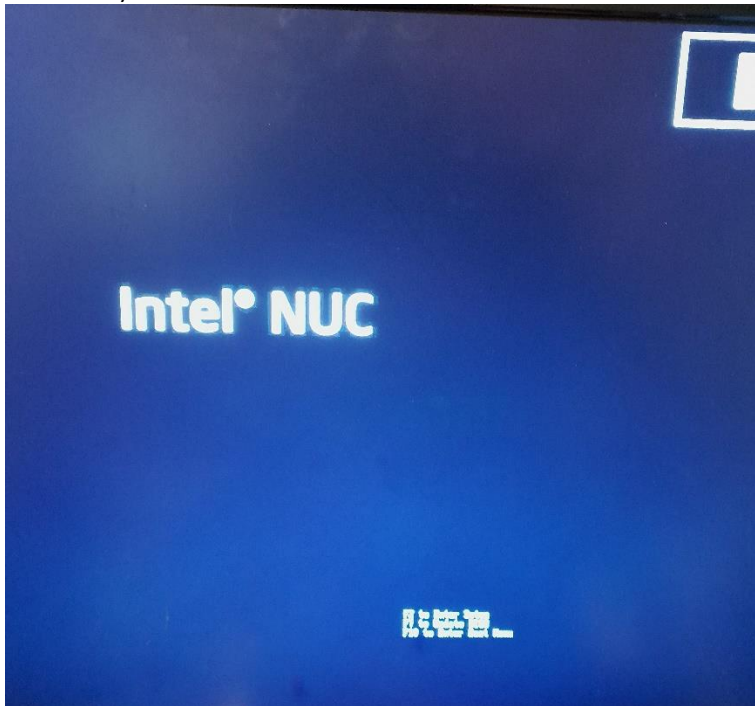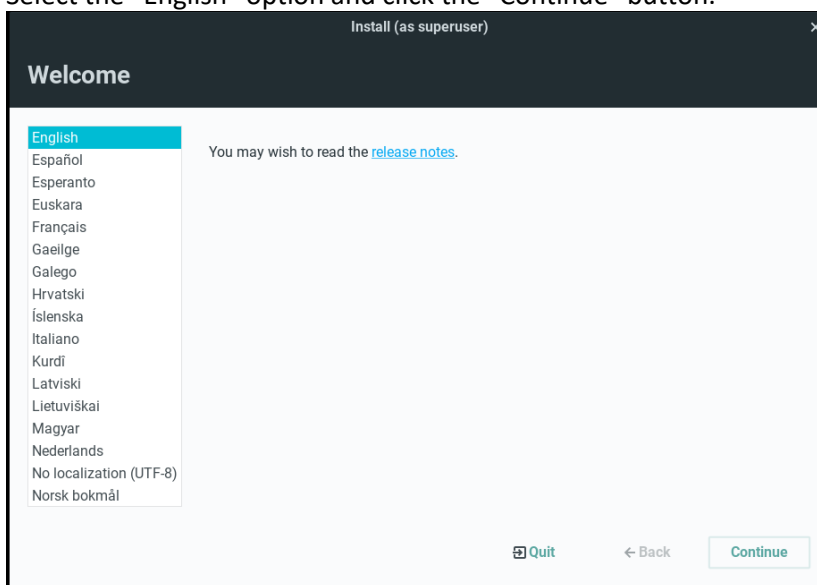

Select the USB Device to boot from (Example Image is from the Intel NUC)
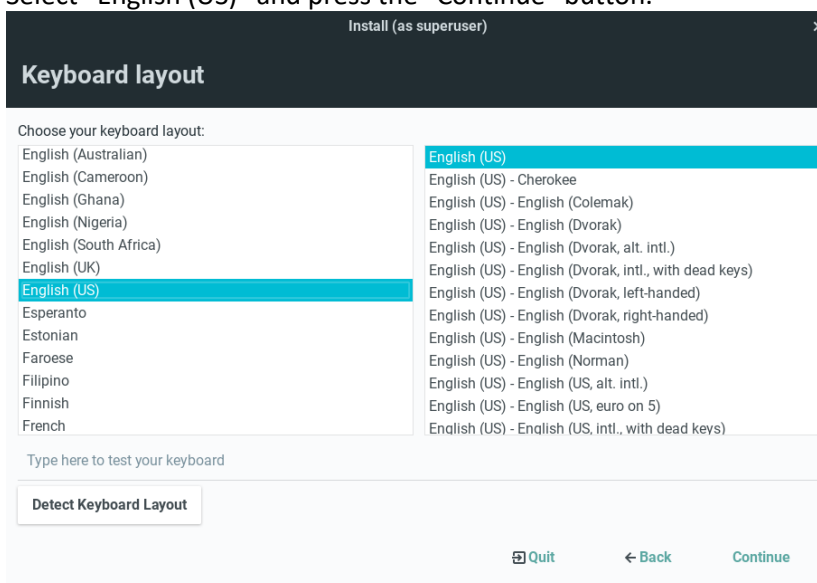

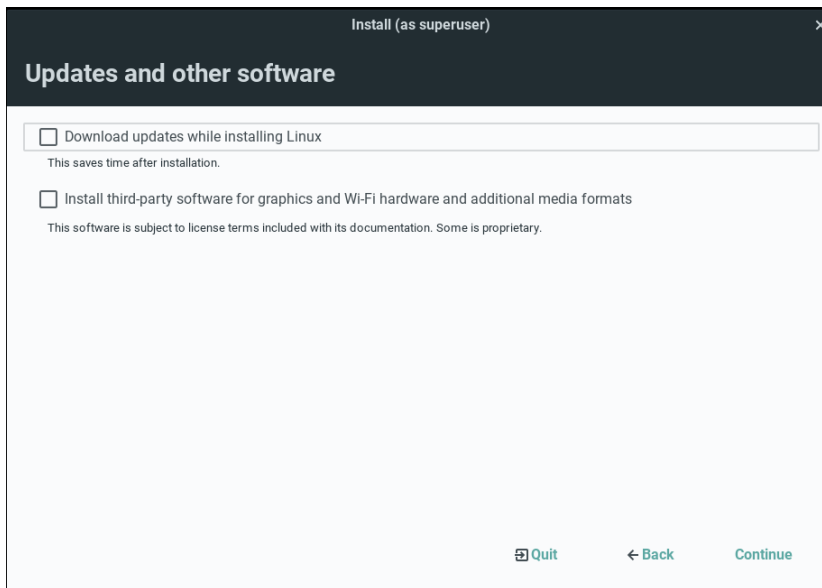Select the "Direct Install" option presented and press Return.

```
              GNU GRUB   version 2.06

 Boot Linux Lite 6.4 Live System
*Direct install Linux Lite 6.4
 Compatibility Mode Linux Lite 6.4
 Check for file corruption - boots into Live desktop if none found
 Reboot
 Shut Down




     Use the ↑ and ↓ keys to select which entry is highlighted.
     Press enter to boot the selected OS, `e' to edit the commands
     before booting or `c' for a command-line.
```

Select the "English" option and click the "Continue" button.

Install (as superuser) ✕

Welcome

| English |
| Español |
| Esperanto |
| Euskara |
| Français |
| Gaeilge |
| Galego |
| Hrvatski |
| Íslenska |
| Italiano |
| Kurdî |
| Latviski |
| Lietuviškai |
| Magyar |
| Nederlands |
| No localization (UTF-8) |
| Norsk bokmål |

You may wish to read the release notes.

🗗 Quit   ← Back   Continue

Select "English (US)" and press the "Continue" button.

Install (as superuser) ✕

Keyboard layout

Choose your keyboard layout:

English (Australian)	English (US)
English (Cameroon)	English (US) - Cherokee
English (Ghana)	English (US) - English (Colemak)
English (Nigeria)	English (US) - English (Dvorak)
English (South Africa)	English (US) - English (Dvorak, alt. intl.)
English (UK)	English (US) - English (Dvorak, intl., with dead keys)
English (US)	English (US) - English (Dvorak, left-handed)
Esperanto	English (US) - English (Dvorak, right-handed)
Estonian	English (US) - English (Macintosh)
Faroese	English (US) - English (Norman)
Filipino	English (US) - English (US, alt. intl.)
Finnish	English (US) - English (US, euro on 5)
French	English (US) - English (US, intl., with dead keys)

Type here to test your keyboard

Detect Keyboard Layout

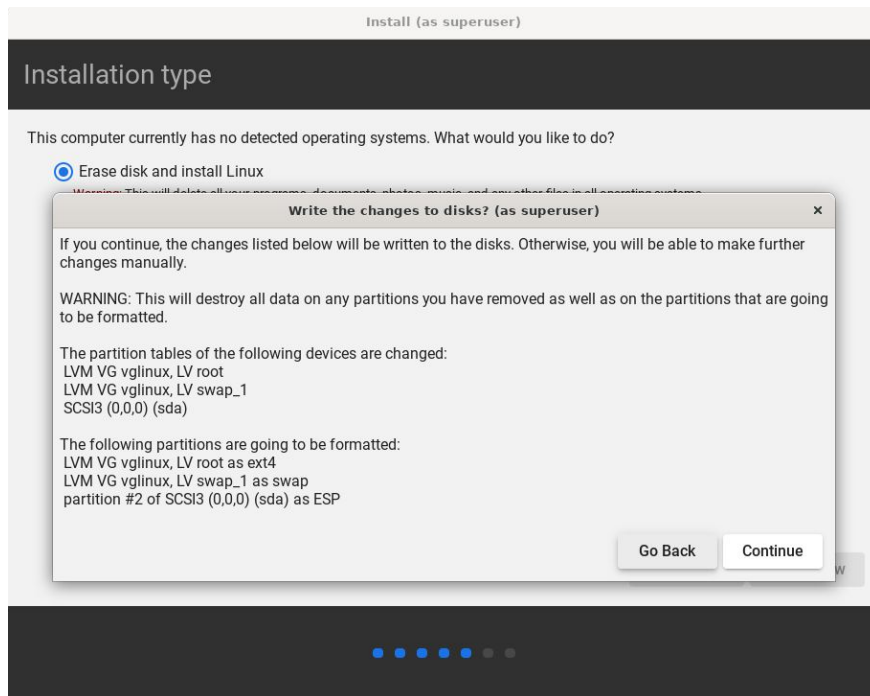🗗 Quit   ← Back   Continue

Unselect both options for "Updates and other Software" and press the "Continue" button.
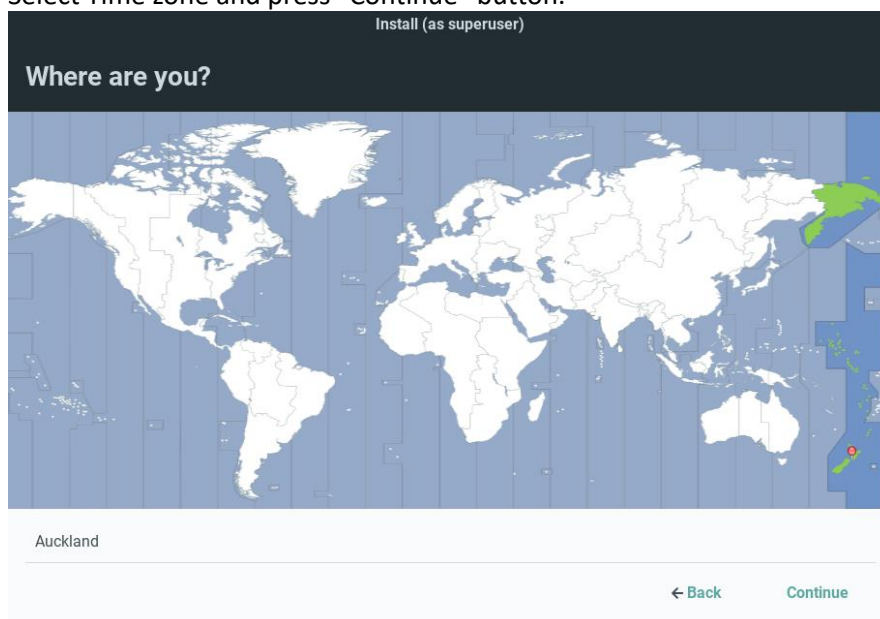
Click "Advanced features" button and select "Use LVM with the new Linux installation". Select the OK button.
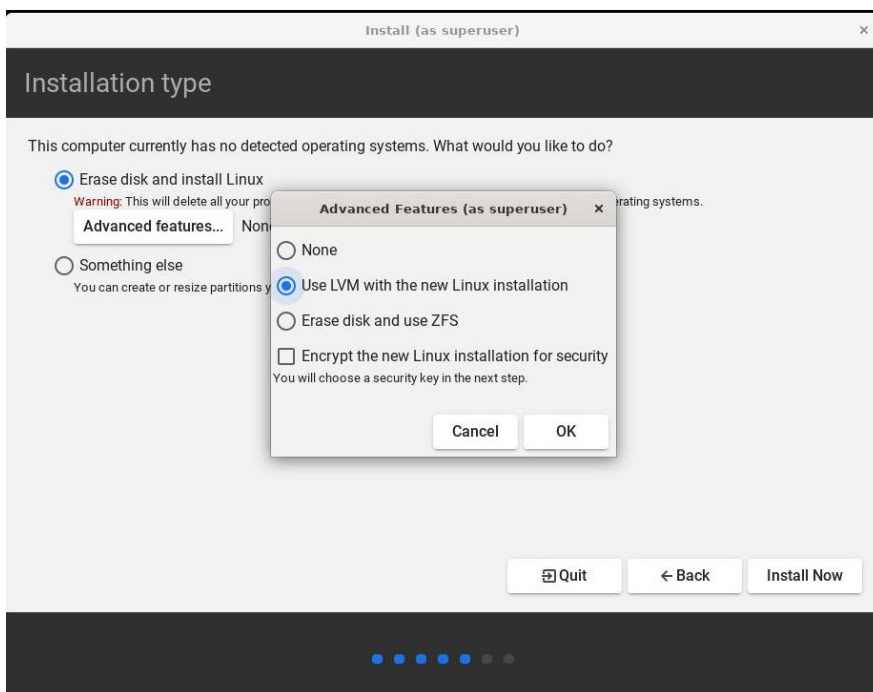
Confirm the destruction of the contents of the disk with "Continue" button.

Select Time zone and press "Continue" button.

Enter parameters for the server name and primary userid (recommended values below) and select "Continue".

Recommended Values

Field	Value	Rationale
Your name	menzshed	The label to identify your userid as
Your computer's name	menzshed-svr	The name of the computer
Pick a username	menzshed	The default user for the application to run on and to login as
Choose a password	[pick your own]	Something easy to remember, but complex enough not to guessed Do not use '*' or '&' or '/'.
Log in automatically	True	Don't prompt for a password

Once the installation is complete, you will be prompted to restart. Click the "Restart Now" button.
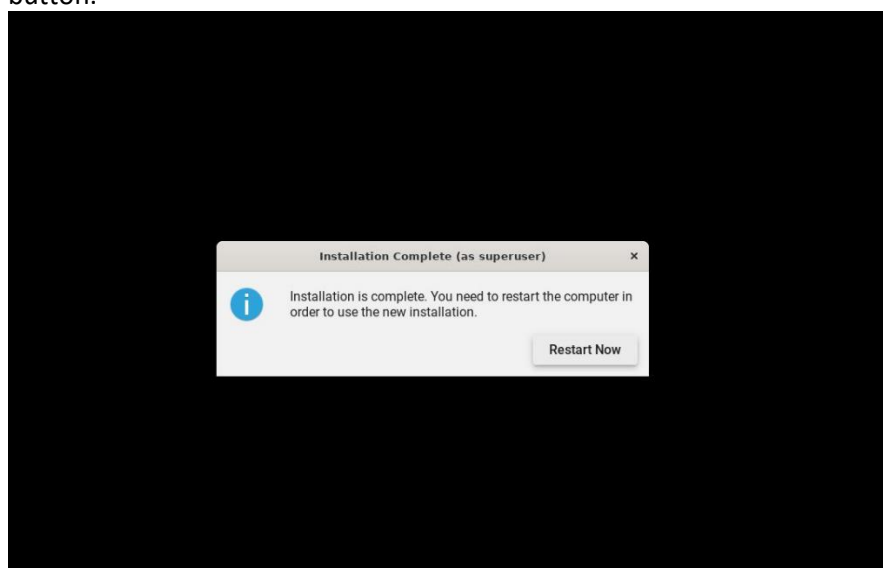
After a short pause, you will be prompted to remove the install media, do so and press Enter key.
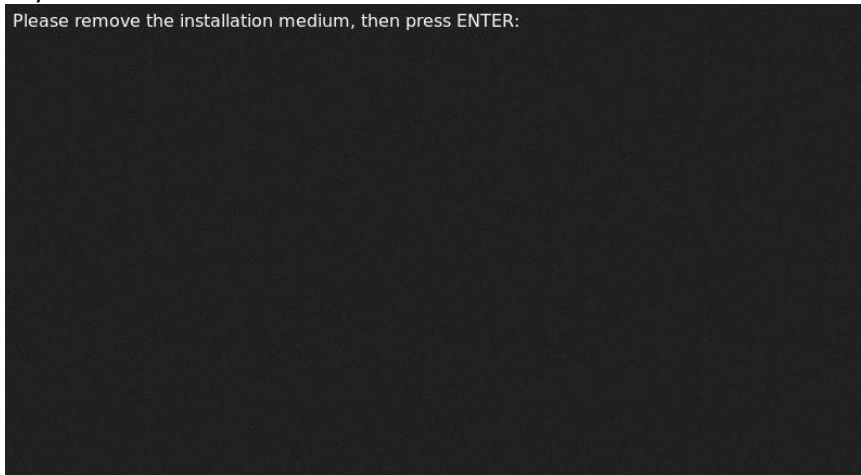

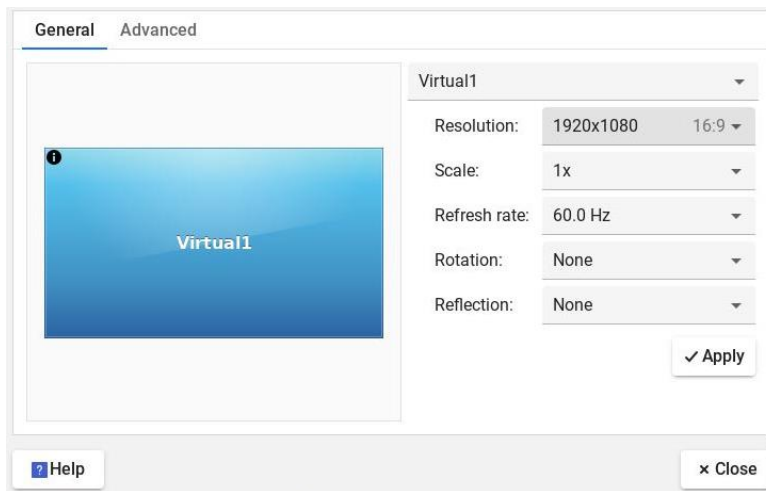After the reboot is complete, you should see a screen where the menzshed userid is logged in.

1.6   Installation of Application

(These instructions will assume you have a windows computer with SFTP capability on the same network as the Server. The Central Server must still be capable of accessing the internet at this point.)

Start the console of the Server, and navigate to menu "Display".
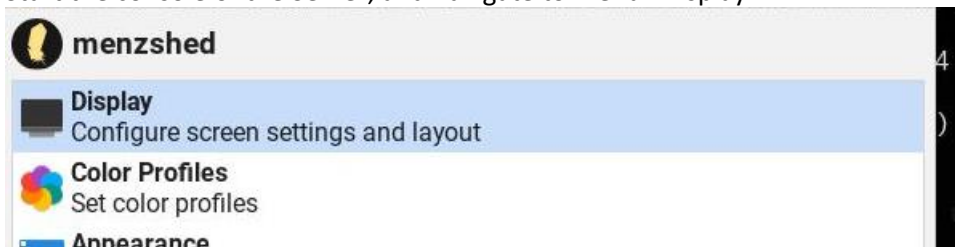
Select the resolution of 1920 x 1080 and select "Apply". Confirm the resolution and Close the window.

General	Advanced

Virtual1 ▼

Resolution:	1920x1080 16:9 ▼
Scale:	1x ▼
Refresh rate:	60.0 Hz ▼
Rotation:	None ▼
Reflection:	None ▼

Virtual1

✓ Apply

? Help   × Close

At the console of the Server and start a terminal session (Icon ▣ on the bottom of screen)

Run the following commands to become the superuser "root" and enter the password for "menzshed" userid.

```
menzshed   ~   sudo su -
[sudo] password for menzshed:
```

Install the package "openssh-server". Answer "y" to any questions.

```
root   ~   apt-get install openssh-server
```

Once the installation is complete, open the /etc/ssh/sshd_config file for modification.

```
root   ~   SIGINT   nano /etc/ssh/sshd_config
```

Change the line starting with "Subsystem" to read as follows. Press Control-X to exit and answer "y" to save the file.

```
# override default of no subsystems
# Subsystem      sftp    /usr/lib/openssh/sftp-server
Subsystem       sftp    internal-sftp
```

Restart the sshd service and then confirm the IP address of the server with the "ip addr" command (this usually begins with 192.168.0 on the 'inet' line – below is an example only).

```
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc
oup default qlen 1000
    link/ether 08:00:27:23:10:cb brd ff:ff:ff:ff:ff:ff
    inet 192.168.0.92/24 brd 192.168.1.255 scope global dyr
p0s3
```

Using your remote computer, perform an SFTP connection to this IP address and upload the file "tmz_[version].tar.gz" to the directory /home/menzshed.

Swich back to the console of the Server and change to the directory /home/menzshed and unzip the file. (Values are example only).

```
File  Edit  View  Terminal  Tabs  Help
root  /    cd /home/menzshed/
root  /  home  menzshed  ls -al t*
-rw-rw-r-- 1 menzshed menzshed 857007 Jul 11 18:22 tmz_02n.tar.gz
root  /  home  menzshed  tar -xzvf tmz_02n.tar.gz
```

After unzipping the file, change directory into TMZ_Bundle and look for a file named
"setup_script.sh". Run the following command and enter the required PIN for your site (your
own choice).

```
drwxrwxr-x  2 menzshed menzshed  4096 Sep 23  2023 wrap
root  /  home  menzshed  TMZ_Bundle  ./setup_script.sh
Dollar 0 ./setup_script.sh
Enter 4 digit security PIN:
9999
```

You will then be prompted for an Organisation Name. This will be placed at the top of the
screen and will be saved for future reference (like upgrades).

```
Enter your organisation name ():Tawa Menzshed
Checking installed packages
```

After a great deal of text scrolls past, you will be prompted which web server to configure.
Press Space to select "apache2" then tab to move to the "OK" button and Space to continue.

```
┤ Configuring phpmyadmin ├
 Please choose the web server that should be automatically configured to
 run phpMyAdmin.

 Web server to reconfigure automatically:

    [ ] apache2
    [ ] lighttpd


                              <Ok>
```

After some more text scrolls through, you will be asked if you wish to configure the
phpadmin package for the database. Use "Space" to select "Yes".

```
Package configuration
              ┤ Configuring phpmyadmin ├

 The phpmyadmin package must have a database installed and configured
 before it can be used. This can be optionally handled with
 dbconfig-common.

 If you are an advanced database administrator and know that you want to
 perform this configuration manually, or if your database has already
 been installed and configured, you should refuse this option. Details on
 what needs to be done should most likely be provided in
 /usr/share/doc/phpmyadmin.

 Otherwise, you should probably choose this option.

 Configure database for phpmyadmin with dbconfig-common?

           <Yes>                        <No>
```

You will be then asked to enter a password twice, for this integration. For ease of use, this
password can also be used for the database password later on.

When prompted for a password for mysql, re-enter the phpadmin password.

You should see more text when database is created and customisations take place. The line "Script complete" indicates the install has completed.
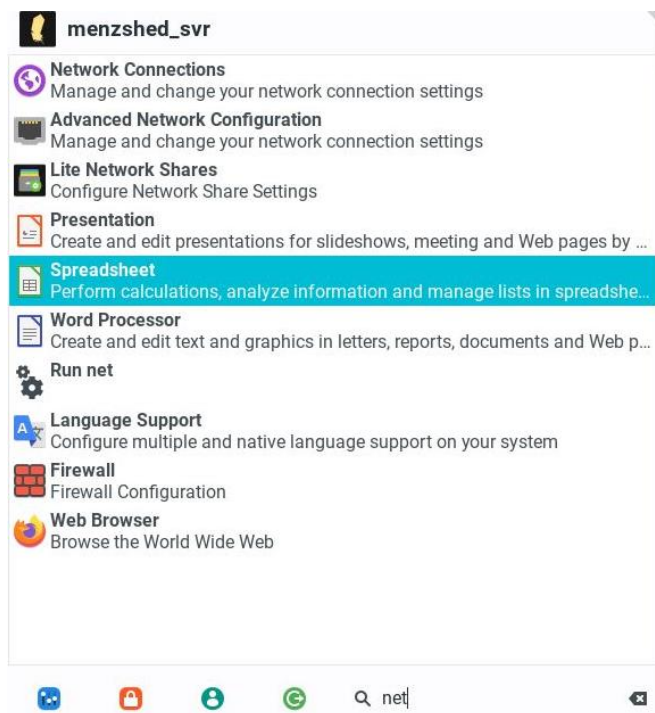

1.7 Post Install Customisation

At this point, you have a basic install system, however you will need to customise it to continue.

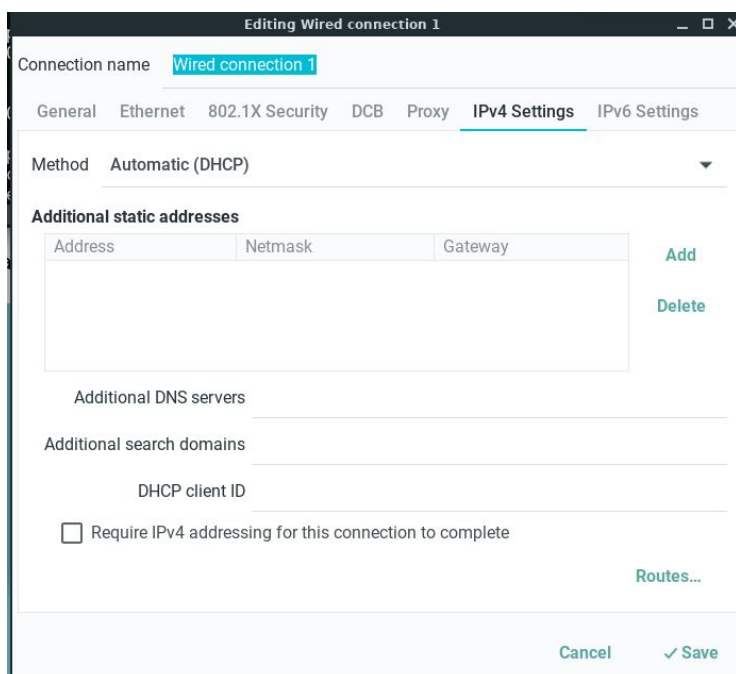Connect the Server to the designated router using a physical cable.

Reconfigure the network by starting the Network interface on the console by typing "network" in the search field and selecting "Network Connections".

Highlight the connection shown, and select the Cog icon on the bottom of the screen.
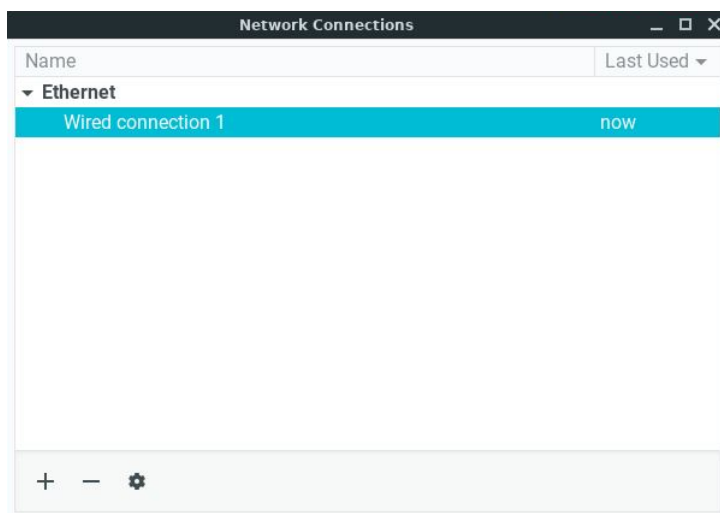
Select the "IPV4" tab and select the Method of "Manual".

Select the "Add" button and configure the network devices as below. Select "Save" and close down any other windows.

After reconfiguring the network, reboot the Server.

NOTE: Linux in general has changed the way networking is configured from Version 5 onwards. If your network change does not take effect, there are not enough column inches in this document to diagnose all the possible causes. Please research "nmcli" configuration and "Network Manager for linuxlite", or post a question on their technical support forums.

Once the Host has rebooted, start the Web Browser and navigate to http://localhost/menzshed/ and then bookmark the page as your home page.
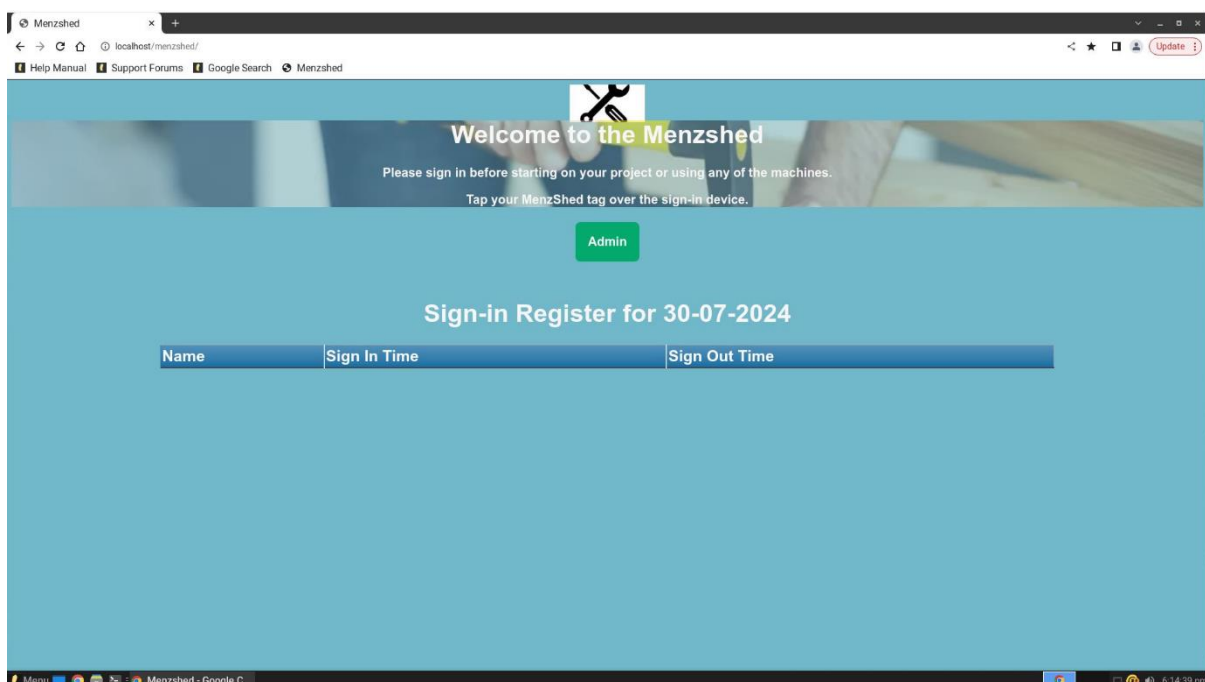
If you wish to customise your header, you can upload a small image into /var/www/html/menzshed/images/Logo.jpeg file and it will replace the crossed tools symbol that is default.

Appendix A – Control Server Hardware Recommendation and Costs

The following is the recommended Components, their Specification and Estimated Cost (as at Jul 2024, all figures in NZ Dollars)

Component	Description	Indicative Cost
Small Form Factor Computer	Dual Core Intel CPU, 8GB memory, 20GB Disk, USB ports, Min 1920x1080 resolution	$155 (Trademe NZ)
Keyboard	Standard USB Device	
Mouse	Standard USB Device	
Monitor	1920x1080 resolution	
Router	1GB Router (can use old ISP router)	$20-$50 (Trademe NZ)
Network Cables	Ethernet Cat5/6, RJ-45 connections	$5-$10