

*****Draft*****

QEMU Ultibo Bare Metal FileHandling 07/21/21

*****Draft*****

<https://en.m.wikipedia.org/wiki/QEMU>

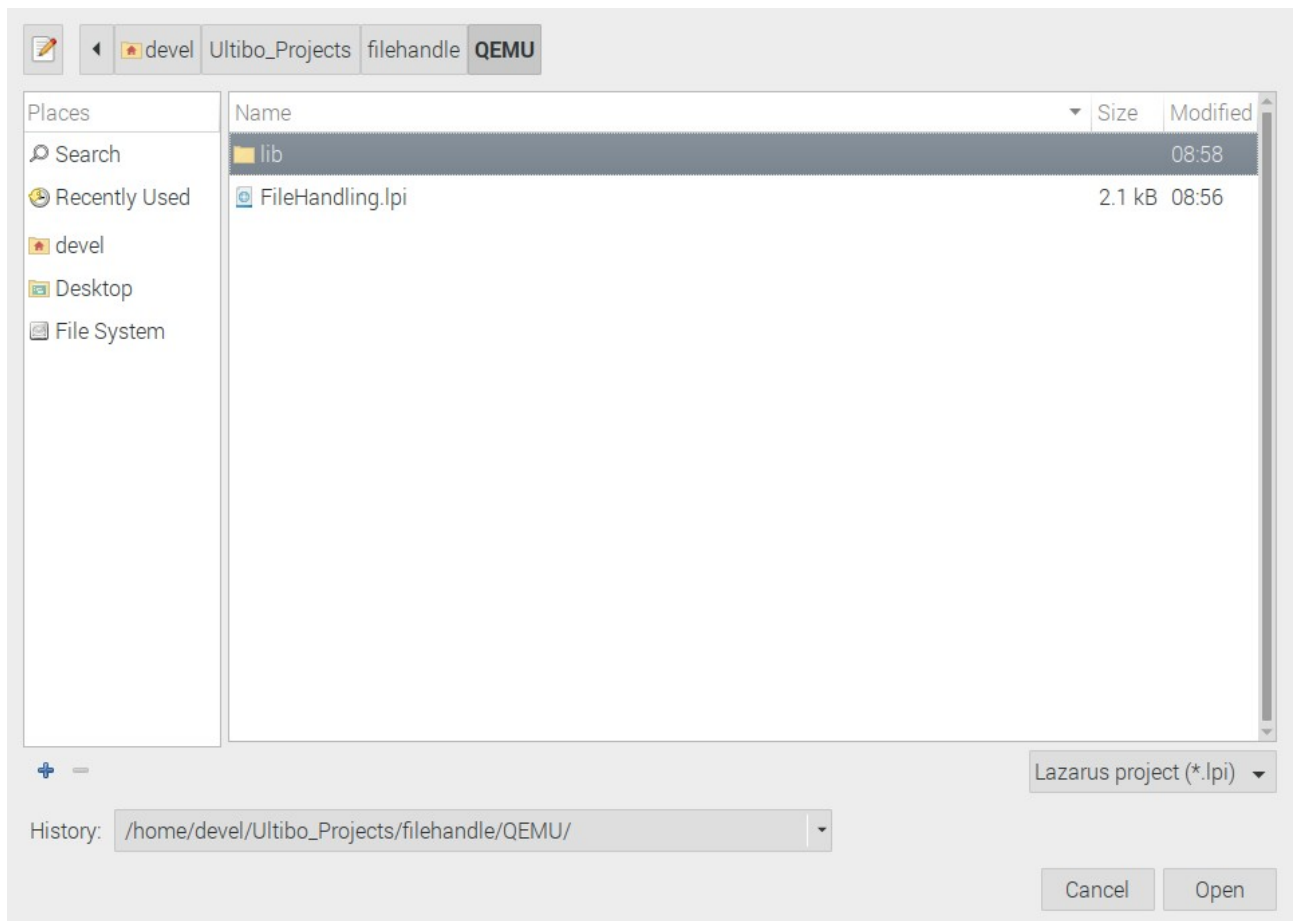
QEMU is a [hosted virtual machine monitor](#): it emulates the machine's [processor](#) through dynamic [binary translation](#) and provides a set of different hardware and device models for the machine, enabling it to run a variety of [guest operating systems](#). It also can be used with [Kernel-based Virtual Machine](#) (KVM) to run virtual machines at near-native speed (by taking advantage of hardware extensions such as [Intel VT-x](#)). QEMU can also do emulation for user-level processes, allowing applications compiled for one architecture to run on another.[\[3\]](#)

Note : Additional software is needed to run QEMU “`sudo apt-get install qemu-system-arm`”.
The following programs are added.

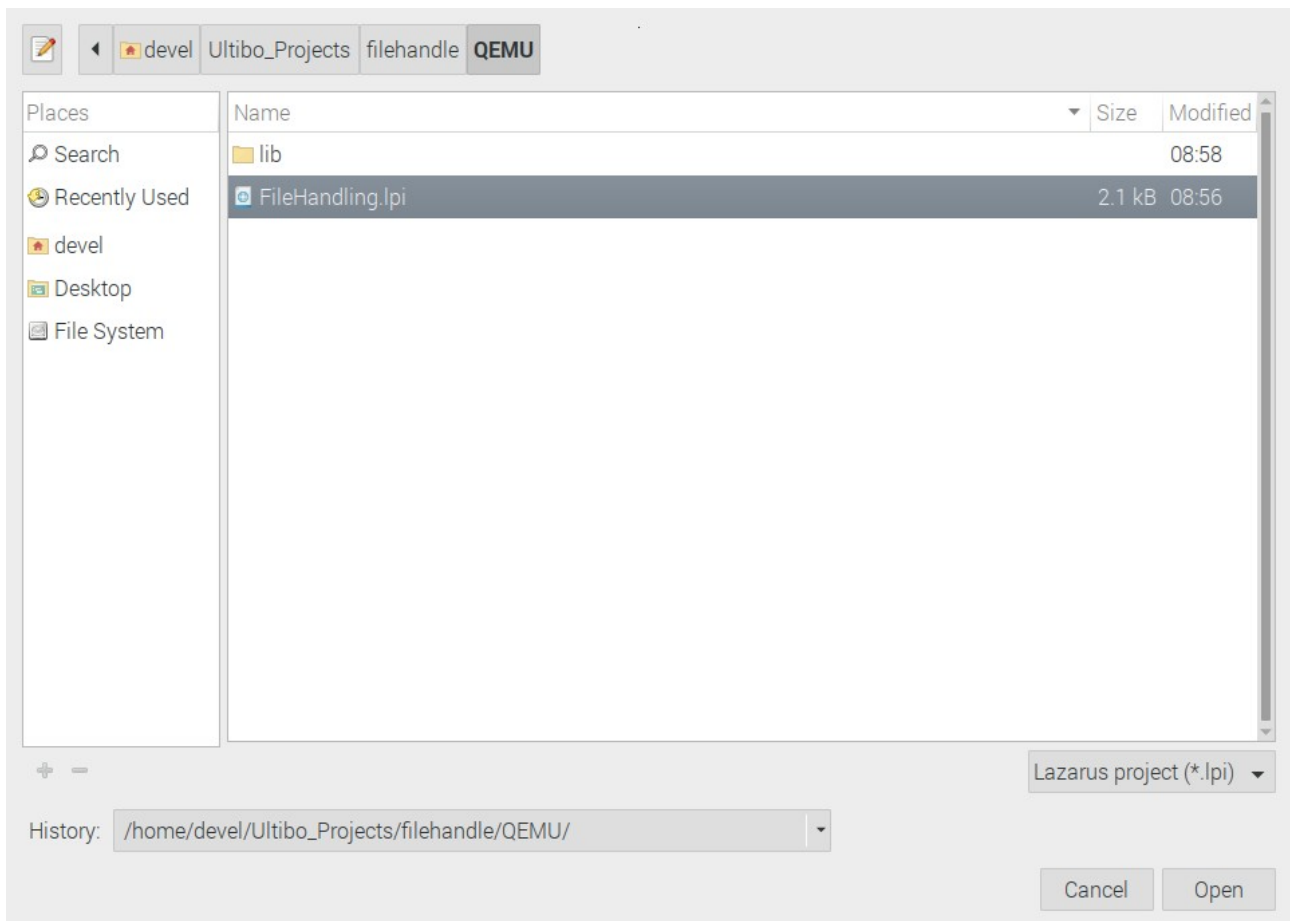
`/usr/bin/qemu-img /usr/bin/qemu-nbd /usr/bin/qemu-system-aarch64`
`/usr/bin/qemu-io /usr/bin/qemu-pr-helper /usr/bin/qemu-system-arm`

The command line for starting **Lazarus IDE (Ultibo Edition)** “`~/ultibo/core/lazarus.sh`”

Project/Project Open

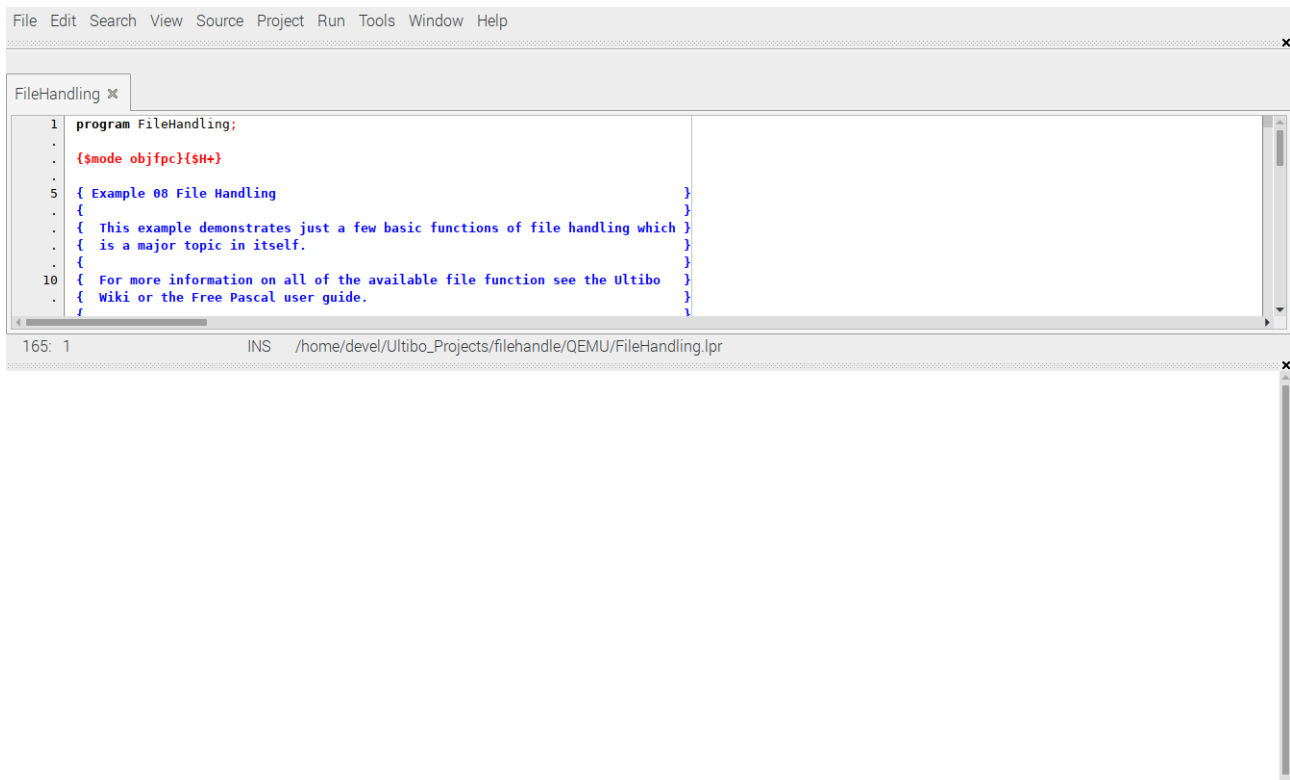


Select FileHanding.lpi

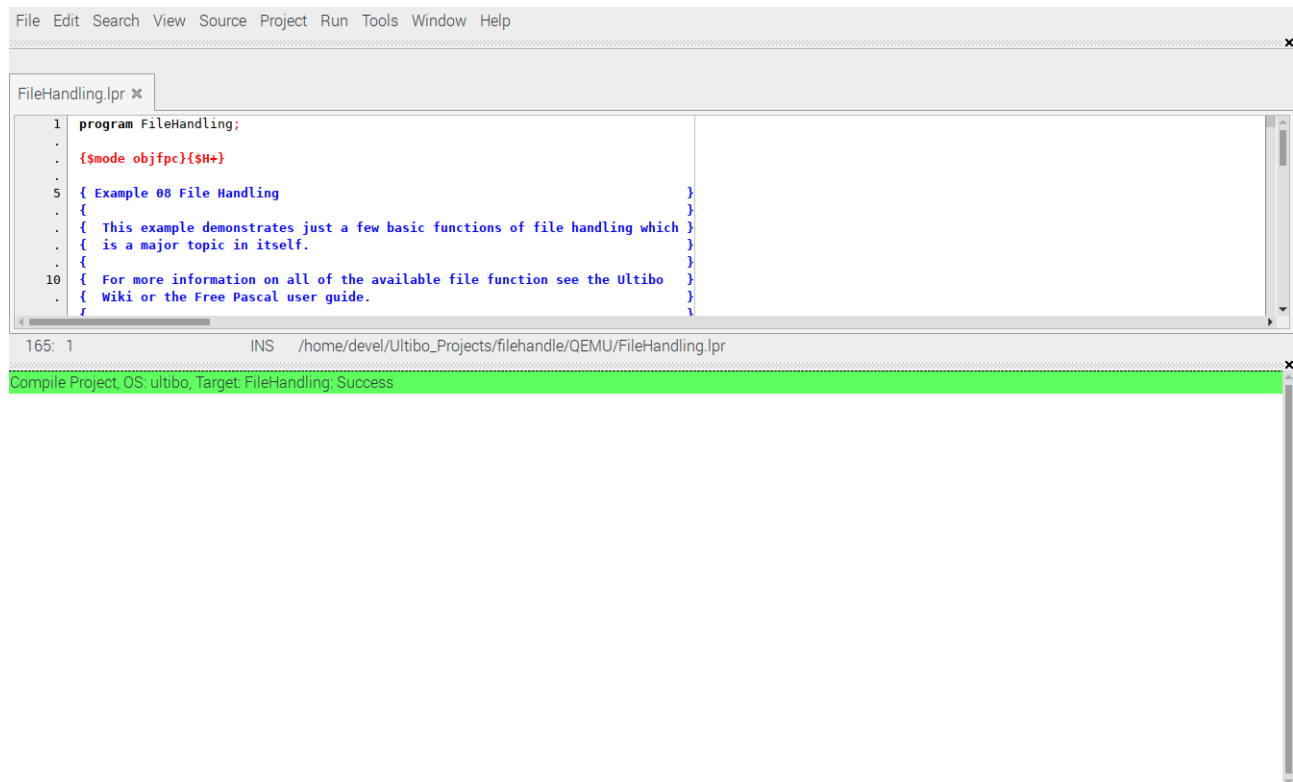


Depress Open

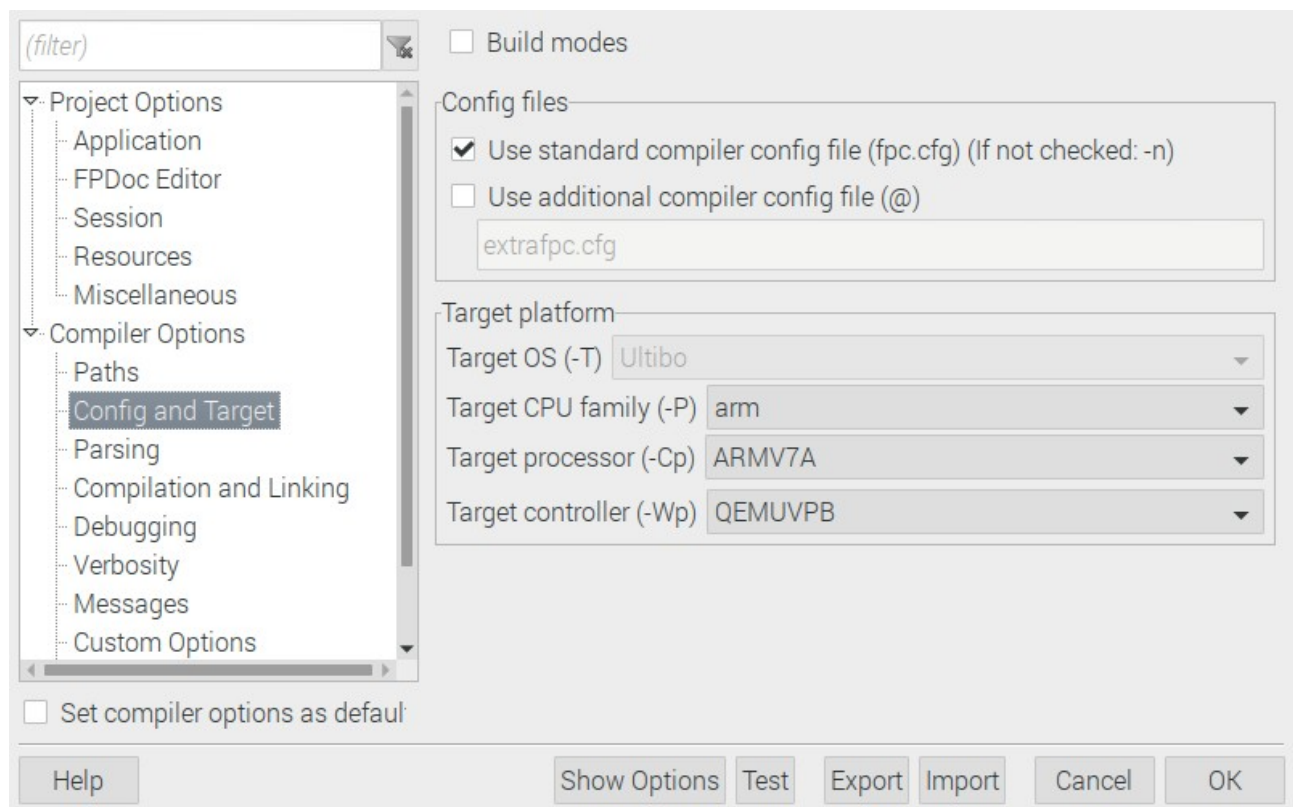
Using Lazarus IDE (Ultibo Edition)



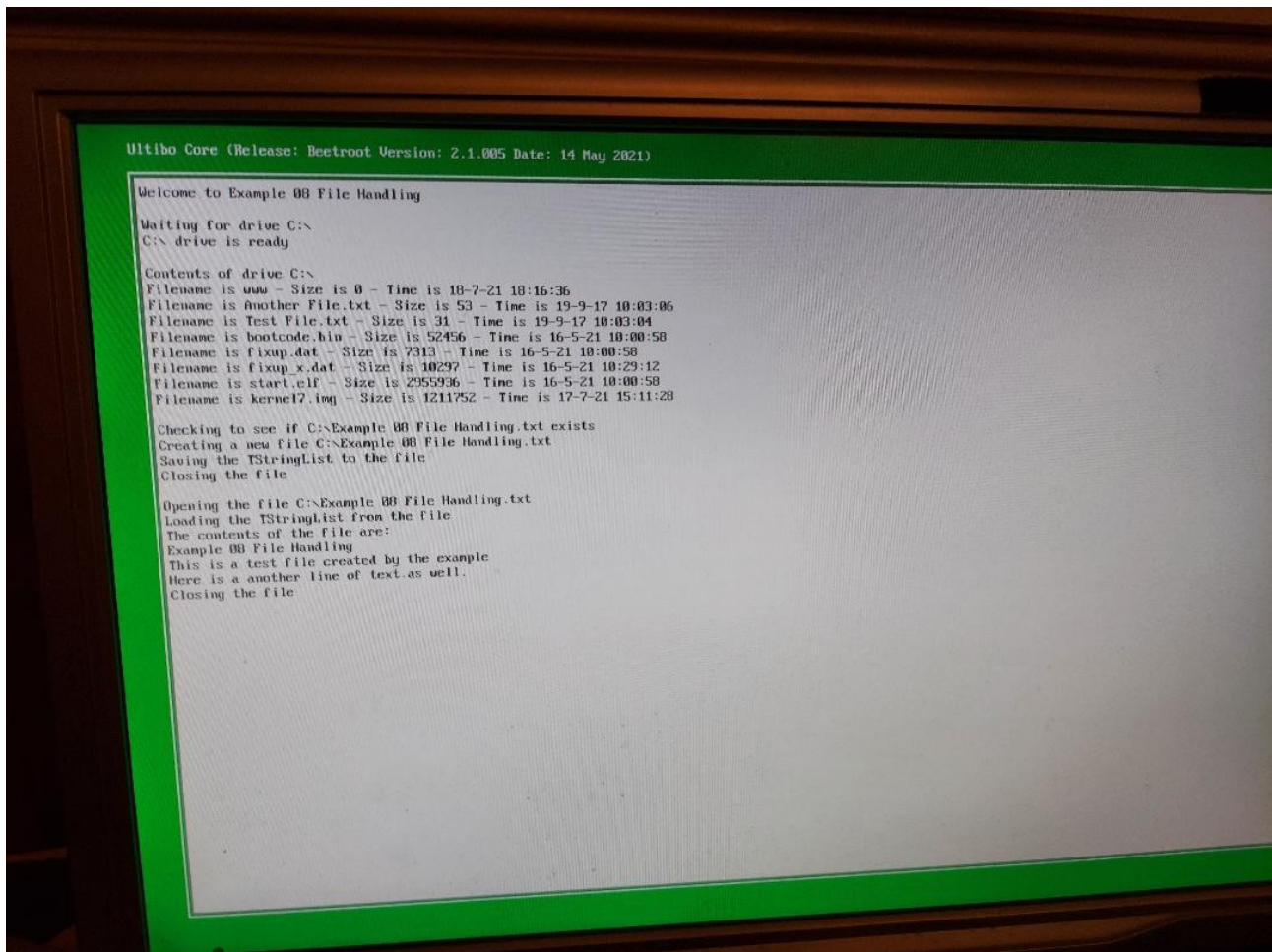
RUN/Compile The kernel.bin is created when the Green bar appears.



Project/Project Options/Config and Target



Note: Currently this is not working correctly.



This is an 8Gb

Disk /dev/sda: 7.3 GiB, 7864320000 bytes, 15360000 sectors

Disk model: Storage Device

Units: sectors of 1 * 512 = 512 bytes

Sector size (logical/physical): 512 bytes / 512 bytes

I/O size (minimum/optimal): 512 bytes / 512 bytes

Disklabel type: dos

Disk identifier: 0xa46788b6

Device	Boot	Start	End	Sectors	Size	Id	Type
/dev/sda1		2048	2047999	2045952	999M	b	W95 FAT32

These are the files needed on a micro sd.

'Another File.txt' fixup.dat start.elf
bootcode.bin fixup_x.dat 'Test File.txt'
'Example 08 File Handling.txt' kernel7.img www

devel@mypi3-20:~/Ultibo_Projects/filehandle/QEMU \$./startqemu.sh

Ultibo Core (Release: Beetroot Version: 2.1.005 Date: 14 May 2021)

Welcome to Example 08 File Handling

Waiting for drive C:\