

The problem: have a common configuration to start

What we expect:

- Have something that is evenly shared on all target Linux boards.
- Linux configuration that allows working groups to share results.
- Safe Linux users can start with this and make their safe Linux.



Is the tiny config what we want?

- Less verbose than expected.
- Several config items are consequence of **arch** defaults.
- Tiny is not a single configuration.
- Tiny is an incomplete set, to be usable it needs to be completed:
 - Formally optional items like **Futex** are not part of tiny, but hardly you can live without.
 - Tiny specifies no hardware drivers, not acceptable if the assumption is that the safe Linux will do something other than being safe.
 - Safe features like IOMMU are not part of the configuration.



The screenshot shows the GitHub interface for the Linux kernel source code. The path is `root/kernel/configs/tiny.config`. The file content is as follows:

```
1 # CONFIG_CC_OPTIMIZE_FOR_PERFORMANCE is not set
2 CONFIG_CC_OPTIMIZE_FOR_SIZE=y
3 # CONFIG_KERNEL_GZIP is not set
4 # CONFIG_KERNEL_BZIP2 is not set
5 # CONFIG_KERNEL_LZMA is not set
6 CONFIG_KERNEL_XZ=y
7 # CONFIG_KERNEL_LZO is not set
8 # CONFIG_KERNEL_LZ4 is not set
9 CONFIG_SLUB=y
10 CONFIG_SLUB_TINY=y
```

At the bottom, it says: generated by cgit 1.2.3-korg (git 2.39.0) at 2024-06-11 06:49:43 +0000

Reference hardware

I want to convince you that reference platform is the way to go.

- Reference hardware allows us to not guess features and/or hardware.
- Hardware can be also QEMU, which is actually a good choice.
- Using QEMU, it is possible to create the hardware in software the way we need for safety.
- The hardware can be later implemented in silicon using FPGA or ASIC.
- The market is not against having virtio hardware implemented in silicon.