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Assistance for ensuring reasonably correct Linux kernel configuration and building.

# Usage

Copy '.config' files to ' "\$scriptLib"/linux/lts/.config ' or similar.

```
./_getMinimal_cloud  
./_build_cloud  
#./_build_cloud_lts  
#./_build_cloud_mainline  
./_export_cloud  
#./_export_cloud_lts  
#./_export_cloud_mainline  
./_upload_cloud  
#./_upload_cloud_lts  
#./_upload_cloud_mainline
```

```
./_getMinimal_cloud  
./_create_lts  
./_create_mainline
```

# Design

Local build and upload included.

Multiple cloud build service configurations may be included - GitHub Actions, BuildJet, AWS CodeBuilder, etc.

## Design - Kernel Configuration

Kernel may be configured as follows:

- 1) Obtain kernel configuration from upstream dist/OS package or sources (eg. Debian Stable linux-config-ver package).
- 2) Configure kernel with 'make oldconfig' and 'make menuconfig' until \_kernelConfig\_desktop report is acceptably similar to the report for a previous kernel version.
- 3) Configure kernel again with 'make oldconfig' and 'make menuconfig', this time to acceptably satisfy \_kernelConfig\_server report.

Both the LTS and Mainline kernels may be configured as such. Beware the upstream dist/OS package should be for as recent a kernel as possible (to correctly enable drivers for newer hardware), but NEVER newer than the kernel to configure (as 'make oldconfig' obviously may not correctly backport differently named kernel symbols to a previous kernel version config). Reports from \_kernelConfig functions are strong but not absolute recommendations (eg. some messages may be precautionary references to obsolete kernel symbol names in case these are ever seen again).

For the 'server' config, minimizing the effect of any future or unknown vulnerabilities, especially for kernel network drivers, 'BadUSB'/SDIO, etc, is most important.

Upstream changes to '\_kernelConfig' report functions, once compiled in, will affect 'statement.sh' files, which can be used to quickly obtain and git diff new reports.

# Redistribution and Preservation

```
git clone --depth 1 git@github.com:mirage335/mirage335KernelBuild.git  
cd mirage335KernelBuild/  
./ubiquitous_bash.sh _gitBest submodule update --init --depth 1 --recursive
```

# Safety

Reasonably sane Linux kernel configuration still does not ensure reliability, security, performance, etc. Be careful to at least understand the choices presented, experiment thoroughly, and when appropriate, update frequently. Your accident is your accident. You have been warned.

# Reference

<https://en.wikipedia.org/wiki/Menuconfig>  
'Configuring Linux is a significant labor'  
Maybe not so much anymore.

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