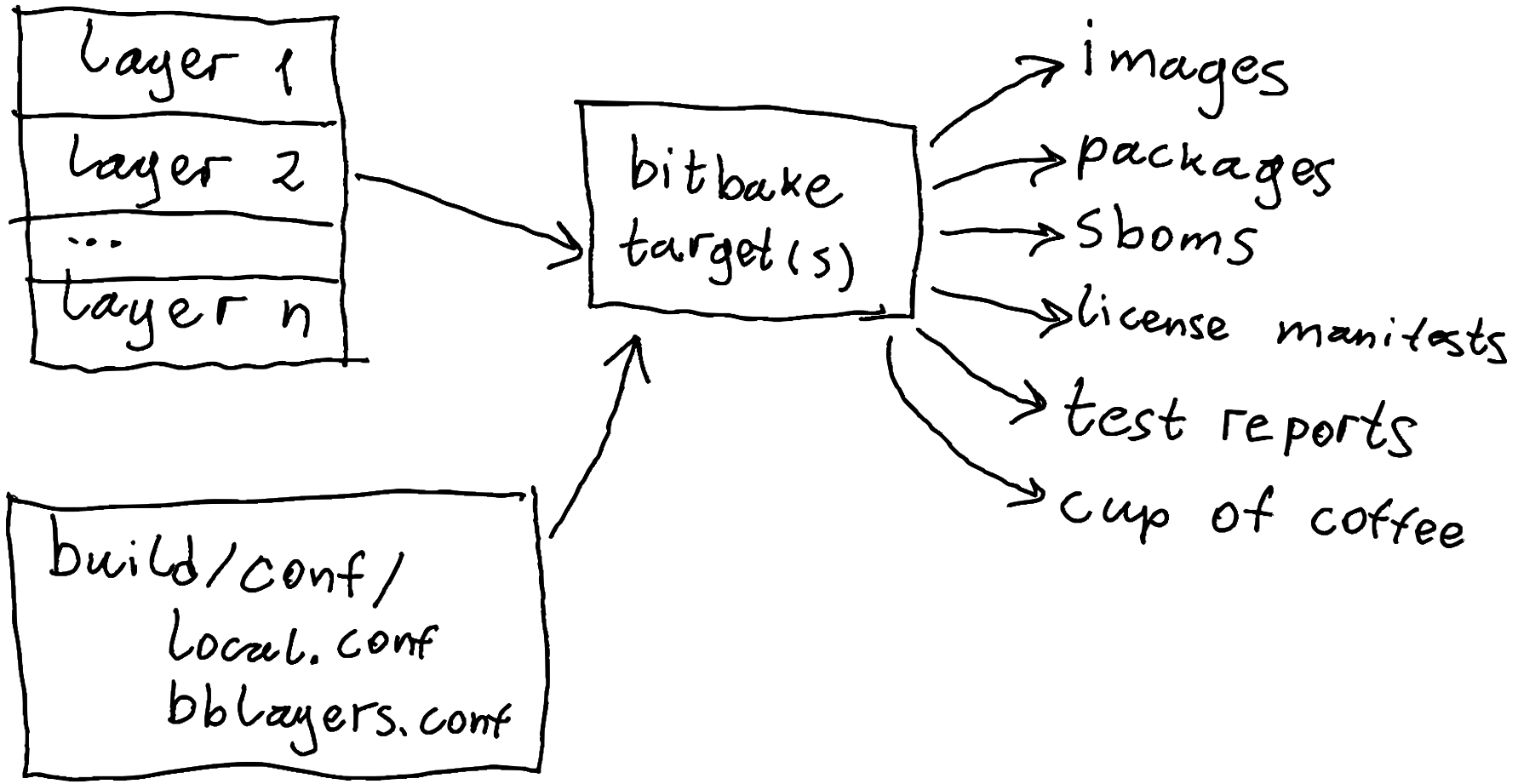
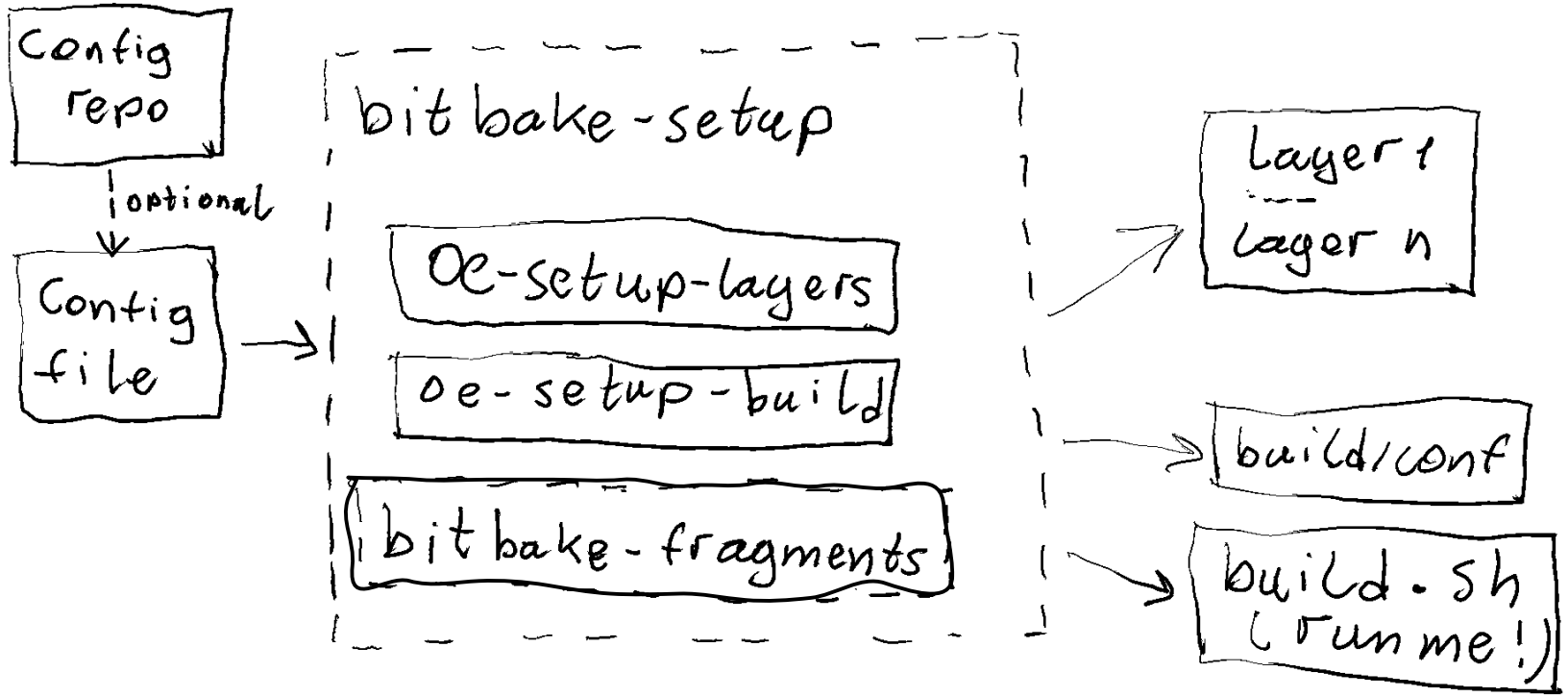
LINUTRONIX

Producing a complete Linux system with a single command (and configuration file) with Yocto

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All of Yocto on one diagram



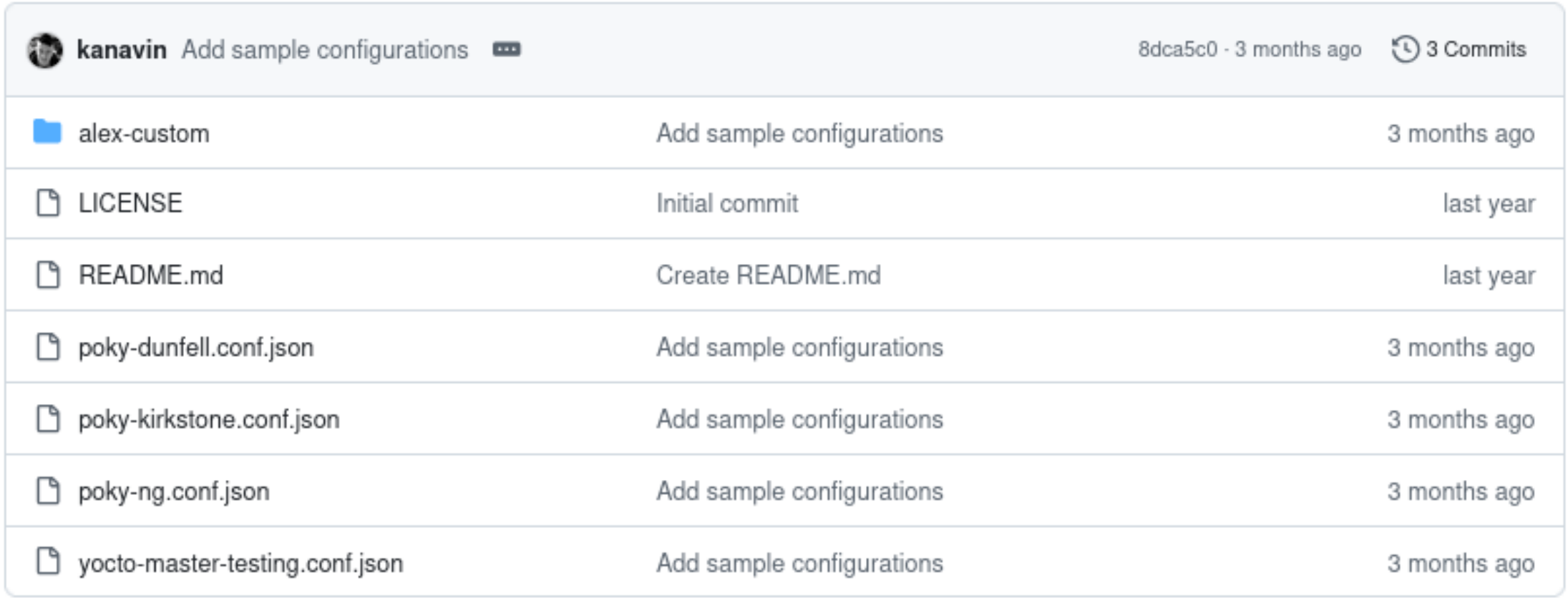


available in master / scarthgap

prototype code in review

Configuration repository (also a prototype!)

https://github.com/kanavin/bitbake-setup-configurations



kanavin Add sample configurations		8dca5c0 · 3 months ago · 3 Commits
alex-custom	Add sample configurations	3 months ago
LICENSE	Initial commit	last year
README.md	Create README.md	last year
poky-dunfell.conf.json	Add sample configurations	3 months ago
poky-kirkstone.conf.json	Add sample configurations	3 months ago
poky-ng.conf.json	Add sample configurations	3 months ago
yocto-master-testing.conf.json	Add sample configurations	3 months ago

Configuration (a prototype too!)

```
{
    "sources": {
        "poky": {
            "git-remote": {
                "remotes": {
                    "origin": {
                        "uri": "https://git.yoctoproject.org/poky-contrib"
                    }
                },
                "rev": "akanavin/bitbake-setup-testing"
            },
            "path": "poky"
        }
    },
    "description": "(future) Official Yocto configurations: poky, poky-altcfg, poky-tiny, for qemux86-64 and arm64 (currently in testing)",
    "bitbake-setup": {
        "configuration": {
            "qemux86-64-poky": {
                "description": "Poky reference distro build for qemux86-64",
                "oe-template": "poky-blank",
                "oe-fragments": ["core/machines/qemux86-64","yocto/distros/poky","core/yocto/sstate-mirror-cdn","core/qemu/enable-native-sdl"],
                "targets": ["bitbake core-image-minimal core-image-full-cmdline core-image-sato-sdk core-image-weston"]
            },
            "qemuarm64-poky": {
                "description": "Poky reference distro build for qemuarm64",
                "oe-template": "poky-blank",
                "oe-fragments": ["core/machines/qemuarm64","yocto/distros/poky","core/yocto/sstate-mirror-cdn","core/qemu/enable-native-sdl"],
                "targets": ["bitbake core-image-minimal core-image-full-cmdline core-image-sato-sdk core-image-weston"]
            },
            "qemux86-64-poky-altcfg": {
                "description": "Poky reference distro build for qemux86-64 (alternative configuration)",
                "oe-template": "poky-blank",
                "oe-fragments": ["core/machines/qemux86-64","yocto/distros/poky-altcfg","core/yocto/sstate-mirror-cdn","core/qemu/enable-native-sdl"],
                "targets": ["bitbake core-image-minimal core-image-full-cmdline core-image-sato-sdk core-image-weston"]
            },
```

Configuration fragments (brand new feature in walnascar (spring 2025) release)

$ cat poky/meta/conf/fragments/machines/qemux86-64.conf

…

$ cat poky/meta/conf/fragments/yocto/sstate-mirror-cdn.conf

…

$ bitbake-config-build –help

…

list-fragments List available configuration fragments

enable-fragment Enable a fragment in the local build configuration

disable-fragment Disable a fragment in the local build configuration

Bitbake-setup (Prototype! Subject to change!)

https://github.com/kanavin/bitbake

- List
  - Lists available configurations
- Init
  - Initializes a yocto build using a specified configuration
- Status
  - Checks if the configuration has been updated upstream
- Update
  - Updates a previously initialized configuration

Demo!

$ git clone https://github.com/kanavin/bitbake

$ bitbake/bin/bitbake-setup list

$ bitbake/bin/bitbake-setup init yocto-master-testing

$. /home/alex/bitbake-builds/yocto-master-testing/build-qemux86-64-poky/init-build-env && bitbake core-image-minimal

(when this completes, there will be a complete Linux system image produced from sstate!)

$ bitbake/bin/bitbake-setup status ~/builds/poky-alex/

$ bitbake/bin/bitbake-setup update ~/builds/poky-alex/

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Thanks for your attention

Any questions ?