OpenWrt Summit 2016

OpenWrt build infrastructures — past, present and (near) future

Luka Perkov

sartura

October 13, 2016

About me

- Sartura's manager
- OpenWrt developer
- (ex) developer

sartura

Building OpenWrt images

What's in it for you?

- building images requires time — be mindful
- you might already be doing it (wrong)
- find out what is coming

sartura

Use cases

- for one or multiple devices
- when requested by customer
- on every git commit
- (nightly) periodic builds
- debug version or production image
- snapshots or releases

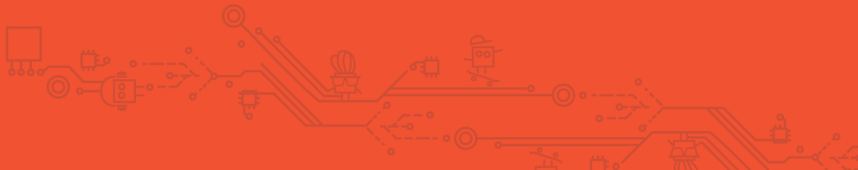
sartura

Past & present

- manual builds
- scripts/env
- Buildbot
  - downloads.openwrt.org
  - IRC
- limited build testing
- no runtime testing

sartura

Continuous integration



Drone.io

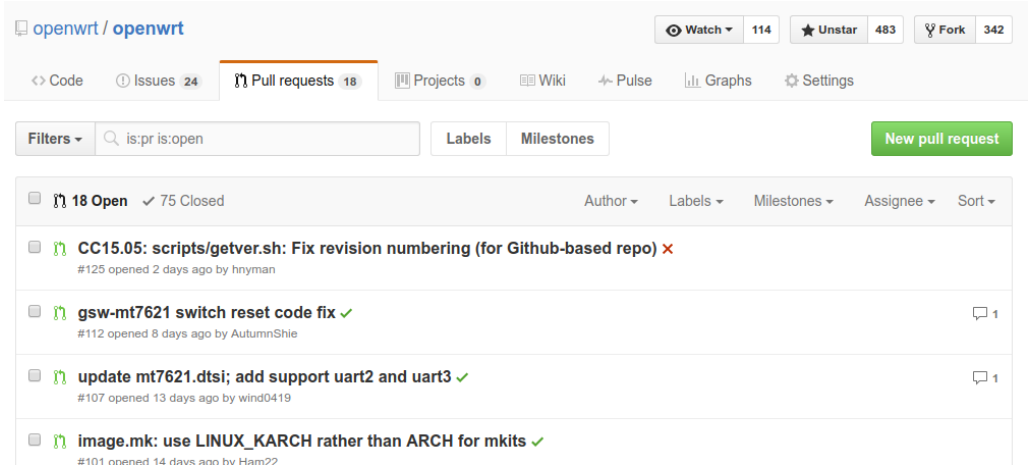
- Docker based
- Works well with GitHub and Bitbucket
  - can be patched and customized
- build instructions defined in the .drone.yml file

sartura

OpenWrt

- openwrt-ninja GitHub account
- defconfig is built for every pull request

sartura


openwrt / openwrt
Watch 114
Unstar 483
Fork 342
Code
Issues 24
Pull requests 18
Projects 0
Wiki
Pulse
Graphs
Settings
Filters
is:pr is:open
Labels
Milestones
New pull request
18 Open
75 Closed
Author
Labels
Milestones
Assignee
Sort
CC15.05: scripts/getver.sh: Fix revision numbering (for Github-based repo)
#125 opened 2 days ago by hnyman
gsw-mt7621 switch reset code fix
#112 opened 8 days ago by AutumnShie
1
update mt7621.dtsi; add support uart2 and uart3
#107 opened 13 days ago by wind0419
1
image.mk: use LINUX_KARCH rather than ARCH for mkits
#101 opened 14 days ago by Ham22

Some checks haven't completed yet

1 pending check

Hide all checks

continuous-integration/drone — this build is pending

Details

This branch has no conflicts with the base branch

Merging can be performed automatically.

Merge pull request

or view command line instructions.

sartura

All checks have failed

1 failing check

Hide all checks

continuous-integration/drone — the build failed

Details

This branch has no conflicts with the base branch

Merging can be performed automatically.

Merge pull request

or view command line instructions.

sartura

All checks have passed

1 successful check

Hide all checks

✓ **continuous-integration/drone** — the build was succe… Details

This branch has no conflicts with the base branch

Merging can be performed automatically.

Merge pull request ▾ or view command line instructions.

sartura

COMMITS ON OCT 11 2016

SUCCESS Revert legacy kernels (3.18/4.1) to last known-good release

wigyori authored 33 minutes ago to legacy-revert

SUCCESS ar71xx: backport flow-control related patches

wigyori authored an hour ago to master

FAILURE ar71xx: backport flow-control related patches

wigyori authored an hour ago to master

RUNNING CC15.05: scripts/getver.sh: Fix revision numbering (for Github-based repo)

hnyman authored 13 hours ago to cc_getver

SUCCESS Chaos calmer upstream relocation

hvarga authored 15 hours ago to chaos_calmer-upstream-relocation

netfilter,iptables: add optional CHECKSUM module

dosvald authored 4 days ago to iptables-add-CHECKSUM

SUCCESS

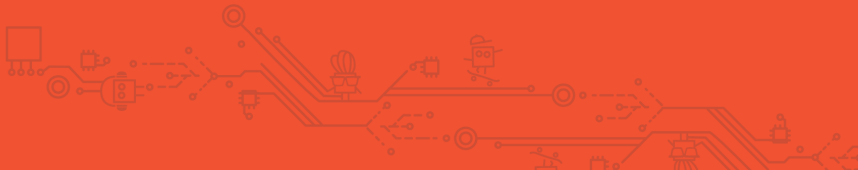
finished 2 days ago
with exit code 0

RESTART

```
[info] Pulling image plugins/drone-git:latest
Drone Git Plugin built from 43dcd64
$ git init
Initialized empty Git repository in /drone/src/github.com/
$ git remote add origin https://github.com/openwrt/openwrt
$ git fetch --no-tags origin +refs/pull/120/merge:
From https://github.com/openwrt/openwrt
 * branch            refs/pull/120/merge -> FETCH_HEAD
$ git checkout -qf FETCH_HEAD
$ export FORCE_UNSAFE_CONFIGURE=1
$ make defconfig
fatal: No names found, cannot describe anything.
fatal: No names found, cannot describe anything.
Checking 'working-make'... ok.
Checking 'case-sensitive-fs'... ok.
Checking 'gcc'... ok.
Checking 'working-gcc'... ok.
```

sartura

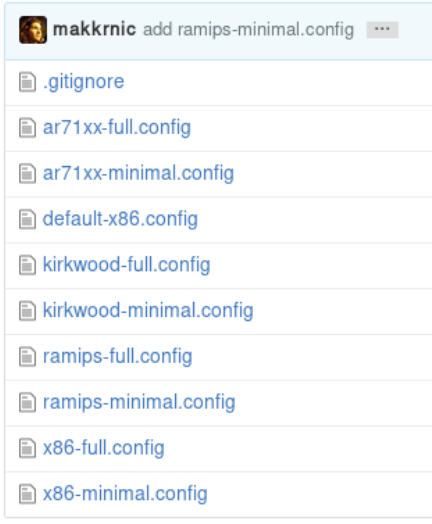
Moving forward



Action items

- run all builds on every commit or pull request
- infrastructure test and deployment
- optimization of the build process
  - reusing toolchain builds
  - download directory mirror

sartura


makkrnic add ramips-minimal.config
.gitignore
ar71xx-full.config
ar71xx-minimal.config
default-x86.config
kirkwood-full.config
kirkwood-minimal.config
ramips-full.config
ramips-minimal.config
x86-full.config
x86-minimal.config

sartura

Wish list

- fine grained package building in feeds
- automated Docker based test image deployment
- semi-automated package upgrade via pull request
- Docker debug and develop mode

sartura

OpenWrt Summit 2016

OpenWrt build infrastructures — past, present and (near) future

luka.perkov@sartura.hr

sartura

info@sartura.hr · www.sartura.hr