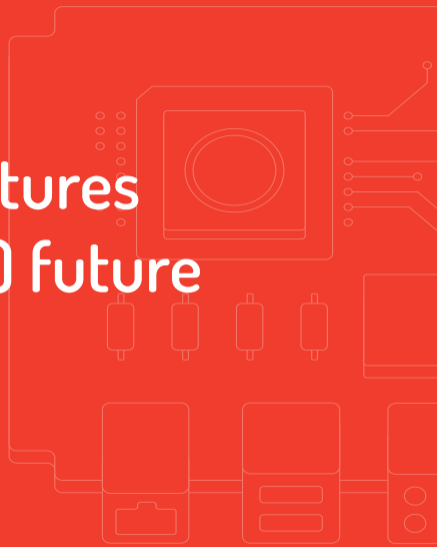


OPENWRT SUMMIT 2016

# OpenWrt build infrastructures - past, present and (near) future

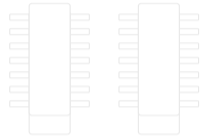
Luka Perkov

sartura



# About me

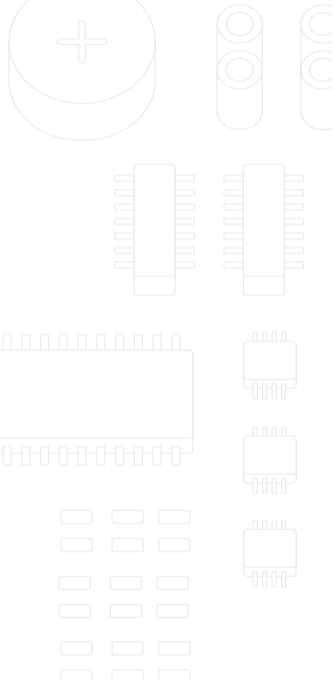
- OpenWrt developer
- Sartura's manager
- (ex) developer



# Building OpenWrt images

What's in it for you?

- Building requires time - be mindful
- You might already be doing it (wrong)
- Find out what is coming



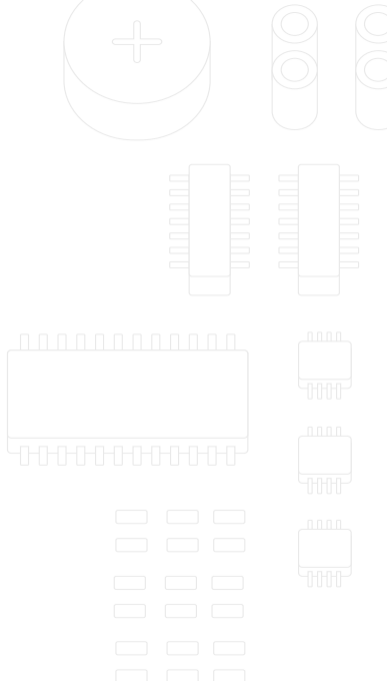
## Use cases

- For one or multiple devices
- When requested by customer
- On every git commit
- (nightly) periodic builds
- Debug versions or production images
- Snapshots or releases



# Past & Present

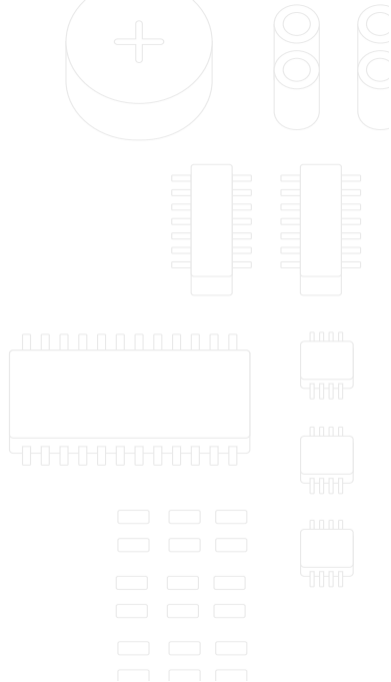
- Manual builds
- scripts/env
- Buildbot
  - [downloads.openwrt.org](https://downloads.openwrt.org)
  - IRC
- Limited build testing
- No runtime testing



# Continuous Integration

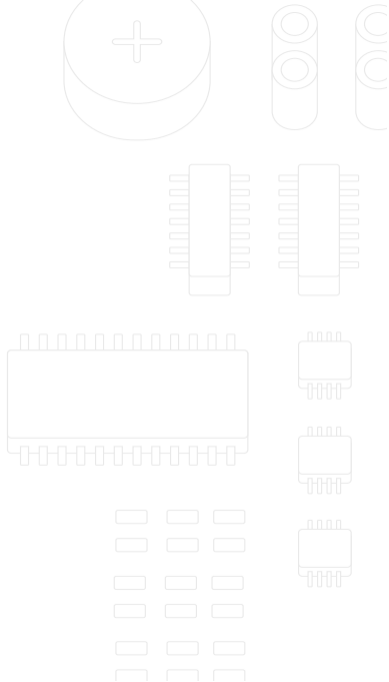
- **Drone.io**

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



# OpenWrt

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

[Hide all checks](#)

1 pending check



**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](#).



### 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](#).



## 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](#).



COMMITTS 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

---

## netfilter,iptables: add optional CHECKSUM module [↗](#)

dosvald authored 4 days ago to iptables-add-CHECKSUM

SUCCESS

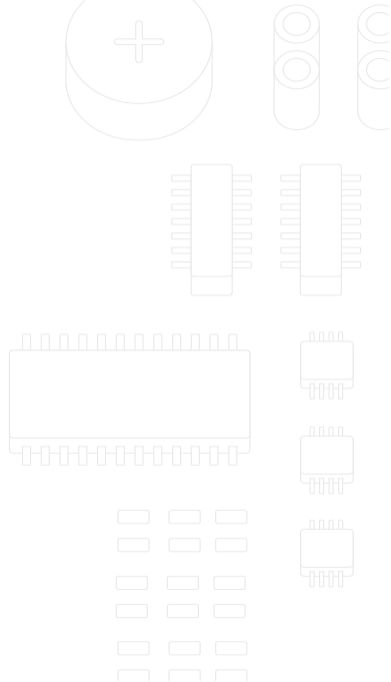
finished 2 days ago  
with exit code 0

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/openwrt/openwrt/.git/
$ git remote add origin https://github.com/openwrt/openwrt.git
$ 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.
```

## Moving forward -- Action items

- Run all builds on every commit or pull requests
- Infrastructure test and deployment
- Optimization of the build process
  - Reusing toolchain builds
  - Download directory mirror





**makkronic** 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](#)

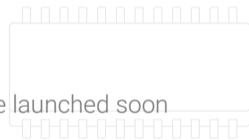
○ Extensive experience in:

- Remote management implementations

- TR-069 (CWMP)
- NETCONF/YANG

- Web UI development

- Web UI deliveries for several customers
- Present in products that are in stores today or will be launched soon





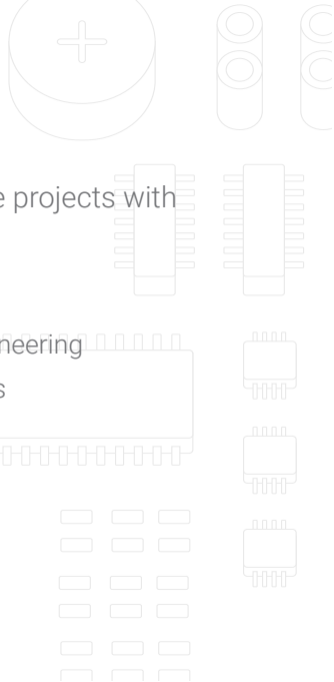
# Partners and Customers

- Sartura has closely collaborated on a number of software projects with numerous companies:

- Cisco Systems
- Marvell
- Gateworks
- Alfa Network

- Patton
- Amplified Engineering
- Anyfi Networks
- ...

Full history of our collaborations can be provided upon inquiry



# OpenWrt build infrastructures - past, present and (near) future

[luka.perkov@sartura.hr](mailto:luka.perkov@sartura.hr)



[info@sartura.hr](mailto:info@sartura.hr)  
[www.sartura.hr](http://www.sartura.hr)

