

Preostalo

- driver
 - ☒ dodati opciju za povezivanje dockercan namespacea na defaultni
 - ☒ refaktoriraj driver.go u manje funkcije
 - ☐ perzistentnost
 - ☐ upakirat za linux distribucije
 - ☐ github actions za deploy na dockerhub
 - ☒ brisanje host interfececa nakon brisanja mreze
 - ☒ podizanje host interfececa nakon stvaranja mreze
 - ☒ upload na dockerhub
- zadaci
 - napraviti repo koji builda zadatke za dockerhub automatski s github actionsima
 - ☐ XCP - dump memory caring caribou
 - ☒ XCP predlozak pripremljen
 - ☐ treba dodati parsiranje XCP poruka
 - ~~UDS Authentication~~ - ne vidim potencijalni zadatak
 - ☐ CAN zadatak s dva ECU-a i GUI-jem
 - uds routine control bi se mogao koristiti za ovo
 - upalit zmigavce
 - postići veću brzinu nego maksimalnu
 - kad uspije, postaviti flag na sabirnicu
 - ☐ UDS security access MITM između dvije sabirnice
 - ~~UDS zadatak s GUI-jem, routine control~~ duplikat gore
- ecu_template
 - ☒ koristiti import lib pa po pristupačnosti datoteka dodati ili maknuti neke protokole
 - riješeno pomoću config.py
 - dodati template za UDS SA
 - ☒ povezati s nekim GUI-jem
 - dodati template
 - ☐ dodati glavni program za slanje repetitivnih poruka umjesto CAN_BCM-a?
 - ☐ README
 - čemu svaka od impl datoteka služi
 - kompatibilnost s caring caribouom
 - primjeri kako neke stvari implementirati
 - ☐ tagovi za razne varijante templateova
 - ☐ XCP
 - ☐ DoIP
 - parsiranje CAN signala po DBC-u
- dodatni programi:
 - ☐ gw program za povezivanje više dockercan mreža?
 - ☐ program za cannelloni udaljeni pristup
- ☐ skripta za generiranje docker composeova

22.5.

AGL IC kontejneriziranje

Flutter docker:

<https://github.com/cirruslabs/docker-images-flutter/pkgs/container/flutter>

ali treba mi starija verzija

<https://hub.docker.com/layers/cirrusci/flutter/3.3.1/images/sha256-33ef98157e7c39ae17db40f01a52c8526ac7dc2cf40f1fea60402daa8e0760ad?context=explore>

dobivam gresku:

```
Building Linux application...
CMake Error at cmake_install.cmake:112 (file):
  file INSTALL cannot find "/gui/build/native_assets/linux": No such file or
  directory.
```

Build process failed

zbog ovih linija u CMakeLists:

```
linux/CMakeLists.txt
126:# Copy the native assets provided by the build.dart from all packages.
127:set(NATIVE_ASSETS_DIR "${PROJECT_BUILD_DIR}native_assets/linux/")
128:install(DIRECTORY "${NATIVE_ASSETS_DIR}"
```

23.5.

Ako ih zakomentiram, build uspije, ali dobivam gresku:

```
/ic: error while loading shared libraries: libflutter_linux_gtk.so: cannot open shared object file: No
such file or directory
```

```
Step 14/15 : RUN ldd /ic
---> Running in af3ee3ae5a88
linux-vdso.so.1 (0x00007ffffc99ef000)
libflutter_linux_gtk.so => not found
libgtk-3.so.0 => /lib/x86_64-linux-gnu/libgtk-3.so.0 (0x00007a7aff692000)
libgdk-3.so.0 => /lib/x86_64-linux-gnu/libgdk-3.so.0 (0x00007a7aff597000)
libpangocairo-1.0.so.0 => /lib/x86_64-linux-gnu/libpangocairo-1.0.so.0 (0x00007a7aff586000)
libpango-1.0.so.0 => /lib/x86_64-linux-gnu/libpango-1.0.so.0 (0x00007a7aff51b000)
libharfbuzz.so.0 => /lib/x86_64-linux-gnu/libharfbuzz.so.0 (0x00007a7aff40c000)
libatk-1.0.so.0 => /lib/x86_64-linux-gnu/libatk-1.0.so.0 (0x00007a7aff3e2000)
libcairo-gobject.so.2 => /lib/x86_64-linux-gnu/libcairo-gobject.so.2 (0x00007a7aff3d6000)
libcairo.so.2 => /lib/x86_64-linux-gnu/libcairo.so.2 (0x00007a7aff292000)
libgdk_pixbuf-2.0.so.0 => /lib/x86_64-linux-gnu/libgdk_pixbuf-2.0.so.0 (0x00007a7aff264000)
libgio-2.0.so.0 => /lib/x86_64-linux-gnu/libgio-2.0.so.0 (0x00007a7aff094000)
libgobject-2.0.so.0 => /lib/x86_64-linux-gnu/libgobject-2.0.so.0 (0x00007a7aff02f000)
libglib-2.0.so.0 => /lib/x86_64-linux-gnu/libglib-2.0.so.0 (0x00007a7afeee6000)
libstdc++.so.6 => /lib/x86_64-linux-gnu/libstdc++.so.6 (0x00007a7afec69000)
libm.so.6 => /lib/x86_64-linux-gnu/libm.so.6 (0x00007a7afeb80000)
libgcc_s.so.1 => /lib/x86_64-linux-gnu/libgcc_s.so.1 (0x00007a7afeb53000)
libc.so.6 => /lib/x86_64-linux-gnu/libc.so.6 (0x00007a7afe941000)
libgmodule-2.0.so.0 => /lib/x86_64-linux-gnu/libgmodule-2.0.so.0 (0x00007a7afe938000)
libpangoft2-1.0.so.0 => /lib/x86_64-linux-gnu/libpangoft2-1.0.so.0 (0x00007a7afe91d000)
```

```

libfontconfig.so.1 => /lib/x86_64-linux-gnu/libfontconfig.so.1 (0x00007a7afe8cc000)
libfribidi.so.0 => /lib/x86_64-linux-gnu/libfribidi.so.0 (0x00007a7afe8ae000)
libepoxy.so.0 => /lib/x86_64-linux-gnu/libepoxy.so.0 (0x00007a7afe78b000)
libXi.so.6 => /lib/x86_64-linux-gnu/libXi.so.6 (0x00007a7afe778000)
libX11.so.6 => /lib/x86_64-linux-gnu/libX11.so.6 (0x00007a7afe639000)
libatk-bridge-2.0.so.0 => /lib/x86_64-linux-gnu/libatk-bridge-2.0.so.0 (0x00007a7afe5fd000)
libXfixes.so.3 => /lib/x86_64-linux-gnu/libXfixes.so.3 (0x00007a7afe5f5000)
libxkbcommon.so.0 => /lib/x86_64-linux-gnu/libxkbcommon.so.0 (0x00007a7afe5ac000)
libwayland-client.so.0 => /lib/x86_64-linux-gnu/libwayland-client.so.0 (0x00007a7afe59c000)
libwayland-cursor.so.0 => /lib/x86_64-linux-gnu/libwayland-cursor.so.0 (0x00007a7afe590000)
libwayland-egl.so.1 => /lib/x86_64-linux-gnu/libwayland-egl.so.1 (0x00007a7afe58b000)
libXext.so.6 => /lib/x86_64-linux-gnu/libXext.so.6 (0x00007a7afe577000)
libXcursor.so.1 => /lib/x86_64-linux-gnu/libXcursor.so.1 (0x00007a7afe56b000)
libXdamage.so.1 => /lib/x86_64-linux-gnu/libXdamage.so.1 (0x00007a7afe566000)
libXcomposite.so.1 => /lib/x86_64-linux-gnu/libXcomposite.so.1 (0x00007a7afe561000)
libXrandr.so.2 => /lib/x86_64-linux-gnu/libXrandr.so.2 (0x00007a7afe552000)
libXinerama.so.1 => /lib/x86_64-linux-gnu/libXinerama.so.1 (0x00007a7afe54d000)
libthai.so.0 => /lib/x86_64-linux-gnu/libthai.so.0 (0x00007a7afe542000)
libfreetype.so.6 => /lib/x86_64-linux-gnu/libfreetype.so.6 (0x00007a7afe476000)
libgraphite2.so.3 => /lib/x86_64-linux-gnu/libgraphite2.so.3 (0x00007a7afe450000)
libz.so.1 => /lib/x86_64-linux-gnu/libz.so.1 (0x00007a7afe432000)
libpng16.so.16 => /lib/x86_64-linux-gnu/libpng16.so.16 (0x00007a7afe3fa000)
libXrender.so.1 => /lib/x86_64-linux-gnu/libXrender.so.1 (0x00007a7afe3ee000)
libxcb.so.1 => /lib/x86_64-linux-gnu/libxcb.so.1 (0x00007a7afe3c5000)
libxcb-render.so.0 => /lib/x86_64-linux-gnu/libxcb-render.so.0 (0x00007a7afe3b6000)
libxcb-shm.so.0 => /lib/x86_64-linux-gnu/libxcb-shm.so.0 (0x00007a7afe3b1000)
libpixmap-1.so.0 => /lib/x86_64-linux-gnu/libpixmap-1.so.0 (0x00007a7afe300000)
libjpeg.so.8 => /lib/x86_64-linux-gnu/libjpeg.so.8 (0x00007a7afe27d000)
libmount.so.1 => /lib/x86_64-linux-gnu/libmount.so.1 (0x00007a7afe230000)
libselinux.so.1 => /lib/x86_64-linux-gnu/libselinux.so.1 (0x00007a7afe203000)
libffi.so.8 => /lib/x86_64-linux-gnu/libffi.so.8 (0x00007a7afe1f7000)
libpcre2-8.so.0 => /lib/x86_64-linux-gnu/libpcre2-8.so.0 (0x00007a7afe15b000)
/lib64/ld-linux-x86-64.so.2 (0x00007a7affe63000)
libexpat.so.1 => /lib/x86_64-linux-gnu/libexpat.so.1 (0x00007a7afe130000)
libatspi.so.0 => /lib/x86_64-linux-gnu/libatspi.so.0 (0x00007a7afe0f6000)
libdbus-1.so.3 => /lib/x86_64-linux-gnu/libdbus-1.so.3 (0x00007a7afe0a7000)
libdatrie.so.1 => /lib/x86_64-linux-gnu/libdatrie.so.1 (0x00007a7afe09c000)
libbz2.so.1.0 => /lib/x86_64-linux-gnu/libbz2.so.1.0 (0x00007a7afe088000)
libbrotlidec.so.1 => /lib/x86_64-linux-gnu/libbrotlidec.so.1 (0x00007a7afe07a000)
libXau.so.6 => /lib/x86_64-linux-gnu/libXau.so.6 (0x00007a7afe074000)
libXdmcp.so.6 => /lib/x86_64-linux-gnu/libXdmcp.so.6 (0x00007a7afe06c000)
libblkid.so.1 => /lib/x86_64-linux-gnu/libblkid.so.1 (0x00007a7afe02f000)
libsystemd.so.0 => /lib/x86_64-linux-gnu/libsystemd.so.0 (0x00007a7afdf4f000)
libbrotlicommon.so.1 => /lib/x86_64-linux-gnu/libbrotlicommon.so.1 (0x00007a7afdf2c000)
libbsd.so.0 => /lib/x86_64-linux-gnu/libbsd.so.0 (0x00007a7afdf16000)
libcap.so.2 => /lib/x86_64-linux-gnu/libcap.so.2 (0x00007a7afdf09000)
libgcrypt.so.20 => /lib/x86_64-linux-gnu/libgcrypt.so.20 (0x00007a7afddb000)
liblz4.so.1 => /lib/x86_64-linux-gnu/liblz4.so.1 (0x00007a7afdd9d000)
liblzma.so.5 => /lib/x86_64-linux-gnu/liblzma.so.5 (0x00007a7afdd6b000)
libzstd.so.1 => /lib/x86_64-linux-gnu/libzstd.so.1 (0x00007a7afdcbl000)
libmd.so.0 => /lib/x86_64-linux-gnu/libmd.so.0 (0x00007a7afdca2000)
libgpg-error.so.0 => /lib/x86_64-linux-gnu/libgpg-error.so.0 (0x00007a7afdc7b000)

```

- mislio sam da mozda apt-get upgrade promijeni potrebnu verziju darta ali to nije slucaj

mozda ovo?

<https://github.com/flutter/flutter/issues/77241#issuecomment-790635330>

Probao s verzijom fluttera 3.7.12, ali dobivam isti error

```
FROM ghcr.io/cirruslabs/flutter:3.7.12 as builder

RUN apt-get update -y && apt-get upgrade -y
RUN apt-get install -y \
    curl git unzip \
    xz-utils zip libglu1-mesa \
    clang cmake git \
    ninja-build pkg-config \
    libgtk-3-dev liblzma-dev \
    libstdc++-12-dev

COPY ./gui/ /gui
WORKDIR /gui

RUN flutter doctor
RUN dart --version
RUN flutter pub get
RUN flutter create --platforms=linux .
RUN flutter build linux --release

RUN ls -lah build/linux/x64/release/bundle/gui

FROM ubuntu:latest

RUN apt-get update -y && apt-get upgrade -y
RUN apt-get install -y libgtk-3-0 libblkid1 liblzma5

COPY --from=builder /gui/build/linux/x64/release/bundle/gui agl-ic

# RUN ldd /gui
ENTRYPOINT ["/agl-ic"]
```

Rjesenje

- prvi problem je bio sto sam pokrenuo flutter create na vlastitom racunalu koje nije debian distribucija te se direktoriji za build za specifican os (u ovom slucaju linux), nisu regenerirali nakon kopiranja svega u container
- .so koji mi je falio je zapravo u lib direktoriju unutar bundlea, potrebno je kopirati cijeli bundle...

Novi problem:

<https://www.baeldung.com/linux/docker-container-gui-applications>

Nakon podesavanja x11 forwarding dobivam prazan prozor:

```
: No engine to send to
** (gui:1): WARNING **: 14:14:32.310: Unable to retrieve framework response
: No engine to send to
** (gui:1): WARNING **: 14:14:32.392: Unable to retrieve framework response
: No engine to send to
** (gui:1): WARNING **: 14:14:32.400: Unable to retrieve framework response
: No engine to send to
** (gui:1): WARNING **: 14:14:32.482: Unable to retrieve framework response
: No engine to send to
** (gui:1): WARNING **: 14:14:32.527: Unable to retrieve framework response
: No engine to send to
** (gui:1): WARNING **: 14:14:32.602: Unable to retrieve framework response
: No engine to send to
** (gui:1): WARNING **: 14:14:33.112: Unable to retrieve framework response
: No engine to send to
** (gui:1): WARNING **: 14:14:33.202: Unable to retrieve framework response
: No engine to send to
** (gui:1): WARNING **: 14:14:33.210: Unable to retrieve framework response
: No engine to send to
** (gui:1): WARNING **: 14:14:33.247: Unable to retrieve framework response
: No engine to send to
** (gui:1): WARNING **: 14:14:33.292: Unable to retrieve framework response
: No engine to send to
** (gui:1): WARNING **: 14:14:33.330: Unable to retrieve framework response
: No engine to send to
** (gui:1): WARNING **: 14:14:33.337: Unable to retrieve framework response
: No engine to send to
** (gui:1): WARNING **: 14:14:33.442: Unable to retrieve framework response
: No engine to send to
** (gui:1): WARNING **: 14:14:33.832: Unable to retrieve framework response
: No engine to send to
> sudo docker run --rm -it --net=host --env DISPLAY=$DISPLAY --env LIBGL_ALWAYS_SOFTWARE=1 agl-ic-x11fw:latest
(gui:1): dbind-WARNING **: 14:16:42.285: Couldn't connect to accessibility
bus: Failed to connect to socket /run/user/1000/at-spi/bus_0: No such file
or directory
** (gui:1): WARNING **: 14:16:42.367: Failed to start Flutter renderer: No
available configurations for the given RGBA pixel format
-
```

```
> sudo docker run --rm -it --net=host --env DISPLAY=$DISPLAY agl-ic-x11fw:latest
```

```
(gui:1): dbind-WARNING **: 14:16:42.285: Couldn't connect to accessibility bus: Failed to connect to
socket /run/user/1000/at-spi/bus_0: No such file or directory
```

```
** (gui:1): WARNING **: 14:16:42.367: Failed to start Flutter renderer: No available configurations for
the given RGBA pixel format
```

<https://github.com/AppFlowy-IO/AppFlowy/issues/1689#issuecomment-1963389274>

Pokusao dodati

--env LIBGL_ALWAYS_SOFTWARE=1

Odustajem za sada

24.5.

probat cu napraviti jednostavni TUI kojem mogu pristupiti s ssh-om, koristeci bubbletea i wish bubbletea:

- <https://github.com/charmbracelet/bubbletea/tree/master/tutorials/basics>

- <https://github.com/charmbracelet/bubbletea/blob/master/examples/realtime/main.go>

[illegible]

```
func listenForActivity(sub chan struct{}) tea.Cmd {
    return func() tea.Msg {
        for {
            mux := http.NewServeMux()
            mux.HandleFunc("POST /update", func(w http.ResponseWriter, r *http.Request) {
                sub <- responseMsg{}
            })
            http.ListenAndServe(":8080", mux)
        }
    }
}
```