2. PyQt
ERROR-DISABLE using NX-API

Flow Chart

```
        ┌─────────────────────┐
        │   UDP 514 (syslog)   │◄────────────────┐
        │       Daemon        │                  │
        └─────────────────────┘                  │
                  │ if syslog receives            │
                  ▼                               │
              ╱─────────╲                         │
             ╱           ╲                        │
            ╱ ERROR_DISABLED ╲   no               │
            ╲  in syslog    ╱────────────────────►│
             ╲           ╱                         │
              ╲─────────╱                          │
                  │ yes                            │
                  ▼                                │
        ┌─────────────────────┐                   │
        │  Get pairt switch/port │                │
        │    from .csv file    │                  │
        └─────────────────────┘                   │
                  │                                │
                  ▼                                │
   defNXAPI.py  ┌─────────────────────┐           │
        │  Config Push to pair switch │           │
        │      using API      │                   │
        │      (port desc)    │                   │
        └─────────────────────┘                   │
                  │                                │
  class MyApp  Qt ▼                                │
        ┌─────────────────────┐                   │
        │  button 1  / original port │            │
        │       - sh/no sh    │                   │
        │  button 2 / pair port │─────────────────┘
        │      - no descriptioin │
        └─────────────────────┘
```
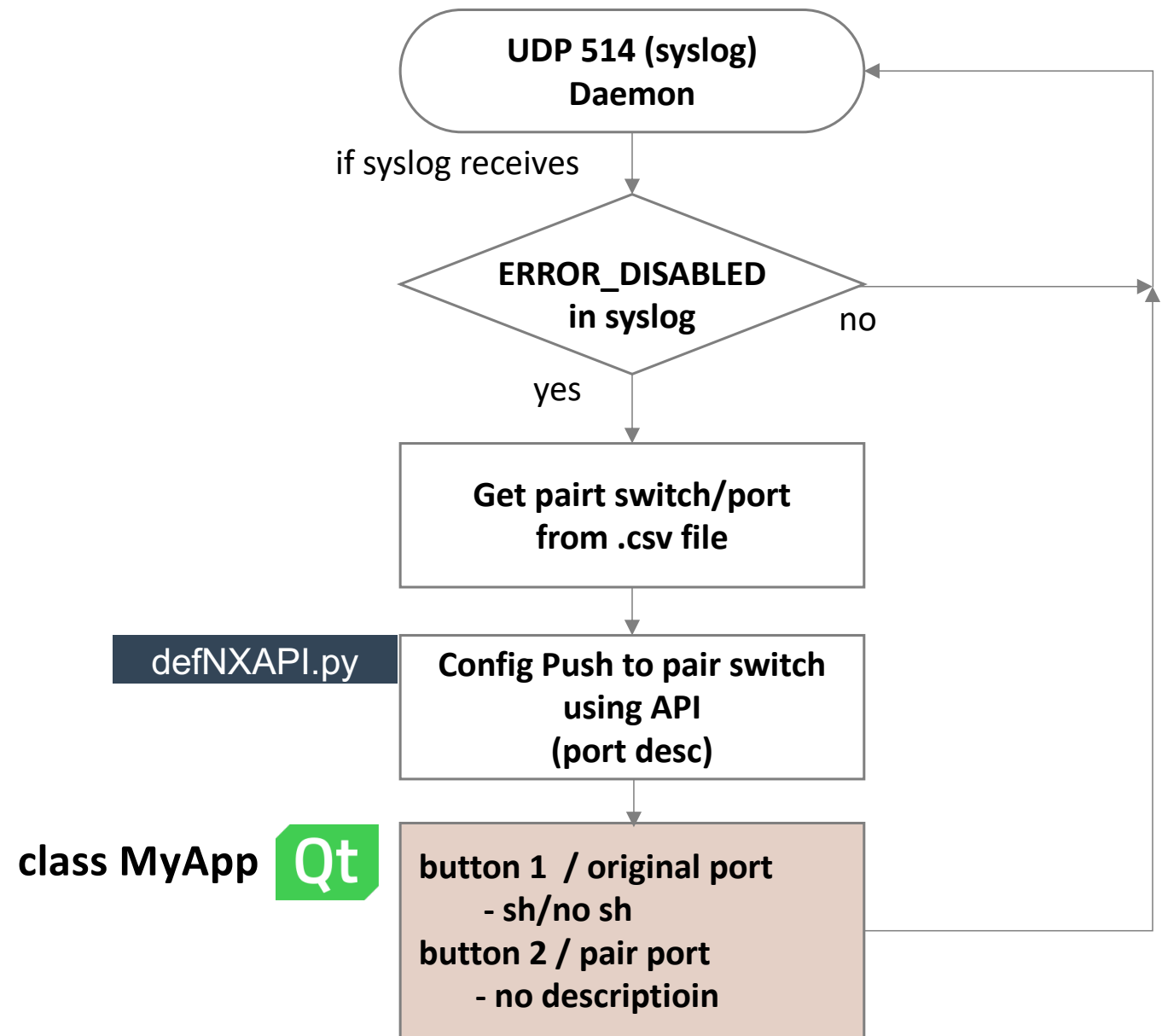
Qt5 and PyQt5, GUI and GUI toolkit

Qt5
- cross-platform software for creating graphical user interfaces as well
- as cross-platform applications that run on various software and hardware platforms

PyQt5
- Python binding of the cross-platform GUI toolkit Qt
- **free software – GPL or commercial = distribute your code as open or buy the license.**
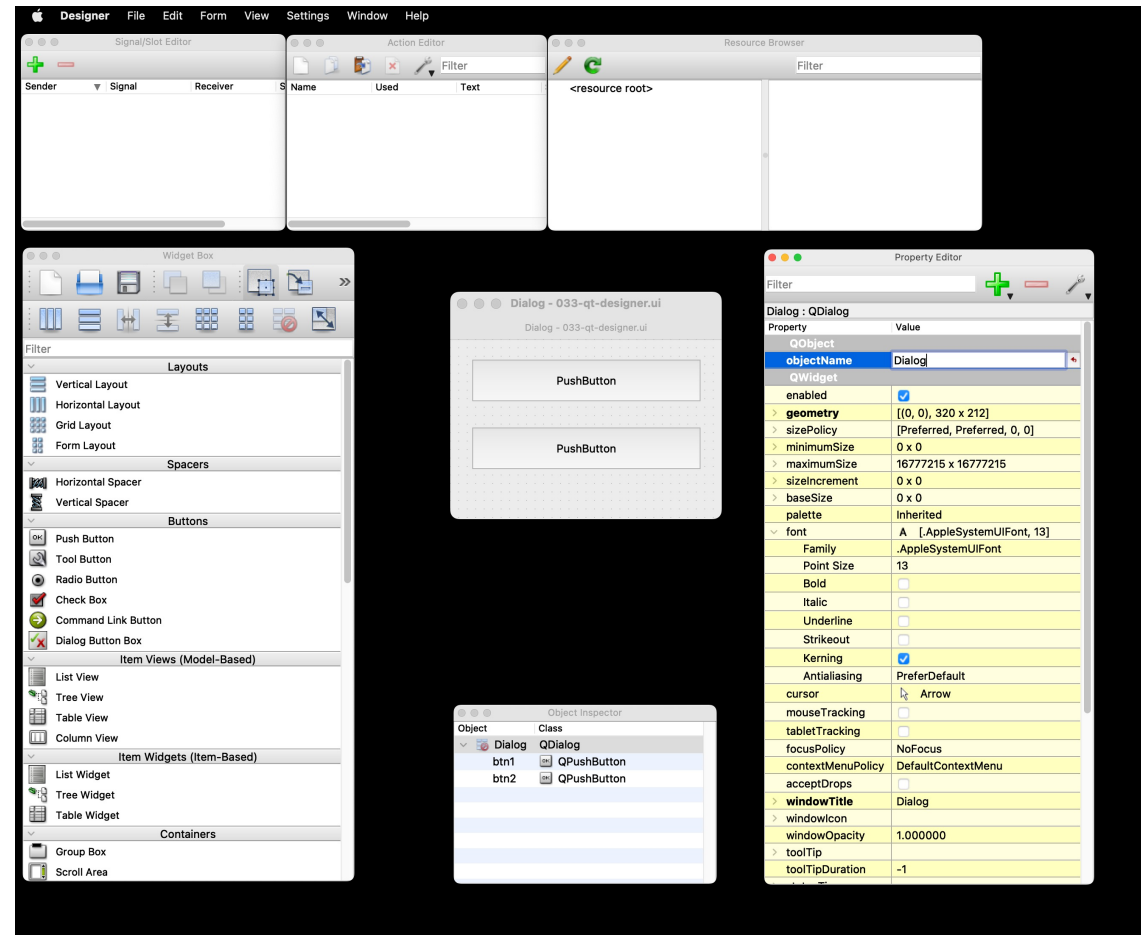- <PySide> is almost same with <PyQt5> and LGPL.

- from wikipedia

I'm using PyQt5 because there are many examples....

Qt Designer, GUI tool

- Sub tool used to create/edit widget files (.ui).

- You can use it to create the ==graphical layouts== (.ui files only).

- The most use is to design the graphical stuff in PyQt apps.

from https://stackoverflow.com/questions/25559332/qt-designer-vs-qt-quick-designer-vs-qt-creator yani

- **Simply, GUI design tool and .ui file can be converted into the Python Code.**

how to use .ui

- Embed   .ui   in   .py

- convert   .ui into .py
  - pyuic5 -x 33.ui -o 34.py

Flow

1. The port(source port) becomes <Error Disabled> and this is notified by the Telegram.

2. <A config> is deployed to the pair port(target port) of the pair switch. In this example, <description> is sent.

3. The notification windows is poped up using PyQt.
   - Option A (Def Action1)
     - Shut and no shut to the source port

   - Option B (Def Action2)
   - <A config> removal to the pair port(target port)

NEXUS-1	NEXUS-3
BORAM	**93180yc-ex**
192.168.0.231	**192.168.0.233**

e1/1   e1/1

HOST
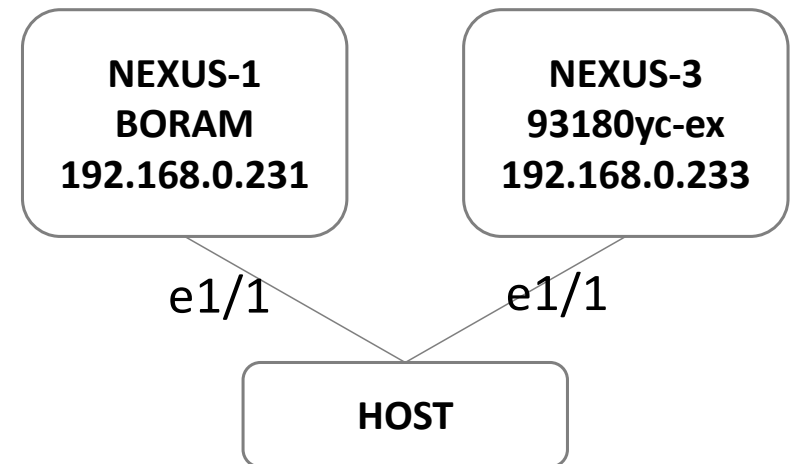
Nexus Switch Config

- feature nxapi
- feature udld
- errdisable detect cause all
- logging server 192.168.0.4 5 use-vrf management

How to Make ERROR DISABLED?

```
boram(config)# errdisable detect cause ?
  acl-exception   Enable error detection for access-list installation failures
  all             Enable error detection on all cases
  link-flap       Enable error disable detection on linkstate-flapping
  loopback        Enable error disable detection on loopback detected by UDLD
```

e1/1
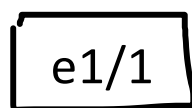
fiber cable looping

Code Review : 031-nxapi+qt.py

- def lineno : to print out the line number @ print
- def action1 : to recovery the error disabled port by shut/no shut
- def action2 : to remove the config @parted port

- class MyApp(QMainWindow) : PyQT
  - def initUI
    - btn1 : shut/no shut to the source port
    - btn2 : <no description> to the target port

- __main__
  - UDP 514 port listen
  - detect <IF_DOWN_ERROR_DISABLED>
  - get the paired port
  - Run Qt

Code Review : defNXAPI.py

- def nxapicall
  - request.post to Nexus switch

  - check response.status = 200 for the API
    - check response.status = 200 for each command