

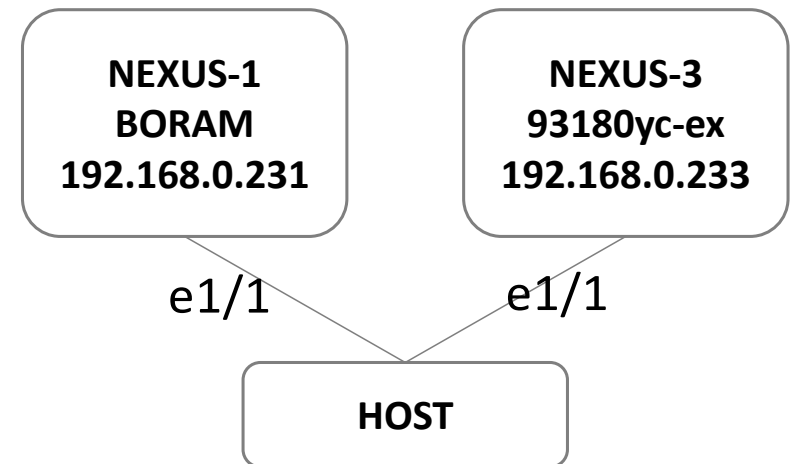


4. Telegram + LINE

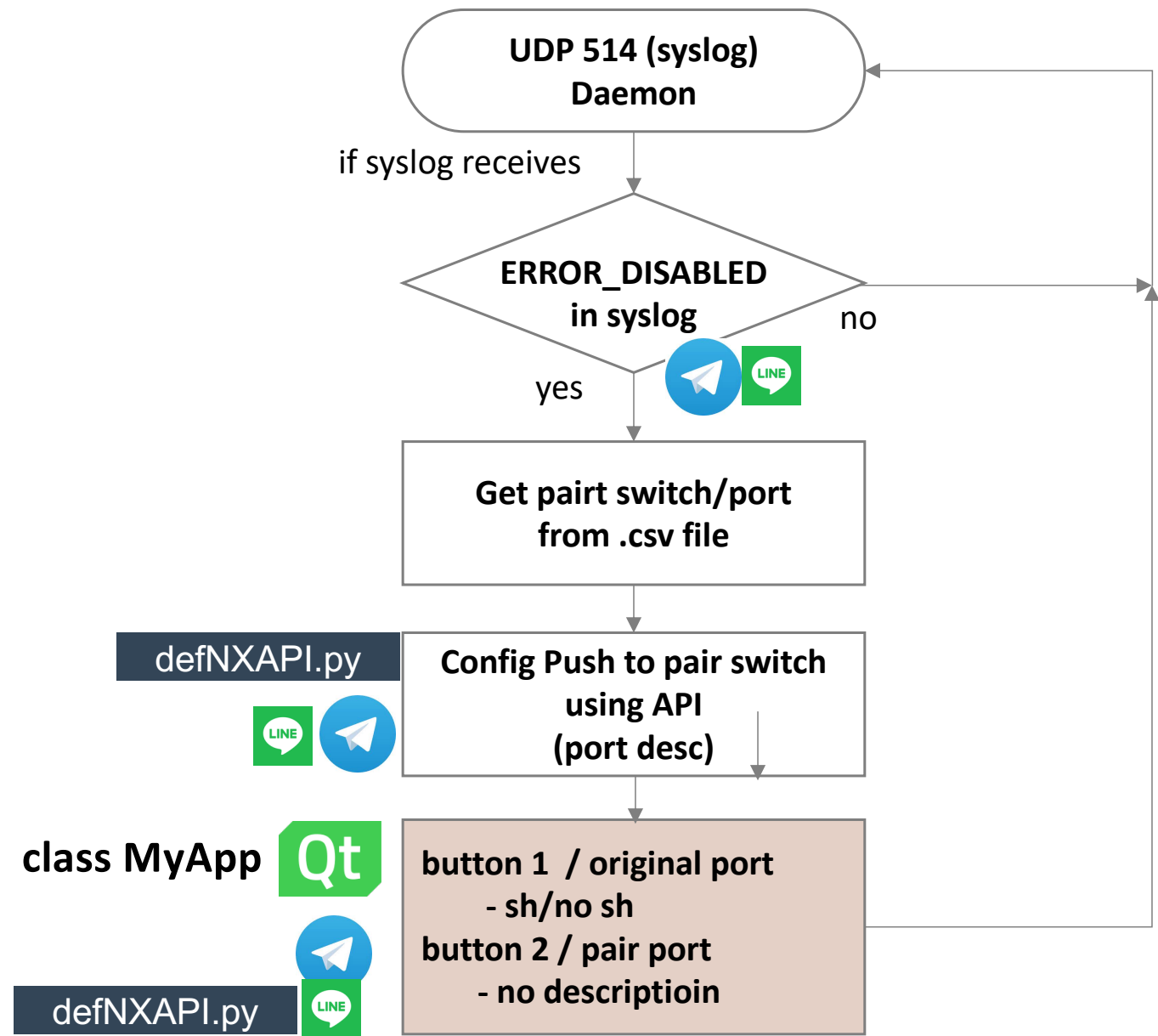
PyQt + NX-API

Flow

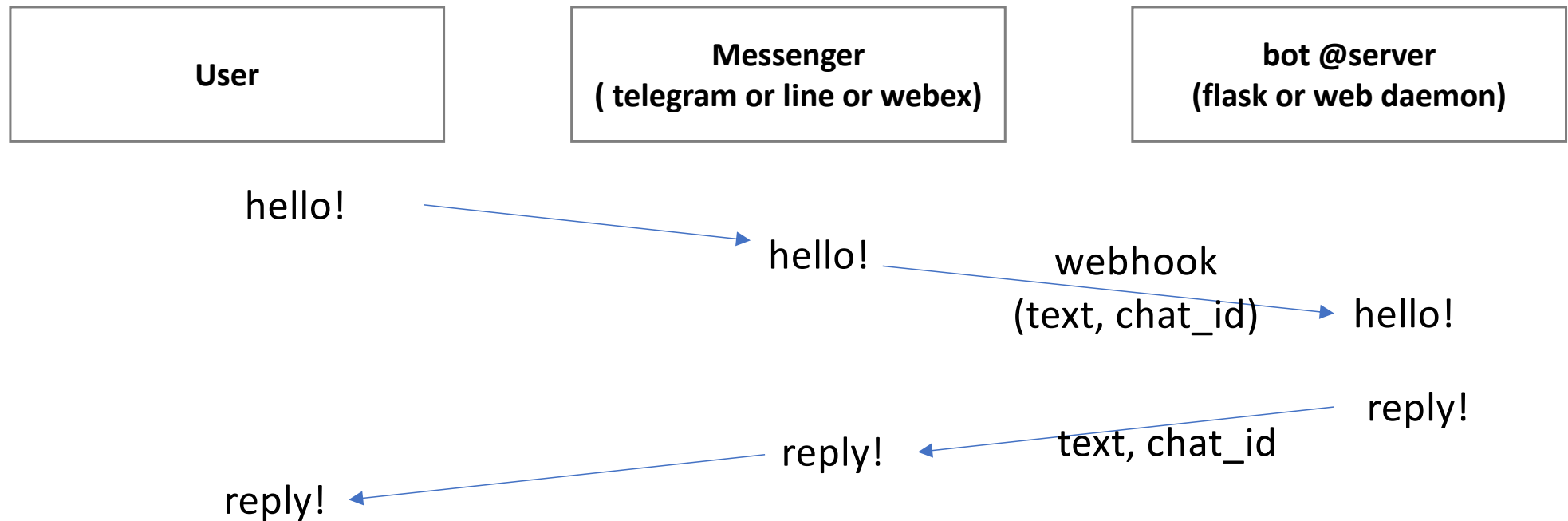
1. The port(source port) becomes <Error Disabled> and this is notified by the Telegram.
2. <A config> is deployed to the pair port(target port) of the pair switch. In this example, <description> is sent.
3. The notification windows is popped up using PyQt.
 - Option A (Def Action1)
 - Shut and no shut to the source port
 - Notification by the Telegram
 - Option B (Def Action2)
 - <A config> removal to the pair port(target port)
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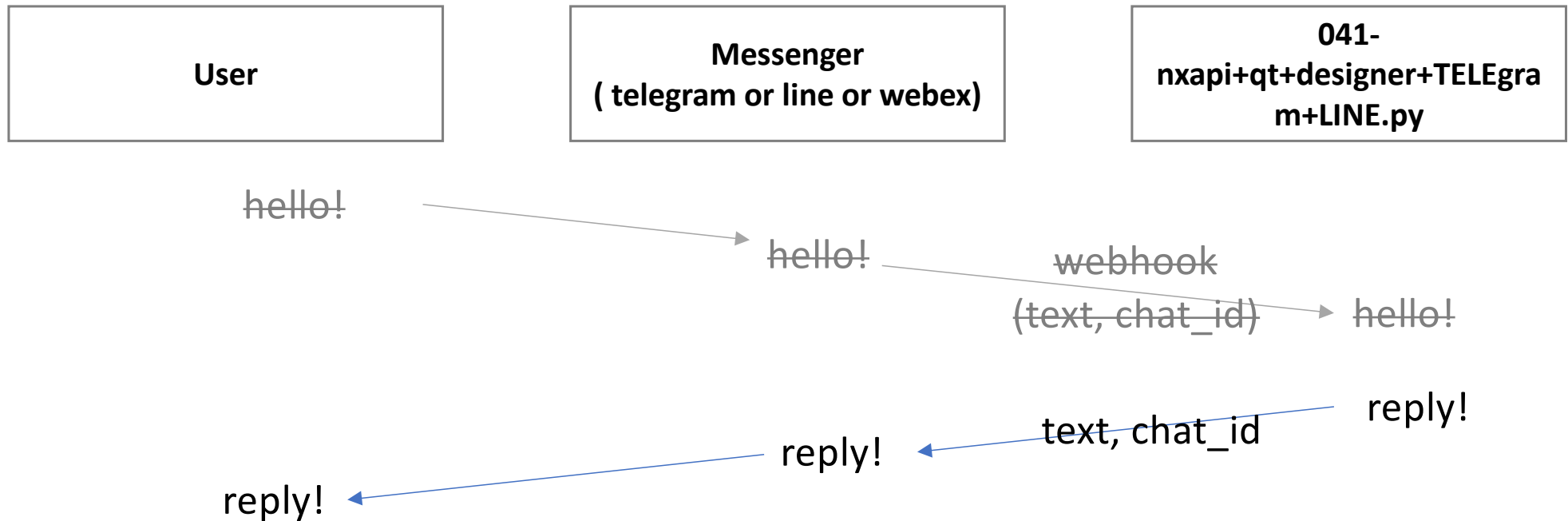
Flow Chart



Normal chat bot flow (Two way)



One Way



Code Review : defTELEgram.py

- def TELEgram
 - get the chat_id for each chatting users
 - remove the replicated chat id.
 - send the message to each user.
- chat_id : expires... so, you have to add manually sometimes.
 - To avoid the manual add, write to the external file.
- If you add the webhook, you can't use the update.

Code Review : defLINE.py

- def LINE_NAVER
 - broadcast to all : <https://api.line.me/v2/bot/message/broadcast>

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
- i : to check if the API and each <CLI> works fine or not.



BOT : Telegram / Line

- Telegram : work with Bot Father
- Line : @line.biz
- Authenticate with your token.
- Chat or Room ID to send the messenger.
 - telegram : the chat ID expires...
 - line : broadcast API to send to all
- To make the chat bot, you need webhook and web server.
- But, for the one way notification, you don't need.

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

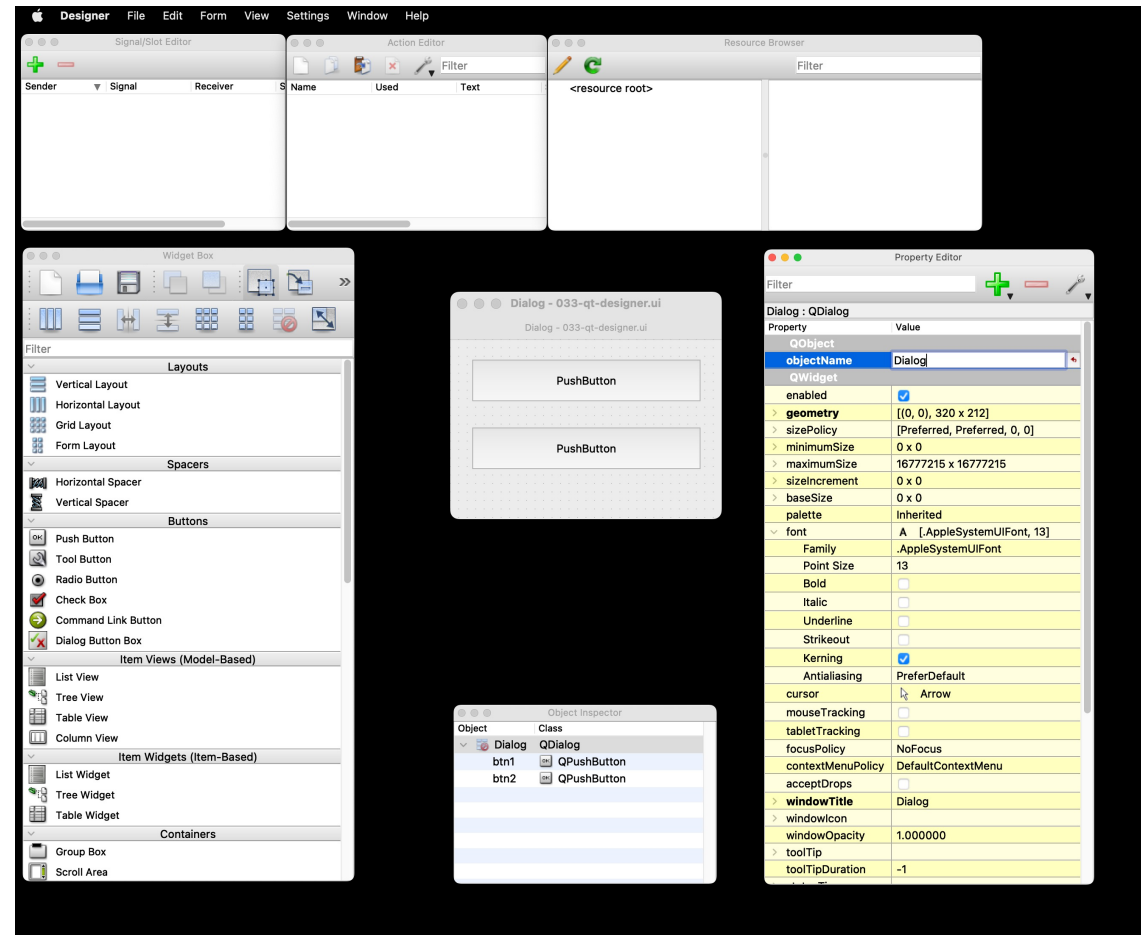
I'm using PyQt5 because there are many examples....

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.

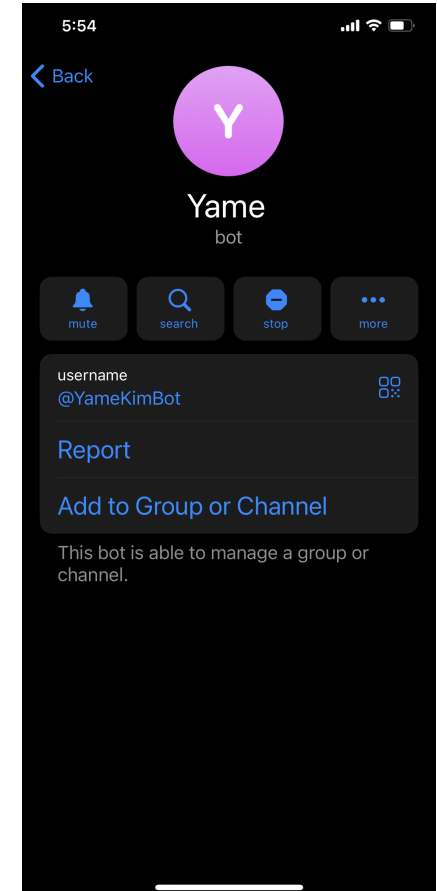
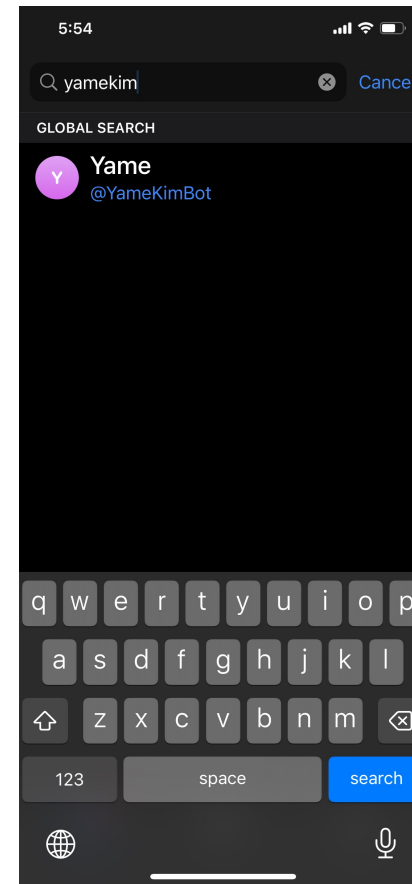
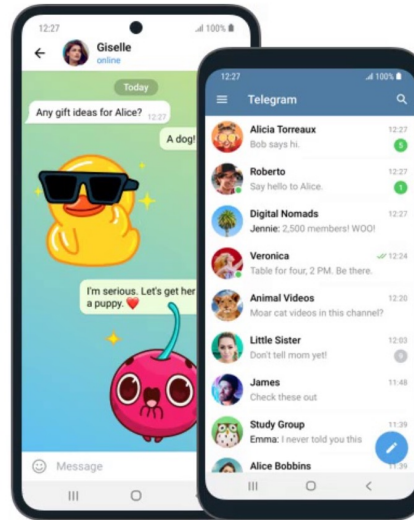
from <https://stackoverflow.com/questions/25559332/qt-designer-vs-qt-quick-designer-vs-qt-creator> yani

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



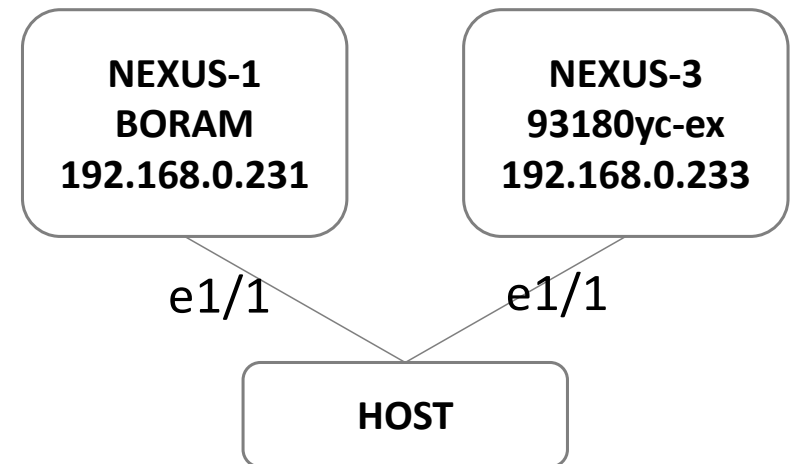
Telegram Bot

- You can create your own chat bot.
- Two-way communication can be.
- Here, I will use chat bot just for the <one-way> notification.



Flow

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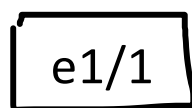
Nexus Switch Config

- feature nxapi
- feature udd
- 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



fiber cable looping

Code Review : 031-nxapi+qt+telegram.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