Genie Logging Tool

How to capture GKI/HSL log

Outline

- How to capture GKI/HSL log
- Q&A

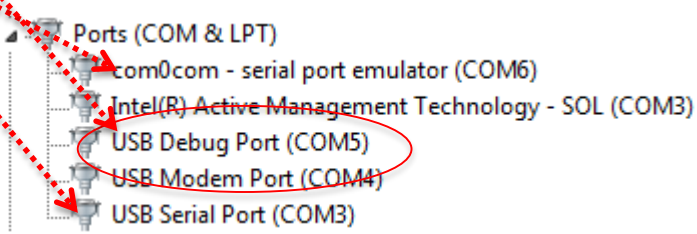
Install Driver

If you are the first time to use genie logging tool, please install some drivers:

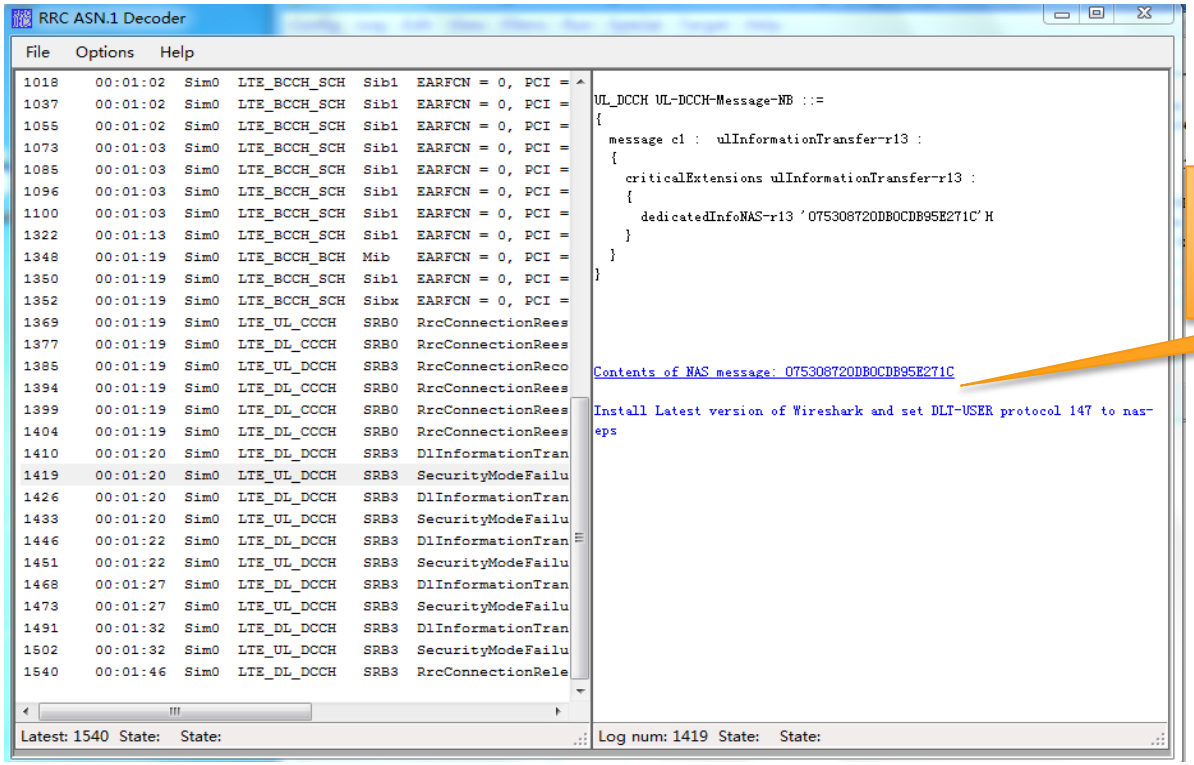
1, USB Driver(Provided by MTK)----this driver for genie tool capture log if using USB logging channel(need to restart PC).

2, USB to UART Driver(Varied according to customer HW design)---- this driver for genie tool capture log if using UART logging channel.

3,com0com Driver(Path: nbiot\tools\core\genie\tools\VirtualAT\depends \install.bat(Run as administrator))---- this driver for genie tool send AT Command by Virtual AT(genie special menu)



WireShark for NAS messages



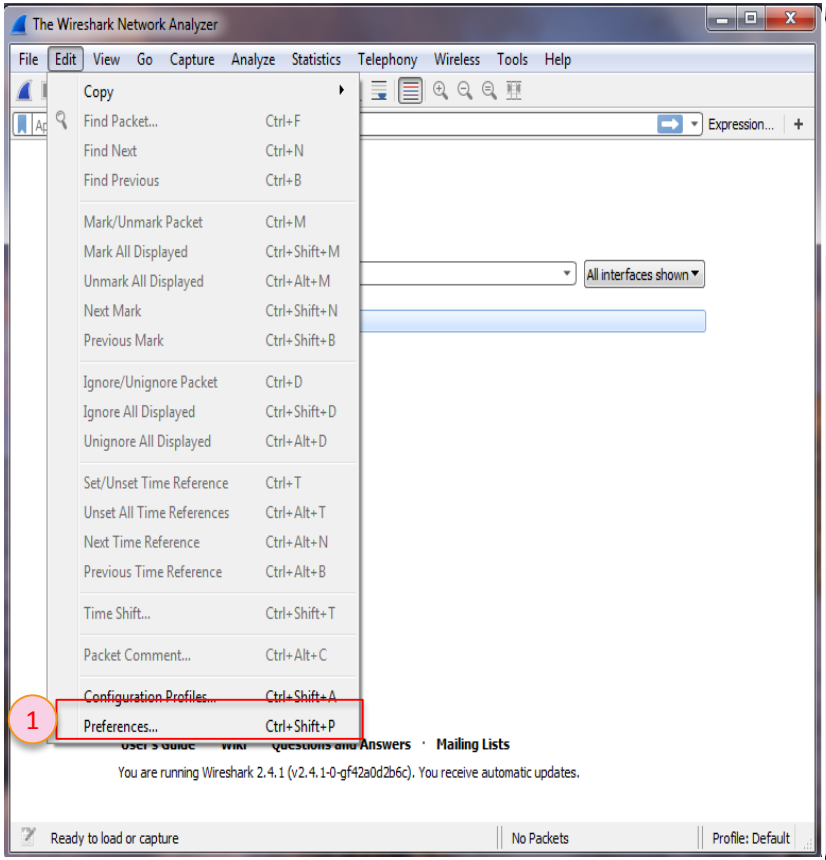
If some items cannot be decoded.

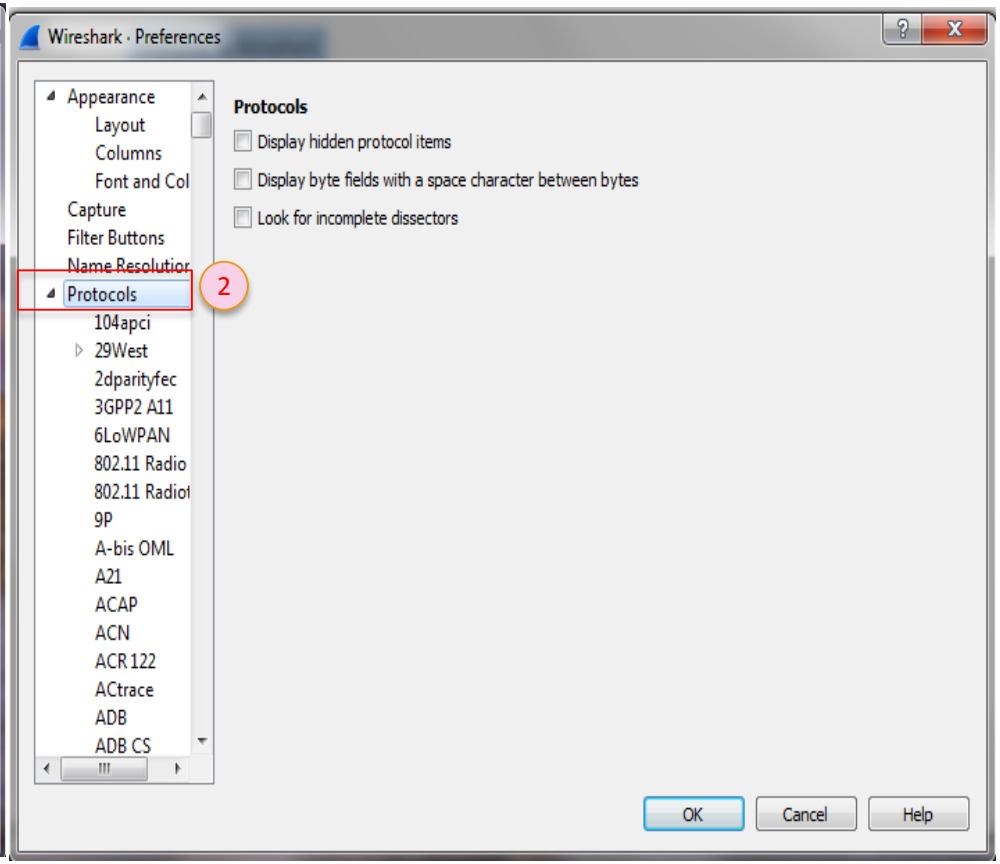
Installation issue: please refer to next slide.

- Install latest version of Wireshark from: https://www.wireshark.org/download.html.

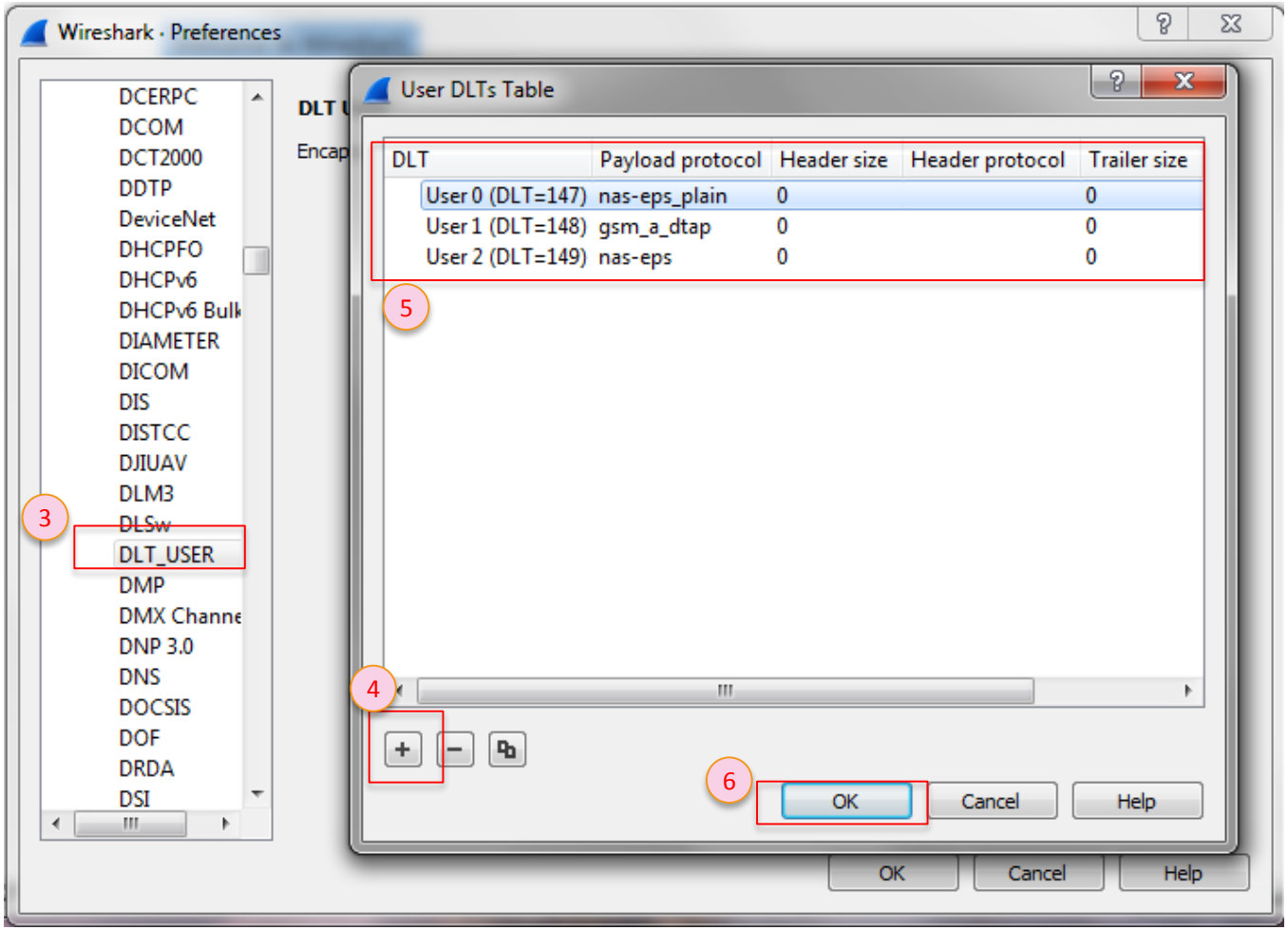
WireShark configuration 1/2

- Follow these steps to configure WireShark.

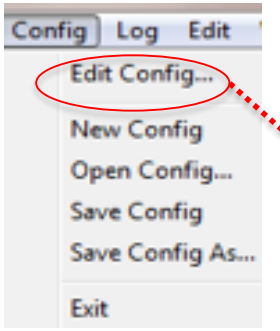




WireShark configuration 2/2



Genie Configuration

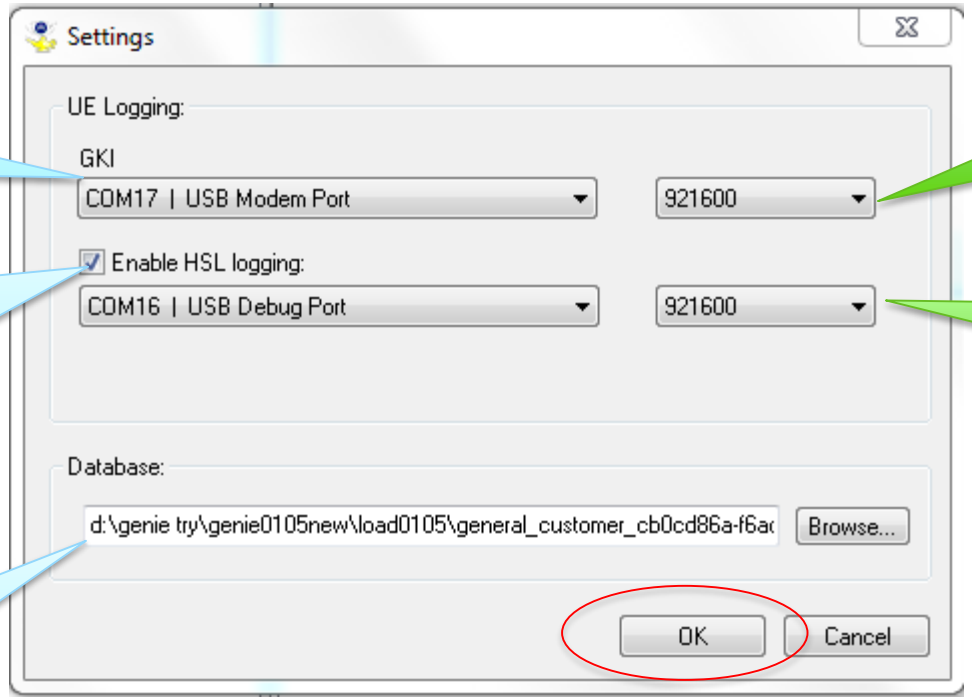


- The **Edit Configuration** dialog box allows the user to configure the parameters for a genie test.

Select GKI COM Port

Select HSL COM Port when click Enable HSL logging

Select Database **.dec** format



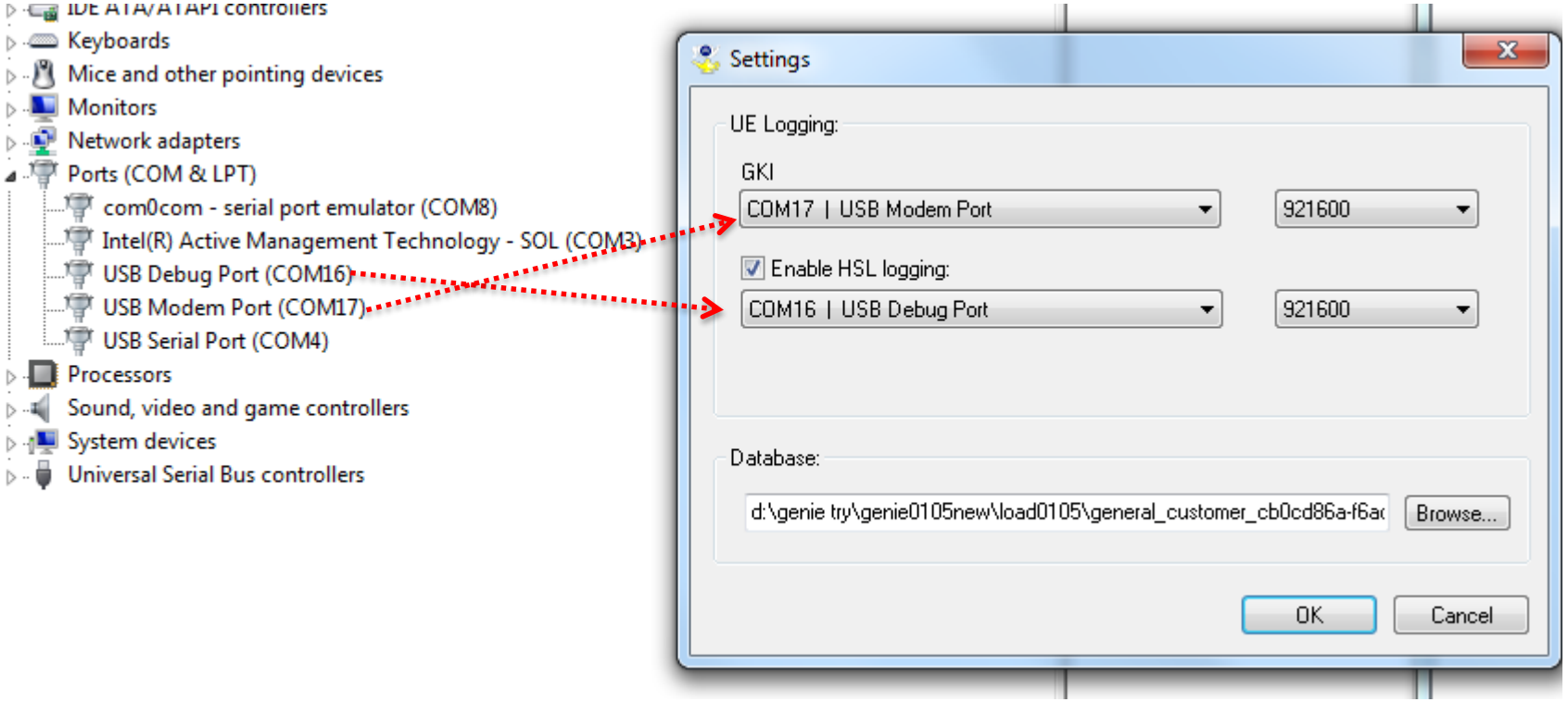
GKI Baud rate

HSL Baud rate

Complete configuration

Select GKI and HSL com port

If you want to capture log by USB Logging channel.
GKI com Port corresponds to USB Modem Port;
HSL com Port corresponds to USB Debug Port.
*.dec file from Target Software Load Package.



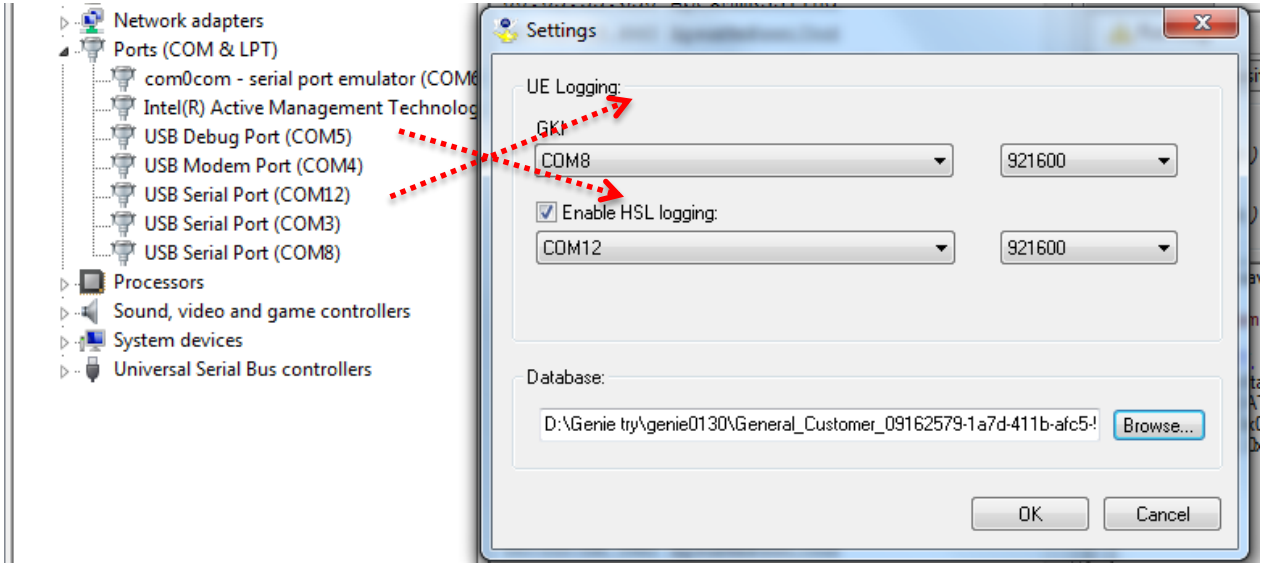
Select GKI and HSL com port

If you want to capture log by UART Logging channel

(For UART port definition, please refer to hardware engineer).

AT com Port corresponds to UART0 Port;
GKI com Port corresponds to UART1 Port;
HSL com Port corresponds to UART2 Port.

*.dec file from Target Software Load Package.
Baud rate: you can Inquire by AT+EPORT=4.

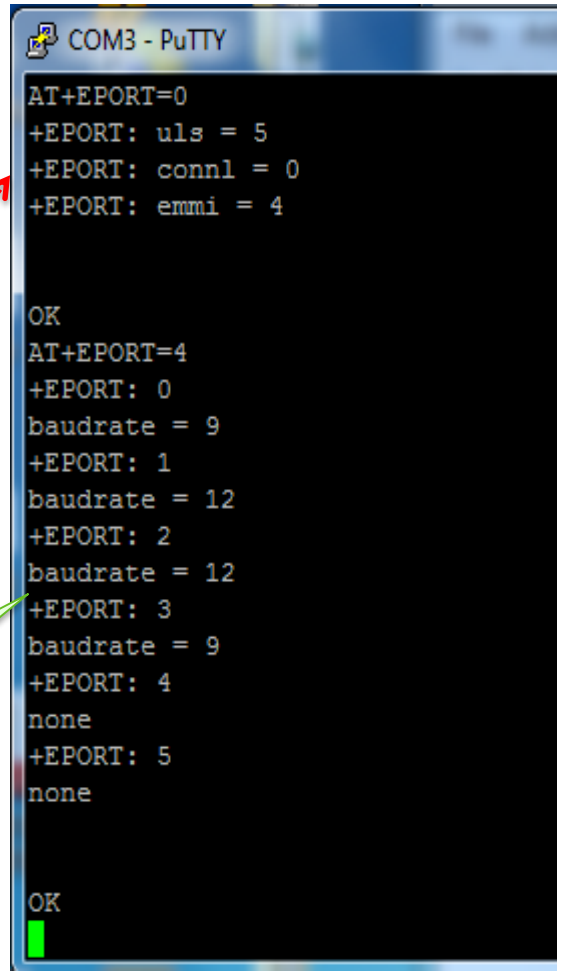


Port information

AT+EPORT=0 will show all the owner name use which port id.

AT+EPORT=4 will show current port parameters.

- Modem log owner name:
  - uls -> hsl log
  - Emmi -> gki log
- Port id:
  - 0~ 3 is URAT device (current assign uls to port 2, emmi to port 1 if switch to UART)
  - 4~5 is USB device (current assign uls to port 5, emmi to port 4 if switch to USB port)
- Baud rate value:
  - 9 -> 115200
  - 12 -> 921600
  - 13 -> 3000000



The means uart 1 & 2 ‘s baudrate are 921600

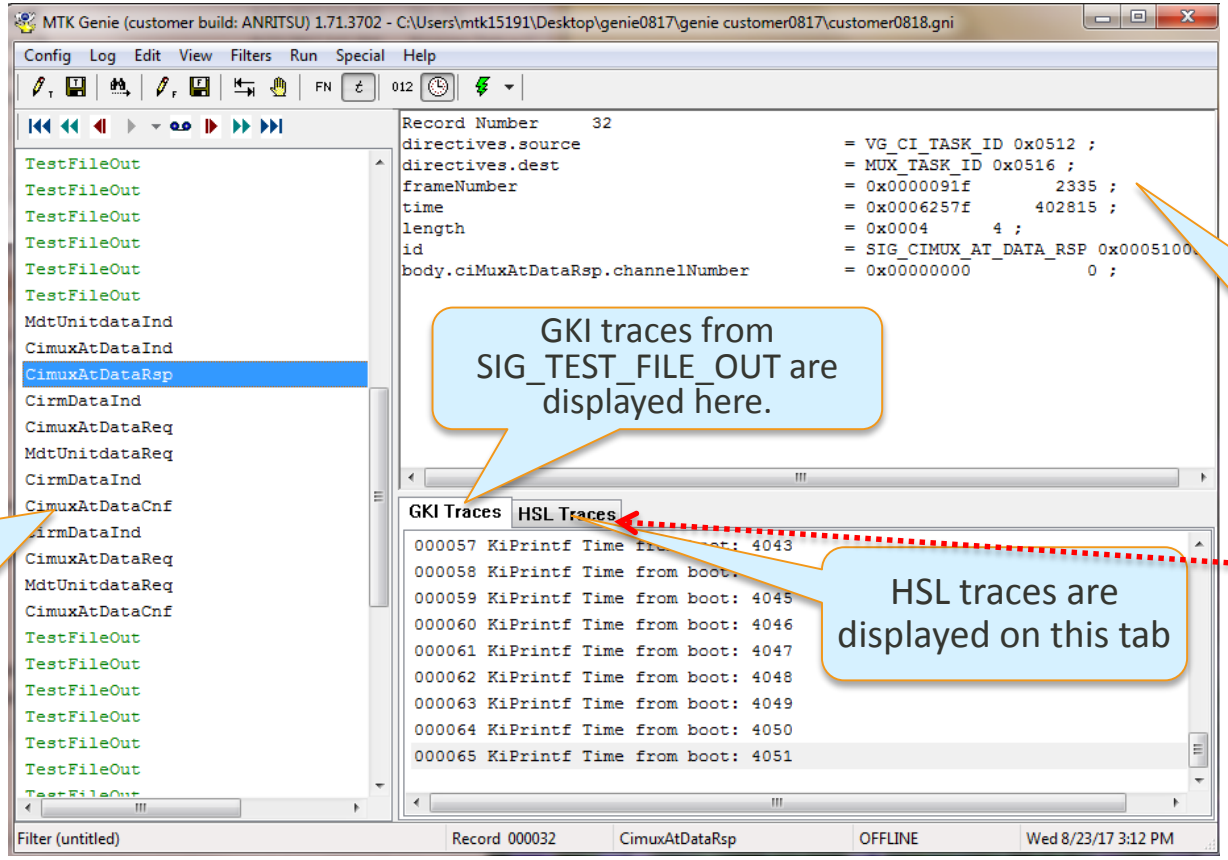
How to switch USB/UART Port

AT cmds	Description
AT+EPORT=1,uls,5	Switch HSL log to USB port
A+EPORT=1,emmi,4	Switch GKI log to USB port
AT+EPORT=1,uls,2	Switch HSL log to uart port
AT+EPORT=1,emmi,1	Switch GKI log to uart port
AT+EPORT=3,2,13	Change HSL log port to 3000000 baudrate
AT+EPORT=3,1,13	Change GKI log port to 3000000 baudrate
AT+EPORT=3,2,12	Change HSL log port to 921600 baudrate
AT+EPORT=3,1,12	Change GKI log port to 921600 baudrate

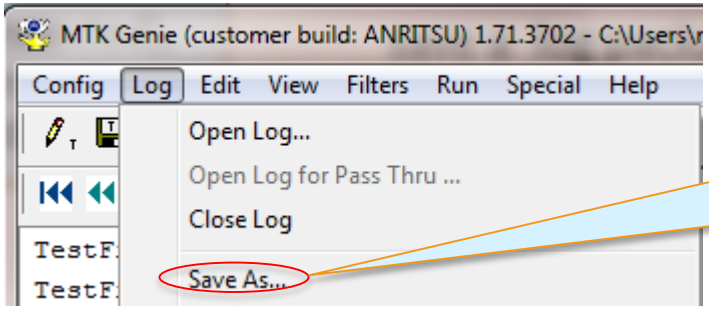
After switch to USB/UART port, please reset target.

Running Genie – capturing a log

- After configurations are completed (and saved), the logging starts by clicking on  or key presses Ctrl-F9. Pressing again will stop logging.
- If the UE is running and ready to connect, GKI/HSL will be captured and displayed.

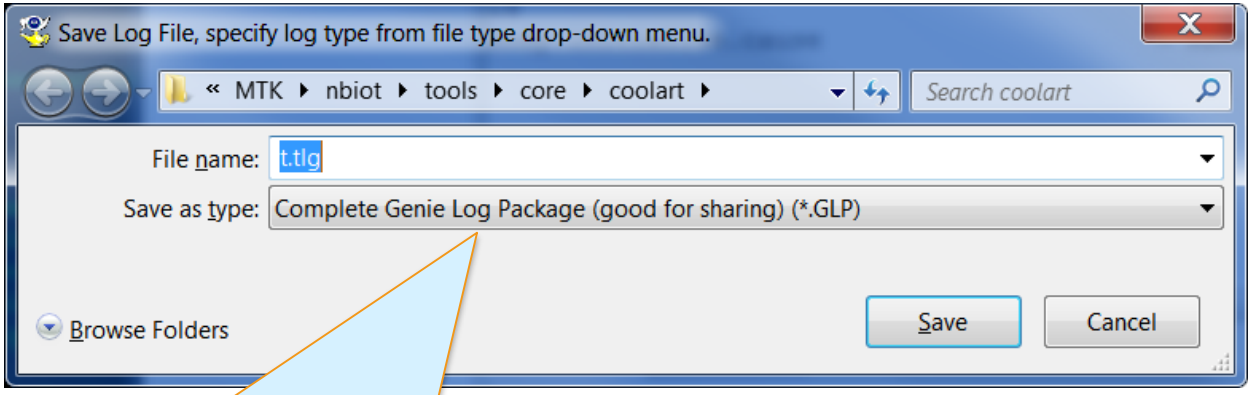


Quick Genie log package creation for sharing with others



1

Only after log capture has stopped (UE disconnected), destination log file name can be specified.



2

This type of package (*.glp) will include any GKI log file (*.tlg) and HSL log files (*.hslog/hslog2)

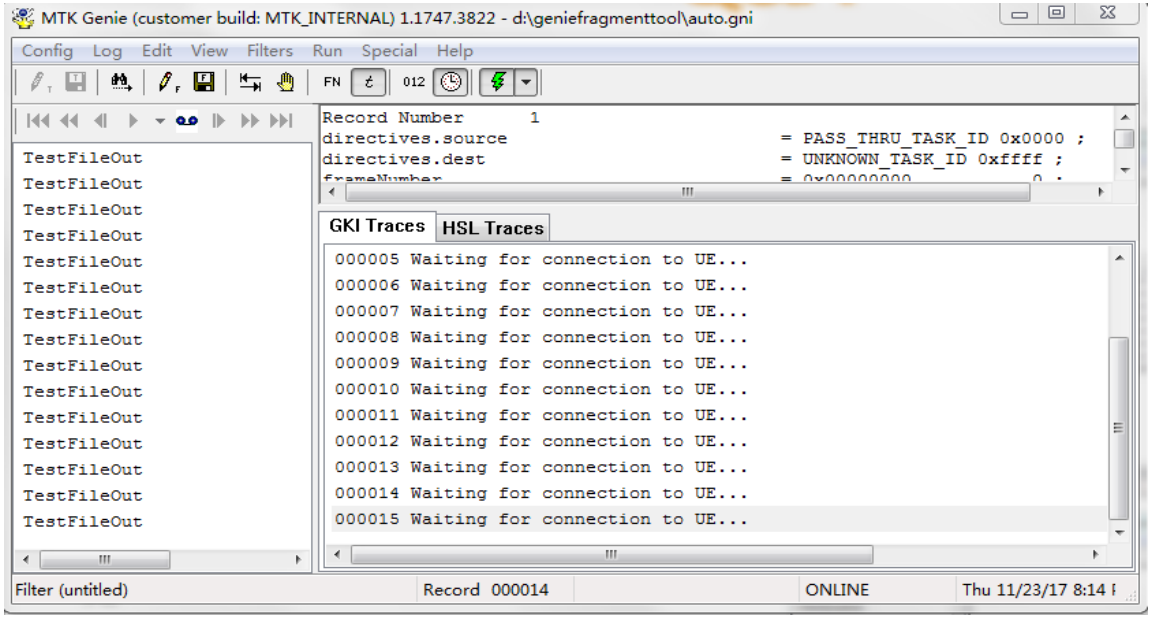
- Follow these steps to save a log package which will put into one Genie *.glp all the necessary GKI/HSL logs/decoders applicable.
- Share this single*.glp with other users.
- By creating a Windows application association with *.glp, it is then possible to double-click on these files to open them. Alternatively, use the Log/Open menu option.

Q&A (1)

1, Q:GKI Trances shows only "Waiting for connection to UE...".

A: Please check this:

1) GKI and HSL com port is correct?
2) If using UART Port, please check GKI/HSL baud rate.
3) Send AT+EPORT=0 ,view current port information.
4) Use other 3rd-party serial port tool (hypter terminal, putty, teraterm, securecrt, sscom, etc) to open the same GKI device port (USB Modem Port) and HSL device port (USB Debug Port), and check whether there is any raw data was transferred from target device to PC tool?
5) Try to reset target.



Q&A(2)

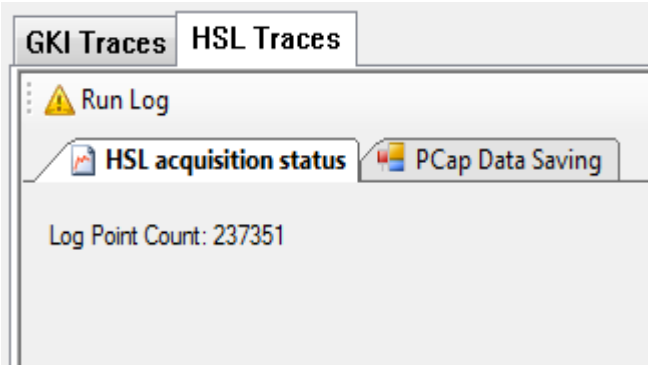
2, Q:GKI Trances have message, but MTK RD can not find the HSL Log.

A: please check this:

1) check the HSL log point count is increasing(error message: count =0 or count remain unchanged)

2) if log point count show error message. Send AT+EPORT=0 to view current port information. uls=5,emmi=4:USB Port; uls=2,emmi=1:UART Port.

3) if you capture log by UART port, please send AT+EPORT=4 to check HSL baud rate.



Q&A(3)

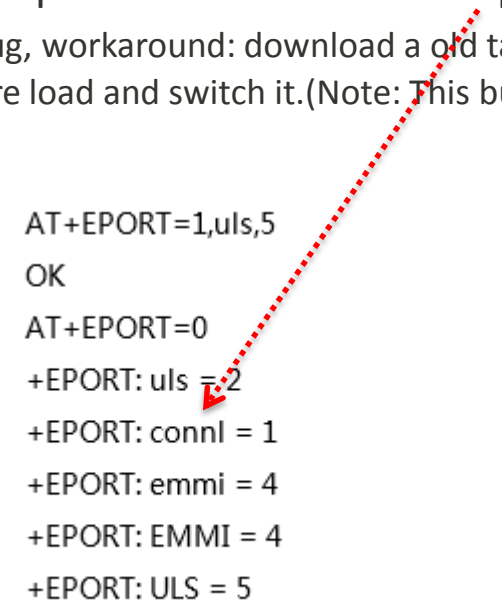
3, Q: MTK RD find a lot of HSL Log can not be decoded.

A: Please make sure the database *.dec matches target software load when genie capture log.

B: Check whether the correct device port baud rate is configured when using UART logging.

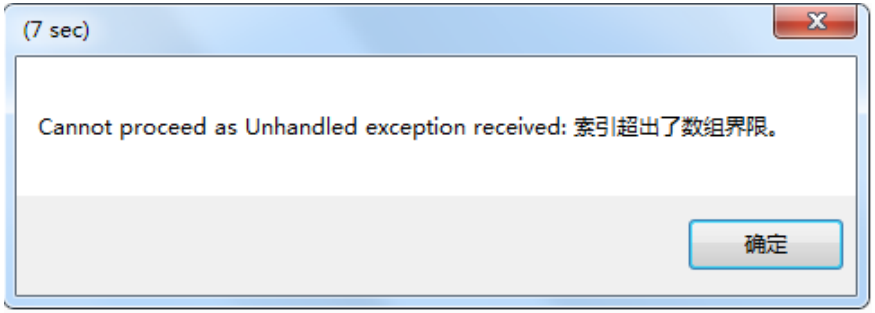
4, Q: Can not switch port because of error input.

A: This a software bug, workaround: download a old target Software load and switch it, after finish it, download the latest target Software load and switch it.(Note: This bug is fixed in NBIOT_SDK_V1.0.1 version.)

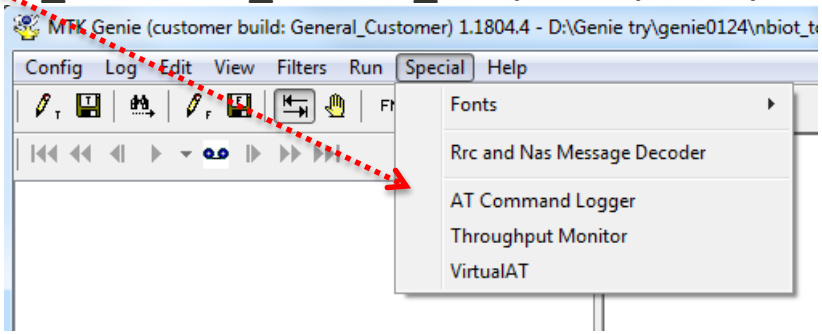


Q&A(4)

5,Q: Open AT CommandLogger/Throughtput Monitor/Virtual AT , will show a error message .



A: Using AT CommandLogger/Throughtput Monitor/Virtual AT, please open it by Special menu, not click *.exe by oneself on path :nbiot_tools_customer_release_xxx\nbiot\tools\core\genie\tools.

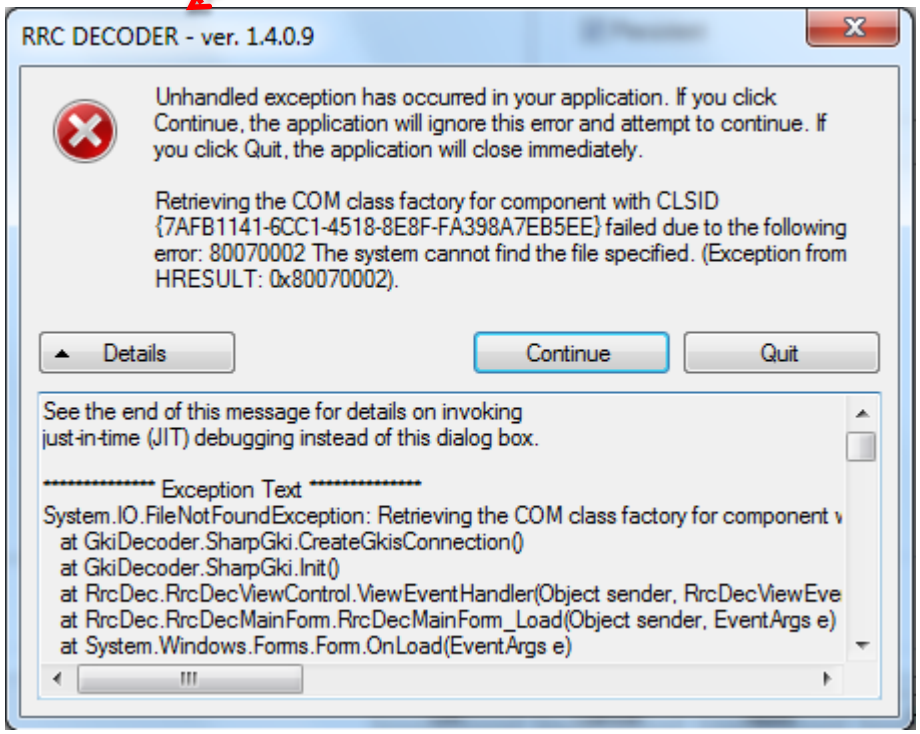


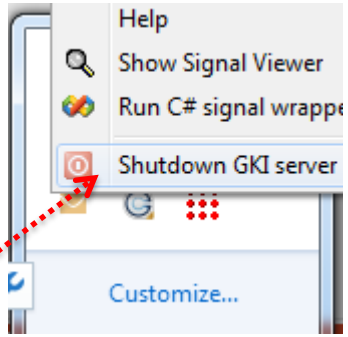
B:Double click “GKIS.exe” to complete the registration when there are multiple genie tool version exist on the same computer.

- Virtual AT need to install com0com driver, please refer to VirtualAT

Q&A(5)

6,Q: If you open Rrc and Nas message Decoder displays the following pop-up.





1,Shutdown GKI server

2,Click the GKIS.exe from path: nbiot_tools_customer_release_\nbiot\tools\core\gkis.

3, Open Rrc and Nas message Decoder again.

everyday genius