Ethos Lua: Getting to the bottom of problems

A (LUA) developer will certainly have tested his scripts intensively before publishing.
Nevertheless, each user usually has a somewhat individual transmitter configuration or combination of scripts, and Ethos is constantly evolving, which means that the "infrastructure" is constantly changing.

It can therefore happen that a widget or script does not work as desired.

As a pure user, you only see the result of the problem, but not its origin.

It's much difficult for a developer to find the root cause if he cannot reproduce the problem himself.

One way to support the developer in troubleshooting is to make the model file available.

Another is to give him details of error messages (or screenshots), prompted in the so-called

„DEBUG MODE“

How to use the debug mode is described in this white paper.

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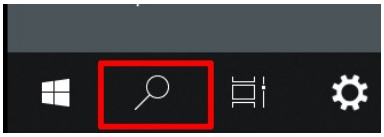
Nov 2022

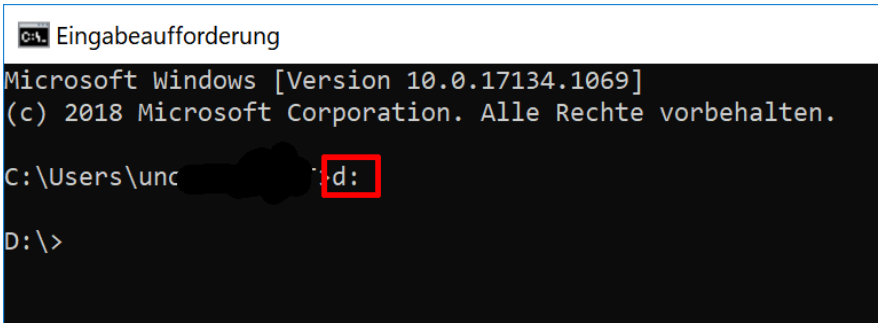
(I) Debug Mode in Simulator (Windows)

1.

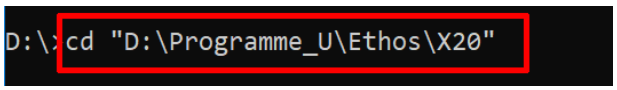
In the first step the command shell is to be started
This is done, for example, by entering "cmd.exe" in the Windows search.
It is probably also sufficient to enter "cmd" and the shell appears as a suggestion



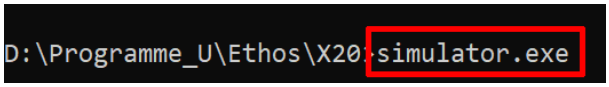
2.
es öffnet sich ein Fenster („shell“) mit der Möglichkeit Windows Befehle („command“) einzugeben
In der command Shell auf das Laufwerk wechseln, wo der Simulator installiert wurde
Im Beispiel ist das Laufwerk „D:“, also wird der Befehl „d:“ eingegeben



3.
now go to the installation folder of the Sim (change directory, i.e. command "cd" and the path).
In this example the path is "D:\Programme_U\Ethos\X20", if the path does not contain space, you can omit the apostrophe.



4.
In the last step, the sim is started
The input "simulator.exe" is necessary for this.



As a result, you will see two windows,

The simulator, and the command shell.

The simulator now runs in "debug mode" and reports events to the command shell.
If errors occur in a lua script, the error messages will also appear there.

The type of error description gives the developer important hints to solve the problem.

Here I have constructed an example where a command was written incorrectly in line 706 of the code:
(syntax error)

The procedure of starting in debug mode can be simplified considerably by creating a batch file that contains the above mentioned commands,

this would be:

d:
cd "D:\Programmes_U\Ethos\X20"
"D:\Programmes_U\Ethos\X20\simulator.exe".

Create the file with Notepad and save it e.g. as "EthosSim.bat" to start the sim in debug mode with a double click.

(I) Debug Mode by using transmitter

In a few situations, errors can only be reproduced by using the transmitter.

It is possible to redirect messages from your tx to a PC or laptop.
For this purpose, a serial interface is "simulated" via USB.
To do this, an application for terminal emulation is needed on the computer.
I recommend putty (it is easy to use, can do everything necessary, and is free of charge).

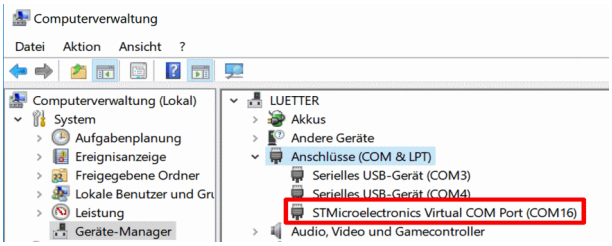
If you google putty, you will quickly find download options and can install the app.
In the description, I assume that putty is installed.

One-time preparation:

find out the interface occupied by the transmitter:

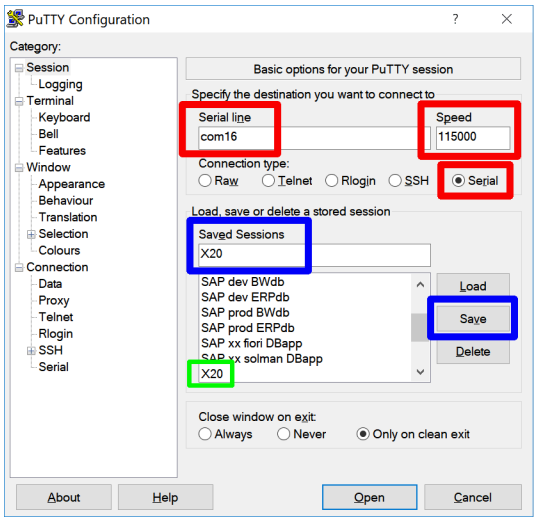
To do this, the Ethos transmitter is connected to the PC via a USB cable while the system is in operation,
The transmitter will ask you about the type of connection, select "serial".

Then take a look in the Windows device manager of the PC to evaluate which serial or Com port is in use.
Look for the STMicro... entry, in this case it's the COM16 interface:



now set up a so-called "session" in putty:
Make the following entries in the Putty configuration / "Session" (red)

- Serial line: com16
- Speed: 115000 Baud
- Conn Type: "serial"



IMPORTANT!
Give the session a name (here X20) and press the "Save" button (blue).
This will create a session named "X20" (green).

Application:

As already described above, the transmitter must be switched on at first, then connect via USB, select "serial" on the Tandem transmitter and in the last step: start putty.

Then within putty:
- click on the session (here x20, green)
- press "load" button
- press "open" button to start session

A window similar to the command shell appears with the transmitter's messages.

Similar to the batch file that starts the sim in debug mode, a batch file can also be generated for starting Putty and activating a session by a doubleClick.

One line is sufficient, e.g. in my installation is on drive D:... and session is named X20:

"D:\inst\putty\PuTTYPortable\PuTTYPortable.exe" -load X20