

EBTF

Frequently Asked Questions

1. What is the necessary configuration to run EBTF tool?

a. Hardware configuration

EBTF platform is composed of a standard laptop computer equipped with an Ethernet Card 100Mb/s with an RJ45 connector.

EBTF has been tested by Eurogiciel on a computer with the following specification:

- Standard Laptop computer (DELL)
- Pentium IV Processor at 1.7GHz
- 80 Gb HD
- 512 Mb RAM
- Standard Graphic Card
- RS232 Port
- USB Port
- Ethernet Card 10/100Mb
- For ARINC 429 feature: An AIM's ARINC 429 Card. The API429 card must be AIM's card - API/ACI429 8 Channels (0/8) or APM429 PCMCIA 16 or 8 Channels. Indeed, API429 card should be installed on the computer with its driver (BSP V0502A) in order that EBTF429 works correctly.

b. Software configuration

The EBTF runs under Windows 2000 or XP. The user has to be logged under super user rights. Internet Explorer version ≥ 6 is necessary.

c. Specific installations and settings

A specific configuration of Internet Explorer is necessary:

In the Internet Explorer Settings panel, the following parameters must be set as below:

- Page refresh frequency: always
- Temporary Internet Files directory size: 300 Mo

An installation of Winpcap (public system for direct network access under Windows) is necessary for EBTF setup. The setup will take care of this procedure.

These procedures are described in the EBTF user's manual.

2. In which physical network configuration EBTF works ?

The EBTF tool is integrated to the AFDX network, the Ethernet board behaves as a simulated AFDX end-system.

The EBTF can also be integrated to the Open-World Ethernet network. For this purpose, you have to purchase this specific communication layer available as an EBTF option.

The EBTF is interfaced to the test bench via a standard Ethernet interface (RJ45).

The EBTF can also be integrated to the Arinc 429 network. For this purpose, you have to purchase this specific communication layer.

The EBTF communicates with only one BITE during the simulation. The choice of the BITE should be done offline through the trial configuration files.

The handoff case (for redundant BITE modules, i.e. a Master and a Slave BITE Module) is managed for specific interface (automatic re-configuration).

3. Where can I find EBTF user manual?

The EBTF setup places the user manual under the installation directory; a shortcut is available in the start menu. EBTF user manual is also available for download on this web page.

4. What are the limitations of the EBTF tool?

a. BITE equipments supported

The EBTF tool communicates with BITE TYPE 1 equipments. Since version 6.0 EBTF can now communicate with BITE Type 2 equipments through a new option.

The EBTF communicates on AFDX, Open-World Ethernet, and ARINC 429 networks, through options.

b. Limitations concerning the ABD100?

The EBTF tool supports 2 levels of menus in the XML file. The EBTF tool supports XML file containing at most 20 MENU items, and 20 sub-menus and 20 functions. The number of Sub-objects per object and of sub-sub objects per sub-object is limited to 5.

Data size for messages received in interactive mode is limited to 2200 bytes. Data size for messages encoded in interactive mode is limited

to 500 bytes. For these messages encoded in interactive mode, the number of Sub-objects per object and of sub-sub objects per sub-object is limited to 5. The total number of objects in messages is limited to 32.

EUROGICIEL can not guarantee correct behaviour above these limits.

The EBTF Tool generates the following commands to the BITE under test: START, NEXT, STATUS, ABORT, ACK, NACK and HOLD. The EBTF Tool receives and to decodes the following commands and request from the BITE under test: DISPLAY, WAIT, DOWNLOAD, STATUS, TERMINATE, NACK, and HOLD.

The EBTF Tool manages the following objects for the DISPLAY of a step:

_CAUTION, _QUESTION, _ASCIIENTRY, _VARTEXT, _FIXEDTEXT, _IMAGE_AREA, _PARAMLIST, _ CHART , CONDITION, _ACTION.

NB: The _IMAGE_AREA elements are taken into account if the syntax used in the XML file for describing them and their storage location are compliant with the following rule:

Picture files must be written in the XML file without path information:

ex: <REFERENCE>PICT0061.JPG</REFERENCE>

And the relative picture files must be set in "html files» directory. (Refer to User Manual chapter 3: DIRECTORIES.)

Since version 3.1: The "INDEX" element is fully managed by the EBTF Tool. This "INDEX" element is used to specify the applicability of a function described in the XML specification file with regards to the BITE Index transmitted by the BITE.

c. Limitations concerning performances

EBTF tool is able to manage a throughput of 1Mb/s. EUROGICIEL can not guarantee correct behaviour above this limit (>1Mb/s)

Concerning ARINC 429 feature: EBTF tool can manage one A429 board.

d. Limitations of EBTF functionalities

Record files size is just limited to the available disk space. Large traffic files can be replayed either directly either through a simple file cutting operation (described later in this FAQ). Long time sessions can be replayed.

5. How automatic safety tests work?

EBTF launches automatic safety test when safety activation counter in reception is set to zero. (As described in the ABD100 4.5.6.1).

The start command sent by EBTF has the function ID "15". This function ID is constant; this value has no link with XML file.

In EBTF configuration file (EBTF.ini) you can inhibit this automatic switch:
[AUTOSAFETY TEST SWITCH]
Enable=0

6. I have just installed EBTF but it does not work.

The dysfunction may come from a problem of rights: You must have administrator (super user) rights on your computer when you run EBTF.

7. I have installed EBTF but when I load my first trial, EBTF exits without any message. My EBTF installation folder path contains a dot.

Install the most recent version of EBTF where this problem is corrected.

8. I have just installed EBTF but when I load my first trial it does not work (crash, or freeze ...)

Install the most recent version of EBTF where this problem is corrected.

If the problem remains, it may come from the following reasons:

- Check that you have administrative rights on your computer when you run EBTF.
- Check that your trial is coherent: check that all the files necessary to the trial are in the right directories, and especially refer to user manual to check the validity of the BDS file.
- If possible, test your trial on another PC where EBTF works fine in order to check that your trial is coherent.

9. I try to run interactive mode but no functions are available for testing in interactive mode?

Or the list of interactive tests proposed by EBTF tool in this menu is not complete in comparison with my XML file for interactive mode?

Since version 3.1, EBTF tool takes fully into account the following requirement of ABD100: The "INDEX" element is used to specify the applicability of a function described in the XML specification file with regards to the BITE Index transmitted by the BITE.

Consequently, in XML files, the INDEX elements, mandatory for functions elements, are now used for filtering the functions available for interactive tests: The only functions proposed for interactive tests are those matching the identifier received into LRU identifiers messages (the system identifiers displayed in LRU traffic window).

10. I installed a new version of EBTF tool and the interactive mode does not work anymore: The Interactive Mode 'Main Menu' has no working links and lists only the main headings with no links for each individual test.

Refer to 9.

11. I try to run interactive mode but it does not run correctly, or there are refresh problems.

Firstly install the most recent version of EBTF Tool and check that your version of Internet Explorer is at least 6 (update it if necessary).

Problems of page refreshment or malfunctions may happen in interactive mode if a specific configuration of Internet Explorer is not done:

In Internet explorer 'Settings' panel, the following parameters must be set as follow:

- Page refresh frequency: always
- Temporary Internet Files directory size: 300 Mo

This procedure is described in EBTF user manual. (Chapter "SETUP"/"Internet Explorer Configuration")

12. When EBTF receives normal mode BITE fault messages, sometimes it starts sending "START" command with function ID 15, is it a bug of EBTF? How can I prevent EBTF from sending this command?

It is not a bug, but an automatic safety test. (Refer to 5)

13. I have installed 2 Ethernet cards, but I can not select my card with EBTF.

The selection of an Ethernet card after loading a trial is proposed only if several cards are available and if no card is set in EBTF INI file: [ETHERNET CARD CHOICE] item must be empty.

The Ethernet card can also be modified by menu "Configuration"/"Ethernet Card Selection". EBTF must be quitted and re-opened so that the Ethernet card choice is taken in account. Indeed, when you select a card and close the application, the card you chose is saved in EBTF.ini so that you don't have to select the card again next time you run EBTF.

If you can not access to all your Ethernet cards with EBTF tool, the problem comes probably from an incompatibility between Ethernet card and the version of an EBTF component: Refer to 16.

14. I recorded with EBTF a lot of traffic and I want to replay it afterwards, what can I do? Or I want to let EBTF record traffic overnight and replay it afterwards.

Record files size is just limited to the available disk space so you can record traffic during long period of times or overnight.

Replay function is particularly powerful since version V3.0 of EBTF Tool.

- Large traffic files can consequently be replayed directly: all the traffic previously recorded flows in the traffic windows, and 'Pause' button can be used to analyse a message or focus on a part of the traffic.
- It is also possible to select only a part of the traffic file for the replay through a simple file cutting operation: Indeed, traffic files are text files that you can edit manually with a standard text editor. They are stored in "EBTF_INSTALL_DIR/EBTF/Traffic files" directory. You can cut a large replay file in different smaller replay files, by putting (to the maximum) 200 messages in each smaller file. This way you can replay the sub files one after the other and therefore replay (in several times) the session you have made.

15. The time displayed for a failure message in the normal mode traffic window does not always match with the timestamp of the message, is it a bug of EBTF?

It is not a bug, the Failure Message appearance time differs from the failure detection time included in the failure message (time code area) frame: Indeed the EBTF tool links failure messages, and the hour of appearance of a failure is the time (time code area) of the first failure message received for the same failure.

By default a failure is identified by the data: Fault Message Code, FDE Event and Flight Desk Effect Code. Other failure identifiers are available and can be set in EBTF configuration file (only Fault Message Code, or only FDE Event and Flight Desk Effect Code).

Thus all the failure messages referring to the same failure will have the same appearance time.

16. My Ethernet card is not recognised by EBTF tool.

This problem can be due to incompatibility between Ethernet card and our driver (winpcap) used for communication on Ethernet card. The following solution - newer version of the drivers - corrects problems with some incompatible Ethernet cards:

- ✚ First set up EBTF tool (will setup tool winpcap 3.0)
- ✚ Then set up Ethereal last version (0.99) and during the installation choose to install WINPCAP 3.1 (will uninstall winpcap 3.0 and then install winpcap 3.1)
- ✚ And launch EBTF tool.

Ethereal last version (0.99) can be downloaded on Ethereal web site. (12.4Mo)

For any question or requirement: transmit your request to
EBTF@eurogiciel.fr

Please be as precise as possible by sending details, snap shot,
EBTF and Ethereal records, etc...