



- The purpose of FASTER23 is to acts a bridge between FASTER2 and FASTER3, enabling transparence integration of existing modules while laying the foundation for future architectural advances, ensuring backward compatibility and optimized modularity.
 - Compatible with
 - FASTER2 and FASTER3 modules
 - FASTER2 and FASTER3 data format
 - FASTER2 and FASTER3 synchronization system
 - From now until 2028

David Etasse → etasse@lpccaen.in2p3.fr



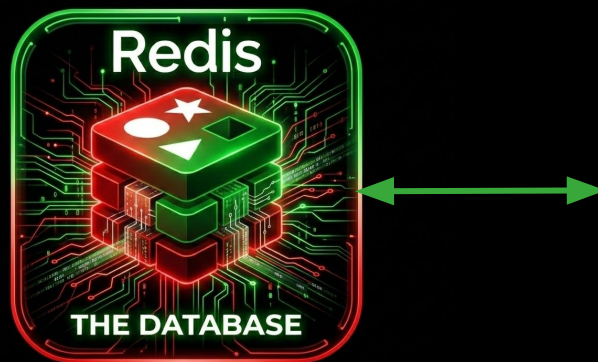
- faster_setup_gui
- faster_gui
- faster_daq_shell
- Ada
- Cython
- fasterv2 ubuntu package

- FASTER2 Modules (uTCA and Standalone modules)
- FASTER2 Synchronisation system
- FASTER2 Data format
- FASTER2 Protocol
- fasterac and pfasterac
- RHB and nptool

```
sudo apt install faster23
sudo apt install rhb
sudo apt install fasterac
pip install pfasterac
```

faster23 setup tui

- Allow the user to configure FASTER in a terminal
- Every effort will be made to speed up the procedure

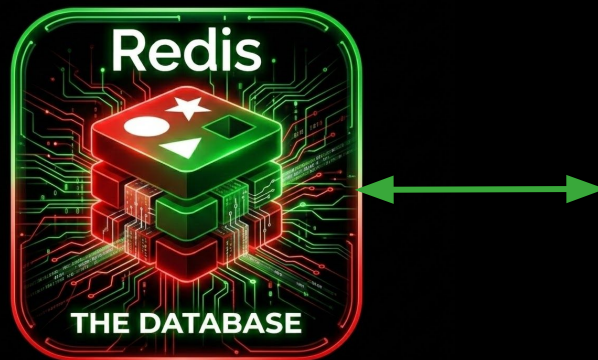


faster23 setup tui (Terminal User Interface)

- Discover the modules
- Choice of algorithms (QDC, CRRC4, TRAPEZOIDAL, ..)
- Choice of flow traitement (Trigger/Merger, Decimator..)
- Choice of Storage area
- Scriptable
- Suitable for large experiments

faster23 cli

- Command Line Interface (Lightweight, fast, automatable) for configuring FASTER
- Suitable for both large-scale and small-scale experiments



faster23 cli (Terminal User Interface)

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Add the Storage area

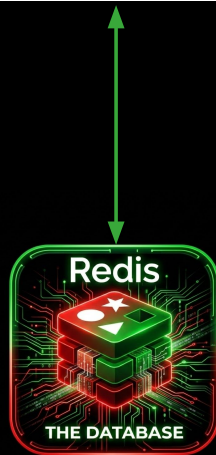
```
faster23_cli --add-storage /mnt/data/manip1/
```

Define the t0 module

```
faster23_cli --t0-module 192.168.1.25
```

List the configured modules

```
faster23_cli --list-modules
```



faster23 cli

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```
# Add the Storage area  
faster23_cli --add-storage /mnt/data/manip1/
```

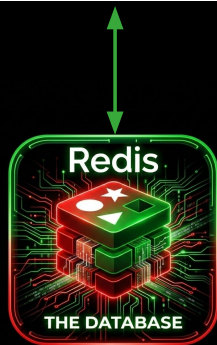
```
# Define the t0 module  
faster23_cli --t0-module 192.168.1.25
```

```
# List the configured modules  
faster23_cli --list-modules
```

```
# Add a MOSAHR module with 8 CRRC4 channels
```

```
faster23_cli --add-module MOSAHR --ip 192.168.3.208 --db 1 --type CRRC4 --name C1,C2,C3,C4 --label 1,2,3,4 --db 2 --type CRRC4 --label 5,6,7,8 --name C5,C6,C7,C8
```

```
faster23_cli --add-module MOSAHR --ip 192.168.3.208 --db #1 --type CRRC4 --name C#1 --label #1
```



faster23 cli

- Command Line Interface (Lightweight, fast, automatable) for configuring FASTER
- Suitable for both large-scale and small-scale experiments

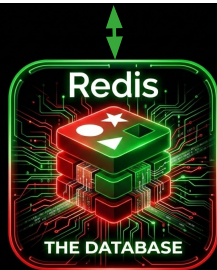
```
# Add the Storage area          # Define the t0 module          # List the configured modules
faster23_cli --add-storage /mnt/data/manip1/  faster23_cli --t0-module 192.168.1.25  faster23_cli --list-modules
```

```
# Add a MOSAHR module with 8 CRRC4 channels
```

```
faster23_cli --add-module MOSAHR --ip 192.168.3.208 --db 1 --type CRRC4 --name C1,C2,C3,C4 --label 1,2,3,4 --db 2 --type CRRC4 --label 5,6,7,8 --name C5,C6,C7,C8
faster23_cli --add-module MOSAHR --ip 192.168.3.208 --db #1 --type CRRC4 --name C#1 --label #1
```

```
# Add 20 MOSAHR modules with 8 CRRC4 channels from Label 1 to 21 and name C1 to C21
```

```
faster23_cli --add-module MOSAHR --ip 192.168.3.208..192.168.3.228 --db #1 --type CRRC4 --name C#1 --label #1
```



FASTER3 → What Disappears, What Remains and What's new ?

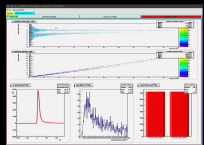


FASTER3 → What Disappears, What Remains and What's new ?



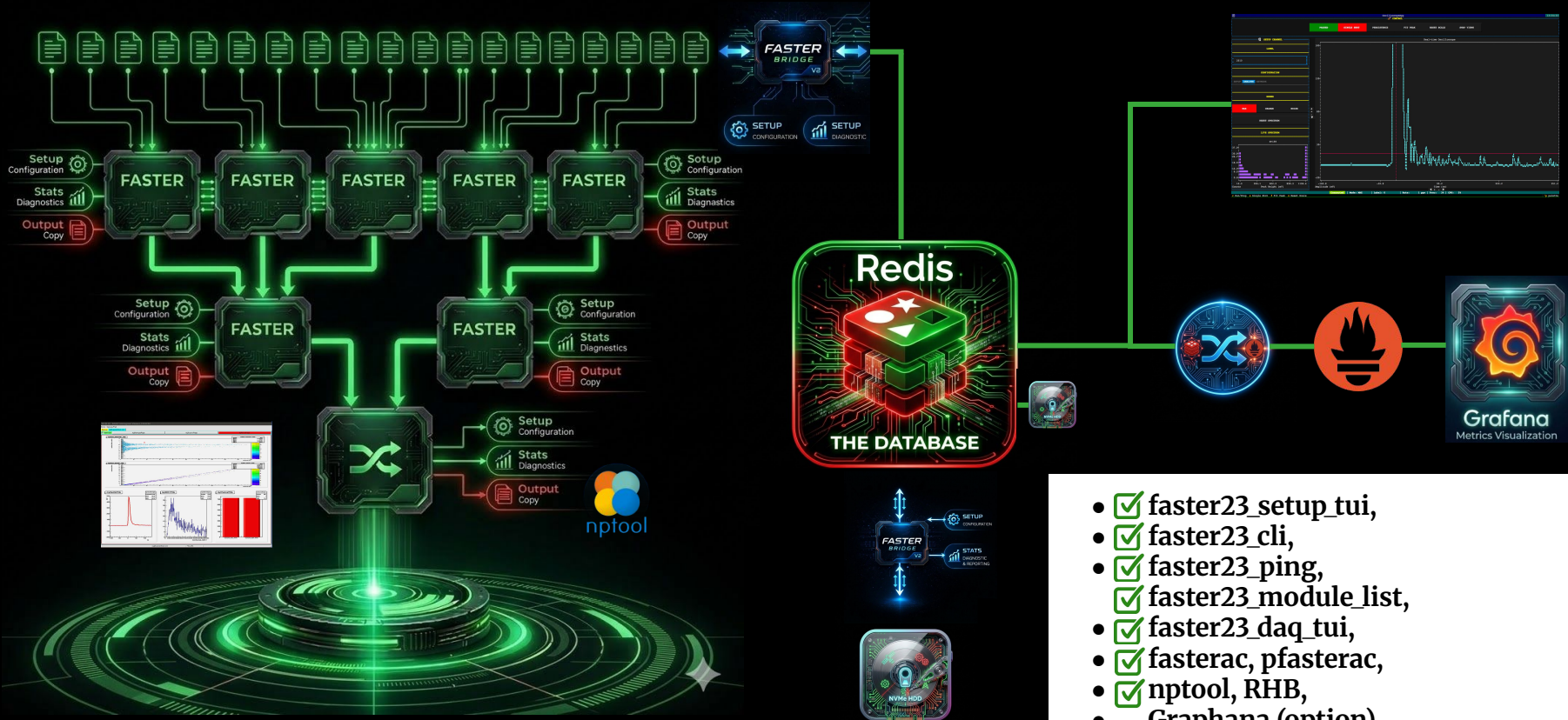
The screenshot shows the JFAST Inspector interface. On the left is a file explorer with a file named "FASTER_DAY_CRRC4.jfast" selected. The main window displays a list of CRRC4 events with their IDs and timestamps. A spectral plot is shown in the center, with a vertical dashed red line at 1232. The plot shows a peak at this frequency. Below the plot are controls for "EVENT ID" (0), "PROTOCOL" (CRRC4), "LABEL" (4), "ENERGY (CH)" (4929), and "SPECTRUM BIN" (1232). On the right, there is a "PROTOCOL DOCUMENTATION" section with the text: "Integrated Energy: A 22-bit value extracted from the telemetry word. It represents the total charge detected during the event window."

Event ID	Protocol	Label	Energy (CH)	Spectrum Bin
#0	CRRC4	4		
#1	CRRC4	4		
#2	CRRC4	4		
#3	CRRC4	4		
#4	CRRC4	4		
#5	CRRC4	4		
#6	CRRC4	4		
#7	CRRC4	4		
#8	CRRC4	4		
#9	CRRC4	4		
#10	CRRC4	4		
#11	CRRC4	4		



- faster23_setup_tui,
- faster23_cli,
- faster23_ping,
- faster23_module_list,
- faster23_daq_tui,
- fasterac, pfasterac,
- nptool, RHB,
- Graphana (option)

FASTER3 → FASTER23 overview



- faster23_setup_tui,
- faster23_cli,
- faster23_ping,
- faster23_module_list,
- faster23_daq_tui,
- fasterac, pfasterac,
- nptool, RHB,
- Grafana (option)


FASTER DAY


(2006-2008-2011-2019)


31 March 2026


 2:00 p.m. – **Session 4** → SINAPSE, the FASTER3 simulator for large-scale system



1. Project motivations (**David Etasse**)
2.  Centralized deployment platform (**Guillaume Cubero**)
3. Embedded AI models (**Thomas Carreau**)
4. High-throughput transfer platform (**David Etasse**)

 3:30 p.m. – **Session 5** → Between 2 and 3 there is 23

1.  Project motivations (**David Etasse**)

 3:45 p.m. – Roundtable discussion and conclusion