EPC Tools Zoom Series (ETZS)

A series of short Zoom sessions, demonstrating features of EPC software tools like PowerSpy and FGCRun+.

The ETZS goal is to help you to become more familiar with the features of EPC software tools and to show you how to use them to solve real issues with power converter development, commissioning, operation and troubleshooting. It also gives you the opportunity to shape the future of EPC tools by sharing your ideas and feedback. You are also very welcome to ask questions and to propose topics for future sessions.

Please find below the following sections:

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ETZS Facts

1. Every Wednesday at 14:00h CET **exactly** on Zoom
2. **5-10 minutes demo** and **5-10 minutes Q&A session**
3. The sessions build up on each other (from basic to advanced features)
4. The Q&A is for you! Ask questions, propose future topics, and give feedback on the tool
5. Be reminded by importing this recurring event file to your calendar, or by joining the sy-epc-etzs-announcements e-group for a weekly announcement of the next topic.
6. Zoom: http://cern.ch/etzs-zoom or https://cern.zoom.us/j/65633893700?pwd=MVN3Wi9pZTJaRUtDa2ZsRTl5VEVNdz09
7. Please join with your microphone muted until the Q&A and read the next section about video recording and privacy.

Video recording and Privacy

We will record the **presenter's shared screen only**, along with the Zoom audio track. This should include the presenter's voice only during the demonstration, as well as the participants voices if they ask questions during the Q&A.

The videos will be archived on the CERN video service as training materials for future users of the tools, or for current users who are unable to attend the live ETZS sessions. This includes people from other labs, so the videos will be **visible from anywhere and by anyone**.

As mentioned, your video feed will **not** be included in the recorded videos and if you want to ask a question during the Q&A, but don't want your voice to be included in the recording, then please use the chat feature to type your question for the presenter to read out.

Upcoming Zoom sessions

A list of upcoming sessions, their topics and their scheduled date

Application	topic short description	training goal	presented by	scheduled date
	Summer break			

Archived Zoom sessions

An archive of past sessions, including recordings for consultation on demand

Application	topic short description	training goal	presented by	training date	recording
PowerSpy	ETZS #9: PowerSpy on steroids: Enhance PowerSpy usage with useful tips and shortcuts	• Know how to use the most useful keyboard shortcuts to be more efficient navigating PowerSpy • Know how to use regexp to search for FGCs • Know how to use the remote terminal • Discover some other tips to be more efficient when using PowerSpy	Benjamin RAYMOND	14 Jul 2021	video

PowerSpy	ETZS #8: Advanced usage of the FortLogs archive service	- Know what are the other acquisition sources (FGC Logger and Scripts) - Know how to use the bulk star and tag - Know how to switch between live FGC logs to archived FGCs logs - Know how to share links: - to a filter that identifies a group of interesting acquisitions - to archived logs - to live FGC logs - Tips to use the filters efficiently by selecting fields from acquisitions directly - Know how to modify acquisitions while working in the global view	Benjamin RAYMOND	07 Jul 2021	video
PowerSpy	ETZS #7: An introduction to the FortLogs archive service	- Understand what is the archive service (FortLogs) - Know how to browse and organize saved acquisitions	Benjamin RAYMOND	30 Jun 2021	video
PowerSpy	ETZS #6: PowerSpy features for signal analysis - Using the Fit and Noise features to analyze signal noise - Using the FFT feature to analyze signal noise	- Know how to use the Fit and Noise features - Understand how to use the signal analysis fields to know the means, RMS and peak to peak values for a signal - Know how to use the Fit option to subtract a linear least-squares fit from each signal, allowing noise on a linear ramp to be visualized and analyzed - Understand the significance of the Fit option on the RMS analysis field - Know how to show the noise as a histogram and how to interpret the shape of the histogram - Know how to use the FFT - Know how to run an FFT on all or part of one or more signals - Know how to measure the amplitude of a particular frequency in a signal using the FFT chart - Know how to lock the zoom window between different FFT charts	Benjamin RAYMOND	23 Jun 2021	video
PowerSpy	ETZS #5: PowerSpy features for signal analysis - Using the first-order fit feature to analyze exponential signals - Using the scatter plot feature to visualize coupled signals	- Know how to identify the time constant and final value of an exponential rise or fall of a signal - Know how to use the scatter plot feature to visualize and analyze coupled signals, for example, with field to current or voltage to current charts	Benjamin RAYMOND	16 Jun 2021	video
PowerSpy	ETZS #4: PowerSpy features for signal analysis - Managing shown signals, measure and read samples information - Comparing signals from different machine cycles with the acquisition history	- Know how to manage signal visibility in the sidebar and in the chart - Know how to use the tooltip and measuring tools - Know how to choose the amount of information to have in the tooltip - Know how to read information in the tooltip - Know how to use the measuring tool to measure amplitudes and time windows - Know how to compare signals from different machine cycles with the acquisition history - Understand the concept of the PowerSpy acquisition history and acquisition index - Know how to change the acquisition history length - Know how to track the number of resident acquisitions per signal - Know how to choose the signal color scheme between signal-based and acquisition-index based - Know how to use the signal tooltip to differentiate between different acquisitions of the same signal	Benjamin RAYMOND	09 Jun 2021	video
PowerSpy	ETZS #3: PowerSpy features for signal analysis - Choosing the signals that interest you with multiplexed logs - Using the exponential scaling and/or dual analog chart feature to analyze signals with different magnitudes	- Know how to use multiplexed logs - Understand how multiplexed logs work - Know how to choose the signals that interest you - Know how to analyze signals with very different magnitudes using - exponential scaling, when there is no significant offset, for example, with the regulation error - dual analog charts, when the signals have large offsets, for example, with current and voltage signals	Benjamin RAYMOND	02 Jun 2021	video
PowerSpy	ETZS #2: PowerSpy features for signal analysis - Using PowerSpy relative time to compare cyclic acquisitions - Share PowerSpy charts in presentations and papers	- Using relative and absolute time - Understand the concepts of acquisition time origin and relative time - Understand how the time origin is chosen for cyclic and non-cyclic acquisitions - Know how to select between relative and absolute time - Know how to use relative time to compare acquisitions from different cycles - Know how to control various features of the chart to optimize it's appearance in presentations or papers: - Understand zoom-in/out and chart panning pan - Change chart background (white or black) - Change axis labels font size and signal line thickness - Change signals visibility and color - Change chart size before using a screenshot tool	Benjamin RAYMOND	26 May 2021	video

PowerSpy	ETZS #1: An introduction to PowerSpy	• Have an overview of the PowerSpy user interface layout and features • Understand signal sources and acquisition basics	Benjamin RAYMOND	19 May 2021	video

Potential future topics

These can be requested and suggested by you

- during the Q&A sessions,
- by sending an e-mail to sy-epc-web-admin@cern.ch or
- by leaving a comment on the respective tool's FAQ wiki page.

The more people request a certain topic, the more likely it is be chosen for a future session.

PowerSpy

topic short description	training goal	requesters
Misc	• Using the tool tip feature to see if large acquisitions are being sub-sampled • Understand the limitation in acquisition size and how it can result in sub-sampling of your log data • Know how to use the tool tip to check the sampling rate of the data • Understand the difference between continuous and discontinuous logs	Quentin / Raul

FGC Barcode Manager

topic short description	training goal	requesters

FGC Property Manager

topic short description	training goal	requesters
Introducing the system overview	• Understand the different panels that are composing the overview including • general information about the system and it's components • as well as it's system and component properties • Know how to find, edit and export properties and their values associated to a system and it's components • Know how to inspect the history and analyse changes in mentioned properties and their values • Know how to filter for certain properties or values	Kevin (based on use case where Miguel asked for who changed CAL properties)

FGCRun+

topic short description	training goal	requesters

Frequently asked questions

Each of our tools that are part of the ETZS has a dedicated FAQ wiki page with questions asked by their users.

Questions can be submitted

- by asking during the ETZS Q&A sessions or
- by posting them in the comments section of the respective tool's FAQ wiki page

FAQ wiki pages:

- [FAQ FGC Barcode Manager](#)
- [FAQ FGC Property Manager](#)
- [FAQ FGCRun+](#)
- [FAQ PowerSpy](#)