

**PSI** Center for Scientific Computing,  
Theory and Data

# EIDO Update

03 March 2025

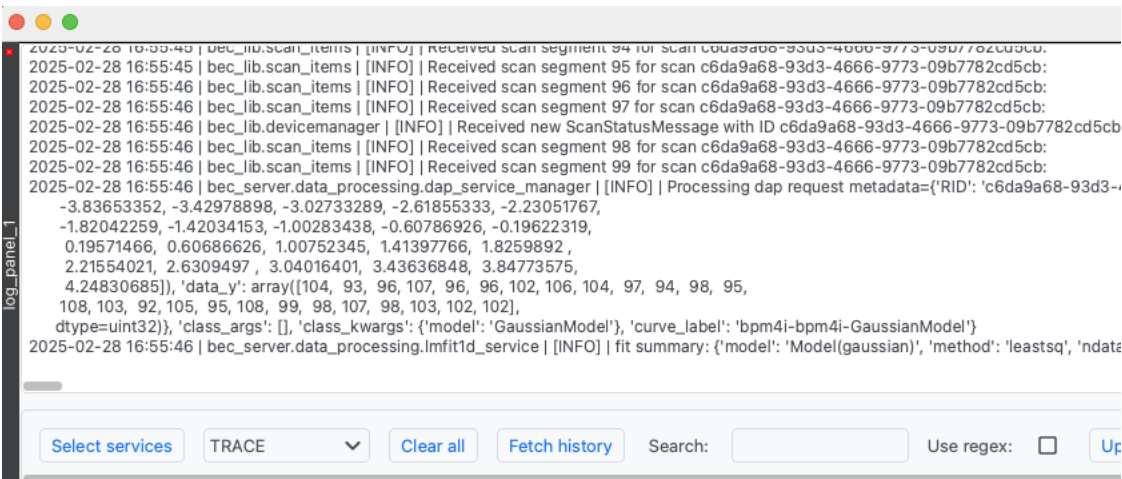
# SLS

## BEC Widgets

- Release v2.0 in the upcoming weeks
  - Major refactor of the plotting libraries
  - Improvements to and cleanup of the CLI
  - Support for save/restore through the UI
- New log panel

## BEC Core

- Customized device summary
- Improved file writer
  - better support for partial writes
- Preparation for Redis ACLs



```

2025-02-28 16:55:45 | bec_lib.scan_items | [INFO] | Received scan segment 94 for scan c6da9a68-93d3-4666-9773-09b7782cd5cb:
2025-02-28 16:55:45 | bec_lib.scan_items | [INFO] | Received scan segment 95 for scan c6da9a68-93d3-4666-9773-09b7782cd5cb:
2025-02-28 16:55:46 | bec_lib.scan_items | [INFO] | Received scan segment 96 for scan c6da9a68-93d3-4666-9773-09b7782cd5cb:
2025-02-28 16:55:46 | bec_lib.scan_items | [INFO] | Received scan segment 97 for scan c6da9a68-93d3-4666-9773-09b7782cd5cb:
2025-02-28 16:55:46 | bec_lib.devicemanager | [INFO] | Received new ScanStatusMessage with ID c6da9a68-93d3-4666-9773-09b7782cd5cb
2025-02-28 16:55:46 | bec_lib.scan_items | [INFO] | Received scan segment 98 for scan c6da9a68-93d3-4666-9773-09b7782cd5cb:
2025-02-28 16:55:46 | bec_lib.scan_items | [INFO] | Received scan segment 99 for scan c6da9a68-93d3-4666-9773-09b7782cd5cb:
2025-02-28 16:55:46 | bec_server.data_processing.dap_service_manager | [INFO] | Processing dap request metadata={'RID': 'c6da9a68-93d3-4666-9773-09b7782cd5cb', 'data_x': array([-3.83653352, -3.42978898, -3.02733289, -2.61855333, -2.23051767, -1.82042259, -1.42034153, -1.00283438, -0.60786926, -0.19622319, 0.19571466, 0.60686626, 1.00752345, 1.41397766, 1.8259892, 2.21554021, 2.6309497, 3.04016401, 3.43636848, 3.84773575, 4.24830685]), 'data_y': array([104, 93, 96, 107, 96, 96, 102, 106, 104, 97, 94, 98, 95, 108, 103, 92, 105, 95, 108, 99, 98, 107, 98, 103, 102, 102], dtype=uint32)}, 'class_args': [], 'class_kwargs': {'model': 'GaussianModel'}, 'curve_label': 'bpm4i-bpm4i-GaussianModel'}
2025-02-28 16:55:46 | bec_server.data_processing.lmfit1d_service | [INFO] | fit summary: {'model': 'Model(gaussian)', 'method': 'leastsq', 'ndata':
  
```

log\_panel\_1

Select services TRACE Clear all Fetch history Search: Use regex:  Up

## Ophyd Devices

- New base class to simplify the device integration
- Added possibility to document EPICS signals directly in the ophyd object.


```

cSAXS [20/47] >> dev.eiger.summary()
eiger - Summary of Available Signals
  
```

Name	Data Name	Kind	Source	Type	Description
trigger_input	eiger_trigger_input	normal	SIM:eiger_trigger_input	integer	Trigger Input for detector Possible values: 0 : Auto 1 : Soft 2 : Extern Enable
exp_time	eiger_exp_time	config	SIM:eiger_exp_time	integer	
file_pattern	eiger_file_pattern	config	SIM:eiger_file_pattern	string	
frames	eiger_frames	config	SIM:eiger_frames	integer	
burst	eiger_burst	config	SIM:eiger_burst	integer	
image_shape	eiger_image_shape	config	SIM:eiger_image_shape	array	
write_to_disk	eiger_write_to_disk	config	SIM:eiger_write_to_disk	integer	
image	eiger_image	omitted	SIM:eiger_image	array	

# SwissFEL

## General

- Onboarding 6<sup>th</sup> endstation: Diavolezza 
- New generic and customizable automatic data-processing tool:
  - Monitor sf-daq broker messages for new files → submit slurm job for each

## sf-daq

- Power on/off individual JF modules
- Yet another version change for 2 detectors:
  - Version is (still) part of the detector name
  - Search/replace slightly simplified since last time
- Everything in systemd:
  - Replaced bash script monitoring config files → path units
  - Replaced cron job → timer unit

## **slic**

- github action to build conda noarch package
- Status monitor for sf-daq requests
- Refactored client for sf-daq REST-API
- Cleaned up scans

## **sfdata**

- github action to build conda noarch package

The end 😊