ESRF status update

The detectors landscape at the shutdown

Beamline	Detector	Data rate
ID23-1	Pilatus2 6M	25Hz (400MB/s)
ID23-2	Pilatus3 2M	250Hz (2.25GB/s)
ID29	Pilatus2 6M	25Hz (400MB/s)
ID30-A1	Pilatus3 2M	25Hz (225MB/s)
ID30-A3	Eiger 4M	750Hz (1.04 GB/S)
ID30-B	Pilatus3 6M	25Hz (300MB/s)
BM-29	Pilatus 1M	1KHz

Beamline	Detector	
ID23-1	**Eiger 2 CdTe 16M (mid 2021)**	133Hz (532 MB/s)
ID23-2	Pilatus3 2M	250Hz (2.25GB/s)
ID29	**Jungfrau (PSI) (2022)**	1KHz
ID30-A1	Pilatus3 2M	25Hz (100MB/s)
ID30-A3	**Eiger 4M**	750Hz (1.04 GB/S)
ID30-B	Pilatus3 6M	25Hz (225MB/s)
BM-29	Pilatus3 2M	250Hz (2.25GB/s)

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┌──────────┐      ┌──────────┐      ┌──────────┐      ┌──────────┐
│          │      │          │      │          │      │ Automatic│
│ Detector │ ───> │   Lima   │ ───> │ Storage  │ ───> │ data     │
│          │      │          │      │          │      │ analysis │
└──────────┘      └──────────┘      └──────────┘      └──────────┘
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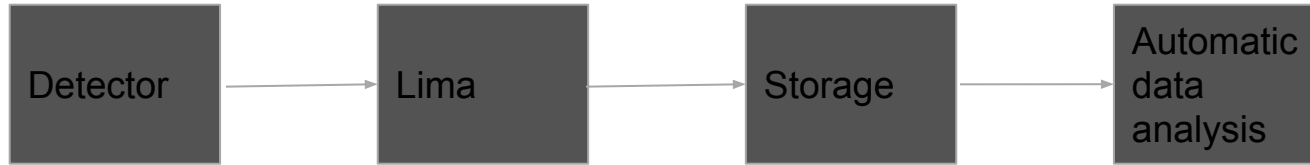
Data analysis and storage are all done in the ESRF data center.
Connected to the BL via fast networking (10 Gb/s)
All analysis done after writing images in the central storage
Works perfectly fine with Pilatus detectors (but too many files)
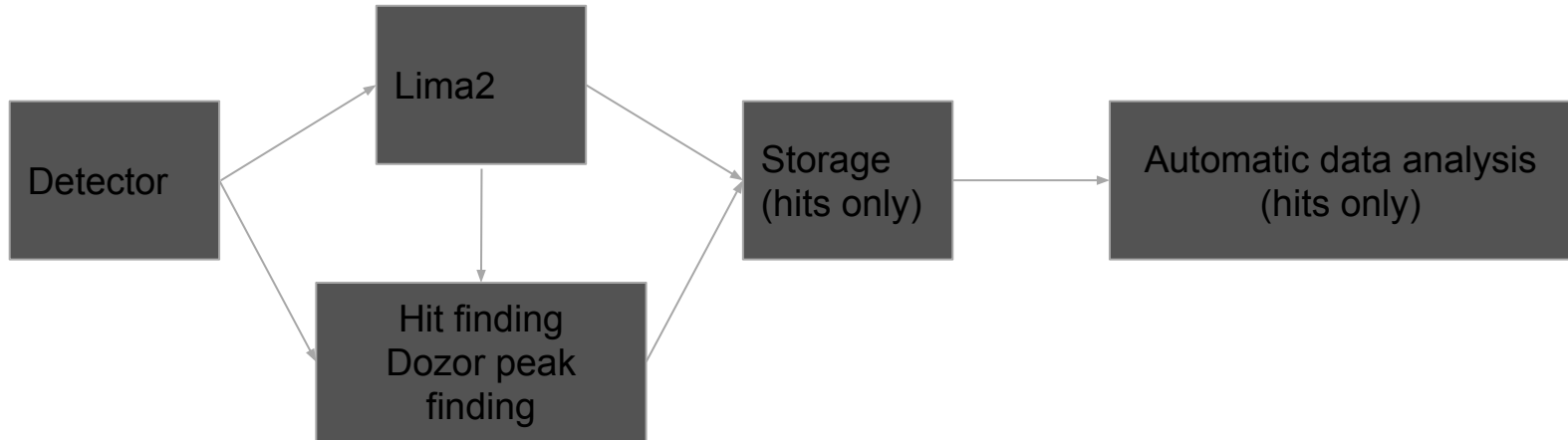
2 use cases: SSX and automatic data collection.
SSX: produces large amount of data
Automated: Beamline is stopped during image analysis

2D characterization relies on DOZOR.
Current version of DOZOR does not handle HDF5.
We spend major time and disk space to convert back to cbf.
Images written twice, storage and file number increase

DOZOR plan to read .h5 (using NEGGIA)

Create less files (we have an arbitrary limit of 10k images per scan now)

Use it for on the flight peak finding in SSX experiments.

Speed up automated data collection