

RO Software Development and Operational Support

LOFAR development roadmap

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LOFAR Activities since last user meeting

In production:

- Northstar fixes
- CEP4
- Poznan LTA
- 3 Polish stations
- LTA portal support set up again
- New LCUs
- CEP3 upgrade
- LOFAR production pipelines are publicly available as docker images



docker

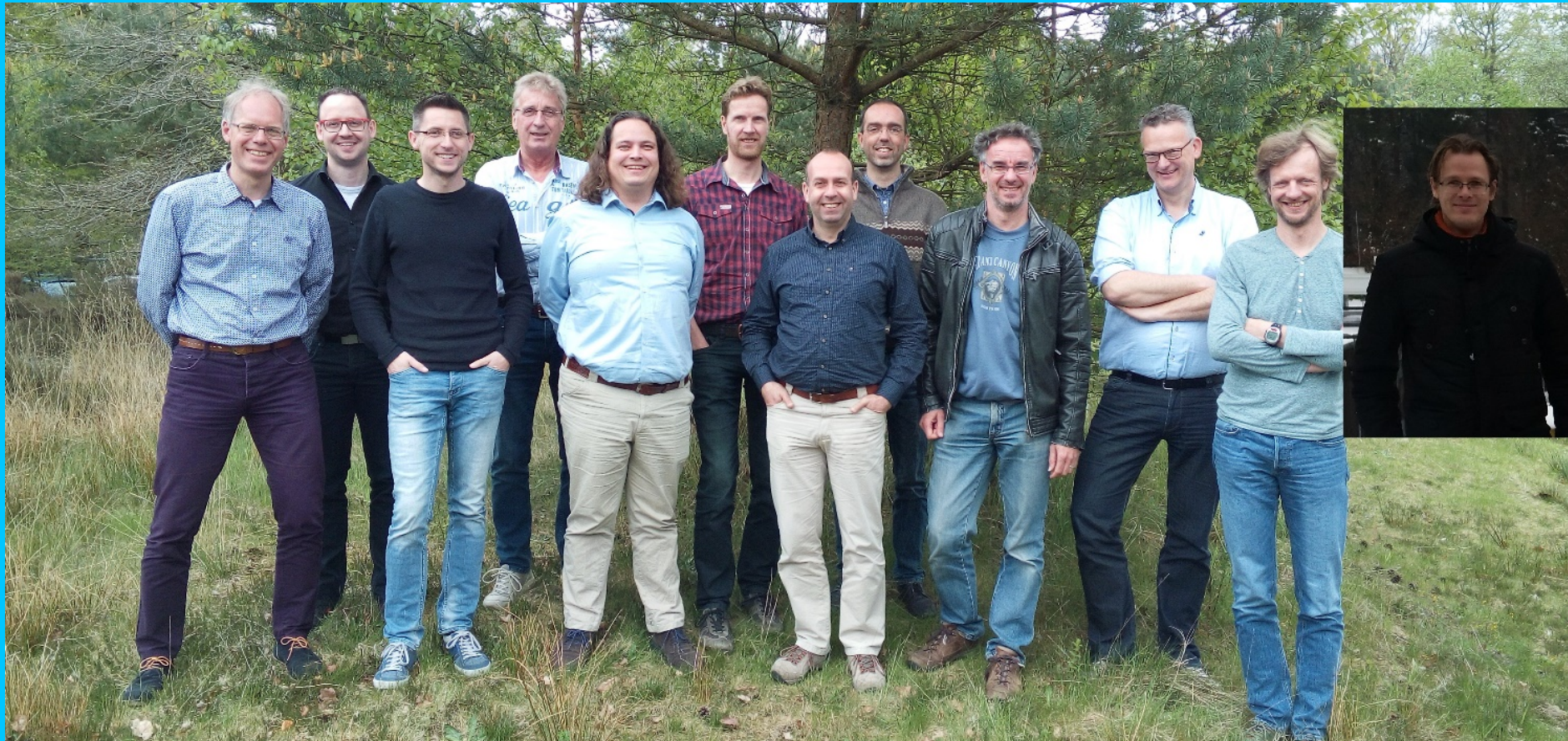
Currently working on

1. CEP4 dataloss and crashing nodes
2. Responsive telescope v1.0
3. New issue tracker and service desk tool: Jira
4. Survey Tier I ingest.:
5. NenuFAR local mode

We do 3 things:

- (S): System administration
- SD: Software Development in 2 Scrum teams
- OS: About 50% support
- Last year: 2 colleagues left, recruited 4 new (Net + 1.7 FTE)
- Planned growth this year: 3.5 FTE

SDOS team



- Finishing current activities
- LOFAR will move to github, allowing anyone to clone and/or contribute
- Start with LOFAR efficiency; 2,5 year project
 - MoM: More flexibility in specification and pipelines
 - Finish RA
- Some impact from Apertif starting up

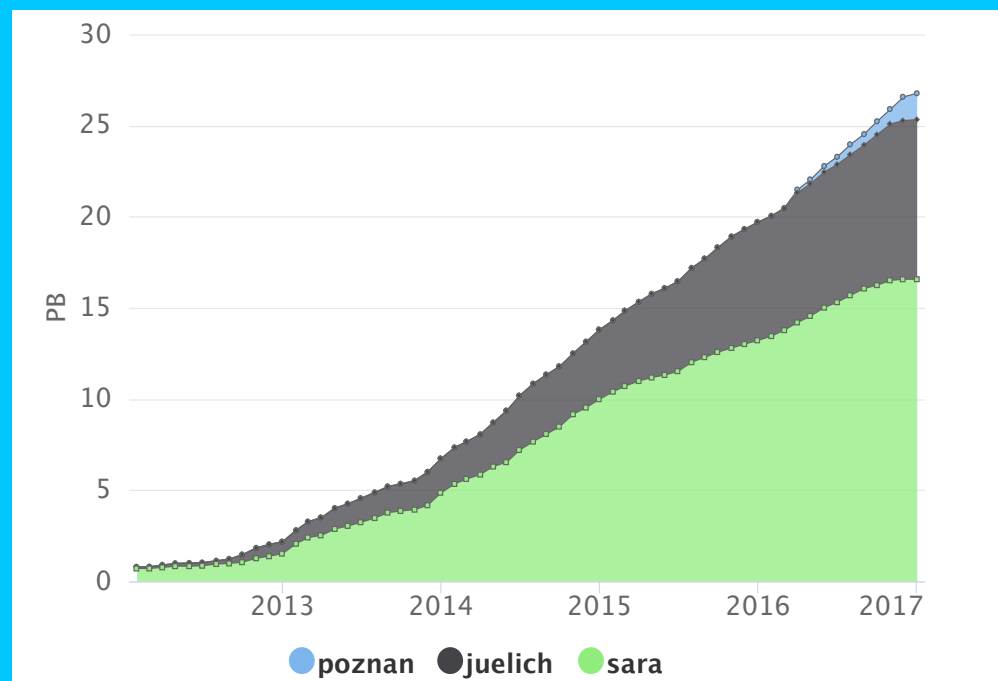
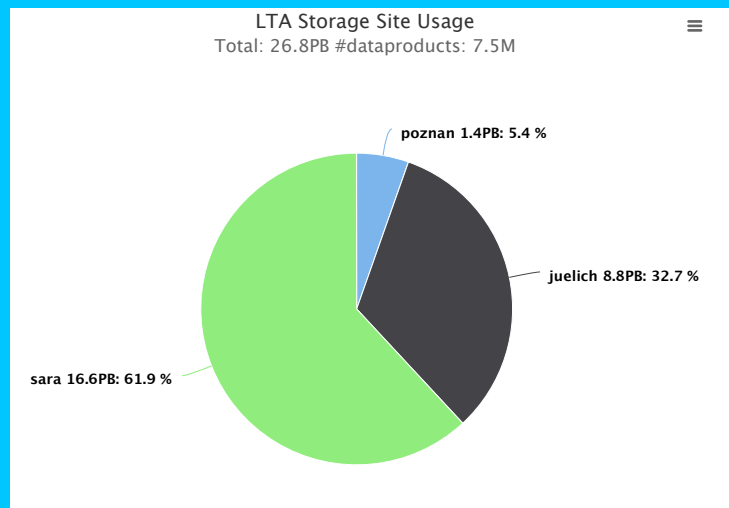
Ongoing discussions/decisions to take



- COBALT 2.0 planning
- TBB support; level of production completeness
- NenuFAR ILT mode
- Pipeline Framework

- Update ingest systems (improved reliability & flexibility)
- Download tests
 - Monitoring availability of services
 - Test dataset on all sites; script to test retrieval speed available
- LTA portal support handed over from RUG to ASTRON
- Internal network FZJ improved (removed bottleneck tape-disk transfers)
- Solved network performance issue affecting HTTP downloads from SURFsara
- LTA processing support (coordinated by SOS)
- User ingest support (coordinated by SOS)

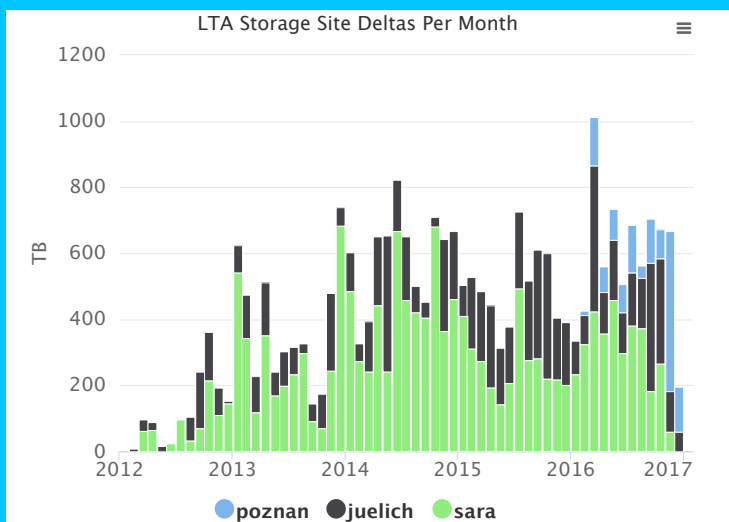
Data stored in the Long Term Archive



Stable growth since 2014

(Mostly calibrated instrument data

(Now at 7 PB per year



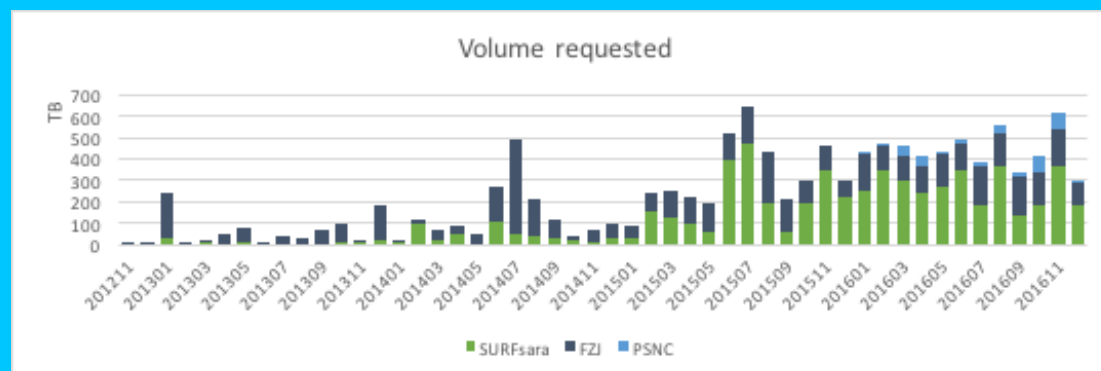
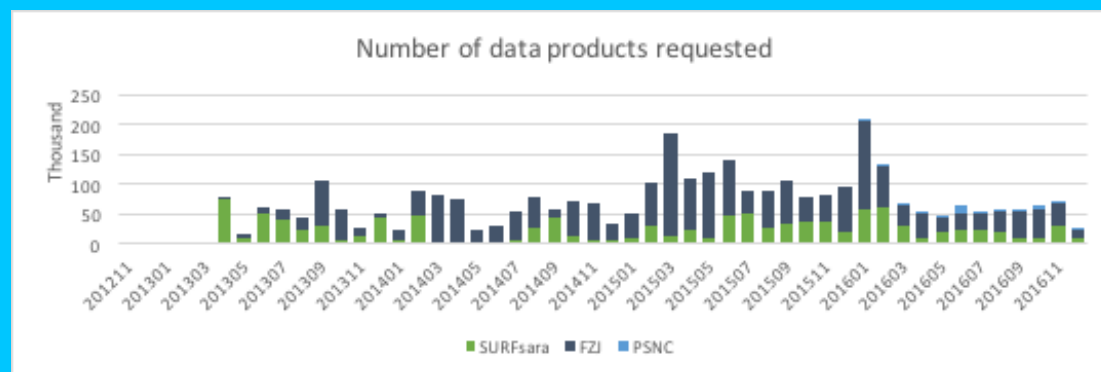
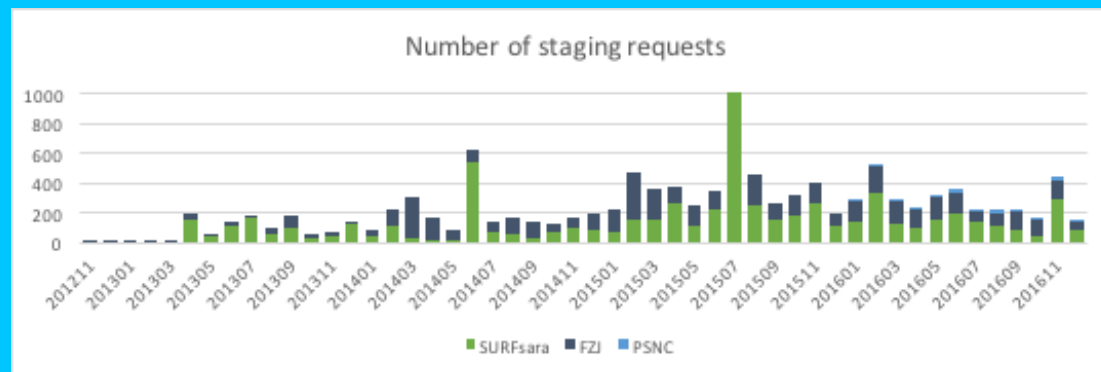
Data retrieval

User requested data

- Processing LOFAR data challenging in early years
- Large scale production of scientific data started
- 2016: 80% of ingested volume requested
- These are mostly not science ready data

Retrieval challenges

- Small data products
 - Protocol overhead
 - Not suited for tape
- User-side network
- Long staging times



- 493 accounts associated with 320 LOFAR projects
- 190 accounts used to request data (map below)
- 64 registered personal grid certificates (plus 30 expired)

