

SMHI MARS infrastructure hosted at NSC

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NSC / SMHI collaboration

The National Supercomputer Centre (NSC) at Linköping University is hosting several compute and storage resources on behalf of SMHI. Among these are both the MARS servers and the forecast systems that archive operational data in MARS. On the MARS side this collaboration began in 2007.

MARS Servers

Technical data

Two servers, one for operational data and one for research data. Same hardware specs for both. Are due for replacement in 2017.

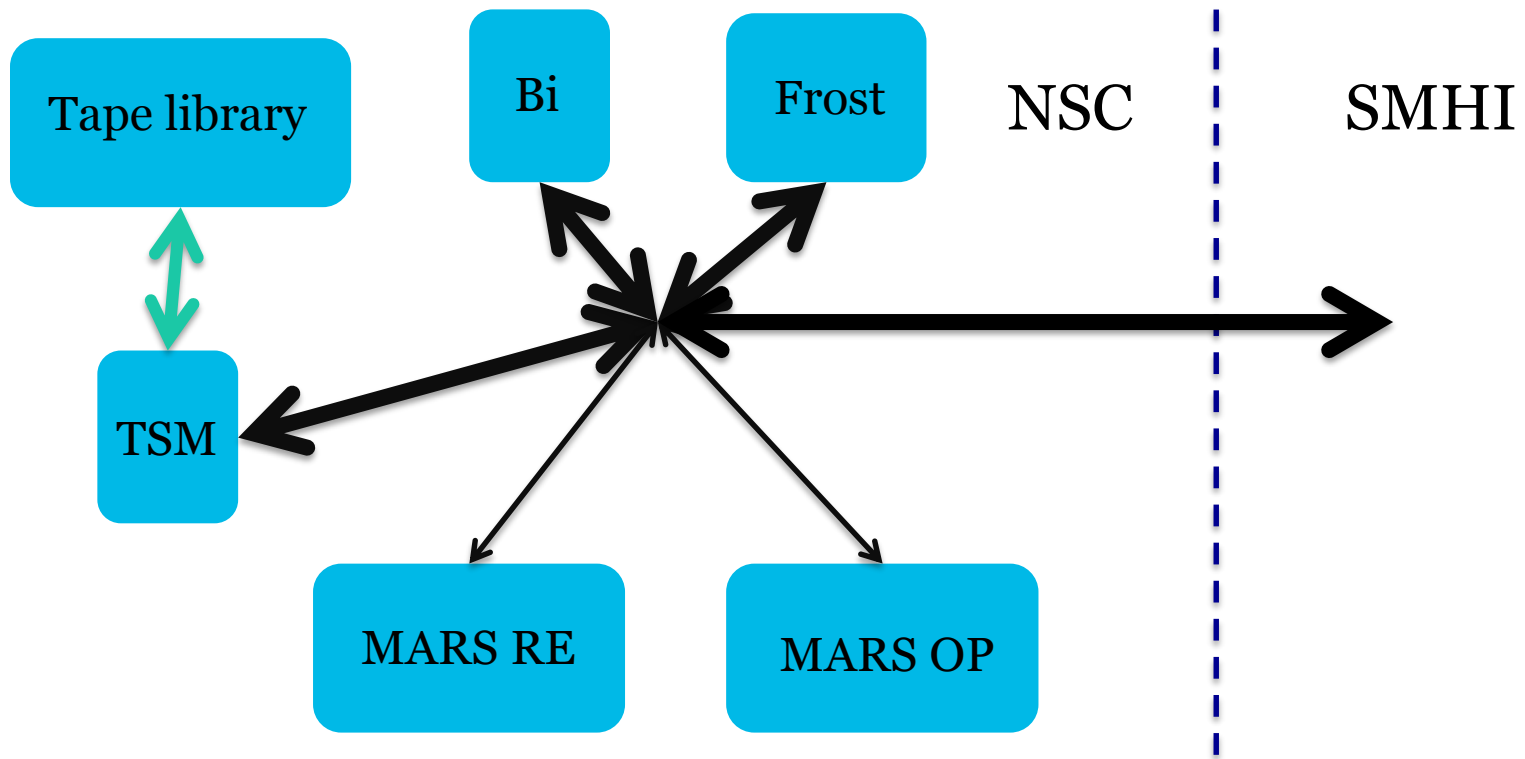
- DELL R510
- Intel Xeon E5620, 8 cores, 2.4 GHz
- 24 GB RAM
- 24 TB disk storage for MARS data

Network

Network links

- MARS servers have 1 Gbit/s network links
- TSM server has 10 Gbit/s network link and 8 Gbit/s FC link
- SMHI forecast and research systems (hosted at NSC) have 10 Gbit/s network links
- The network between SMHI (Norrköping) and NSC (Linköping) is 10 Gbit/s

Network sketch



Tape storage

TSM servers

- NSC has four TSM servers in total, one is used by MARS
- MARS shares the TSM server with other services
- Data goes straight to tape, but we are testing both storing small datasets and staging incoming data in TSM disk pools

Tape library

- IBM TS3500
- 6809 LTO slots, 4648 data cartridges in the library (old LTO-4 cartridges removed recently)
- 8 LTO-5 drives, 8 LTO-6 drives
- Shared resource, all TSM servers use the same library, no drives are dedicated

EOP

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