

MDSplus Data Migration October 2008

September 29, 2008

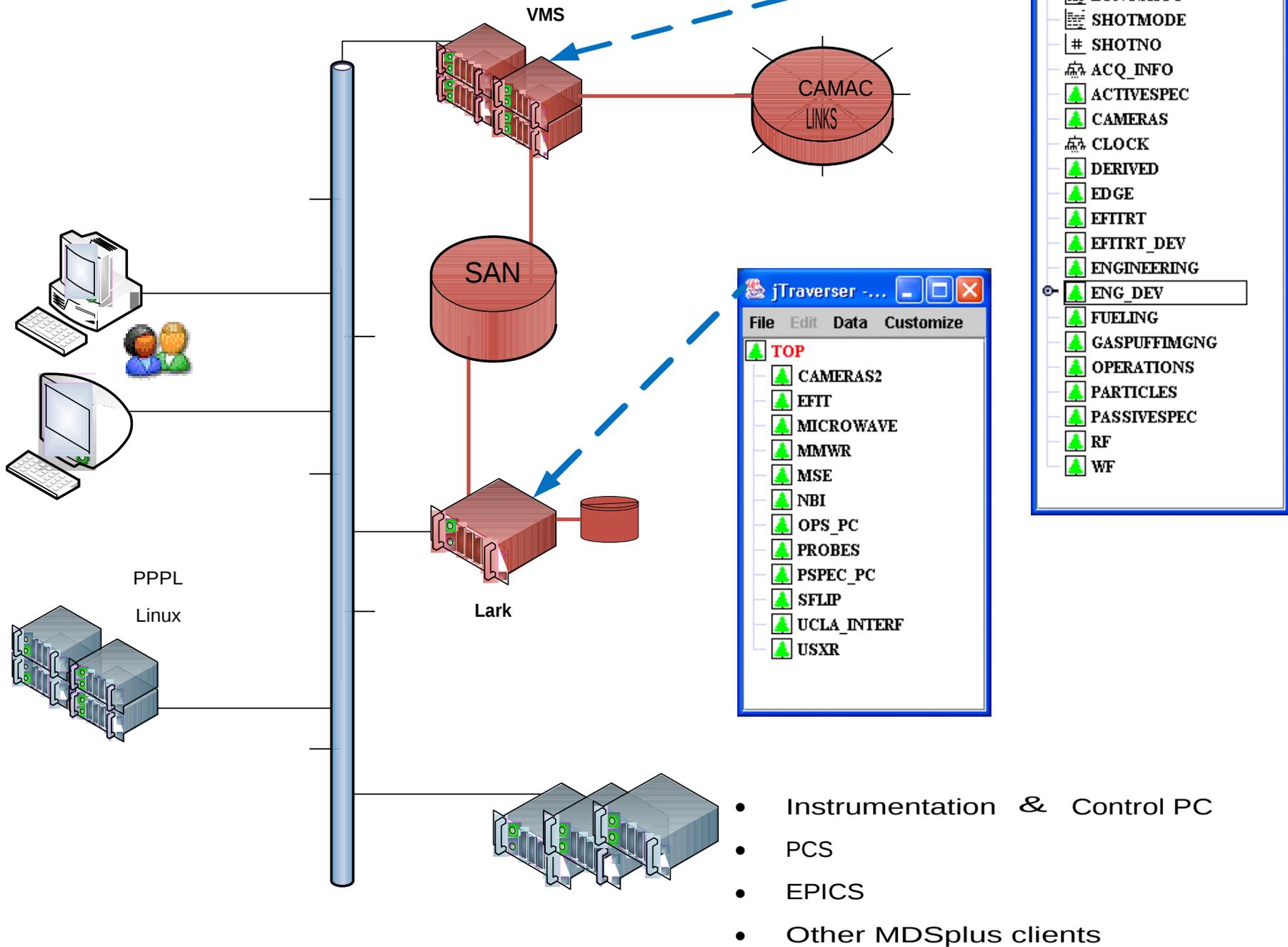
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Overview

- For the next run, including pre-ops calibrations, the NSTX MDSplus data serving and CAMAC I/O will be performed using a new Linux computer called skylark.
- The 3.5 TB of NSTX data that is currently served by VMS will be transferred to Linux (skylark).
- During the transfer process, the MDSplus data will be available from VMS servers in read-only mode: one cannot write data to the trees.
- This is being planned for Oct 14-15.

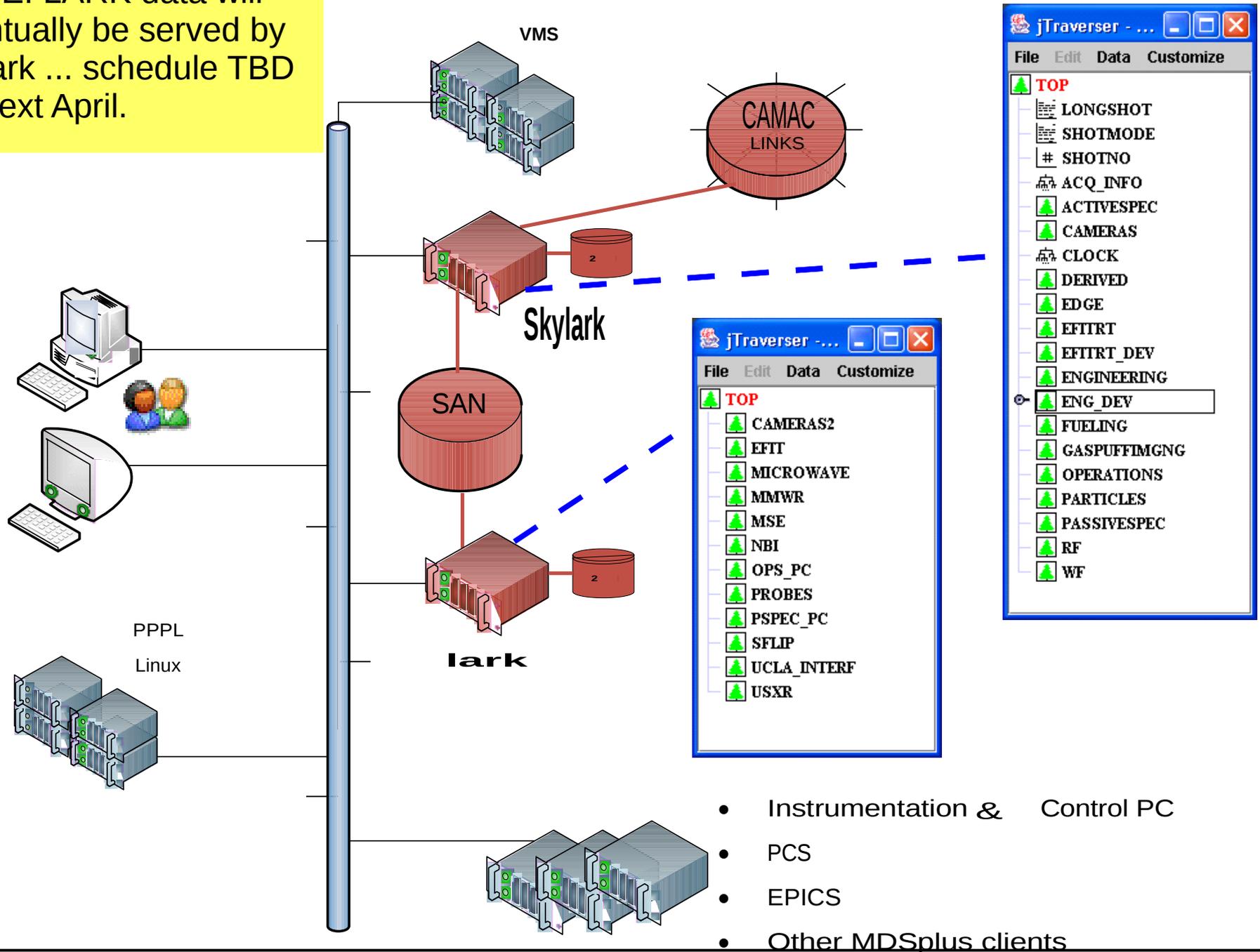
Existing MDSplus Configuration



- Instrumentation & Control PC
- PCS
- EPICS
- Other MDSplus clients

New MDSplus Configuration

NOTE: LARK data will eventually be served by skylark ... schedule TBD for next April.



Core Functions

Skylark Functions

- MDSplus Data serving
- MDSplus Event serving
- CAMAC control

System Types

- PPPL Server-level access (VMS cluster, Linux clusters)
- User/Desktop access.
- Data Acquisition systems (PC's, DT-Acq) access.

Pre-Transfer Activities

About 1/4 of VMS data has already been transferred to skylark for testing. This data will be deleted and re-copied during the actual transfer-week.

- Skylark tree/group-memberships developed and tested.
- Skylark's **transfer scripts** and **validity scripts** refined, tested, benchmarked.
- New (alt-name) VMS and Linux environment-setting scripts/modules developed and tested.
- **User desktop** tree-path-update instructions and files developed, tested, and posted on a web-page.
 - Mac, Windows, Linux
- Testing (from servers and desktops):
 - MDSplus apps: traverser & dwscope
 - core IDL routines
 - Web tools
 - database tools
- Develop and test backout plan.

Transfer-Week Schedule

- Tuesday October 14 (AM):
 - VMS MDSplus servers stopped on all VMS nodes (users disconnected from MDSplus servers).
 - Tree files put into read-only mode.
 - VMS MDSplus servers restarted.
 - Automated VMS to Linux transfer begins.
 - Automated 'quick' transfer-validity routines begin.
- Wed, Oct 15 (PM)
 - VMS to Linux transfer completes.
 - Automated 'quick' transfer-validity routines complete.
 - Automated 'deep-scan' transfer-validity routines start.
- Thu, Oct 16 (AM)
 - VMS MDSplus servers stopped on all VMS nodes (users disconnected from MDSplus servers).
 - Revised VMS and Linux environment-setting scripts/modules put online.
 - Users login and use **skylark** for MDSplus serving.

Post-Transfer Activities

- Automated 'deep-scan' transfer-validity routines complete.
- Field user complaints.
- Continue porting and testing of CAMAC I/O and remainder of project (next slide).
- After a few weeks
 - Preserve a complete NetBackup snapshot of all VMS MDSPlus disks (3.5 TB).
 - starting with oldest data/disks, re-use VMS SAN drives for skylark and lark:
 - Unmount VMS drives that hold MDSplus data.
 - Delete files, reformat for Linux, present to skylark/lark.

Schedule

Task Name	Start	Finish	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Diagnostics Linux port & lab test	Jul 1 '08	Sep 16 '08	■								
online test with Physicist	Aug 4 '08	Nov 21 '08		■							
Skylark prep	Aug 11 '08	Sep 17 '08		■							
FDR	Aug 21 '08	Aug 21 '08									
Tree Data VMS-> Skylark	Sep 29 '08	Oct 7 '08				■					
CSD client software rev & test	Oct 6 '08	Oct 23 '08				■					
Data Management	Oct 13 '08	Oct 30 '08				■					
PreOps/Calib testing	Nov 3 '08	Dec 26 '08					■				
Diagnostic/Ops Shakedown	Jan 5 '09	Feb 27 '09							■		
APS	Nov 17 '08	Nov 21 '08					■				