



NUC

21.11.2023

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HH, 21.11.2023

NUC – formal changes

New members and change in chairing

- .Dave has accepted new obligations as a computing coordinator for the global atlas group and is even more busy than before
- .Thanks for chairing this meeting for the last years !
- .His representation for atlas will go over to Stephen Jiggins – welcome !
- .Chairing could be done by IT if OK for everyone
- .Frequency of NUC meetings: aim for every 1 – 2 month and keep it as informal as possible
- .Always possible to initiate a NUC meeting by any of the members if feeling is we need one for whatever reason !

NAF Software

Condor/Jupyter

- .Powermanagement (automatic shutting down of idle nodes) is in place and working now
- .Some older nodes still problematic and need individual tweaking or disabled for powercycling
- .Some hickups in Jupyter notebooks in the last couple of weeks due to powermanagement, a broken switchport and some smaller bugs – should all be fixed now !

Version Changes upcoming

- .Significant changes in 2024 upcoming
- .Operating System CentOS 7 → Redhat 9
- .Condor 9.X → 23.0
- .Legacy software depending on EL7 can only be run containerized in userspace
- Users have to prepare migrating to native OS or for containerization
- Will provide generic EL7 container for some time(*)
- (*) watch out for will-not-fix security issues critical also in userspace

NAF Storage

GPFS/DCACHE

dCache:

- Updates to next Golden Release: 9.2 for the Data Challenge 2024 (no OS reinstall yet)
- Needed for full WLCG token support and XrootD-transfer monitoring
- CMS done, ATLAS and DESY in December or January
- Repeated issues with excessive usage patterns from ATLAS/CMS users
- Began major restructuring of the Belle II storage spaces with the end of the recalibration

New Hardware

CPU nodes

- .This year's generation with Intel Xeons
 - 2x 56 native cores or 224 hyperthreaded cores, respectively
 - Turned out pretty powerful :)
 - . ~3200 HS23 (HT) or ~2850 HS32 (native cores)
- .Preparing NAF nodes w/o HT due to user IOPS “challenges”
- .~45 kHS23 in total
 - 512GB memory
 - 3TB NVME mass storage
 - . No driver support for EL7, i.e., EL9-only !
- .New nodes with EL9 + Condor 23
- Rest of the cluster will follow towards CentOS7 EOL

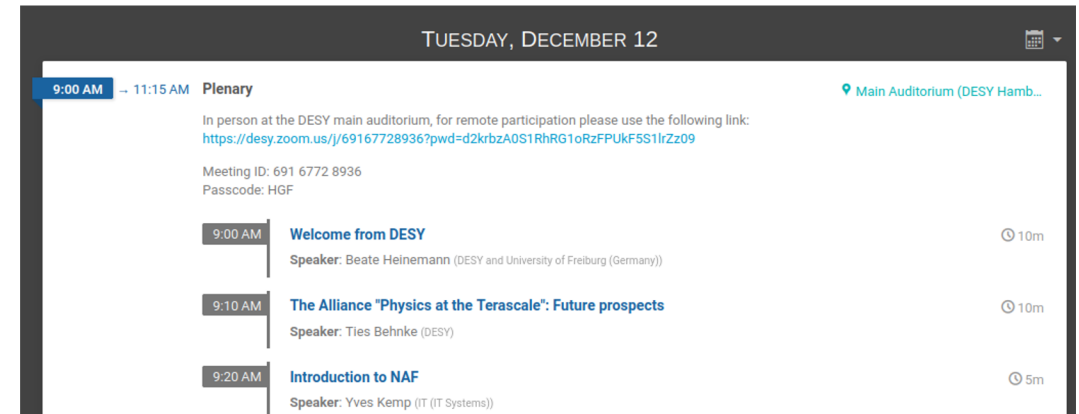
NAF: MFA

- Introduced MFA for access to DESY resources from outside
 - e.g. bastion (ssh), VPN, Web-Mail, Sync&Share
 - NAF no MFA in the first step: External users
 - Now: Experienced equipping external users with MFA
- MFA also for NAF access, political will to speed up deployment
- Technology:
 - Ssh : easy, on short timescale (before Christmas?)
 - Jupyter: needs some investigation ... 2024Q1 ?
 - FastX: needs more investigation
- Is an information of users enough to implement MFA on ssh e.g. on 13.12.2023 ?

TS alliance workshop 12/13-12-2023

Preparation of 'interactive' NUC

- Remember last time (Helmholtz alliance meeting 2018) ?
- Two sessions Q&A at lunchtime and open NUC in the evening
- Q&A somewhat slow but still some good discussions
- 5min introduction to NAF/IDAF on the agenda for tuesday
- NAF slot, including a discussion on new analysis workflows and tools within such a parallel slot
- Possible title: "How would you like the NAF in 2025?"



TS alliance workshop 12/13-12-2023

Possible agenda for parallel session

- .Short introduction of NAF setup (1 slide)
- .Entry points (WGS & Jupyter notebooks)
- Upcoming changes in internal setup of Jupyter notebooks
- .Slots on dedicated servers
- .More ressources (fatter notebooks)
- .Different memory configuration at start up
- .DASK/SPARC for HUGE memory needs
- .What else might be needed ?

TS alliance workshop 12/13-12-2023

Possible agenda for parallel session

- .Host OS

- Will/must be EL9 (ALMA) for new hardware

- Container needed for CENTOS7 workflows

- Apptainer ready and available but usage needs some intervention in the submit syntax

- .Name container path or submit it with the job

- .More automation possible once the actual mapping becomes obvious

- .e.g. “CMS job requests EL7 → lands on ALMA9 node →start CMS EL7 prod container”