LAD'21

DAOS/Lustre Integration

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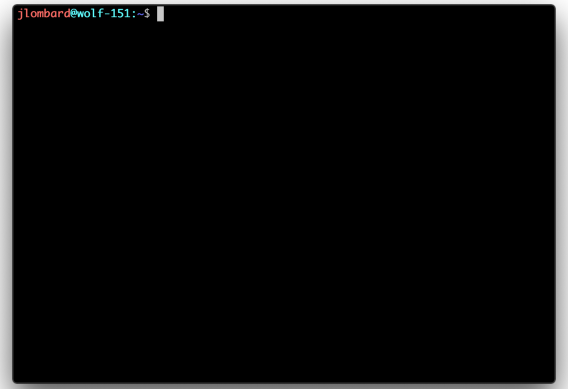
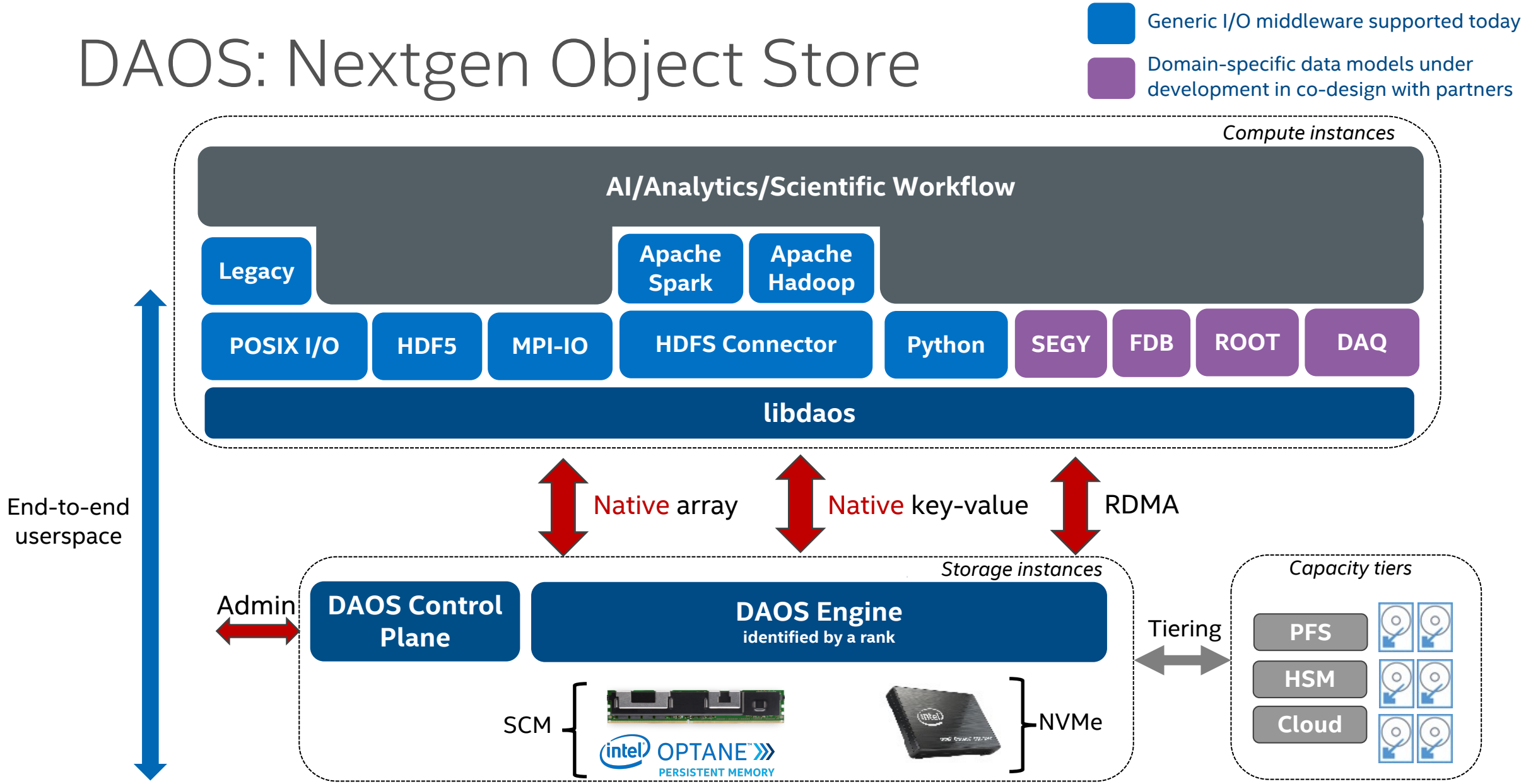
Agenda

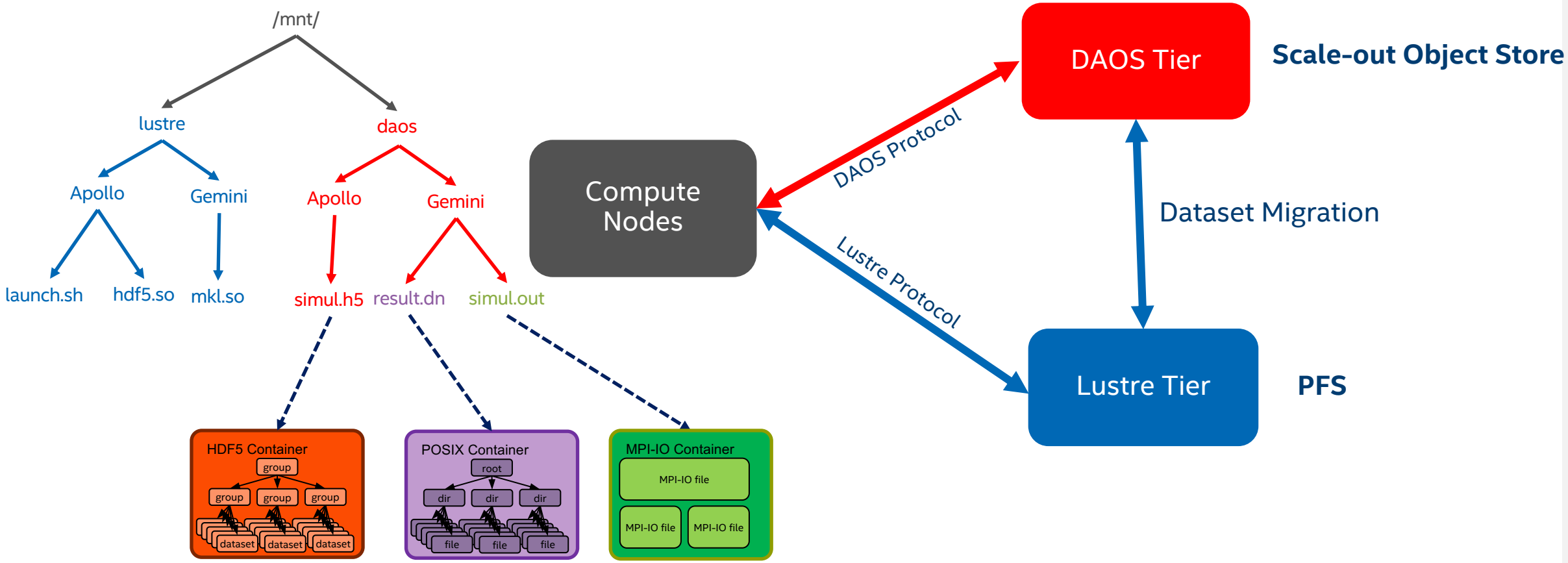
- DAOS/Lustre Integration Update (Johann)
- Demonstration (Bruno)
- Use Case (Kevin)



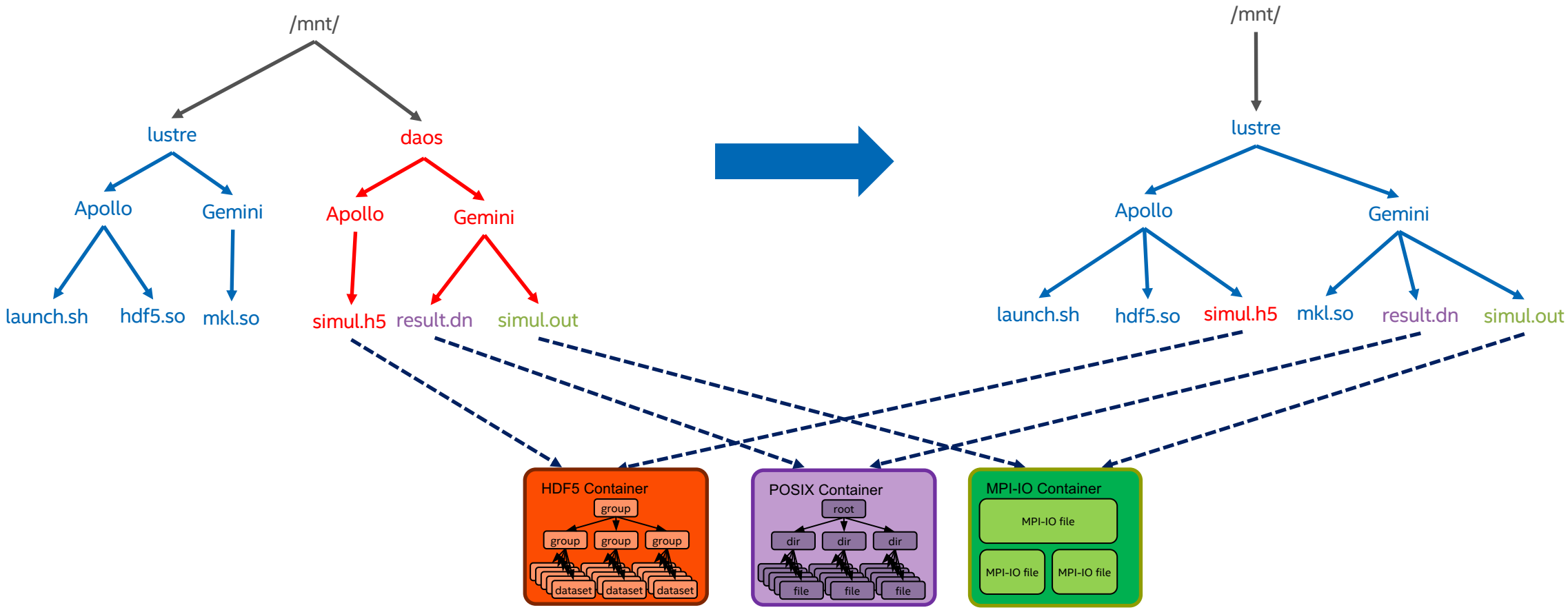
DAOS: Nextgen Object Store



Targeted Storage Architecture

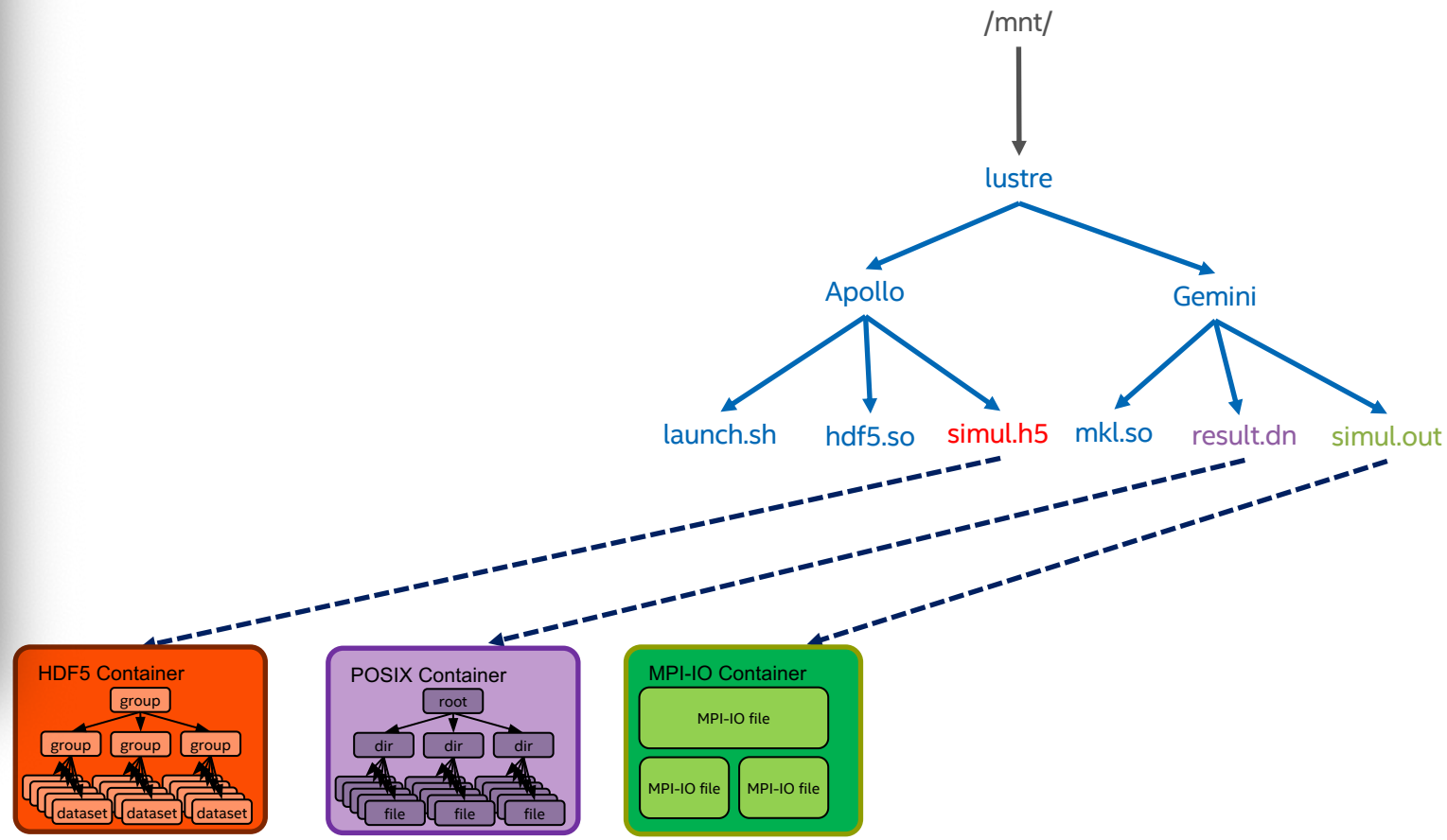


Unified Namespace Concept

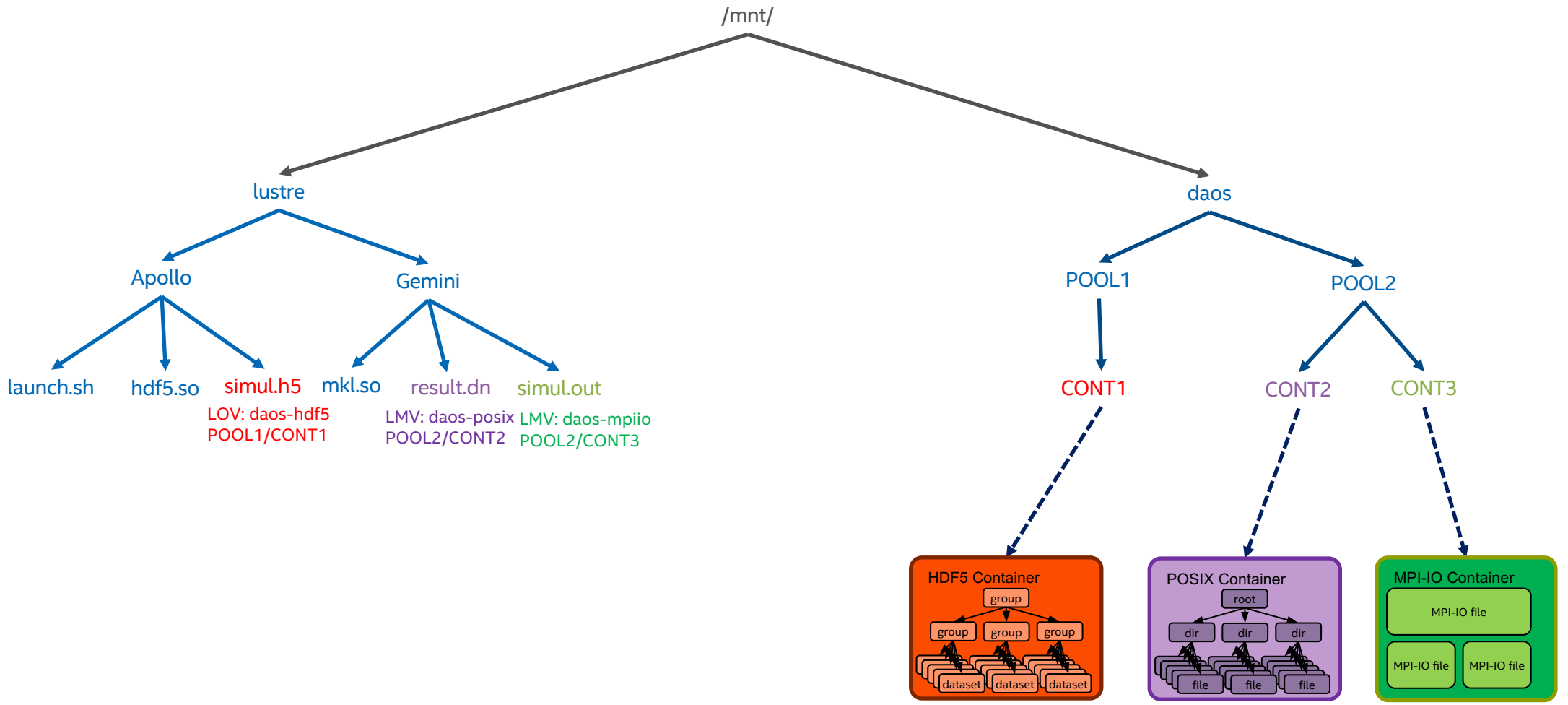


Unified Namespace Concept

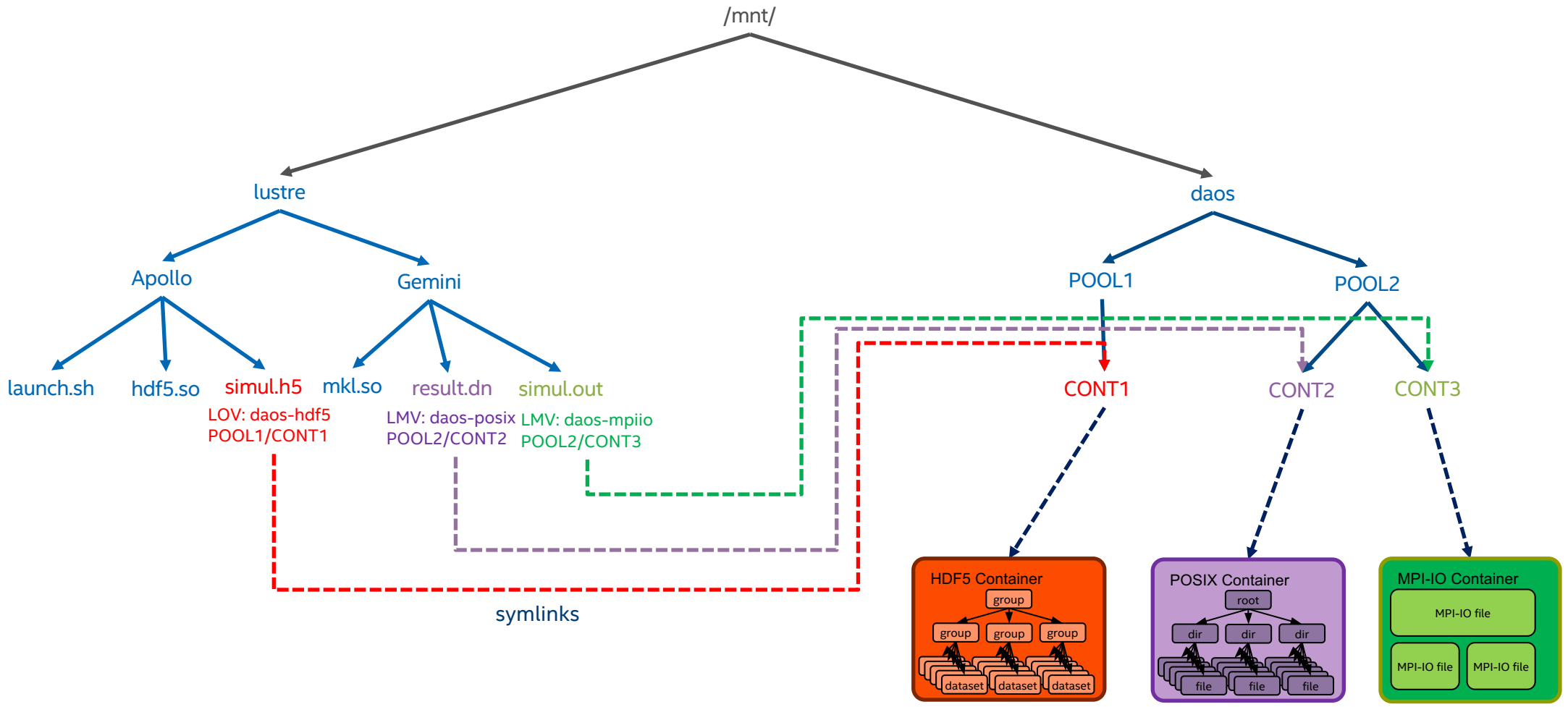
```
jlombard@jprisaca-MOBL:~$ cd /mnt/lustre
jlombard@jprisaca-MOBL:/mnt/lustre$ ls -R
Apollo Gemini

./Apollo:
hdf5.so   launch.sh simul.h5

./Gemini:
mkl.so    result.dn simul.out

./Gemini/result.dn:
dir1 dir2 dir3

./Gemini/result.dn/dir1:
file1 file2 file3

./Gemini/result.dn/dir2:
file1 file2 file3

./Gemini/result.dn/dir3:
file1 file2 file3

./Gemini/simul.out:
file1 file2 file3
jlombard@jprisaca-MOBL:/mnt/lustre$
```



Unified Namespace Implementation



Unified Namespace Implementation



Lustre Changes

- Foreign LOV/LMV
  - On-disk format
  - Lustre API/ioctl() changes
  - Lustre tools changes
  - lfsck compatibility changes
- Expose special files/directories as symlinks
  - Explored auto-bind-mount
  - Client-only changes

Available in 2.13

Available in 2.15

intel