

# A Typical Current Software Stack for NWP/Climate



## ■ Domain semantics

- ▶ XIOS writes independent variables to one file each
- ▶ 2nd servers for performance reasons

## ■ Issues with the Data model in NetCDF4/HDF5

- ▶ Performant mappings to files are limited
  - Map data semantics to one "file"
  - HDF5 shared file format notorious inefficient
- ▶ Domain metadata is treated like normal data
  - Need for higher-level databases like Mars
- ▶ Interfaces focus on variables but lack features
  - Workflows
  - Information life cycle management

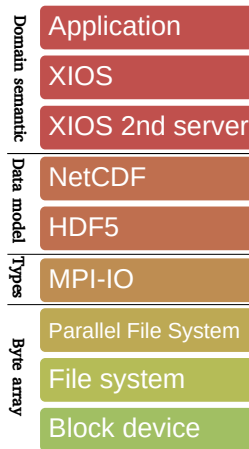


Figure: Typical I/O stack