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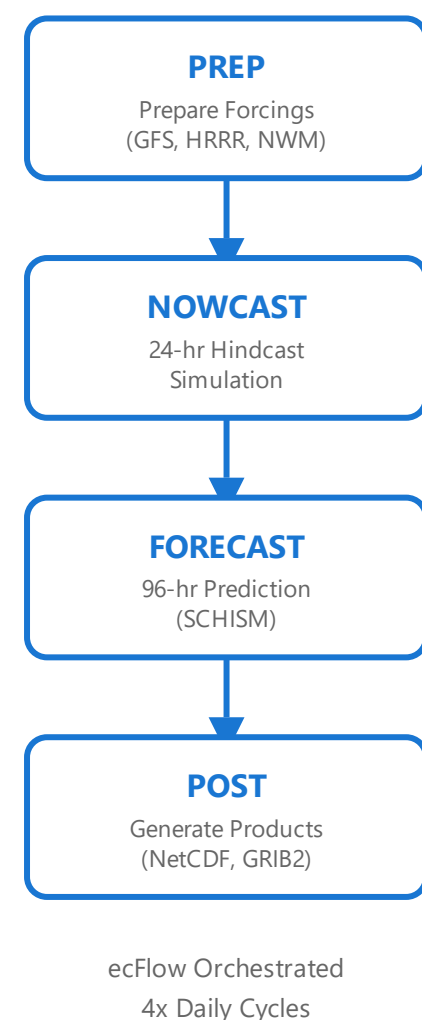
## Objectives

- Replicate WCOS2 environment
- Enable external collaboration
- Maintain operational fidelity
- Accelerate R2O transitions

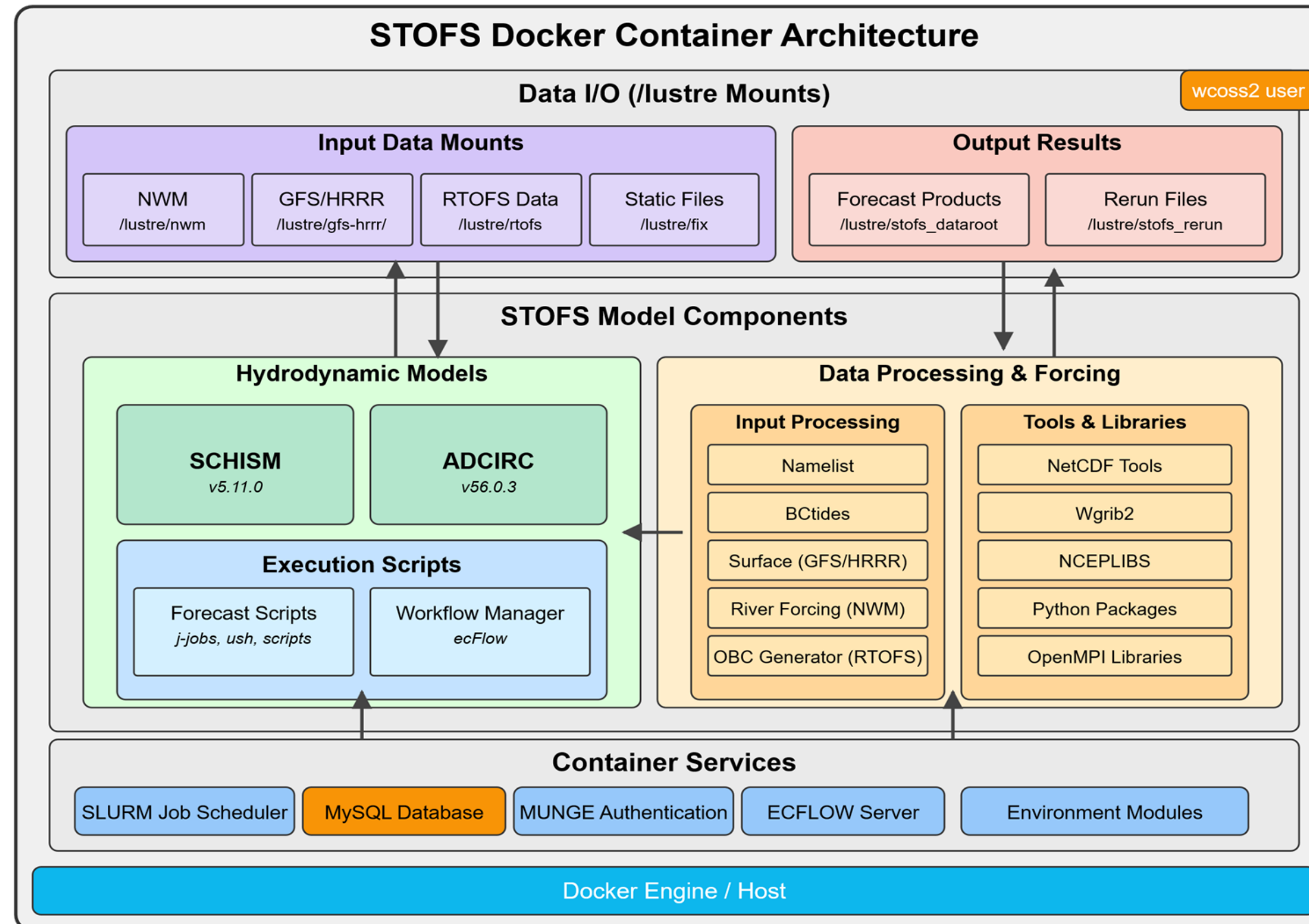
## STOFS-3D-Atlantic

- Operational system for surge, tide, and 3D coastal circulation forecasts.
- Containerization framework first applied to STOFS-3D Atlantic operational forecast system

### STOFS-3D Atlantic Operational Pipeline



## Container Architecture



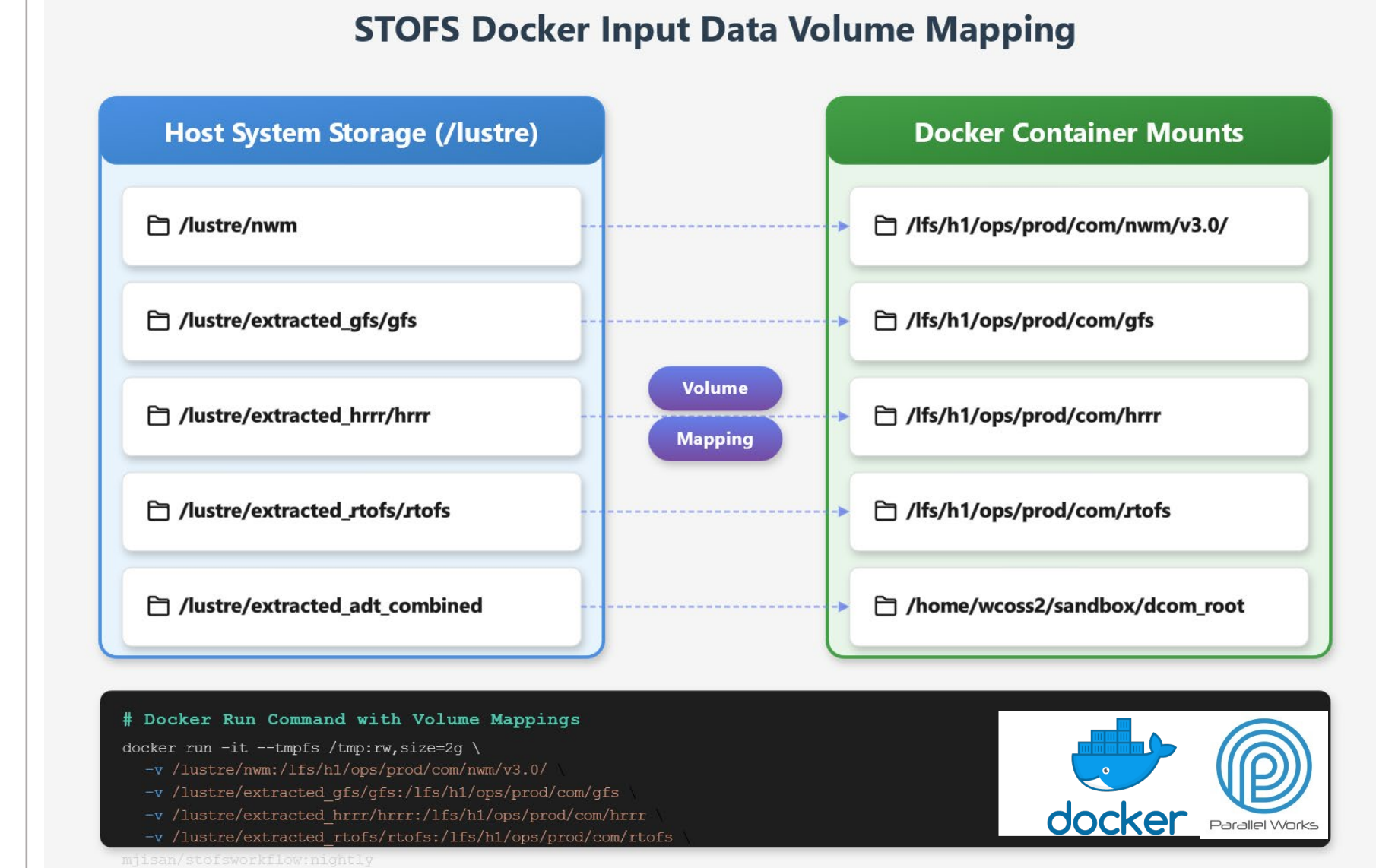
### Features

- Docker containerization
- NCEP software Stack
- SCHISM and ADCIRC models
- Python workflow manager
- CI/CD integration

### Tech Stack

- Rocky Linux 9 (RHEL)
- OpenMPI, NetCDF, WGRIB2
- Python 3.9
- SLURM and ecFlow
- STOFS-specific binaries i.e. tidefac, netcdf2shef etc.

## Data Volume Mapping



## Ongoing Works

### Container Ecosystem Evolution

