

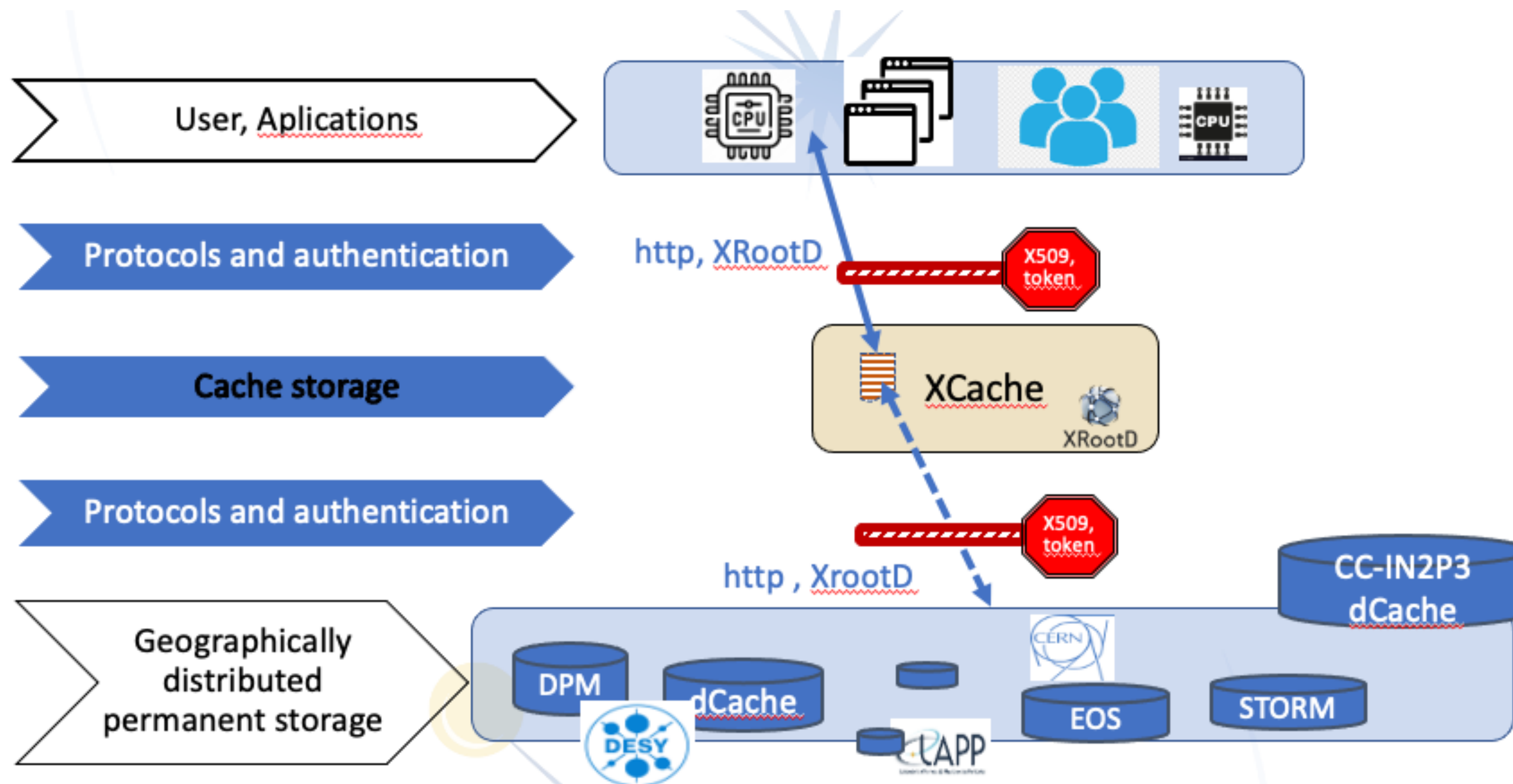
**Centre de Calcul**  
de l'Institut National de Physique Nucléaire  
et de Physique des Particules

**CC-IN2P3**  
**ESCAPE: Site perspective**

**G.Rahal on behalf of CC-IN2P3 team**

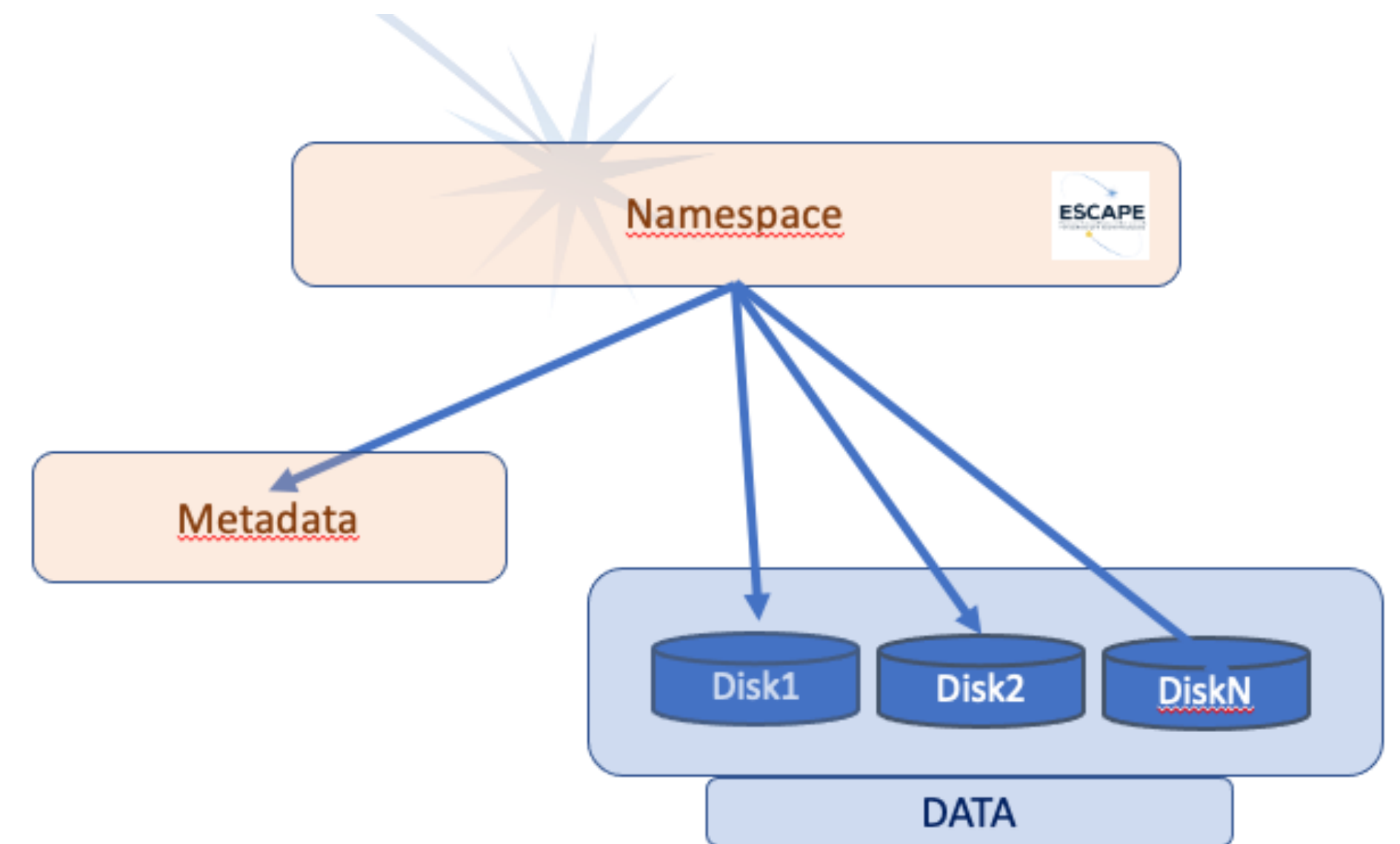
# ESCAPE setup @ CC-IN2P3

- RSE: ESCAPE dCache testbed with ~130TB
- CACHE: Xcache (XROOTD)



# XCache setup @ CC-IN2P3

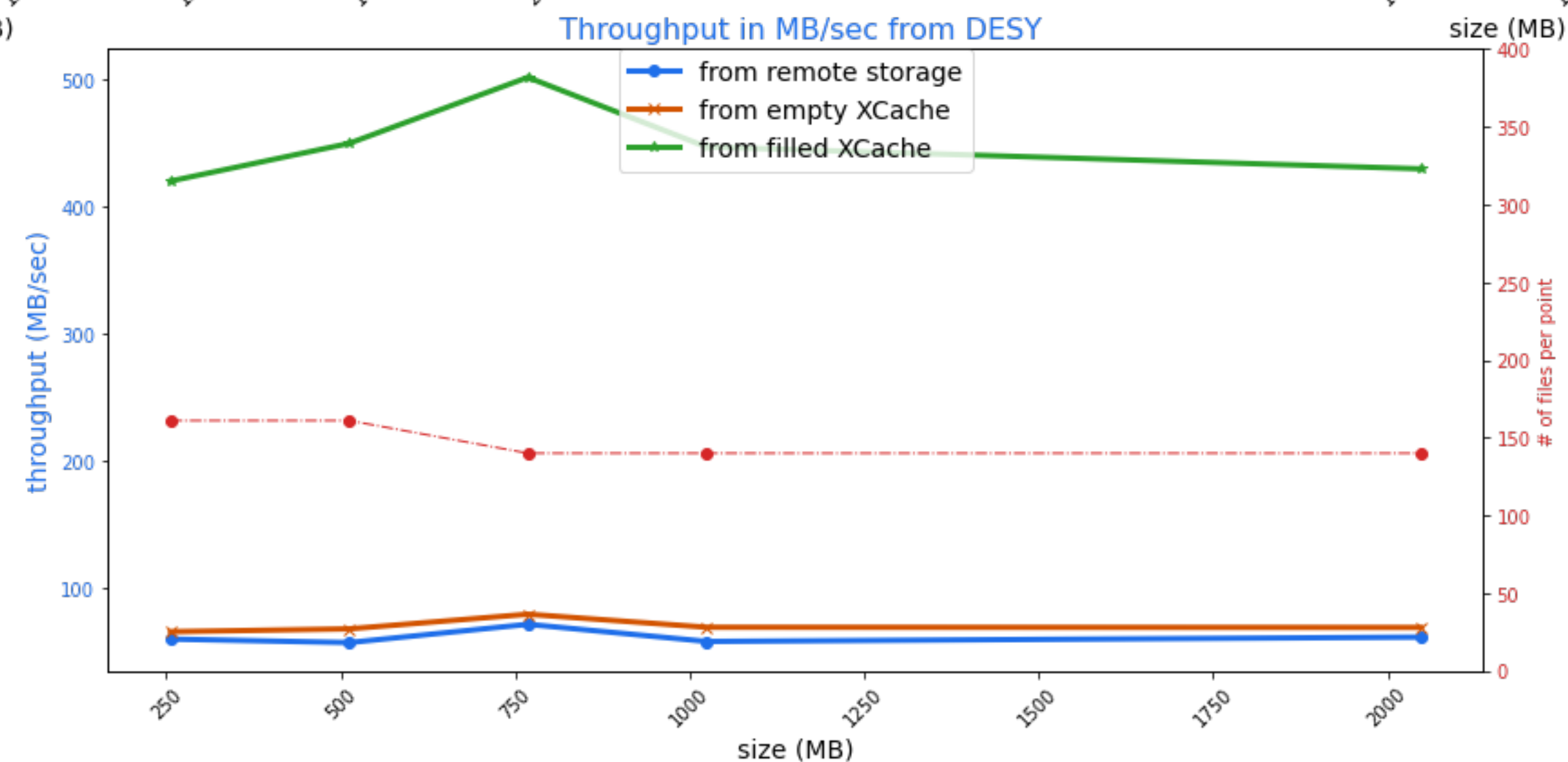
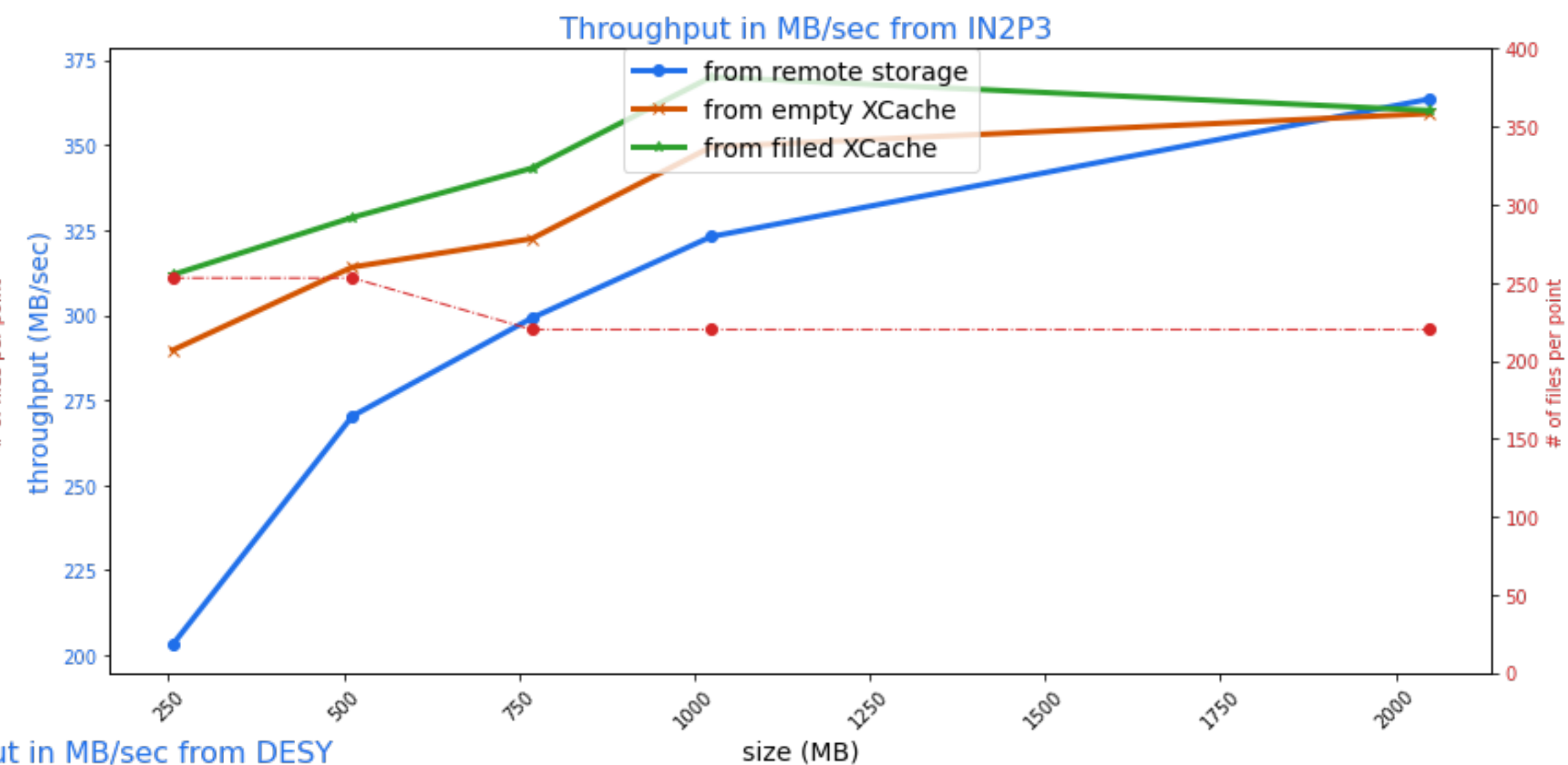
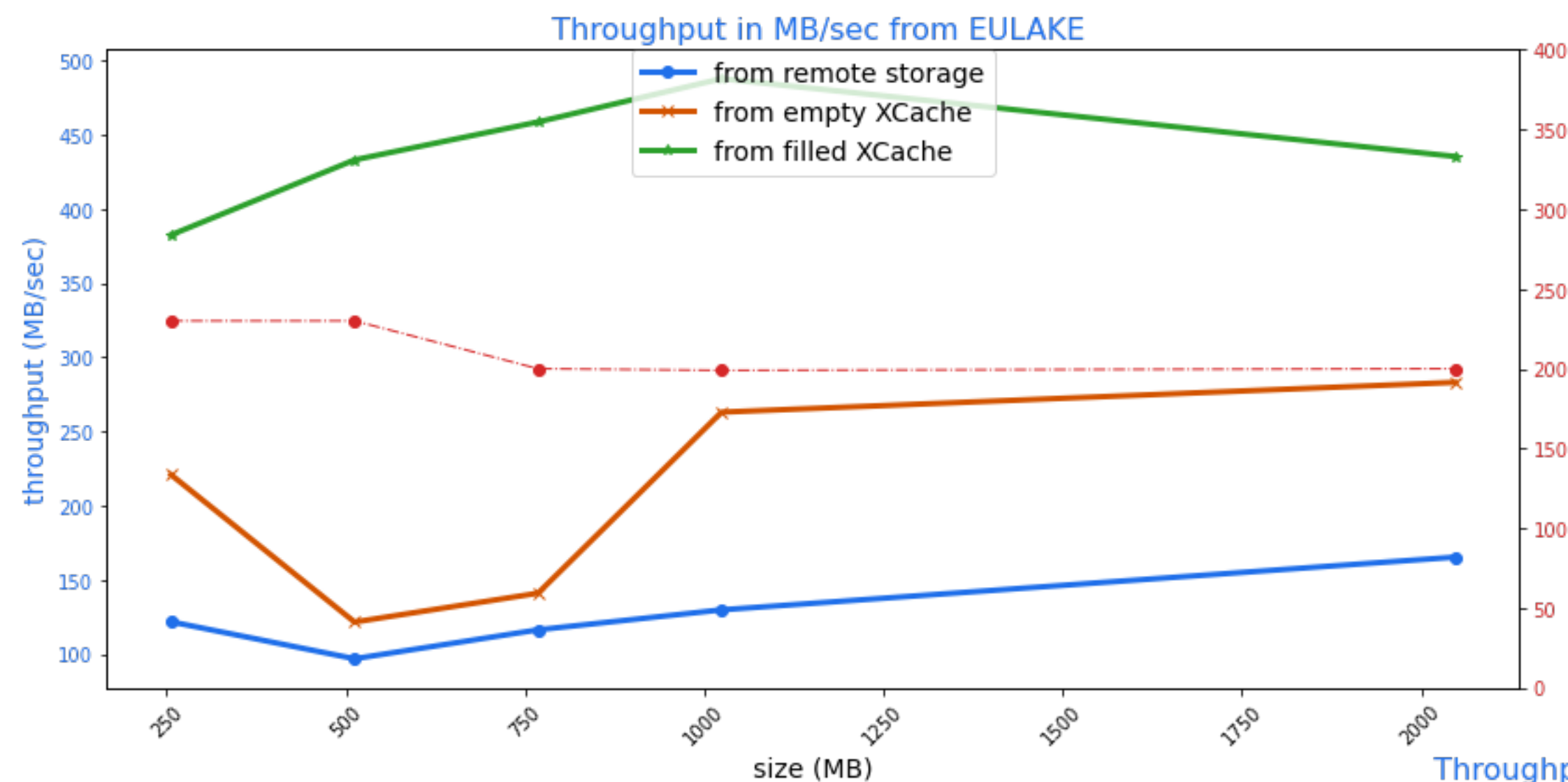
- Xcache instances
  - 1VM, 8GB RAM, 4vCPUs, 80GB disk
    - All data spaces put together
    - Importance of the hypervisor occupancy and QoS optimization
  - 1 Bare metal instance with 32GB RAM and ~130TB Disks
    - Multiple disks
    - Separation of namespace, metadata and data



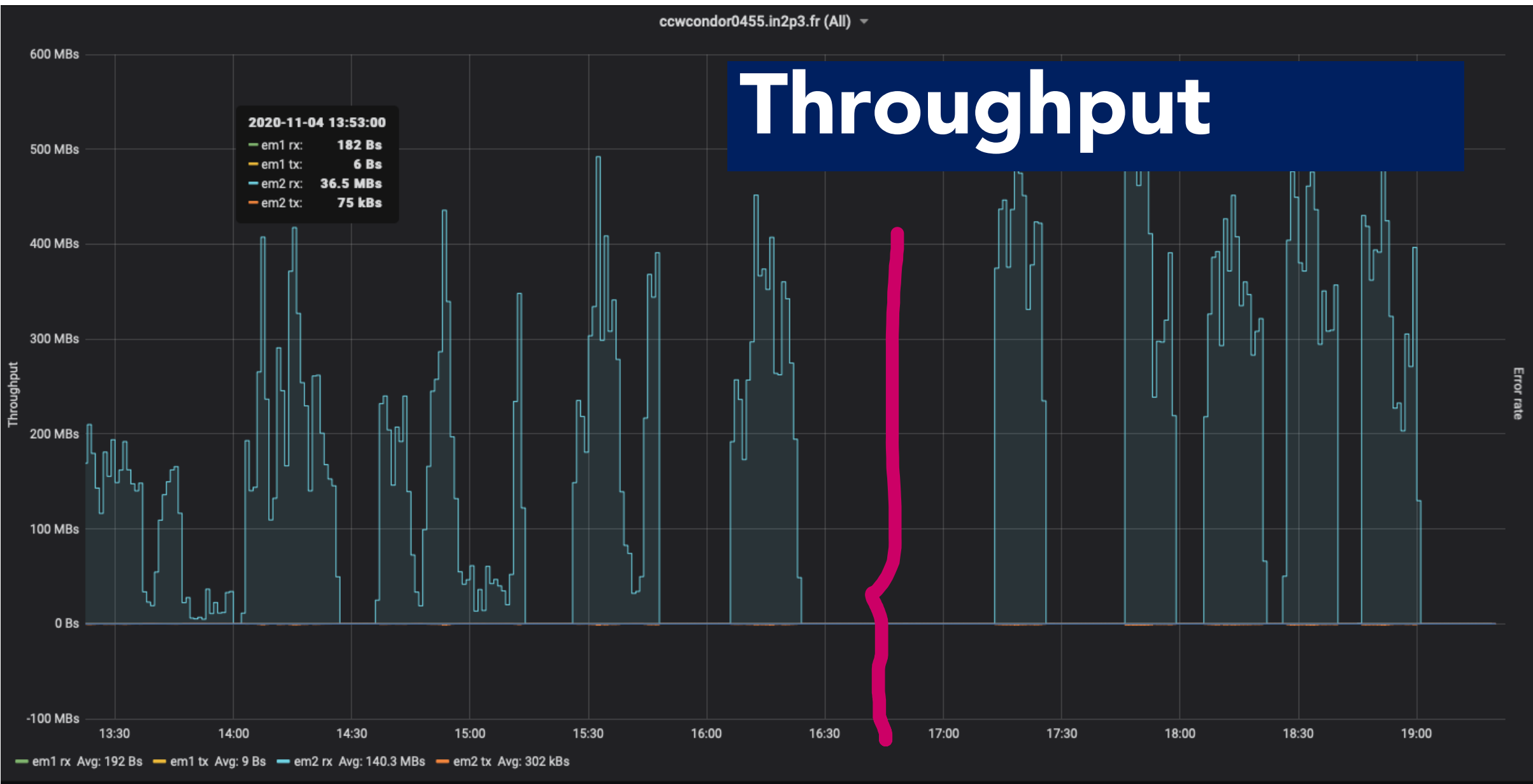
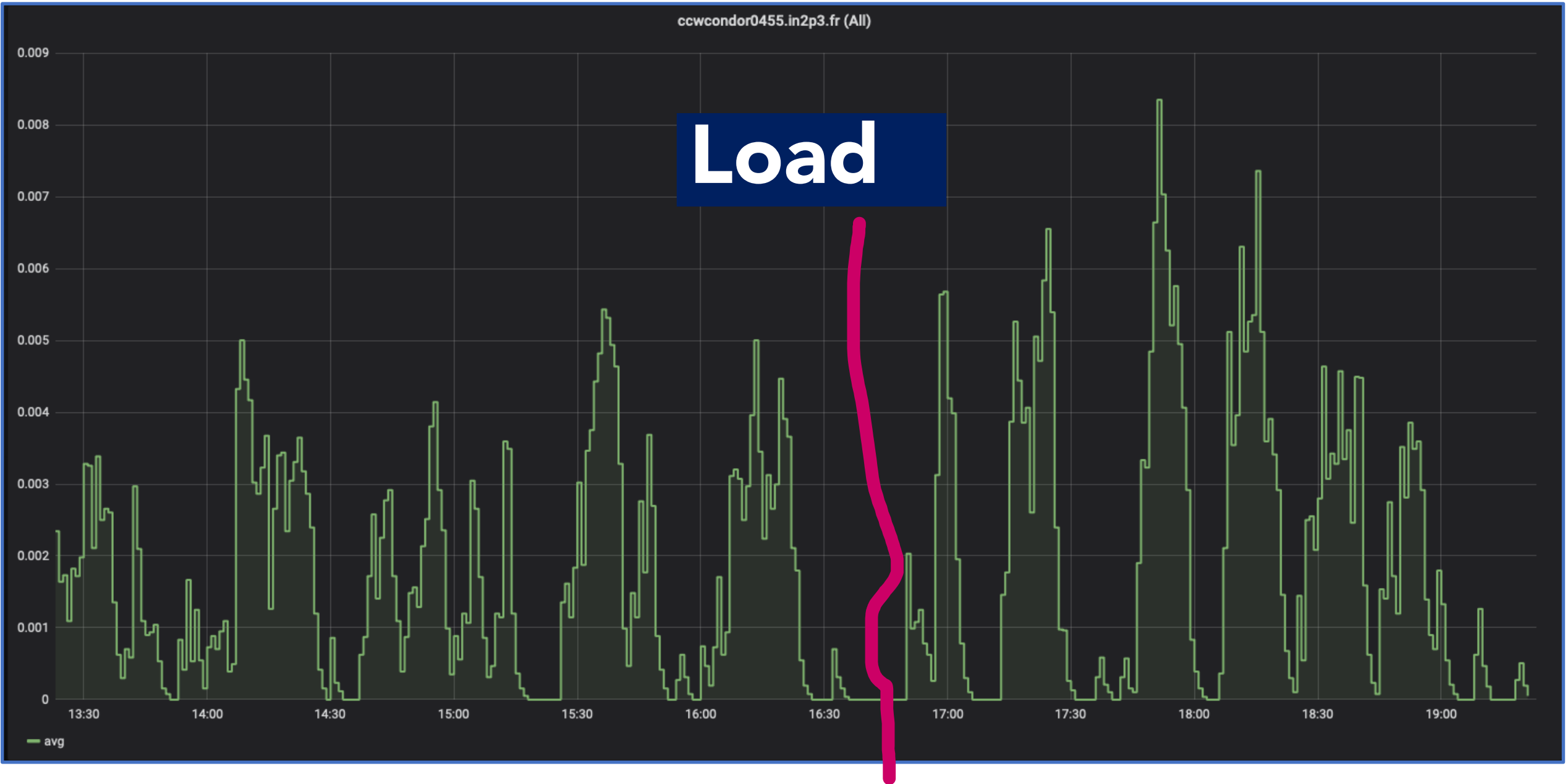
# Xcache setup

- **Containerisation of deployment:**
  - Docker-compose
  - Ansible
  - <https://gitlab.in2p3.fr/CC-Escape/xcache-config>
- **Test setup infrastructure:**
  - Grid jobs with HTCondor or local batch jobs UGE
  - RUCIO: Distribution of data to multiple sites (CC, DESY, CERN, LAPP)
  - Collect and compare throughputs for different parameters: filesize, data availability or not in xcache, distance of the remote sites.

# Some of the tests



# Load and throughput on the worker node



| EULAKE                                      | CCIN2P3                                       |
|---------------------------------------------|-----------------------------------------------|
| 2020/11/4 13:00 to 16:00                    | 17:00 to 19:30                                |
| From RSE: 120MB/sec<br>Full Xcache: 439MB/s | From RSE: 290MB/sec<br>Full Xcache: 340MB/sec |

- Tests with experiment use-cases:
  - Run analysis frameworks to compare access from remote RSE and through the Cache: LSST, CTA, ATLAS or others.
- Use Token-based AuthN/Z access
  - Try to validate both token and X509
  - Still to understand service deployment without root access

**Thank you**