

Data Centers Roles and Services

João Pedro Athayde Marcondes de André

January 22nd, 2021

Introduction

- Overview of tasks & services
- MoU status
- SLA status

JUNO ‘needs’

- JUNO “main needs”:
 - ▶ Storage capacity for data
 - ▶ Storage capacity for “data backup”
 - ★ plan to use European replica of data as backup
 - ▶ CPU for data processing & simulation
 - ★ key point for DCI!
-
- “Additional” requirements for distributed computing
 - ▶ Distributed software → CVMFS, (Singularity)
 - ▶ Job submission tool → DIRAC
 - ▶ User authentication → VOMS, (IAM)
 - ▶ Global file management → DIRAC File Catalog, (RUCIO)
 - ▶ Monitoring → PerfSONAR, ... (global interface?)
 - ▶ Redundancy

Current MoU status & definitions

- Computing MoU still under discussion at funding committee
- MoU defines different types of data center:
 - ▶ Host: IHEP
 - ▶ Raw data centers: IHEP, CC-IN2P3, CNAF, JINR
 - ★ providers for bulk storage
 - ▶ Regional data centers: IHEP, CC-IN2P3, CNAF, JINR, MSU
 - ▶ Monte Carlo production centers: IHEP, CC-IN2P3, CNAF, JINR, MSU
 - ★ providers for bulk computing power
 - ★ despite name, can be used for “analysis” tasks also
- Main task of MoU: supply JUNO “main needs” from different sites
 - ▶ On tables, pledges related to Tape, Disk and CPU availability per year
 - ▶ Requirement to safeguard data (ie backup) stated in MoU
- MoU also foresees organizational strategy:
 - ▶ Computing Steering Group (CSG): estimate required resources and evaluate usage
 - ★ includes people from Computing Centers
 - ▶ JUNO ISC: validates planning on required resources/usage
 - ▶ JUNO FC: defines anything money-related

SLA status

- In MoU it is foreseen that “Detailed service level definitions with key metrics will be elaborated and maintained by the CSG.”
 - ▶ This is the role of the SLA
 - ▶ SLA still mostly under discussion
- Discussion based of SLA annexes of WLGC MoU examples
- Needs to define:
 - ▶ Network quality requirement
 - ▶ Quality of Service on CCs: “production level”, but what required “response time”
 - ▶ Services & Hosts (also redundancy)