

INAF/IDIA Cloud Pilot

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Overview



Project pages on INAF Indico platform What we decided

Use case

A new Computational Infrastructure @ INAF



What We Agreed Upon

Following the September meeting:

We agreed on a set of functionalities for a pilot project:

A federated cloud system

We set a timeframe of 2 years;

And agreed that we would need the system to be location agnostic, and be able to represent the entire data lifecycle.

We decided to to determine the parameters for a pilot implementation based on a preliminary scientific use case analysis.

LOFAR Use Case





- LOFAR observation of the radio lighthouse: CU Vir. (*PI Paolo Leto, INAF*)
- Archive Data: 223GB
- InitialSubstractor output: 118 GB
- DD Pipeline Output: 2,4 TB
- DD Pipeline run (24 bands) details:
- 30 days on:
- 2 CPU Intel(R) Xeon(R) CPU E5-2640 v4
 @ 2.40GHz (40core) 512GB RAM



INAF: what we are negotiating to get



- Model: IBM NeXtScale cluster
- Architecture: Linux Infiniband cluster
- Network: Intel OmniPath (100Gb/s) highperformance network
- Nodes: 72 X 2 (Intel Broadwell)
- Processors: 2 x 18-cores Intel Xeon E5-2697 v4 at 2.30 GHz
- Cores: 36 cores/node
- RAM: 128 GB/node -> 256 GB/node





A Container as a Service approach