

## Joint EGO-Virgo Computing Committee (JECC) meeting

Cascina, 18<sup>th</sup> November 2016

**Meeting Minutes**

### Presents :

**A. Bozzi (EGO - Head of IT Department)**  
**L. dell’Agnello (CNAF - phone)**  
**R. Lemrani (CC-IN2P3 - phone)**  
**G. Punturo (VIRGO VDASC Coordinator)**  
**M. Bizouard (VIRGO-phone)**

### Topics:

- Virgo use of computing center resources in 2016 and 2017 forecast (M. Punturo)
- Ego contribution to the off-line computing cost 2016 and forecast for 2017
- Budget request for 2017

Slides and documents presented during this meeting are available at:

<https://workarea.ego-gw.it/ego2/ego/computing/jecc/jecc-meeting-18-november-2016/>

## Virgo use of computing center resources

M. Punturo presented the status and forecast of the Virgo Collaboration computational needs.

2016 has been a year of transition for the usage of computing resources by Virgo collaboration, with different effects on the computing centres accessible by Virgo collaborators.

The analysis of the O1 data generated a substantial increase of the usage of CNAF mainly starting from September 2016. The implementation of the accounting system allow to show that CNAF is in the week 8-15 November 2016 the 3rd computing centre of the LVC collaboration in terms of CPU core hours and the 5th since O1. In fact the CW analysis asked for an increase of the computing power from 25kHS06 (Virgo pledge) to 35kHS06, kindly offered by CNAF clustering the resources unused by other CSN2 experiments.

This fully justify the request for 2017 to have 36kHS06 at CNAF, considering the analysis of the O2 data.

In 2016, the Virgo collaboration has requested to CCIN2P3 5M HS06 hours.

So far only 1.1 M HS06 hours has been used. The main reason is that only few users are regularly using resources at CCIN2P3 : the EM-follow up Virgo team lead by Barbara Patricelli (Pise), the cosmic string search team lead by Florent Robinet (Orsay) and the long transient search lead by Marie Anne Bizouard (Orsay). The most CPU demanding search, the long transient search, has not run at CCIN2P3 in 2016 because the pipeline has not yet been modified to be able to run there. This explains the discrepancy between the demand and the usage.

A new entry in 2016 has been the use of the Nikhef computing center. In 2016 the Rome CW pipeline has been adapted to run via EGI at Nikhef and up to 1000-1500 jobs have been launched in parallel in some time periods

### Needs 2017

In 2017 the main user of the Virgo computing centre will be again the CW analysis but new entries are expected. cWB is attempting to move part of the analysis at CNAF, pyCBC is capable to access CCIN2P3 and CNAF via OSG (soon also cWB will be able to do it) and the long transient search will run at CCIN2P3.

At EGO we had in 2016 a crisis on the availability of disk space in the "Procddata" volume; the problem has been mitigated implementing a quota control and monitor; but further needs, related to the next scientific run(s) are expected and it is mandatory to foresee an increase of 100TB in the storage in Cascina.

In the following tables are listed the additional requests at the computing centres:

Table 1 - 2017 needs at CNAF

CPU power [HS06]	Disk Storage [TBN]	Tape Storage (additional TB)
36000 (pledge)	656 (pledge)	300 (To be verified)

Table 2 - 2017 needs at CCIN2P3

CPU Energy [HS06.hours]	Disk Storage (TBN)	Tape Storage (additional TB)
2 M HS06.hours	5TB additional to the 15TB currently available	370

Table 3 - 2017 needs at Nikhef

CPU Energy [HS06]	Disk Storage (TBN)	Tape Storage (TB)
25000	20	0

## EGO contribution to the off-line computing cost 2016 and forecast for 2017

EGO pay for the storage, the maintenance of 25TB in Lyon and 161 TB in Bologna.

In addition, according to the pay-for-allocation accounting model, established at CNAF, EGO will pay the renewal of the computing power installed on 2012 (1240 HS06) and the new power installed on 2016 (15000 HS06).

In Lyon Ego pay the consumption (77272 HS06.day)

**To sum up, the 2016 EGO contribution to the off-line computing cost will be:**

**CNAF : 157 K€**

**IN2P3 : 7 k€**

## Budget request for 2017

The CCs have provided estimated costs for 2017, and committed within Ego budget is 200k€