Tel-Aviv University GRID Status

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Abstract

In November 2008, following a transition phase, the new IL-HEP-TAU GRID center was connected to the EGEE GRID and it is currently in the test zone phase. Once operational, it will be opened to the ILC community.

1 Introduction

Until June 2008, the Tel-Aviv University GRID center, was operating in its old configuration. Eudet funds were used to buy processors and storage for this center. Following a transition phase and maintenance, the TAU group has started operating the new and improved HEP GRID center, which is now connected to the EGEE GRID [1]. In addition, a national GRID initiative (NGI) organization and infrastructure will start operating in the beginning of 2009.

2 Old GRID Center

In the last years Tel-Aviv University operated a small scale GRID center which included 60 Xeon dual core processors (10 were funded by the Eudet) with a storage capacity of 6 Tb which were funded by the Eudet (see Fig. 1). The GRID center was working and connected to the EGEE GRID until June 2008. In the last months and until November 2008 maintenance was ongoing to prepare the new TAU GRID center.
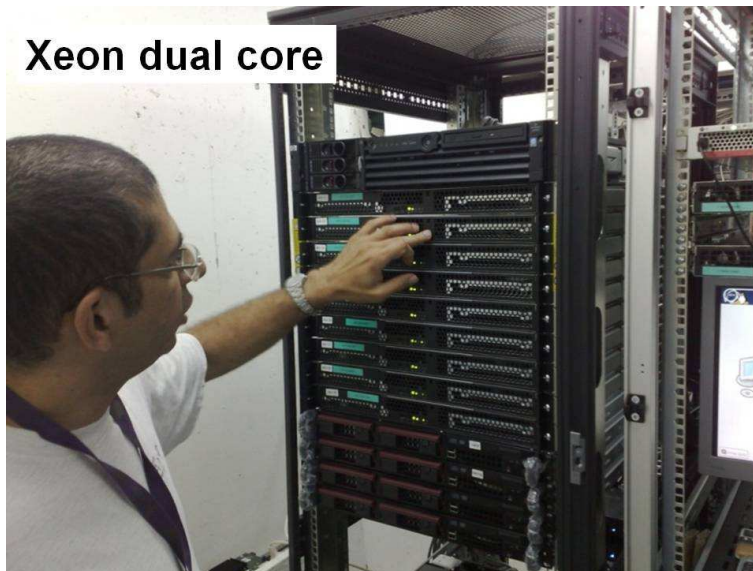

Figure 1: Pictures of the old generation Xeon dual core processors used by the old GRID center.

3 TAU HEP center

After new hardware and infrastructure installation, the improved HEP GRID center was connected to the EGEE GRIP and it is currently in the test zone phase [1].

The IL-HEP-TAU hardware includes 64 Xeon quad core (2.5 GHz) processors, together with a storage of 100 Tb (see Fig. 2). This center will constitute the ATLAS Tier2. About 10% of its resources will be available for ILC activities.
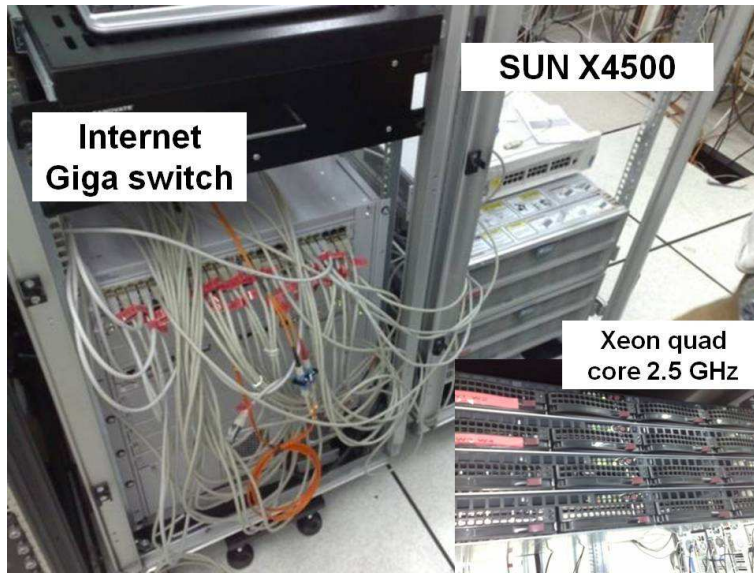

Figure 2: Pictures of the Sun X4500 storage, Internet Giga switch and the new generation Xeon quad core that are used in the new HEP GRID center.

Although the original operating schedule was June 2008, the independent network was connected only in September 2008. Following a configuration phase and middle-ware installation (glite 3.1) the center was connected to the EGEE on November 2008.

The structure of the IL-HEP-TAU GRID includes the following (see also Fig. 3):

- network services: gateway, firewall and DNS/DHCP;

- working nodes, storage and computer elements which are running SLC-4 (32 and 64 BITS);

- the storage clustering is done by LUSTRE: the MetaData (MDT) Server is installed on a Sun X4200 and the Object Storage Targets (OST) on the Sun X4500. The MDT machine is running linux and the OST machine are running SOLARIS. Since SOLARIS and LUSTRE are not yet compatible, the X4500s are connected via iSCSI to machines running both Linux and Lustre.

Within the next 3 years we intend to integrate 400 additional cores, and extend the storage by 500 Tb (we have secured funding of 200,000 USD per year).
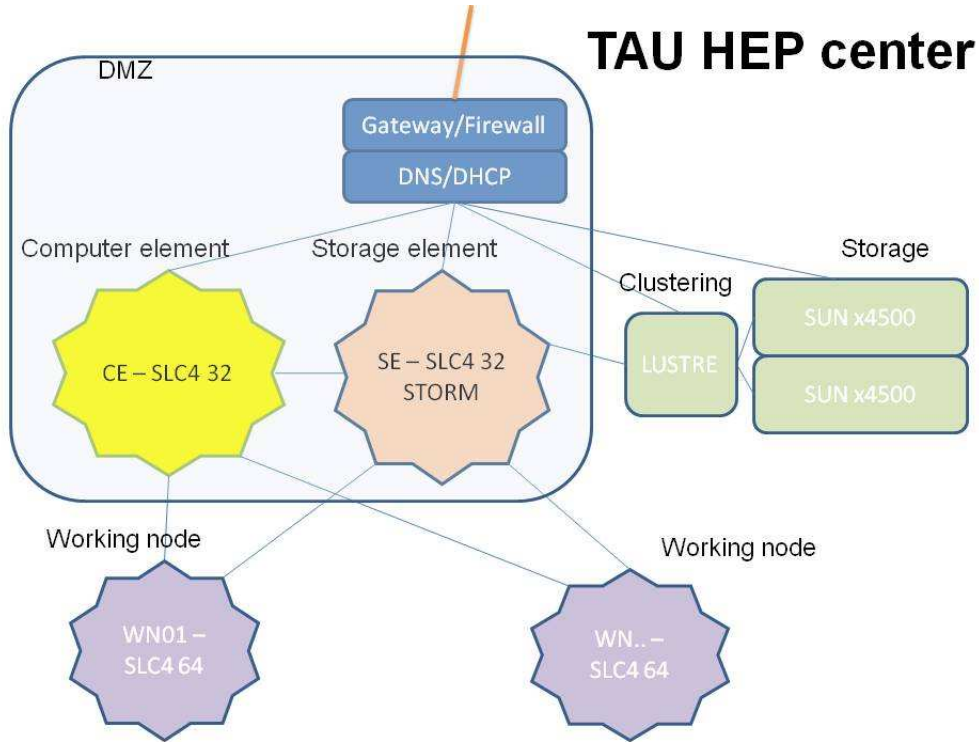

Figure 3: Diagram of the TAU GRID setup

4 NGI - ISRAGRID

With the support of the Israeli government a National GRID Initiative (NGI) named 'ISRAGRID' will start operating in January 2009.

This initiative includes the establishing of an organization and a 2 GB/sec infrastructure.

In TAU, the number of available cores depends on technical issues with the potential to integrate for all the TAU Computer Center units (about 400 - 500 cores).

This initiative, will be open to various communities, including the ILC virtual organization.

5 Summary

The new HEP center is connected to the EGEE GRID and is currently in the test zone phase. In a few weeks the evaluation phase will end and we expect to switch to production mode. The center is currently in its basic configuration with an organized program (and funds) to increase the computing power and storage in the next years. Once operational, it will be opened to the ILC community as will be the ISRAGRID infrastructure.

Acknowledgments

References

[1] http://goc.grid.sinica.edu.tw/gstat/IL-TAU-HEP