

## **Kolkata Grid Tier-2 Centre: Installation and Administration**

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Grid Computing has been considered as the solution for dealing with large amount of data produced in large experiments like ALICE, STAR etc. Grid comprises of many small sites geographically distributed across the globe. Therefore for this complex system, installation of a Grid site, day to day administration and management of the site and meeting the SLA (Service Level Agreements) and providing QA (Quality Assurance) service to the Grid computing are challenging. One tier-2 grid computing centre has been installed at VECC-SINP campus in Kolkata for ALICE experiment under WLCG (Worldwide LHC Computing Grid) and has been operational fully for last one year. We will present the details of the installation of the Tier-2 site from scratch and bringing it upto the requirement of an experiment. Day to day administration and maintenance of the site will also be presented.

The installation procedure includes the discussion on infrastructure, cooling and power supply in addition to the procurement of computing hardware, building cluster, installing middleware as per the requirement of the WLCG and then maintaining software accordingly to the VO(Virtual Organization) requirement (for us ALICE experiment). The administration of the site requires continuous update of OS, middleware with respect to CE, SE, VOBOX and many other related to the security of the site. Apart from a maintaining the Grid computing site, administrator has to provide computing infrastructure to the local users with sufficient storage and computing power in terms of a dedicated Tier-3 site. The challenges involved in all the steps related to the grid site will be discussed with Kolkata tier-2 centre as a case study