

## **IPv6 Deployment and Migration of WLCG TEIR-2 site resources on Private Cloud**

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National Centre for Physics (NCP) in Pakistan, maintains a large computing infrastructure for scientific community, including a Teir-2 site of Worldwide LHC Computing Grid (WLCG) and local scientific cluster. Need for IP address space has been increased, due to expansion of infrastructure, and adoption of Cloud technology for hosting virtual machines. On the other side, IPv4 address space is almost near to depletion in this region, and hence migration to IPv6 is inevitable. NCP is among the few organizations in the country, which is actively involved in promoting IPv6 and has deployed next generation IPv6 protocol in its campus network. NCP network is configured to provide IPv6 support by ensuring high availability of services, security, and optimized routing. Most of the corporate services are running in dual stack mode. WLCG TEIR-2 site is also being tested on IPV6. In order to optimize the utilization of computing resources, open stack based private Cloud has also been deployed. All the computing resources are now being managed through that cloud. This paper discusses the details of IPv6 deployment status and migration status of TEIR-2 site on private cloud.

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