

## **Update on National Knowledge Network in India**

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The government of India has recently approved a project for the establishment of National Knowledge Network (NKN), comprising of a multi-gigabit/sec network in India for the scientific and academic community. The low cost connectivity & countrywide reach provided by the NKN would make quality difference in scientific endeavors, as NKN backbone would provide sufficient data transfer capability to any scientists in India to retrieve scientific data, thereby improving their research quality.

The National Informatics Centre is managing the implementation of the project. The vision of the NKN is being realized in two phases – the initial phase and the final phase. The initial phase is aimed inter alia at setting up virtual class rooms amongst established mentoring IITs and the new mentored IITs; grid computing; – this can range from high energy physics to climate modeling and health care; and for collaborative design of advanced complex engineering systems, and so on. The NKN will also enable connection among different sectoral networks in research, education, health, agriculture and so on and the sectoral networks of the mission-oriented agencies.

The major part of Garuda Grid network has been transferred to NKN. And regional WLCG network in India will also use NKN backbone. Many institutions in India are part of EU-IndiaGrid project, which connects European grid infrastructures to Indian Grids.

Numbers of workshops on NKN were conducted to demonstrate running of applications and train users & network administrators. The Hon'ble President of India inaugurated the initial phase of the NKN on April 9, 2009.

In this presentation, an overview of recent developments in NKN is provided with a brief description about its capabilities such as bandwidth, scalability, security and sharing of applications using MPLS technology.