Abstract

National Knowledge Network (NKN) is a project of Government of India, which will connect Educational Institutes, R&D institutions, Health service facilities, Agricultural institutions, Libraries of India and a future plan of collaboration with the International research organizations. This paper presents detail proposed Network Infrastructure and Application framework setup that an Institute need to have for the best use of NKN. It also describes the services and other features of the NKN. Critical security issues have been identified and a model is proposed which can be implemented by the Institutes for securing such high speed networks.

References

- National Knowledge Network - Connecting Knowledge Institutions, http://www.nkn.in/
- National Knowledge Commission: http://knowledgecommission.gov.in/
Towards a Best Use of National Knowledge Network for the Knowledge Sharing

- NKN Services: GARUDA – NKN PARTNERS MEET 15th July, 2011 National Knowledge Network report page 12 by Shri R. S. Mani, Sr. Technical Director, NIC.
- NKN, Brochure of First NKN Annual Workshop - National Knowledge Network, "The e-Infrastructure of India"; (Accessed on December 20th January, 2013)
- National Knowledge Network - Second Annual Workshop Presentation "Enhancing Research Collaborations through NKN"; IISc Bangalore NKN Workshop, October 2013.
- BARC : Bhabha Atomic Research Centre India: http://barc.gov.in/
- Garuda : the unique platform for Innovative research collaboration, by Subrata Chattopadhay CDAC, Bangalore at IISc Bangalore NKN Workshop, October 2013.
- TEIN (Trans-Eurasia Information Network) Linkage to NKN by ByungKyu Kim, Ph. D. Executive Officer TEIN*: Cooperation Center- Connecting Europe and Asia’s Research and Education Communities, IISc Bangalore NKN Workshop, October 2013.
- GLOBAL RING NETWORK FOR ADVANCED APPLICATIONS DEVELOPMENT: http://www.gloriad.org/gloriaddrupal/
- Presentation on "The India-Europe cooperation on e-Infrastructures, EU-IndiaGrid & EU-IndiaGrid2 Projects"; by Alberto Masoni, in First NKN Annual WORKSHOP http://nkn.in/nkn.../slides/.../EU-India%20Grid%20by%20A. %20Masoni. pdf?
- Remote Physics Experiment at ESRF (Experimental Synchrotron Research Facility), Grenoble, France on NKN, http://www.nkn.in/virtual_lab.php
- NPTEL(National Programme on Technology Enhanced Learning), http://nptel.iitm.ac.in/
- White Paper on Securing Manufacturing Computing and Controller Assets, Rockwell Automation, CISCO.

Index Terms

Computer Science Information Systems

Keywords

NKN Network Architecture Security Services Application framework