



# Making BITS-Pilani the Largest IPv6-compliant Campus Intranet in India

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An Initiative of the CSD, BITS-Pilani



# Project objectives

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- ❑ To capitalize on the early lead of BITS-Pilani in IPv6 research, development, deployment, testing and 6Bone connectivity
- ❑ Making the BITS-Pilani, largest and if possible first fully IPv6-enabled Campus-wide Internetwork
- ❑ Reusing the resultant infrastructure for building part of the Grid Computing Testbed for the Project Grid-One



# Steps and Methodology

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- ❑ Volunteer training & documentation
- ❑ Administrator Education
- ❑ Support-staff training
- ❑ Creation of 8x2 hour help-desk
- ❑ Division / Unit-wise deployment planning and risk-analysis
- ❑ Gradual IPv6 deployment and testing
- ❑ Implementation auditing



# How to configure various systems?

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- Project URL:
  - <http://discovery.bits-pilani.ac.in/ipv6/index.htm>
- Support documentation:
  - Protocol wise
  - OS-wise
  - Application-wise
  - Security-wise
  - Performance-wise



# Steps

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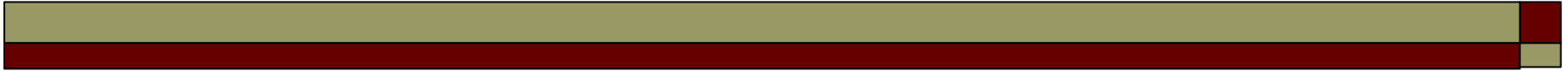
- First step is to enable IPv6 in workstations, PDAs etc. by simple configuration. <These nodes may be running on different OSes.>
  - The BITS already has an IPv6-capable router and many IPv6-enabled Switches <enabling needed>.
  - A software router already supports IPv6 address and parameter auto-configuration.
- Next step is to configure various server-class machines.
- Last step is to configure switches, refine VLAN mappings and reconfigure Firewalls, IDS, Gateway etc.



# Some simple points

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- Internet access to IPv6 users can be provided directly or through a IPv6 Proxy Server.
- IPv6 Proxy Server may be an Apache Server.
- HTTP traffic between client browsers and the IPv6 Proxy server flows on IPv6.
- HTTP traffic from IPv6 Proxy server to non-IPv6 compliant systems / Internet may have to be sent over IPv4.
- There are, at present very few users on campus who are using Internet access through IPv6 but about 4500 users indirectly use it through the DLP mailer.



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Thank you!