



Department of Telecommunications,
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India IPv6 Task Force Newsletter

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*“Major Service providers
have assured that they
will offer IPv6 services by
December, 2011.”*

India getting ready for IPv6

As the age of IPv6 dawns on the internet horizon, India is racing ahead to make itself IPv6 ready. The IT eco-system in India is working towards adopting IPv6. India IPv6 task force has been working continuously with the Service providers, Content providers, and Government sector organizations to help in the IPv6 adoption. The progress towards the IPv6 adoption is reflected by the readiness of the major Service providers and the Content providers to participate in the World IPv6 day on June 8th, 2011 and also re-enforcement of the commitment by the Service providers and Content providers during the various review meetings, towards adhering to the National IPv6 policy guidelines of providing IPv6 services by December, 2011. The government sector organizations are gearing up to start IPv6 services by March 2012.

Internet Service providers -IPv6 readiness

The IPv6 adoption by the major Service providers is the key fundamental backbone for implementation of the IPv6 adoption across the IT eco-system in India. Almost all the major Service providers, have rolled out Enterprise IPv6 services, and are working to rollout the retail broadband services. In the various review meetings and the recent one held in Sanchar Bhavan on 9th May, 2011 with Service providers by ‘Networks & Technologies’ (NT) Cell, Department of Telecommunications, the major service providers have assured that they will offer IPv6 services by December, 2011.

A few of the challenges being faced by the service providers are lack of IPv6 ready equipment in the CPE segment, applications, content and customer awareness towards IPv6 adoption.

Content Providers – IPv6 readiness

One of the significant stumbling blocks towards acceptance and use of IPv6 instead of IPv4 is the availability of content on IPv6. Beyond the availability of IPv6 connectivity by service providers, it's content who have to lead the IPv6 adoption process.

Department of Telecommunications has held multiple review meetings with content providers, wherein some of the content providers have agreed to make their offerings and services IPv6 ready by Dec, 2011. A few content providers mentioned that during their lab experiments the latency to access content increased during dual stack environment, wherein IPv4 and IPv6 protocols run simultaneously, and solutions for this issue are being worked out.

"The government sector organizations are gearing up to start IPv6 services by March 2012"

Government organizations – IPv6 readiness

The Government sector organizations have been at the forefront of the IPv6 adoption cycle in India, the various IPv6 awareness workshops conducted by TEC in the year 2009 and 2010 during the initial phase, started the process of IPv6 adoption by the government sector. The India IPv6 task force is driving the IPv6 adoption across the Government sector organizations through its various review meetings and IPv6 awareness workshops across the country. They are being regularly pursued to adhere to the IPv6 policy guidelines. Almost all the Government Organizations have already appointed IPv6 nodal officers. In the recently held IPv6 awareness workshops with state Government officers in Puducherry and Bengaluru, in the panel discussions the response of the concerned IT officers was very positive and assured to start IPv6 services as per Policy guidelines.

Recent meetings and outcome

The Department of Telecommunications has been holding various meetings with key stakeholders across the IT eco-system towards IPv6 adoption – Service providers, Content providers, Government sectors. The key highlights of the various meetings are presented below:

“C-DOT to setup a lawful interception & monitoring system for IPv6 protocol”

Name of the meeting	Key highlights
Meetings with Service providers	<ul style="list-style-type: none"> ➤ World IPv6 day to be celebrated as a mass IPv6 awareness day ➤ Most of the service providers are ready to provide IPv6 services to enterprise customers. ➤ C-DOT to setup a lawful interception monitoring system for IPv6 protocol also
Meetings with Content providers	<ul style="list-style-type: none"> ➤ Content providers agreed to participate in the World IPv6 day ➤ All the Content providers have initiated or are in the process of initiating the IPv6 adoption ➤ It was decided to have joint review meetings with Service providers
Meetings with Government sector organizations	<ul style="list-style-type: none"> ➤ DoT to hold technical workshop for Central Govt nodal officers ➤ NIC to make government office websites, maintained by NIC IPv6 ready ➤ Latest list of IPv6 ready hardware and software to be uploaded on the DoT/TEC website
Empanelment of IPv6 consultants for Govt organizations	<ul style="list-style-type: none"> ➤ DoT is in the process of finalizing the panel of consultants for Govt organizations
IPv6 address policy committee	<ul style="list-style-type: none"> ➤ National IPv6 address policy details were discussed and planned to be released shortly.

India IPv6 Task force

The India IPv6 task force was created as part of the “National IPv6 Deployment Roadmap” released by Government of India in July, 2010. Telecommunication Engineering Center (TEC) had conducted various workshops and seminars throughout the country during 2009-10 based upon the inputs from them the “National IPv6 Deployment Roadmap” a policy document for transition from IPv4 to IPv6 in India was prepared and approved by the Government for implementation by different stakeholders specially Central and state government departments and Telecom Service providers. The following are the key policy guidelines issued by Govt of India :

- All major Service providers (having at least 10,000 internet customers or STM-1 bandwidth) will target to handle IPv6 traffic and offer IPv6 services by December-2011.
- All Central and State government ministries and departments, including its PSUs, shall start using IPv6 services by March-2012.
- Formation of the India IPv6 Task Force.

“The India IPv6 task force comprising of 2 committees and 10 working groups was formed in December 2010”

The India IPv6 task force comprising of 2 committees and 10 working groups was formed in December 2010, to plan, co-ordinate and drive the IPv6 adoption across the nation. The details of the committees and the working groups are placed below. The committees formed as part of the India IPv6 task force are :

Oversight Committee – This will be the apex body for making policy decisions and responsible for guiding the task force by taking strategic decisions. The Oversight Committee will be headed by Secretary(T), DoT as its Chairman.

Steering Committee – The Steering committee will be the second level body for coordinating the activities of the Task Force. It will oversee the activities of the different working groups constituted under the Task Force for timely smooth transition in the country. The Steering Committee will be headed by Advisor(T)/Member(T), DoT as Chairman.

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|--------------------------------|---|
| ➤ Training and awareness | ➤ IPv6 implementation in government sectors |
| ➤ IPv6 network implementation | ➤ Pilot projects |
| ➤ Standards and specifications | ➤ Applications support |
| ➤ India6 network | ➤ Knowledge resource development |
| ➤ Experimental IPv6 | ➤ Security |

Updates from working groups

A few updates from the recent activities and achievements of the various working groups are placed below:

Name of the working group	Lead Organization	Key achievements
Training and Awareness Working Group	BSNL	<ul style="list-style-type: none"> ➤ DoT/BSNL have organized IPv6 awareness workshops at: <ul style="list-style-type: none"> • 8th March 2011 at Lucknow • 19th May, 2011 at Puducherry • 1st June, 2011 at Bengaluru ➤ Every month at least two workshops are planned across the country covering various states/UTs.
Action Plan and IPv6 Network implementation working Group	'Networks & Technologies' (NT) Cell, DoT	<ul style="list-style-type: none"> ➤ Held various review meetings with major service providers and they are being pursued to adhere to policy guidelines. Almost all major service providers have assured compliance.
Standards and Specifications Working Group	Telecom Engineering Center	<ul style="list-style-type: none"> ➤ The IPv6 standards have been finalized and released by TEC
"India6" Network Working Group	Tata Communications	<ul style="list-style-type: none"> ➤ Document on IPv6 ready network services availability across the nation and the gaps is being prepared
"Experimental IPv6 Network" Working Group	Sify	<ul style="list-style-type: none"> ➤ Proposal for IPv6 experimental lab is under preparation
Pilot Project Working Group	: Department of Information Technology" (DIT)	<ul style="list-style-type: none"> ➤ The pilot project working has proposed various IPv6 pilot projects across the various states - Himachal Pradesh, Karnataka towards initiating IPv6 adoption.
Applications support Working Group	Tech Mahindra	<ul style="list-style-type: none"> ➤ The various IPv6 demo labs for the various applications are being setup in <ul style="list-style-type: none"> • Bangalore • Hyderabad • Noida • Pune • Mumbai

Upcoming events

- IPv6 awareness workshop for decision makers at Raipur (Chattisgarh) on 10th June, 2011
- IPv6 awareness workshop for decision makers at Bhopal (Madhya Pradesh) on 24th June, 2011
- IPv6 awareness workshop for Central Government nodal officers in Sanchar Bhavan in July, 2011
- IPv6 Policy implementation meeting with Principal Secretaries(IT)/Secretary (IT) of States and UT's-Sanchar Bhavan, July, 2011

IPv6 around the world

World IPv6 day on June 8th, 2011

World IPv6 day, scheduled for 8th June 2011, is a global-scale test flight of IPv6 sponsored by the Internet Society. On this day, major Service providers and Content provider organizations will enable IPv6 on their main websites for 24 hours. The goal of this event is to motivate organizations across the industry, Internet service providers, hardware makers, operating system vendors and web companies to prepare themselves for IPv6 to ensure a successful transition as IPv4 address space runs out.

APNIC triggers last of IANA IPv4 free pool space allocations

As the IPv4 address pool is exhausted at the Internet Assigned Numbers Authority (IANA) level and the last /8 was assigned to Asia Pacific network Information Center (APNIC).

As the last set of IPv4 address pool are assigned, strict allocation policies are in place to ensure IP addresses are available to those with a demonstrated need.

Every bulb has an IPv6 address

If every light bulb had its own unique Internet IP address, you could monitor, manage and control every light bulb from any Internet-enabled device – turning lights on and off individually, dimming or creating scenes from your smartphone, tablet, PC or TV – to save energy as well as electricity costs. The smart lighting network could have dozens or even hundreds of appliances connected through a wireless network designed for maximum energy savings, communicating information about their environment, about power consumption levels, and alerting you to any problems. NXP Semiconductors has introduced GreenChip™ smart lighting solution that makes the Internet-enabled, energy-efficient lighting network a reality.

*“Major Service providers
and the content providers
to participate in the World
IPv6 day on June 8th,
2011”*

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