India IPv6 Task Force Newsletter

सत्यमेव जयते

Department of Telecommunications, Ministry of Communications and IT, Government of India

ISSUE 3

OCTOBER, 2011

Inside This Issue

1. IPv6 Applications – Leading the way to adopt IPv6

2. Highlights of 2nd Oversight committee meeting

3. Important meetings and outcomes

4. IPv6 awareness workshop for decision makers

5. Prop 100 – National IP Address plan – Allocation of country wide IP address blocks

6. IPv6 Opening New Frontiers – Managed Digital Homes

7. IPv6 based Smart buildings – Saving Energy and reduced carbon emissions

8. IPv6 around the world

9. Upcoming events

IPv6 Applications – Leading the way to adopt IPv6

One of the first key questions asked by every Strategic Decision Maker across organizations is – What is the RoI (Return on investment), I can realize by adopting IPv6.

IPv6 is an infrastructure technology at the network protocol layer. Being an infrastructure technology, it cannot provide RoI, in isolation. IPv6 has quite a few new features as compared to IPv4, which can be exploited by applications, to provide the RoI.

Internet of things has resulted in growth of many sensor based applications, these applications significantly benefit from the various IPv6 features and also the 6LowPAN protocol.

A few IPv6 applications like Smart Grid, Smart Building, intelligent irrigation management and so forth have resulted in applications which can provide - Return on investments.

Government Sector IPv6	Energy Sector IPv6	Defense IPv6	Others IPv6
•IPv6 based E-governance Applications •IPv6 based Citizen Services •IPv6 based SDC and SWAN	•Smart Buildings •Smart Grid •Smart Metering System	•IPv6 Network based Warfare management system •IPv6 based intelligent Soldier equipment	•IPv6 Sensor based intelligent manufacturing management system •IPv6 Sensor based intelligent irrigation System •IPv6 based Rural Health

Highlights from 2nd Oversight Committee meeting

Second meeting of the Oversight Committee under India IPV6 task force was held on 4th-October, 2011 in Sanchar Bhawan under the Chairmanship of Secretary (T), DoT. A few highlights of the meeting are placed below :

➢ The detail of Cost issue (Higher Cost charged by Vendors) was discussed and it was suggested that the issue needs further deliberation and in depth study by Telecom Engineering Center (TEC).

➢ It was requested that an expert group to be formed from the principal vendors and other concerned stakeholders with whom the core committee members can interact as per the technical requirements.

➢ The various Pilot Project proposal in different fields received from seven States are under discussions, these are to be finalized & intimated shortly by Department of Information Technology (DIT).

➢ The IPv6 forum, India offered to host the Global IPv6 summit in India with the support of DoT.

➢ It was suggested that the economic impact/ benefits of IPv6 based applications in the country, need to be published in the newspapers for information to all.

➢ CMAI & others will hold focused workshops for industry with different working groups.

➢ It was agreed that the various applications and content providers need to be pursued by all to be IPv6 ready.

➢ It was mentioned that Top websites across India would be pursued to be made IPv6 ready.

➢ C-DOT mentioned that they would make Lawful Interception & Monitoring System (LIMS) ready for monitoring of IPv6 traffic by December, 2011.

➢ The IPv6 certification Test bed is expected to be ready by January, 2012 by TEC and accordingly certification facility will be made available to all.

➢ The NKN, NIC, ERNET and ISPAI are to to work for promotion of IPv6 in educational institutions.

➢ Major Service providers assured to be ready by the given timelines with some riders.

➢ Government organizations progress is not encouraging and they need more time to start using the IPv6 services.

➢ 2-3 Government websites to be made available on IPv6 shortly by NIC.

➢ WG-7 Lead Tech Mahindra planned to have conferences and workshops with content providers & application developers

Important meetings and outcome

The Department of Telecommunications is holding regular 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 during September & October, 2011 are presented below :

Name of the meeting	Key highlights
IPv6 review meeting of Central Ministries/ Departments	➢ The IPv6 adoption status across various Central Government departments was reviewed. ➢ All nodal officers assured that all necessary actions will be taken to start the IPv6 services in their respective ministries and departments including their PSUs within the timelines.
Meeting with the Major Service Providers and Content Providers for IPv6 Policy Implementation	➢ DDG (NT) reiterated that Service Providers need to be ready from all angles to offer IPv6 services by the dates as per the National policy. ➢ Some of the content providers mentioned that with dual stack they will be ready by the timelines and there is no hurdle in this regards.

IPv6 Awareness Workshops for Decision makers:

Workshops	
Awareness Workshop on IPv6 for Decision Makers for State Government, Central Government & Service Providers **Venue :** NEDFi House, Dispur, G.S. Road, Guwahati **Date :** 27th September, 2011 **Chief Guest :** Sh. P. P Varma, IAS Addl. Chief Secretary, Govt. of Assam	Awareness Workshop on IPv6 for Decision Makers for State Government, Central Government & Service Providers Hotel Shivalikview, Sector, 17 Chandigarh, 21st October, 2011, **Chief Guest :** Mr. A R Talwar, Principal Secretary (IT), Govt. of Punjab & Other Distinguished Guests
In these workshops Policy decisions for the IPv6 implementation and progress in the respective states were reviewed, IPv6 applications, and other aspects of IPv6 were also covered.	

"Some of the content providers mentioned that with dual stack they will be ready by the timelines and there is no hurdle in this regard

Prop-100 : National IP Address Plan - Allocation of country-wide IP address blocks

A proposal was submitted by DoT to APNIC community on 29th July 2011 for the reservation of a contiguous IPv6 address block for different organizations / stakeholders in an economy.

APNIC policy does not currently allow address blocks to be allocated at the economy level, so through this proposal, a change was sought in the policy for reservation of adequate IPv6 address space economy wise for further allocation to different organizations and stakeholders within the economy.

The main objective of this proposal is to ensure that all economies (and the different present and future organizations in those economies) can ensure they will get a suitable share of the IPv6 address space, in one or more large contiguous blocks, whether they need it now or at a later date.

(A) Analysis and Projection of Requirements

Each economy in the APNIC region is different in terms of population, population growth rate, GDP growth rate, mobile, internet and broadband penetration growth rate, social requirements etc. There could be many other factors, which could be taken into consideration. These factors would help to make an aggregate estimate of the present and future IPv6 address requirements of all organizations and stakeholders in each economy.

(B) Reservation of the IPv6 address space for different economies (for their organizations and stakeholders) by APNIC

Based on the projections and estimates, APNIC may keep one or more suitably sized blocks reserved for different economies for ultimate use of organizations and stakeholders of those economies. APNIC may also keep some large blocks unreserved, i.e. not reserved for any economy in the beginning, for any sudden unforeseen requirements in future.

The allocation of addresses from these reserved blocks to organizations and stakeholders in different economies may be done directly by APNIC or through an National Internet Registry (NIR) [wherever existing] as it is doing at present. Ultimately these addresses will be allocated to individual organizations /stakeholders and not to the economy.

The proposal was discussed at the APNIC 29 conference at Busan meeting in South Korea on 31st August, 2011, and has been referred back to the community for further discussions and clarity. The National IPv6 Task force, plans to further work with APNIC community on Proposal-100, towards discussion and adoption.

"The main objective of this proposal is to ensure that all economies, can ensure they will get a suitable share of the IPv6 address space, in one or more large contiguous blocks, whether they need it now or at a later date"

IPv6 Opening New Frontiers - Managed Digital Homes

As the age of the Digital home emerges, the Digital Home management presents a significant opportunity for the Service Providers.

The Triple networks, which are currently used to provide the Triple Play services like – Voice, Video and Entertainment, can be extended to help provide the Digital Home management services.

The new age digitally enabled homes require a lot of IP addresses, auto-configuration, secure network protocol, energy conservation features, and so forth. The IPv6 protocol has all these features along with features which help in the ease of management of the network.

The area of Managed IPv6 Digital homes opens up new area of Business opportunity for the Service Providers.

Service Providers should consider this new area to extend their business opportunities.

"The area of Managed IPv6 Digital homes opens up new area of Business opportunity for the Service Providers"

IPv6 based Smart Building -Saving Energy and reduced Carbon Emissions

One of the major upcoming applications using the IPv6 based sensors is to provide energy savings, through the use of Smart building mechanisms. Various states across India are planning to initiate IPv6 based Smart building projects wherein the energy management systems across the building are managed using IPv6 based sensors and computing resources accordingly.

Energy saving and lowering the greenhouse gas emission is now a major agenda across the world including India. For global warming measures, a number of international actions including the post-Kyoto Protocol and U.N. Framework Convention on Climate Change are advancing.

A system such as BA (Building Automation) and BEMS (Building Energy Management System) could help manage the amount of energy consumed by making using of IPv6 based sensors and intelligent energy management system.

The IPv6 based Smart building could result in about 20-25% of energy savings (the results achieved would vary based on the building architecture and design).

Organizations are encouraged to consider IPv6 based Smart building applications towards saving energy consumption and reduced carbon emissions.

IPv6 around the world

Survey Results Predict Global Internet Service Providers' IPv6 Adoption to Increase in 2012

The Global IPv6 Deployment Monitoring Survey 2011 results, initially previewed at the Internet Governance Forum (IGF) in Nairobi, Kenya, in September, 2011 demonstrate healthy growth in awareness, planning and actual deployment of IPv6. The survey was prepared by GNKS Consultant, an independent organization that conducts strategic and policy research and evaluation, and supported by the Number Resource Organization (NRO), the body made up of the world's five Regional Internet Registries (RIRs).

The findings from the third annual survey measuring IPv6 deployment based on data supplied by around 1,600 international respondents, over half of which are Internet Service Providers (ISPs). The data indicates that more than 70% of respondents plan to deploy IPv6 on their networks by the end of 2012.

IPv6 – Legal aspects of the new internet protocol

The European Commission IST project Euro6IX has released a new publication, which is targeted at lawyers This book aims to contribute some basic knowledge about the technical specifications of IPv6 and to analyze, from a legal point of view, the problems and possible solutions that could exist regarding the right to privacy, data protection and intellectual property rights. The book can be downloaded from the location - http://www.ipv6tf.org/pdf/ipv6legalaspects.pdf

Upcoming Events

- ➢ National IPv6 Task Force - IPv6 Core committee meeting on November 1st, 2011
- ➢ National IPv6 Task force - 3rd Steering committee on November 2nd, 2011
- ➢ Service Providers - IPv6 Adoption Status review meeting on 29th November, 2011

"In a survey encompassing 1600 Service Providers, 70% plan to deploy IPv6 by end of 2012"

For Feedback and Suggestions, Please Contact :

1. N Ram, Director (NT),
   Department of Telecommunications,
   Government of India,
   M: +91 9868811933, Ph: +91 11 23372533
   E-Mail: dirnt-dot@nic.in,
   DoT website: www.dot.gov.in

2. R M Agarwal, Deputy Director General (NT),
   Department of Telecommunications,
   Government of India,
   M: +91 9868133440, Ph: +91 11 23372606
   E-Mail: ddgnt-dot@nic.in,
   DoT website: www.dot.gov.in