

Department of Information Technology  
GOVERNMENT OF BIHAR

Circular

Letter No. 07/139/2009/17

Date 05/01/2015

To,

All Principal Secretaries of All Departments,  
Gov. of Bihar

**Sub: Regarding Formation of IPv6 Task force and IPv6 Policy Implementation**

The Indian economy has received a significant boost during the last decade with huge growth in telecom subscriber base as well as Internet usage. India did well in investing in dark fiber infrastructure in the earlier part of this decade the benefits of which the country is reaping now. However, telecommunication technology itself is undergoing dynamic change in the world and is moving towards the Internet and Internet technologies. The Internet today has become a global network serving billions of users worldwide. It has become popular because of its ability to extend accessibility to Everyone, Anywhere and Anytime. The vehicle of the Internet is the "Internet Protocol" which assigns any router, server, host or simple internet device such as mobile phone, Internet Phone or sensor and radio frequency identification device (RFID) an address so that it can communicate with other similar internet devices. The Internet Protocol is evolving as the Global Standard for communication across a range of devices, platforms and networks across the world.

This will expand the addressing space four folds at least and beyond and also cater to enabling new features like end-to-end mobility, auto-configuration and enhanced security of communications.

The "Internet Protocol" (IP) is one specific element of the Internet architecture. Most parts of the Internet today run using Internet Protocol Version 4 (IPv4) addresses. An IPv4 address has a 32-bit addressing space, which can theoretically cater to  $2^{32} = 4.3$  billion devices. At the end of 2009, the world population was estimated to be 6.8 billion. If every person on this planet is associated with at least one internet access device, it is evident that we don't have enough IPv4 addresses. This was foreseen in the early 1990s itself and therefore the Internet Protocol Version 6 (IPv6) was developed. Apart from increasing the address space to 128 bits, many new and advanced features were also introduced in IPv6, which are not present in IPv4.

Our country has a constraint for IPv4 addresses at present and that would get exhausted on a global and country level very soon. In India for implementation of IPv6 a Task Force has been formed comprising of two committees and 10 working groups to oversee the progress of IPv6 implementation across the country. A panel of consultants/technocrats would be formed to oversee the requirements of different central and state Govt. departments for smooth transition to IPv6.

Government of Bihar has already recognized that transition from IPv4 to IPv6 is imminent, which is a new version having enormous address space with many new features like end-to-end mobility, auto-configuration and enhanced security of communications. Government of India has released the

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"National IPv6 Deployment Roadmap" and has taken the following important decision in this policy document-(available on the TEC website <http://www.tec.gov.in>.)  
For transition from IPv4 to IPv6 for all IT systems, Government of Bihar has nominated State Nodal Agency "BELTRON" as the point of contact with **Managing Director – BELTRON as the State Nodal Officer** vide letter 24/12/20143.

Government of India has released the guideline on "National IPv6 Deployment Roadmap" {<http://www.dot.gov.in/ipv6/national-ipv6-deployment-roadmap-ver-i>}, and IPv6 Guidelines which already has already been circulated to all departments is also available at <http://www.dot.gov.in/ipv6/national-ipv6-deployment-roadmap-ver-i>.

In line with Gov. of India Guideline following actions by all Departments in the State need to be taken up on priority with regard to the set of action listed below:

- 1) All the Secretaries/Principal Secretaries of Departments have to nominate one Nodal Officer from their respective Department by 23<sup>rd</sup> Jan2015 and the same needs to be communicated to MD-BELTRON & IT Department.
- 2) The Designated Departmental Nodal Officer shall be responsible for adherence and implementation of IPv6 in their respective Department. They are also expected to work closely with State Nodal Office.
- 3) The Designated Departmental Nodal Officers are expected to attend meetings and, trainings, and work closely with different stakeholders to ensure creation and implementation of IPv6.

*Jsh 5/01/2015-*  
**Tripurari Sharan**  
**Principal Secretary**  
**Information Technology Department**  
**Government of Bihar**

**CC to:**

Chief Secretary- GoB, SIO- NIC Bihar, MD –BELTRON, IT Advisor – GoB, DM's – all Districts