IPv6 Policy
&
Implementation in Indian Economy

(APIPv6TF,APNIC-35, Singapore)
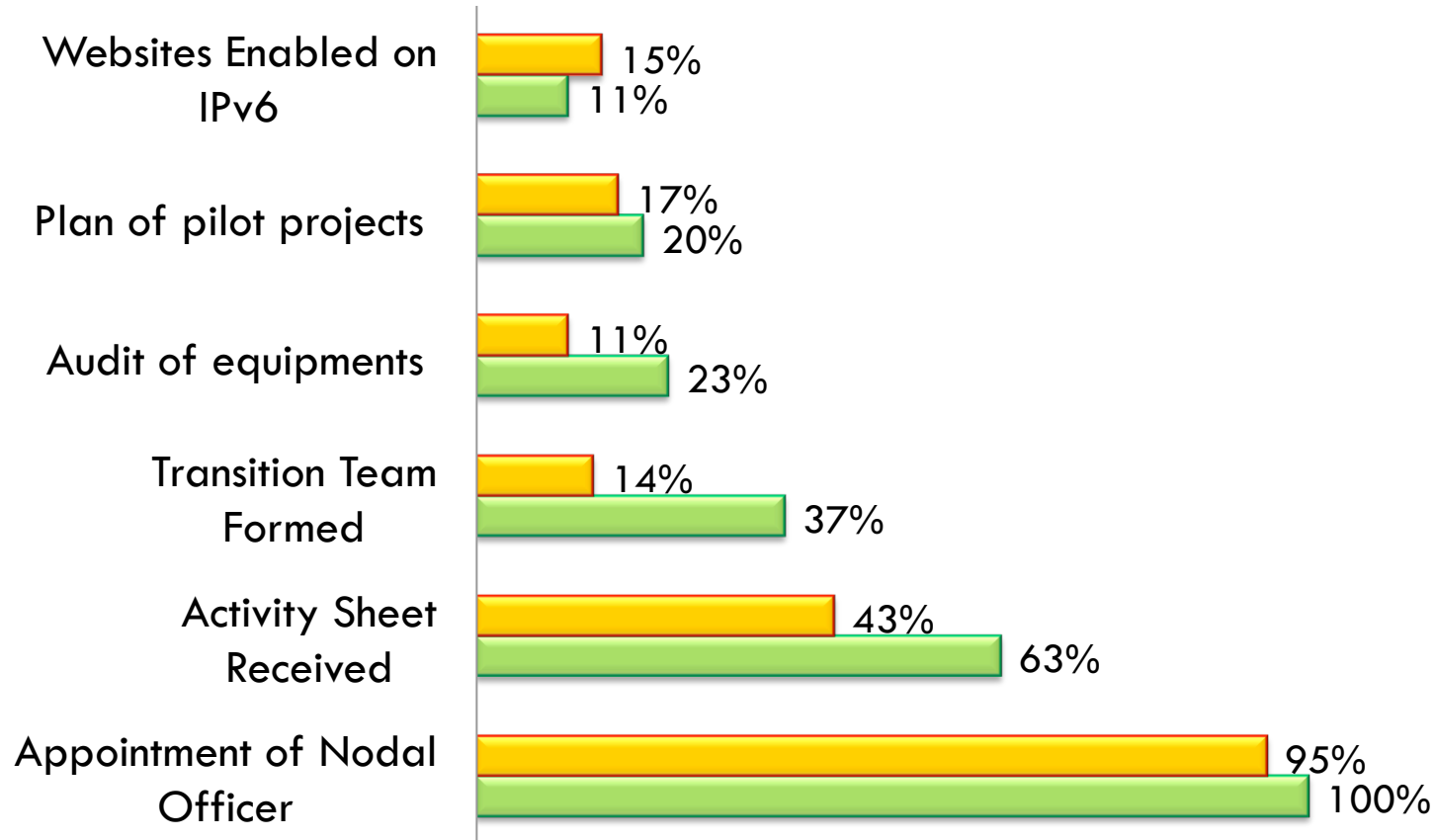### 27.2.13

Status of Ipv6 Implementation in India

➤ All major Service Providers to handle IPv6 traffic and offer IPv6 services:

 - *6 out of 22 fully ready.*
 - *5 out of 16 partial ready, remaining to be ready by December, 2013.*

➤ All Government Organizations, including its PSUs, to start using IPv6 services:

➡ ***Nodal Officers*** *:*

 - *35/35 in States/UTs.*
 - *87/92 in Central Government Organizations*

➡ ***Activity Sheets Received****:*

 - *22/35 States/UTs.*
 - *40/92 Central Govt. Organisations*

IPv6 Status of Government Organisations

Central Ministry/Departments ▪ State/UTs

Websites Enabled on IPv6 — Central Ministry/Departments: 15%, State/UTs: 11%

Plan of pilot projects — Central Ministry/Departments: 17%, State/UTs: 20%

Audit of equipments — Central Ministry/Departments: 11%, State/UTs: 23%

Transition Team Formed — Central Ministry/Departments: 14%, State/UTs: 37%

Activity Sheet Received — Central Ministry/Departments: 43%, State/UTs: 63%

Appointment of Nodal Officer — Central Ministry/Departments: 95%, State/UTs: 100%

Network readiness

Indian networks that are…	No. of ASN	Precent
Globally visible	489	100%
Seen by APNIC measurement	452	92%
Announcing IPv6	65	13%
Sending/receiving IPv6 traffic	21	4%

Device readiness

ASN	Net Name	Details	sample coun	IPv6 capal	IPv6 prefere
131222	MTS-INDIA-IN	Udyog Vihar	2129	44.55	0.4617
45609	BHARTI-MOBILITY-AS-AP	Bharti Airtel Ltd.	2211	31.31	0.0891
55740	TATAINDICOM-IN	TATA TELESERVICES LTD	4128	30.79	0.0238
10199	TATA-AS	Tata Communications Ltd	1247	28.85	0.0786
55441	TATA-DOCOMO-AS-AP		835	27.66	0.0000
55831	AIRCEL-IN	Aircel Ltd.	576	19.83	0.0000
45271	ICLNET-AS-AP		1299	19.70	0.1515
55577	BEAMTELE-AS-AP	Beam Telecom Pvt Ltd	5233	18.97	0.0000
24554	FIVE-NET-AS-IN	Fivenetwork Solution India Pvt Ltd	801	17.99	0.0000
17465	ASIANET	Cable ISP in India	705	17.60	0.0000
17488	HATHWAY-NET-AP	Hathway IP Over Cable Internet	1512	17.38	0.0000
24309	CABLELITE-AS-AP	Atria Convergence Technologies Pvt. Ltd.	755	13.72	0.0000
18207	YOU-INDIA-AP	YOU Broadband & Cable India Ltd.	974	11.12	0.0000
45194	SIPL-AS	Syscon Infoway Pvt. Ltd.	724	9.81	0.0000
4755	TATACOMM-AS	TATA Communications	3546	9.63	0.0543
38457	HNS-AS-AP	Honesty Net Solution (I) Pvt. Ltd	314	7.89	0.0000
23682	PACENET-AS	Broadband Pacenet (I) Pvt. Ltd	453	7.76	0.0000
38266	HUTCHVAS-AS	Vodafone Essar Ltd.	1128	4.90	0.0000
9829	BSNL-NIB	National Internet Backbone	30325	4.32	0.0422
45528	TDN	Tikona Digital Networks Pvt Ltd.	1587	3.63	0.0000
9583	SIFY-AS-IN	Sify Ltd	556	3.23	0.0000
45769	DVOIS-IN	D-Vois Broadband Pvt Ltd	650	1.51	0.0000
17908	TCISL	Tata Communications	873	1.45	0.0000
17917	QTLTELECOM-AS-AP	Quadrant Televentures Ltd	739	1.34	0.0000
10201	DWL-AS-IN	Dishnet Wireless Ltd.	588	0.99	0.0000

Challenges

➢ Content & Application Providers readiness.

➢ End User Devices Vendors readiness.

➢ Skill set for IPv6 implementation across all stakeholders.

To Address These Issues ---   Reorganizing Task Force

Centre for Innovation

A centre of innovation for IPv6 is planned with the vision to provide an environment of end to end IPv6 Services under a single umbrella with the following main objectives.

- To implement IPv6 based pilot projects

- To develop model Experimental IPv6 Network

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- Technical support to Central and State Government units.

- Conducting certified training programmes R& D in collaboration with premier institutes for new RFC/New applications, IPRs etc.

- Consultancy support at National / International level.

- . Auditing of the networks & its certification.

IPv6 Training and Certification

➡ To build an industry recognised IPv6 certification program

➡ To empanel organizations for IPv6 training

➡ To build a talent pool on IPv6 skill set in the country

➡ The training and certification proposed to be targeted towards 3 stratum of the resource pool
- 1. Basic level
- 2. Professional Level
- 3. Expert Level

National IPv6 Deployment Roadmap Version-II

Recommendations for Service Providers

➡ **Enterprise Customers**

❖ All new enterprise customer connections (both wireless and wireline) provided by Service Providers on or after 01-01-2014 shall be capable of carrying IPv6 traffic either on dual stack or on native IPv6.

➡ Retail Customers (Wire line)

❖ All new retail wire line customer connections provided by Service Providers on or after 30-06-2014 shall be capable of carrying IPv6 traffic either on dual stack or on native IPv6.

Recommendations for Service Providers

➡ **Retail Customers (Wireless)**

❖ All new LTE customer connections provided by Service Providers with effect from 30-06-2013 shall be capable of carrying IPv6 traffic either on dual stack or on native IPv6.

❖ All new GSM/ CDMA customer connections by service providers on or after 30-06-2014 shall be capable of carrying IPv6 traffic either on dual stack or on native IPv6.

Recommendations for Content & Application Providers

➡ All contents (e.g. websites) and applications providers should target to adopt IPv6 (dual stack) for new contents & applications by 30-06-2014 and for existing ones latest by 01-01-2015.

➡ The complete financial ecosystem including payment gateways, financial institutions, banks, insurance companies, etc. should transit to IPv6 latest by 30-06-2013.

➡ The new registrations on '.in' domain to be compulsorily on dual stack with effect from 01st January 2014.The entire '.in' domain should migrate to IPv6 latest by June 2014.

Recommendations for Equipment Manufacturers

➡ All mobile phone handsets/ data card dongles/ tablets and similar devices used for internet access supporting GSM/ CDMA version 2.5G and above sold in India on or after 30-06-2014 shall be capable of carrying IPv6 traffic either on dual stack (IPv4v6) or on native IPv6.

➡ All wireline broadband CPEs sold in India on or after 01-01-2014 shall be capable of carrying IPv6 traffic either on dual stack or on native IPv6.

Recommendations for Government Organisations

➡ The Government organisations should prepare a detailed transition plan for complete transition to IPv6 (dual stack) by December 2017.The plan should be prepared latest by December 2013

➡ The public interface of all Government projects for delivery of citizen centric services should be dual stack supporting IPv6 traffic latest by 01-01-2015.

➡ The Government organisations should procure equipments which are also IPv6 Ready (Dual Stack) and go for deployment of IPv6 ready (Dual Stack) networks with end to end IPv6 supported applications. The equipment should be either TEC certified or IPv6 Ready Logo certified.

Recommendations for Government Organisations

➥ The Government organisations should go for IPv6 based innovative applications in their respective areas like smart metering, smart grid, smart building, smart city etc.

➥ The IPv6 should be included in the curriculum of technical courses being offered by various institutes / colleges across the country.

Thank You

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