Taiwan IPv6 Readiness

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Outline

• Status of IPv6 Deployment in Taiwan
  – Government
  – Academia
  – ISP

• Status reports for Outcome of the criteria of IPv6 Readiness Measurement

• Conclusions
Taiwan IPv6 Deployment in Governmental Agencies

- IPv6 service availability in governmental agencies is more than 98%, including Web, Email, DNS and FTP services.

Source: TWNIC
Taiwan IPv6 Deployment in Governmental Agencies

• The upgrade of the internal network to IPv6 had been successfully planned or proposed in 1,196 governmental institutions in 2016 according to the governmental Internet Protocol Upgrade and Promotion Program.

<table>
<thead>
<tr>
<th>Governmental Institutions</th>
<th>Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Yuan</td>
<td>437</td>
</tr>
<tr>
<td>Central governmental agencies</td>
<td>48</td>
</tr>
<tr>
<td>Local governments</td>
<td>711</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1196</strong></td>
</tr>
</tbody>
</table>

Source: TWNIC
Taiwan IPv6 Deployment in Governmental Agencies

- IPv6 user availability in GSN has arrived at 1.76%
- AS4782: GSNET (Government Service Network)

Source: APNIC
Taiwan IPv6 Deployment in Governmental Public Wi-Fi Service

• Some hotspots of Taiwan governmental public Wi-Fi service, iTaiwan, have supported IPv6 and will expand this IPv6 service this year.

• Three stages for the upgrade of iTaiwan service to support IPv6.
  – Stage 1. Service Trial. It is implemented in the building of Ministry of Transportation and communications, that was upgraded 20 hot spots in 2015.
  – Stage 2. Small scale service. It is implemented in total 321 hot spots on sightseeing spots and transportation stations in 2016.
  – Stage 3. Large scale service. It plan to be implemented in 5,965 hot spots in Taiwan. The coverage rate is estimated to be nearly 73% of hot spots to support IPv6 in 2017.
Taiwan IPv6 Deployment in Academia

- IPv6 traffic in TANet is grown up. The outbound traffic of Taiwan in IPv6 of TANet is around 3.5Gbps, 20% of IPv4 traffic. The inbound traffic of that is around 1.7Gbps, 14% of IPv4 traffic.

Source: TANET
Taiwan IPv6 Deployment in ISPs

- Taiwan IPv6 servers in Web, E-mail, and DNS

Source: TWNIC
3 Common measurement criteria — IPv6 BGP Advertisement

• The ratio of IPv6 BGP advertisement in the end of 2016 has arrived at 37.87%.

Source: RIPENCC
3 Common measurement criteria — IPv6 Service Availability

- Data Collection from Alexa’s top 1 million websites
- The ratio of IPv6 service availability in the end of 2016 has arrived at 10.51%.

Source: ALEXA
3 Common measurement criteria — IPv6 User Availability

• The ratio of IPv6 user availability in the end of 2016 is around 1.81%.

Source: APNIC
Conclusion

• The ratio of the three common measurement criteria, IPv6 allocation and BGP advertisement, service availability, and user availability are growth in Taiwan.

• The customers still need be encouraged to apply the IPv6 access service in Taiwan.

• The large scale of Taiwan governmental public Wi-Fi service, iTaiwan, will support IPv6 and be promoted this year.