



# Taiwan IPv6 Readiness

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**IPv6 Readiness Measurement BoF**



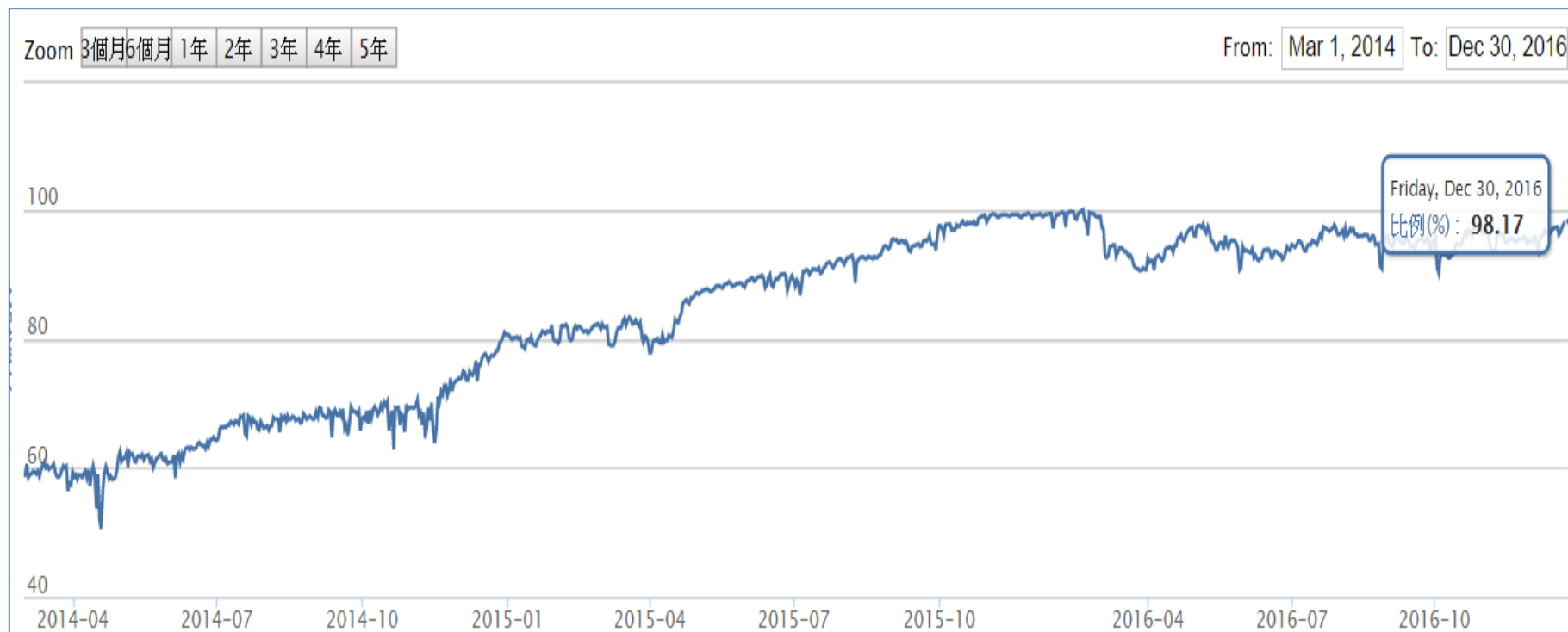
# Outline

- 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.

Governmental Institutions	Numbers
Executive Yuan	437
Central governmental agencies	48
Local governments	711
Total	1196



# 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

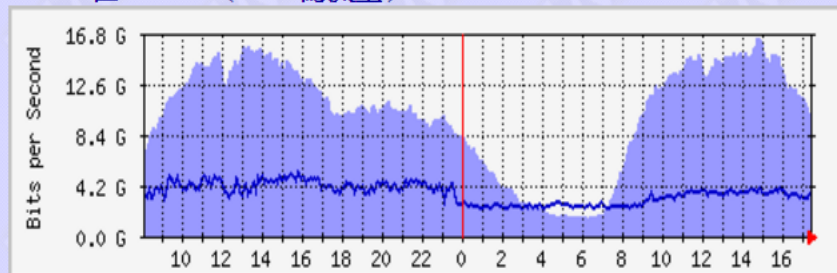
- Some hotspots of Taiwan governmental public Wi-Fi service, iTaiwan, have supported IPv6 and will expand this IPv6 service this year.
- Three stages for the upgrade of iTaiwan service to support IPv6.
  - Stage 1. Service Trial. It is implemented in the building of Ministry of Transportation and communications, 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.



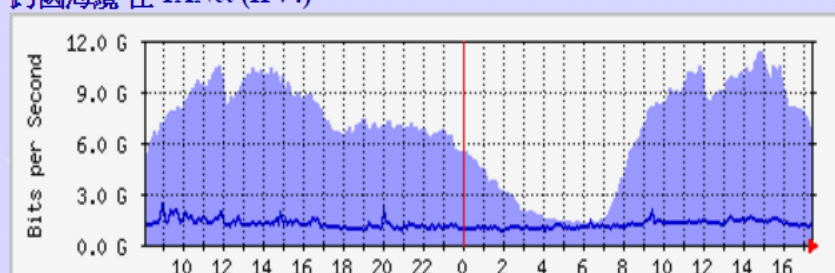
# Taiwan IPv6 Deployment in Academia

- 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.

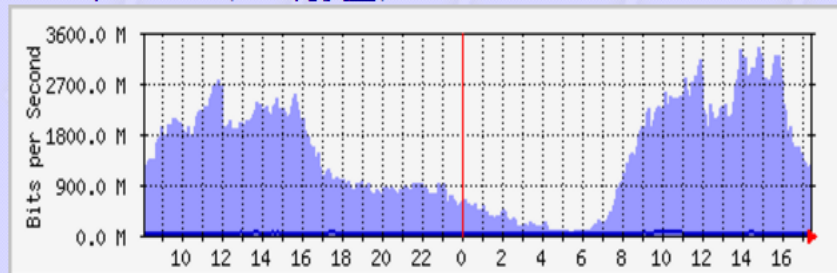
TAnet 往 Internet (IPv4 總流量)



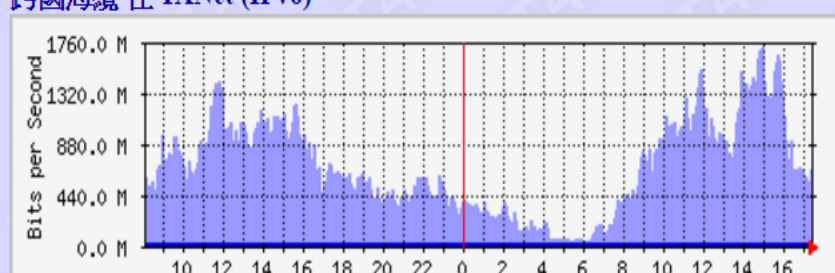
跨國海纜 往 TAnet (IPv4)



TAnet 往 Internet (IPv6 總流量)



跨國海纜 往 TAnet (IPv6)

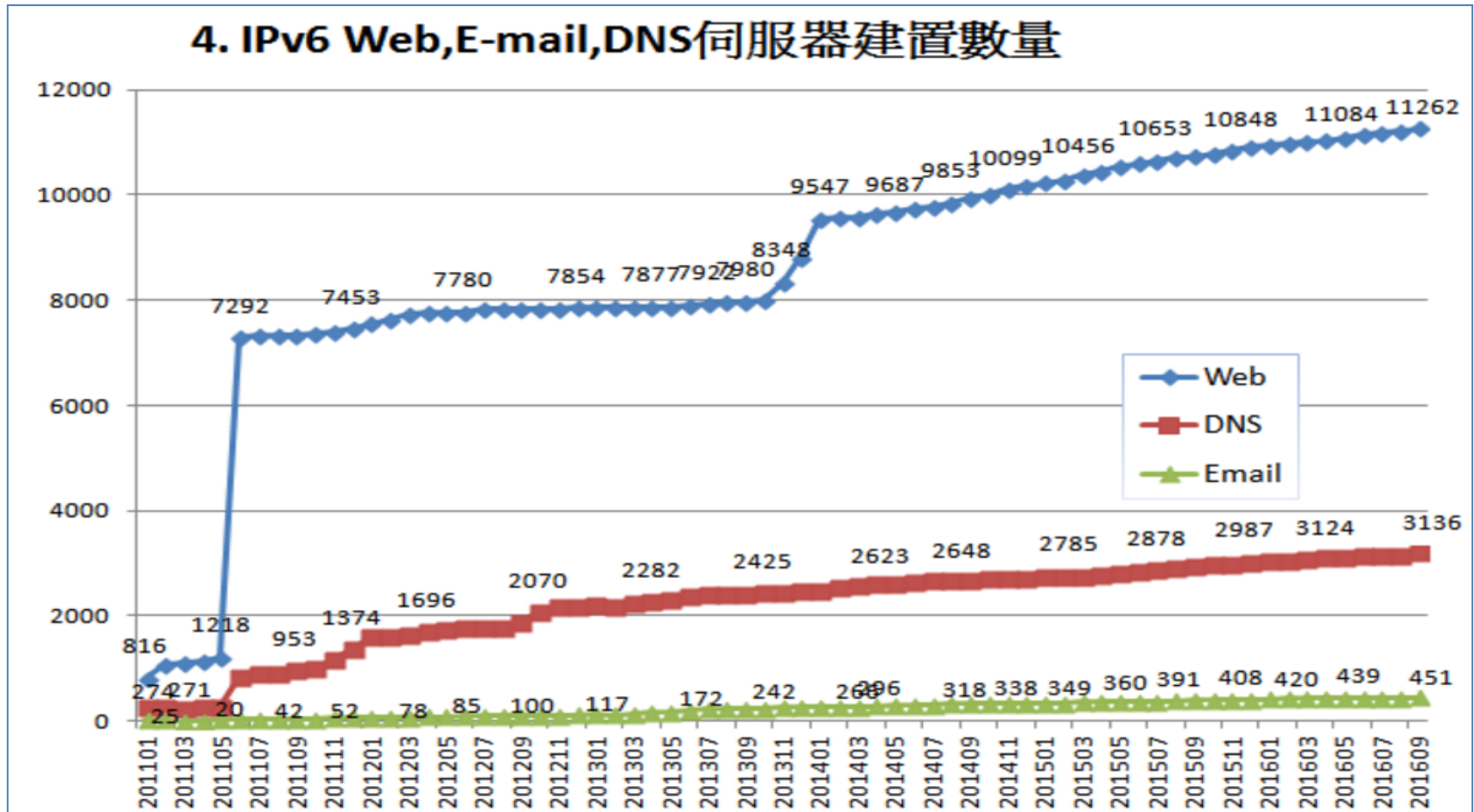


Source:TANET



# Taiwan IPv6 Deployment in ISPs

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



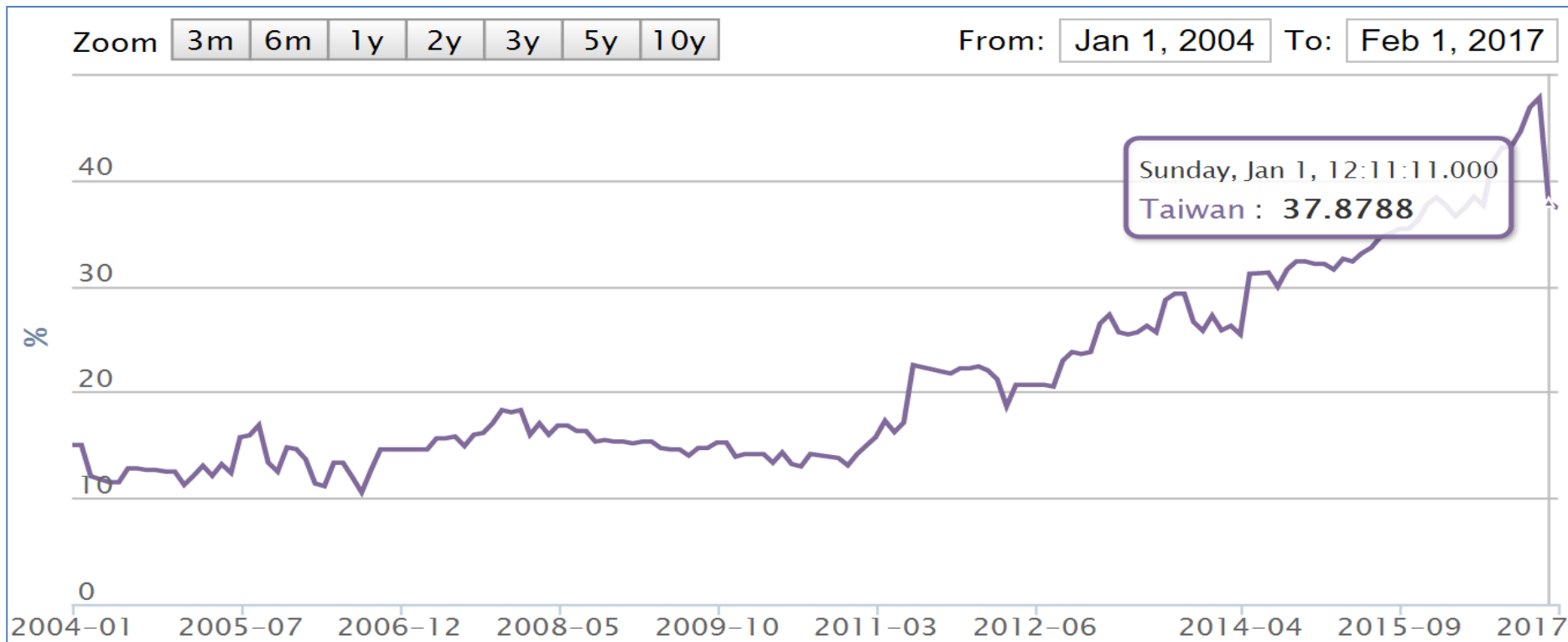
Source: TWNIC





## 3 Common measurement criteria — IPv6 BGP Advertisement

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



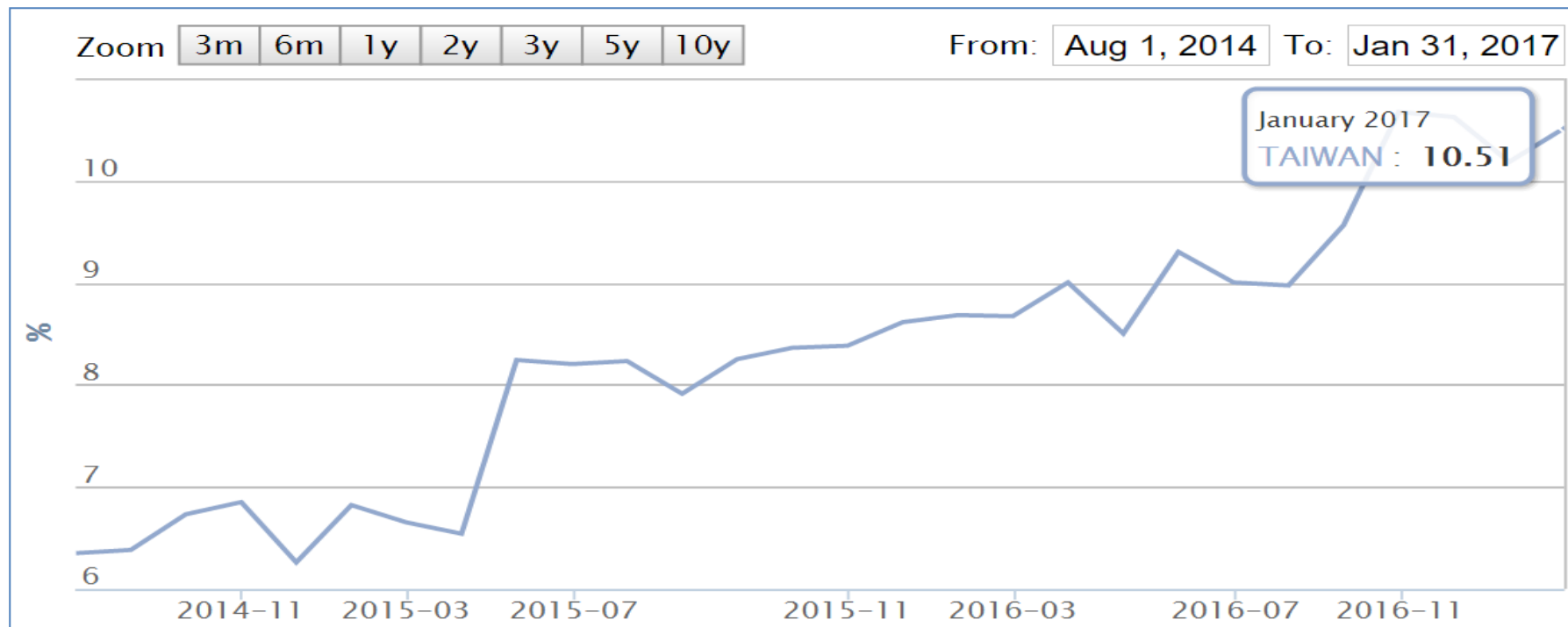
Source:RIPENCC



# 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%.

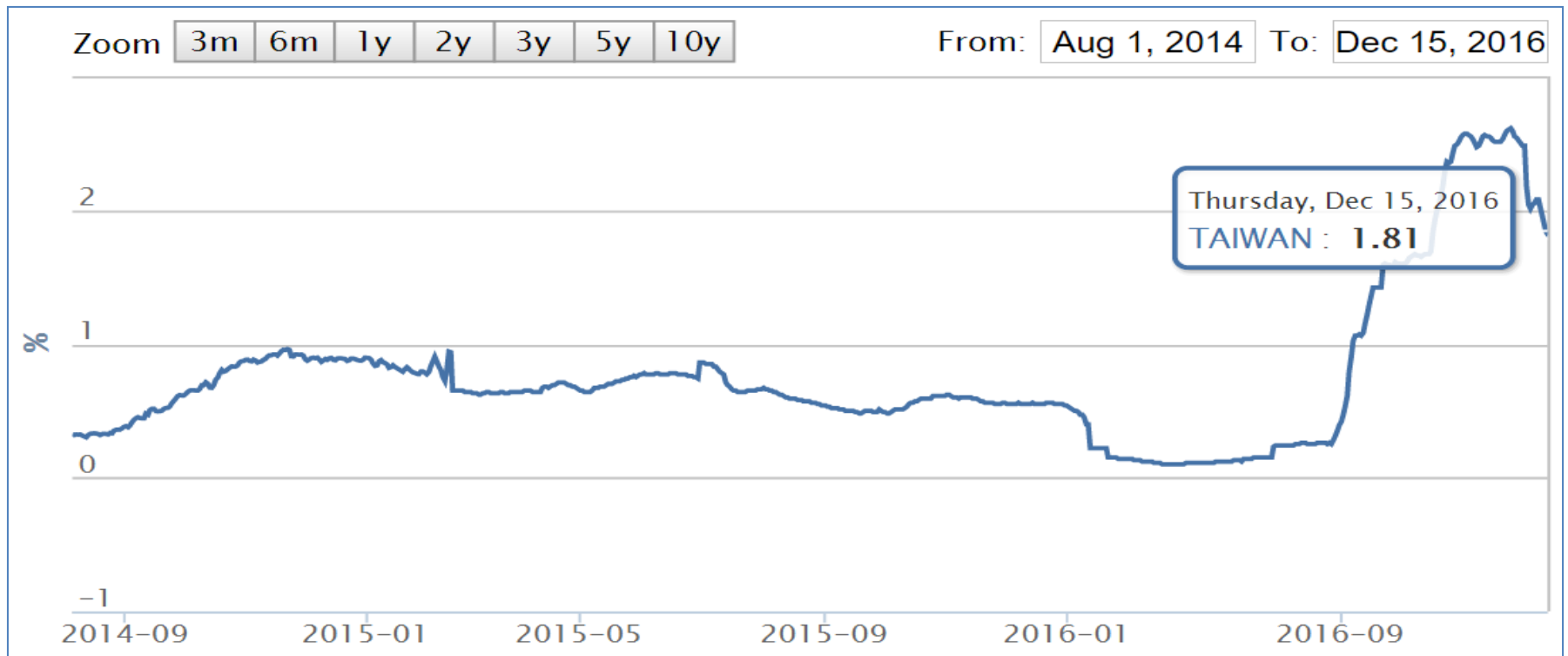




# 3 Common measurement criteria

## — IPv6 User Availability

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





# 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.