



IPv6 deployment in e-government systems

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IPv6 deployment in e-government systems

IT Strategic Headquarters

adopted "New IT reform strategy" in January 2006

The strategy proposes with regard to e-government systems:

"To make ICT devices of each government ministry or agency compatible with IPv6 by FY 2008 , in principle, when they are replaced."



Expected outcomes:

- Improved efficiency in administration through the deployment of innovative applications
- Cost reduction
- Security in the e-government systems (Cost efficient ad-hoc IP-VPN)
- Improved services for customers

Promote Ubiquitous Network Society by the early adoption of IPv6 by the government.

IPv6 deployment for better security

Information Security Policy Council since May 2005

- Decision making body on critical issues on information security in Japan

The First National Strategy on Information Security (Feb. 2, 2006)

Principles for information security

- Need for the introduction of IPv6 in order to establish infrastructures with built-in security features.

New government information systems for enhanced security

- Promote the introduction of IPv6 in the next-generation e-government systems in order to strengthen information security.
- Make ICT devices and software of each government ministry or agency's ICT systems compatible with IPv6 by FY 2008 , in principle, when they are replaced.

Establishing the Guideline

- Two Basic ICT Policy request that “ICT systems compatible with IPv6 by FY 2008.”
- However most of ministries have a few of know-how about the introduction of IPv6.
- So, “The Guideline for the introduction of IPv6 in e-government systems” is established 30th March 2007, by Ministry of Internal Affairs and Communications.

Guideline Outline(1/4)

1. Background of establishing the Guideline

- An adoption of IPv6 to hardware and software has already been set up, and is now ready for the practical use in Japan.
- IPv6 is significantly superior to automatic setup function, and therefore system managers are required to have some measures not to lose the integrative control of the e-Government system, which may be caused by automatic IPv6 communications among these devices themselves.
- Japan recognizes that the current worldwide rapid increase of Internet users cause the complete IPv4 address depletion by 201x. In this case, for new Internet users, only IPv6 facilities may be available.
- Considering these situations, Japan believes that the prompt arrangement toward the IPv6 adaptation be essential for the e-Government system, which offers the service to all nations in Japan.

Guideline Outline(2/4)

2. Position of the Guideline

- The objects of the IPv6 adaptation to the e-Government system are clearly set in following strategies
 - New IT Reform Strategy
(Jan.19/2006 IT Strategic Headquarters)
 - The first National Strategy on Information Security
(Feb.2/2006 Information Security Policy Council)
- These strategies require each government to establish the transition plan to promote the IPv6 adaptation to the e-Government system.
- The Guideline was established as the reference for it by Ministry of Internal Affairs and Communications, which has deep knowledge of communication standards, and will be sent to other governments.

Outline of the Guideline(3/4)

3. Procedures for the transition envisaged in the Guideline

I. Development of an environment where IPv6 is available

“Deactivating IPv6 communications” should be managed.

- i. Compliance of devices and software with IPv6 will be checked within the ICT system. – That is, they are classified into three categories where
 - a. IPv6 is available,
 - b. reception of IPv6 communications will NOT result in an interruption,
 - c. reception of IPv6 communications will result in an interruption.
- ii. Non-IPv6-compliant devices will be replaced with IPv6-compliant ones when they are renewed. While software will be upgraded to normal update.

II. Start of IPv6 application

IPv6 application will be started in order for outside people including citizens to ensure minimum accessibility.

III. Parallel use of IPv4/IPv6

Both IPv4 and IPv6 will be available in all communications.

Outline of the Guideline(4/4)

4. Target of the Guideline

- Early realization of “Development of an environment where IPv6 is available” mentioned in the preceding paragraph
- Making devices to be compliant with IPv6 as well as software, which will be generalized based on IPv4 alone.
- Obviating an unexpected communications among devices in the ICT System, by keeping IPv6 communications to be manageable.

5. Outcome of the Guideline

- Reduction of long term cost, by avoiding repurchase of active devices and software in the introduction of IPv6 to the e-government system in the future.
- Ensuring operational stability and information security, by keeping communications in the e-government system to be manageable.