

2011.1-12



JP Domain Name Registry Report



Japan Registry Services Co., Ltd.

Introduction

The cumulative number of registered JP domain names reached 1.25 million in December 2011. As the Internet is being used in increasingly diverse areas of society, the need for domain names is increasing and the areas of domain names use is getting broader. To meet part of such needs, JPRS announced in September 2011 the establishment of “Prefecture Type JP Domain Names” as a new domain name space rooted in the local community.

In January 2011, following the preparatory phase, JPRS also introduced DNSSEC to the JP domain name service to further improve DNS security.

In the domain name industry, ICANN*1 prepared to introduce new gTLDs, and this major move spurred various discussions and activities around the world.

Also in 2011, we continued to face threats to the foundation of the Internet, such as the exhaustion of IPv4 address inventory and the detection of vulnerabilities in DNS software.

As a company supporting the basis of the Internet society through JP domain names and DNS management, JPRS is striving to make the Internet safe and sound for everyone to use. To this end, JPRS promptly provides information and deals with risks and problems as they arise. JPRS also actively contributes to discussions of global issues and conveys relevant information to parties in Japan.

In addition to the above, JPRS is committed to its ongoing operations to improve JP domain name services, develop systems, and carry out promotional activities to facilitate the use of JP domain names and deliver greater value to users.

The management and administration of JP domain names require a high level of commitment to enhancing the public interest and encouraging sound competition. Recognizing this vital nature of its services and influence on society, JPRS annually publishes the “Registry Report” on its management and administration of .JP domain names.

JPRS will continue to ensure that JP domain names remain useful and contribute to the development of the Internet society.

Koki Higashida
President
Japan Registry Services Co., Ltd.

*1 ICANN...Internet Corporation for Assigned Names and Numbers

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01.1 Goal of JPRS as the JP Domain Name Registry

Our main objectives as the registry are: to continuously improve the value of JP domain names; to provide the registry services that contribute to society; and to gain stronger support from the local and global Internet community in an environment where we compete and collaborate with other registries of Top Level Domains (TLDs) and similar services.

JPRS defines the following as the core concepts for the registration and administration of JP domain names.

- Reliability: establishing domain name space with the public trust
- Stability: operating and administering a stable domain name system (DNS)
- Usability: providing accessible domain name services which meet users' needs
- Fee Performance: providing services at reasonable fees

With the mission of supporting the foundation of the Internet, JPRS considers it important to ensure reliability and stability while pursuing a good balance with usability and fee performance.

01.2 Activities in 2011

JPRS has contributed to the development of the Internet society and worked to enhance its registry services and the value of JP domain names in cooperation with the JP Registrars and other related organizations.

DNSSEC Introduced to JP Domain Name Service (January)

In October 2010, JPRS started signing the JP zone in preparation for deploying DNSSEC in the JP domain name service. Then, in December 2010, JPRS registered key information in the root zone for verifying its DNSSEC signatures. Using the key information registered in the root zone, JPRS confirmed that JP zone signatures were properly validated and that existing DNS infrastructures were not adversely affected. In January 2011, JPRS completed the deployment of DNSSEC in the JP domain name service to further improve the security of JP domain names.

- <http://jprs.co.jp/press/2011/110117.html> (in Japanese)

Issuance of RFC on Standards Track Written by JPRS Engineer (March)

On March 11 (US time), Kazunori Fujiwara of JPRS, Scott Bradner of Harvard University in the US, and Lawrence Conroy of Roke Manor Research Limited in the UK jointly issued the RFC*¹ (RFC6116: The E.164 to Uniform Resource Identifiers (URI) Dynamic Delegation Discovery System (DDDS) Application (ENUM)*²). This RFC defines the protocol specifications of ENUM used to correlate telephone numbers with URI as an application of DDDS*³. It is one of the RFCs classified in the “Standards Track” category.

Standards-track RFCs are important for establishing the standard specifications of protocols. RFC6116 was the first standards-track RFC authored by a JPRS engineer.

- <http://jprs.co.jp/topics/2011/110315.html> (in Japanese)

Hirofumi Hotta of JPRS Appointed Co-Chair of ICANN ccNSO Council (March)

Hirofumi Hotta of JPRS was elected Co-Chair of the ICANN ccNSO*⁴ Council.

ccNSO is a confederation of ccTLD registries assigned to countries and territories assigned ccTLDs. While coordinating with the other ICANN Supporting Organizations and Advisory Committees, ccNSO plays an important role in forming a consensus across the ccTLD community on global issues relating to the entire ccTLD space, as well as recommending policies to the ICANN Board.

JPRS has been participating in ccNSO as the registry of Japan’s ccTLD “.jp”, actively contributing to ICANN activities.

- <http://jprs.co.jp/press/2011/110323.html> (in Japanese)

*1 RFC : Request for comments

*2 ENUM : Technology for enabling the specification and identification of various communication services using telephone numbers as a standardized identifier

*3 DDDS : Abbreviation for Dynamic Delegation Discovery System. This system applies character string conversion rules obtained in DNS searches to convert character strings in applications to locations (e.g., URI).

*4 ccNSO: ccNSO (Country Code Names Supporting Organization) is one of the Supporting Organizations set up in ICANN to support its activities through coordination relating to domain name resources that form the foundation of the Internet.

Free Cartoon Booklet on the Internet System Sent to Junior and Senior High Schools and Technical Colleges across Japan (May)

“Info-Communications Promotion Month” started in mid-May as a part of Internet-related educational activities. In line with this, from May 13 to June 30, JPRS set up a special web page (<http://マンガで学ぶ.jp>) where teachers at junior and senior high schools and technical colleges could apply for the booklet. JPRS distributed the booklet free of charge to those who applied. The free booklet was distributed for the second year in a row, following the support activities conducted in the same period in 2010. At that time, JPRS received a number of applications from educational institutions across the nation. Many teachers appreciated the booklet as a suitable teaching material for Internet-related lessons and expressed their hope that it would continue to be distributed, because of the lack of similar teaching materials in school. The number of copies distributed in total in 2010 and 2011 amounted to about 50,000.



Ponta's Great Adventure in the Network

The cartoon booklet is titled “Ponta’s Great Adventure in the Network.” It contains a story to help readers learn how the Internet works, explaining how we can reach particular websites and the system of Internet addresses, or “domain names,” with many illustrations.

- <http://jprs.co.jp/press/2011/110513.html> (in Japanese)

Publication of “Practical Guide to DNS Operations” Authored by JPRS Engineers (May)

JPRS engineers wrote and published “Practical Guide to DNS Operations” This book describes DNS in detail, from the basics to specific settings and operations, based on findings that JPRS has obtained through its technical studies and large-scale DNS operations conducted to manage “.jp” domain names.



Practical Guide to DNS Operations

Decision to Set Up New Domain Name Space “Prefecture Type JP Domain Names” using the Names of 47 Prefectures in Japan (September)

JPRS set up a Geographic type JP Domain Name Reconstruction Working Group in May 2010. In WG meetings, JPRS studied how to enable users in various regions to register and use Geographic type JP domain names so that they can contribute to local development.

As a result, in September 2011, JPRS decided to establish “prefecture type JP domain names,” a new domain name space rooted in local communities.

“Prefecture type JP domain names” include the names of the 47 prefectures in Japan, such as “000.tokyo.jp” and “000.osaka.jp”. These domain names help to associate websites and email addresses with particular regions in Japan.

- <http://jprs.co.jp/press/2011/110926.html> (in Japanese)

Education and Promotion Related to Domain Names and DNS

Jan. JANOG27 Meeting

JPRS provided information on changes in DNS traffic, using examples of cases observed after the introduction of DNSSEC to the JP domain name service.



JANOG27 Meeting

Feb. 13th ThinkQuest Japan

JPRS supported the “13th ThinkQuest Japan,” a Web contest for junior and senior high school students. JPRS provided 339 general-use JP domain names (both in Japanese and ASCII) free of charge for 170 works so that they could have original domain names. JPRS also presented the Best Domain Name Award to the team who had chosen the most effective domain name to increase the appeal of their work.

Mar. HOSTING-PRO 2011

JPRS explained the latest trends of domain names and DNS.

Apr. 11th DNSOPS.JP BoF

At the 11th DNSOPS.JP BoF, JPRS presented a case study on how to provide communities with technical information, such as effective technical PR and the method of calling attention to certain issues.

May Beginners' Seminar on How to Make Good Use of Websites

At a seminar held by the Chamber of Commerce in Ichikawa, Chiba, JPRS discussed the necessity of corporate PR via the Internet, as well as the basics of domain names and their use.

Jun. Interop Tokyo 2011

At the JPRS booth, mini-seminars were given to visitors explaining a basic knowledge of domain names and technological information on DNS.



JRPS booth

Jul. JANOG28 Meeting

JPRS presented key management information regarding DNSSEC operations in the JP domain name space.

Aug. 260th RIST Forum

At the RIST*¹ Forum, which is for discussing a variety of the latest technologies, JPRS presented its activities for enhancing the security, stability, and reliability of DNS, including conditions encountered after the Great East Japan Earthquake.

Nov. Internet Week 2011

At the lunch seminar, JPRS talked about the issue of “DNS not disseminating” and explained its technical background with demonstrations of correct procedures to prevent faults.

In the DNS DAY session, JPRS presented statistics on JP DNS and the global trends of domain names.

Also, at the 12th DNSOPS.JP BoF, we gave a presentation on basic countermeasures for bugs in BIND 9, as well as registrars’ IPv6 information collection related to recommended settings for reverse DNS lookups.

*1 RIST: Kumamoto Technical Innovation and Integration Research Group

01 · 3 International Relations

1. Activities at IETF

IETF was established in 1986 to promote the standardization of Internet technologies. Technical specifications decided on at IETF are documented as RFCs (Request for Comments) and used as standards in Internet operations.

JPRS engineers are participating in various working groups set up in IETF, thus contributing to the standardization of Internet technologies by preparing proposals, writing RFCs, and conducting many other activities.



IETF80

(1) Revision of Internationalized Domain Name Protocol

Internationalized domain names (IDN) refer to domain names in Kanji, Hangul, and other non-ASCII (alphanumeric) characters, or their technical specifications. IETF standardized the IDN protocols in 2003 and revised them in 2010.

To promote IDN, JPRS provides the internationalized domain name tool kit 2 (idnkit-2), which complies with the latest specifications revised in 2010 to the community. This tool kit offers API (library) for application developers to make software comply with the IDN specifications, as well as a set of tools for system administrators to properly process IDN.

In January 2011, JPRS released Version 2.1 with an additional API package that complies with several programming languages such as Java and Perl.

- <http://jprs.co.jp/idn/index-e.html>

(2) Internationalization of Email Addresses

Email Address Internationalization (EAI) is a series of protocol extensions that internationalize email addresses and allow non-alphanumeric characters to be used in the addresses. EAI was standardized as a verification test protocol in the period from 2008 to 2010. Based on the results of verification tests, IETF is currently drawing up a standard protocol. Kazunori Fujiwara from JPRS is proposing standard specifications (RFC) and actively participating in the standardization efforts at EAI.

(3) Promotion of ENUM Standardization

ENUM is a technology for using DNS to correlate telephone numbers (E.164 numbers) with various Internet resources, such as email addresses and website addresses (URI). IETF standardized the ENUM protocol in 2000 and revised it in 2004.

In March 2011, IETF issued RFC6116 that revises the conventional ENUM protocol, RFC6117 that prescribes the method for registering new ENUM services, and RFC6118 that redefines the conventional ENUM service to comply with RFC6117. Kazunori Fujisawa from JPRS co-authored RFC6116.

(4) Promotion of the Standardization of Internationalized Identifier Preprocessing

Internationalized identifiers generally refer to identifiers consisting of non-alphanumeric characters (i.e., internationalized) that uniquely identify domain names, email addresses, and website addresses on the Internet.

To use internationalized identifiers, preprocessing is necessary to unify or normalize character types and compatible characters so that character strings can be matched up correctly. IETF issued an RFC in 2003 to propose “stringprep” as the standard method of preprocessing. Since stringprep refers to the older version of Unicode specifications, it needs to be revised.

Accordingly, in June 2010, IETF set up the PRECIS Working Group (WG) to discuss revisions to stringprep. Yoshiro Yoneya from JPRS was appointed Co-Chair of the WG to lead its activities.

2. Participation in ICANN and Other International Discussions

ICANN is a private non-profit organization established in the United States in 1998 to coordinate resources underpinning the Internet, such as domain names, IP addresses, protocols, and root servers.

Since its foundation, JPRS has been actively participating in the organization of ICANN and studies of various policies, and supporting the management and coordination of Internet resources led by the private sector, with ICANN playing the central role. In 2002, JPRS signed a “ccTLD Sponsorship Agreement” with ICANN, and has since been entrusted by ICANN to serve as the registry of Japan’s ccTLD “.jp”.

By participating in various organizations established in ICANN, as well as presentations and meetings, JPRS is discussing policies and making action plans to cope with issues facing ICANN and registries. Also via ICANN, JPRS is sharing its experience in JP domain name registry operations with the global community, thereby contributing to the development of the Internet as a whole.



ICANN meeting in Singapore

The following reports JPRS’s activities in ICANN organizations:

(1) ccNSO

ccNSO*1 is one of the Supporting Organizations set up in ICANN to assist its activities. The role of ccNSO is to form a consensus in the ccTLD community on global issues concerning the entire ccTLD space and to make recommendations to the ICANN Board. Since ccNSO was established in 2003, JPRS has been a member and also served as a ccNSO Council member. In 2011, Hirofumi Hotta of JPRS was elected Co-Chair of the ccNSO Council.

One of the achievements made by JPRS in ccNSO is the planning and designing of the IDN ccTLD Fast Track Process. Since the official start of this process in November 2009, applications have been made to ICANN for 36 characters, of which 30 have been registered as IDN ccTLD in the root zone (as of January 24, 2012).

While implementing the ccTLD Fast Track Process, ccNSO started full-scale discussions on creating permanent policies. Major themes of the discussions were to review the definition of character strings allowed as IDN ccTLD, as well as to redefine ccNSO membership at the introduction of IDN ccTLD. To study these issues, working groups were set up in ccNSO. JPRS acts as an observer in the working groups to discuss the definition of character strings, and also chairs the working group on membership redefinition, taking the initiative in reviews and compilation of the final report.

*1 ccNSO: Country Code Names Supporting Organization

At the 40th ICANN meeting held in San Francisco in March 2011, ccNSO hosted its first joint workshop with DNS-OARC, an institution engaged in DNS operation, analysis, survey, and research. In the workshop, many presenters talked about technologies for authoritative DNS servers and registry system operation, and implementation of solutions, putting special focus on ccTLD. JPRS made a presentation on DNS service evaluation, as well as the diffusion of DNSSEC validation seen from the viewpoint of access to DNS, and shared with the international community findings from its experience as the registry.

In 2011, ccNSO also provided several opportunities for information sharing and discussions on business continuity plans. At the San Francisco meeting in March, JPRS reported on the situation in Japan after the Great East Japan Earthquake. Also at the Singapore meeting held in June, JPRS talked about the considerations and precautions necessary for maintaining the ability to continue to provide registry services.

From the end of 2010 to the first half of 2011, a working group, comprising ccTLD registries, gTLD registries, and technical experts, was set up to analyze the current situations of DNS security and stability. Another working group also started studies on a contact repository to help ccTLD registries cope with incidents. JPRS sends members to both working groups.

(2) SSAC

SSAC*², one of the Advisory Committees in ICANN, advises the ICANN community and the ICANN Board on issues related to Internet security and stability. SSAC consists of technical experts, such as from TLD registries, registrars, root server operators, and Internet-related researchers.

Since 2007, Shinta Sato of JPRS has been participating in SSAC. Using his experience of working in a ccTLD registry, Sato is committed to ensuring that the Internet operates stably at the global level.

(3) Participation in ICANN KSK Ceremony

The deployment of DNSSEC in the root zone requires that a “private key” and a “public key” be generated with public key cryptography. The procedure to create a pair of keys is generally called a key ceremony.

Root servers are an indispensable foundation of the Internet, so the Internet community must demonstrate to the entire community that there is no fraud or errors in the generation and updating of these keys. For this reason, prior to holding key ceremonies, ICANN selected 21 TCRs (Trusted Community Representatives) to participate in the ceremonies as representatives of the global Internet community. Masato Minda of JPRS was selected as one of the TCRs and was appointed one of COs (Crypto Officer: one of the roles played by TCR) in the ICANN’s facility on the West Coast (in Los Angeles, USA).

Minda participated in key ceremonies held in the West Coast facility in February and July, 2011. The ceremony held in February (ICANN KSK Ceremony IV) was attended by 21 participants, including Minda and four other COs. The July ceremony (ICANN KSK Ceremony VI) was attended by 13 participants, including four COs. Both ceremonies proceeded smoothly without any problems.

*2 SSAC...Security and Stability Advisory Committee

3. Participation in Registry Organizations

(1) APTLD

JPRS has been a member of APTLD*¹ since 2002. As a board member, Yumi Ohashi from JPRS was involved in APTLD operations.

As the registry of JP domain names, JPRS proposes improvements of APTLD activities, provides information, and leads discussions at presentations and meetings so that the ccTLD community in the Asia-Pacific region can accumulate experience and know-how and raise service standards.

In 2011, APTLD chose security and new gTLDs as a key agenda, held technical training, and exchanged opinions to assist regional development. As a ccTLD official member, JPRS made presentations at various meetings and, as a board member, contributed to APTLD's activities and operation through the planning of these meetings.

(2) CENTR

CENTR*² is an association consisting of ccTLD registries mainly in Europe. As an associate member, JPRS shares information and exchanges opinions with other CENTR members.

In 2011, JPRS cooperated with surveys on the framework for registrar qualification and registry data management practices.

*1 APTLD: Asia Pacific Top Level Domain Association

*2 CENTR: Council of European National Top Level Domain Registries

4. Other International Activities

(1) Participation in AP*Retreat

AP*Retreat meetings are held twice a year, in principle, for Internet-related organizations in the Asia-Pacific region and other organizations that play important roles in the Internet in each country or economy. In the meetings, representatives of each organization report on their activities and share their concerns about various issues. In addition, participants discuss how the Asia-Pacific community should tackle Internet-related issues.

In February 2011, an AP*Retreat meeting was held in Hong Kong jointly with Internet-related organizations in Africa. This was the first Asian-African joint meeting. Participants presented and discussed activities and urgent issues of Internet-related organizations in each region, and exchanged opinions.

Another meeting was held in Busan, South Korea in September, at which Internet-related organizations of the Asia-Pacific region reported their activities. Then, JPRS reported on the aftermath of Japan's Great Earthquake on March 11, sharing information about earthquakes preparedness. Also, participants from Thailand introduced actions taken for floods. These presentations were followed by active exchanges of opinion, making all the participants keenly aware of the need for "emergency preparedness" in the Asia-Pacific region.

(2) Participation in Root DNS Server Operator Organizations' Meetings

IETF holds meetings three times a year, and representatives of root DNS server operator organizations meet on the first day of each meeting. JPRS has been participating in these meetings as one of the organizations in charge of M-Root DNS server operations. At these meetings, attendees share information principally on the stability of server operations and topics related to the latest technology. In 2011, they discussed operations related to the presumed addition of new gTLDs and methods to maintain stable operation of root DNS servers.

(3) Participation in the BIND 10 Development Project

BIND is the most widely used DNS server software on the Internet. In April 2009, ISC, a non-profit organization in the United States, announced a plan to improve the security and robustness of this software and set up a project to develop the next-generation BIND 10. JPRS supports the objectives of this project and participates in it as one of the Founding members.

This project is sponsored by many TLD registries around the world, including JPRS, CIRA (.ca), and DENIC (.de). In 2011, TLD registries and leading ISPs newly joined the project.

Since the outset of the project, JPRS has been offering not only financial support but also human resources, assigning its engineers to development teams. In 2011, the project released the development version of BIND 10 in several phases. As a result, in 2011, its basic functions as DNS server software were enhanced by improved DNS server performance and cache DNS server functions, as well as additional DHCP server functions.

(4) Release of the English Translation of “DNSSEC Technology Experiment Report”.....

JPRS conducted DNSSEC technology experiments in cooperation with domestic ISPs, equipment vendors, etc., and reported the results at APRICOT2011 held in February 2011. To make the useful results accessible to many readers worldwide, JPRS requested cooperation with the English translation of the DNSSEC Technology Experiment Report, and received an offer from APNIC.

APNIC and JPRS jointly translated the report into English. The English translation of the DNSSEC Technology Experiment Report is available on JPRS’s website.

- <http://jprs.co.jp/en/topics/2011/111128.html>

01.4 Activities in Japan

(1) Participation in DNSSEC Japan

DNSSEC Japan is an organization established to introduce and disseminate DNSSEC smoothly in Japan. JPRS actively participates in this organization as a member and the secretariat, with Yoshiro Yoneya of JPRS serving as Vice Chair.

In 2011, JPRS joined the DNSSEC operation technology working group to discuss technologies and methods for deploying DNSSEC services in commercial ISPs and explained the concept and policies of preparing DPSs (DNSSEC Practice Statement).

At the logo working group, JPRS made a checklist and a logo that DNSSEC organizations can use to indicate their DNSSEC operations. The results of these activities are posted on the DNSSEC Japan website.

In the “DNSSEC 2011 Spring Forum” held by DNSSEC Japan in April 2011, JPRS talked about changes in the traffic observed after introducing DNSSEC to the JP domain name service.

● http://dnssec.jp/?page_id=440

(2) Participation in ICANN Debriefing Sessions

Since 2001, JPRS has been reporting the latest ccTLD trends to the Japanese Internet community at ICANN debriefing sessions held jointly by the Japan Network Information Center (JPNIC) and Internet Association Japan (IAJapan).

In 2011, debriefing sessions were held in January, May, August, and November. JPRS reported on issues concerning IDN ccTLD and other subjects studied by ccNSO and discussed ICANN-related issues with the other attendees.

01.5 Overview of this Term's Activities and Challenges for the Future

JPRS has constantly worked to strike a proper balance among reliability, stability, usability, and fee performance, which constitute the basis of JP domain name registry services, while also improving each of the four values.

Management and Administration of JP Domain Names

Activities to Enhance the Usability of JP Domain Names

JPRS worked to improve the value of JP domain names, to encourage more users to register and make good use of the domain names.

The Geographic Type JP Domain Name Reconstruction Working Group set up in May 2010 discussed how to facilitate the registration and use of geographic type JP domain names so that they can contribute to local development. Following repeated discussions, JPRS decided in September 2011 to establish “prefecture type JP domain names” as a new domain name space that uses the names of the 47 prefectures in Japan.

Activities to Enhance Understanding of JP Domain Names and Their Use

JPRS continued its activities to increase public awareness and understanding of domain names, while engaging in educational activities to teach the importance of choosing a suitable domain name and propose ways to use domain names effectively.

As part of the Internet-related educational support activities, JPRS distributed a free booklet on how the Internet works to junior high schools, senior high schools, and technical colleges across Japan. This activity started in 2010, and JPRS has distributed about 50,000 copies of the free booklet in two years.

JPRS also gave lectures at corporate seminars held by chambers of commerce, and provided information at a variety of events. Thus, JPRS continued to hold educational activities to enhance the understanding of domain names and the Internet in various areas.

Regarding Japanese JP domain names, JPRS introduced a greater number of usage examples to help people recognize their uses and benefits.

DNS Operations

Activities to Deploy and Disseminate DNSSEC in the JP Domain Name Service

In January 2011, JPRS deployed DNSSEC to the JP domain name service to improve its security.

Jointly with APNIC, JPRS translated into English the report on DNSSEC technical experiments conducted in cooperation with several ISPs and vendors in 2010. The English translation was posted on the JPRS website in November 2011.

JPRS also participated in DNSSEC Japan's activities and a variety of events, such as the DNSSEC 2011 Spring Forum held in April 2011.

R&D of Internet Technologies and International Activities

Promotion of International Standardization of Internet-related Technologies

To promote internationalized domain names, JPRS publicized the latest version 2.1 of Tool Kit 2 (idnkit-2), which complies with the latest specifications of internationalized domain names. Version 2.1 is enhanced by an API package that is compatible with Java, Perl, and some other programming languages.

To draw up a standard protocol, Kazunori Fujiwara from JPRS proposed standard specifications for the promotion of internationalized email addresses.

To promote ENUM standardization, Fujiwara also co-authored RFC6116, which was revised in March 2011.

To promote the standardization of international identifiers, Yoshiro Yoneya of JPRS acts as Co-Chair of the PRECIS WG established in June 2010.

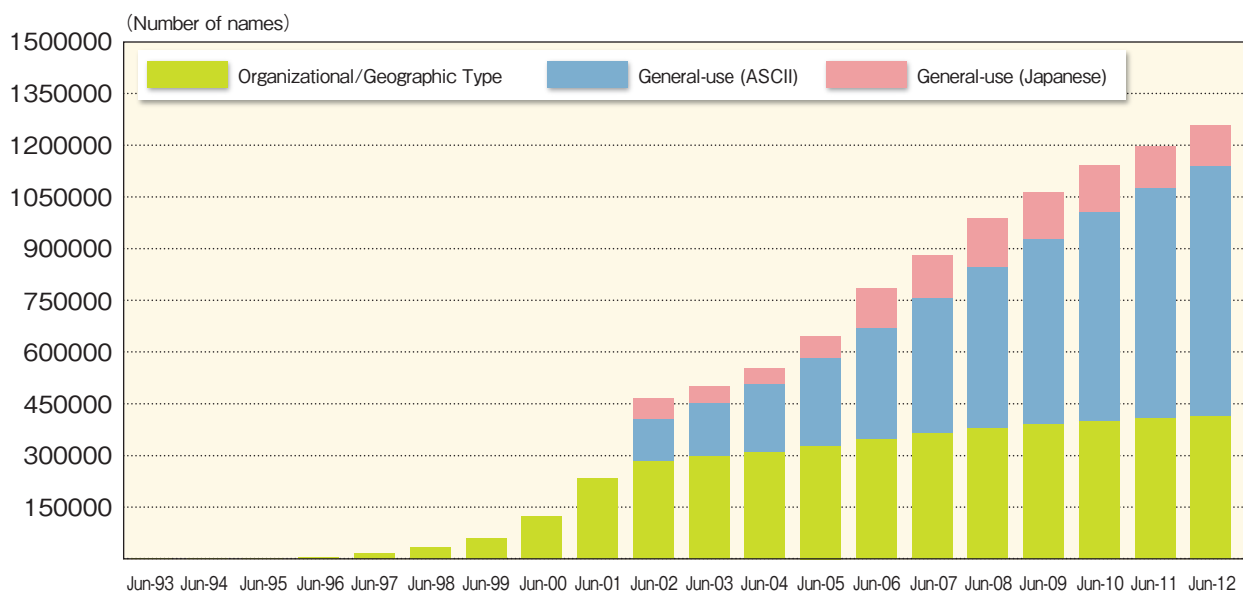
Participation in the BIND 10 Development Project

Since April 2009, JPRS has been participating in the project to develop the next version of DNS software, BIND 10. JPRS is taking an active part, by not only offering financial support but also assigning its engineers to the project.

In 2011, the basic functions of BIND 10 as DNS server software were enhanced by improving authoritative DNS server functions and cache DNS server functions, as well as by adding new DHCP server functions.

02.1 Change in the Cumulative Number of Registered JP Domain Names

As of January 1, 2012, the cumulative number of registered JP domain names reached 1,258,386, an increase of 60,281 in one year.



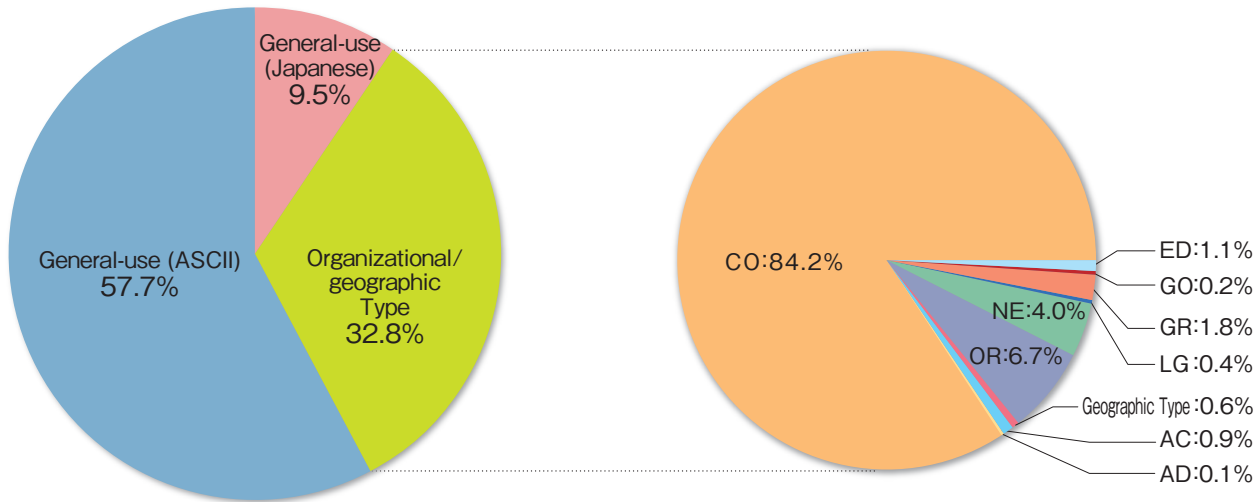
(Number of names)

| Year/Month | Organizational/geographic Type | General-use (ASCII) | General-use (Japanese) | Total |
|------------|--------------------------------|---------------------|------------------------|-----------|
| 1993/01 | 953 | — | — | 953 |
| 1994/01 | 1,341 | — | — | 1,341 |
| 1995/01 | 2,206 | — | — | 2,206 |
| 1996/01 | 4,781 | — | — | 4,781 |
| 1997/01 | 15,477 | — | — | 15,477 |
| 1998/01 | 33,739 | — | — | 33,739 |
| 1999/01 | 58,549 | — | — | 58,549 |
| 2000/01 | 124,573 | — | — | 124,573 |
| 2001/01 | 234,294 | — | — | 234,294 |
| 2002/01 | 283,340 | 121,992 | 61,507 | 466,839 |
| 2003/01 | 297,413 | 153,949 | 51,544 | 502,906 |
| 2004/01 | 309,193 | 199,698 | 45,402 | 554,293 |
| 2005/01 | 327,742 | 254,131 | 63,324 | 645,197 |
| 2006/01 | 346,340 | 323,182 | 116,602 | 786,124 |
| 2007/01 | 363,768 | 394,404 | 124,153 | 882,325 |
| 2008/01 | 378,903 | 468,125 | 141,858 | 988,886 |
| 2011/01 | 389,598 | 539,212 | 134,921 | 1,063,731 |
| 2010/01 | 399,339 | 607,066 | 133,754 | 1,140,159 |
| 2011/01 | 406,856 | 667,538 | 123,711 | 1,198,105 |
| 2012/01 | 413,332 | 725,717 | 119,337 | 1,258,386 |

Please refer to "Domain name statistics" (<http://jpinfo.jp/stats/domains.html>) for the latest information.

02.2 Breakdown of the Cumulative Number of Registered JP Domain Names

*As of January 1, 2012



(Number of names)

| JP Domain Name Types | | 1 January 2012 Number of Registrations | 1 January 2011 Number of Registrations | Difference |
|--|--|---|---|----------------|
| Organizational/ Geographic Type | AC : Higher education institution | 3,530 | 3,512 | +18 |
| | AD : JPNIC Member | 273 | 275 | -2 |
| | CO : Kaisha (Company) | 347,999 | 342,055 | +5,944 |
| | ED : Primary school, junior and senior high school | 4,692 | 4,581 | +111 |
| | GO : Japanese government | 739 | 751 | -12 |
| | GR : Group | 7,428 | 7,627 | -199 |
| | LG : Japanese local authority | 1,842 | 1,849 | -7 |
| | NE : Network service | 16,345 | 16,685 | -340 |
| | OR : Judicial body other than kaisha | 27,890 | 26,855 | +1,035 |
| | Geographic Type | 2,594 | 2,666 | -72 |
| General-use | ASCII | 725,717 | 667,538 | +58,179 |
| | Japanese | 119,337 | 123,711 | -4,374 |
| Total JP Domain Name Registration | | 1,258,386 | 1,198,105 | +60,281 |

Please refer to "Domain name statistics" (<http://jpinfo.jp/stats/domains.html>) for the latest information.

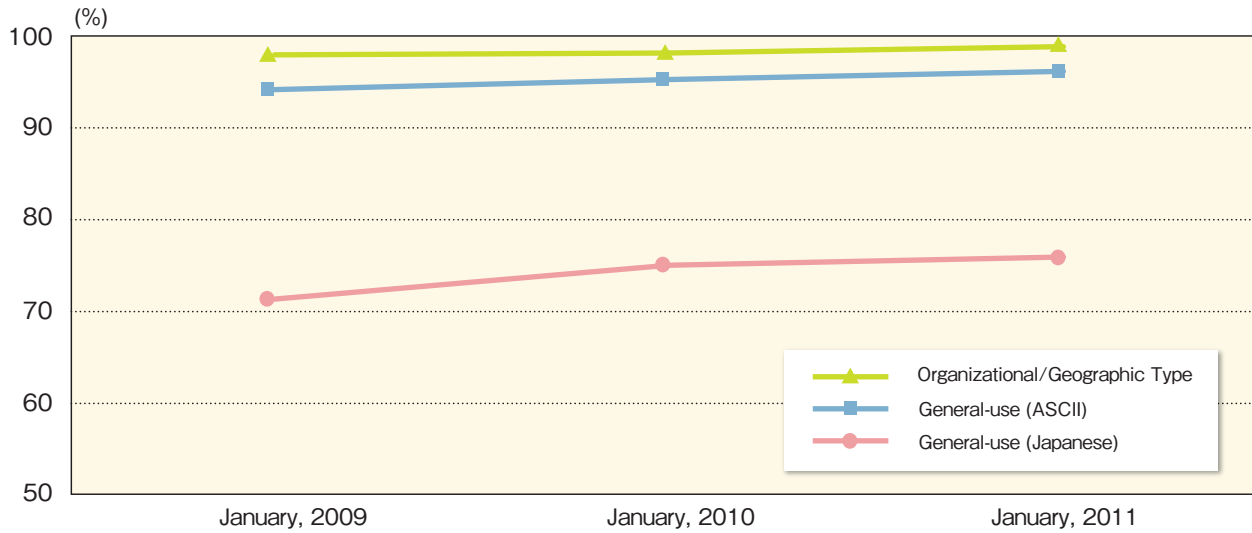
02.3

Number of JP Domain Name Registrations
by Prefecture

*As of January 1, 2012

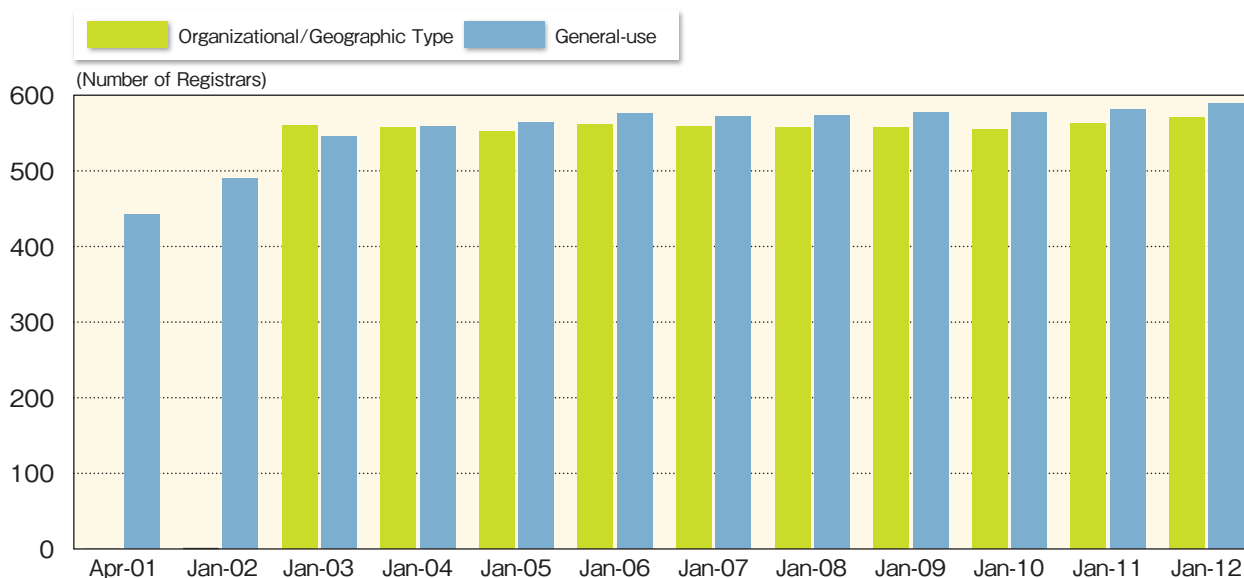
| Prefecture | Organizational/Geographic Type | General-use (ASCII) | General-use (Japanese) |
|------------|--------------------------------|---------------------|------------------------|
| Hokkaidou | 2.8% | 2.3% | 0.9% |
| Aomori | 0.5% | 0.3% | 0.1% |
| Iwate | 0.4% | 0.3% | 0.1% |
| Miyagi | 1.2% | 0.8% | 0.3% |
| Akita | 0.4% | 0.2% | 0.3% |
| Yamagata | 0.6% | 0.3% | 0.1% |
| Fukushima | 0.8% | 0.5% | 0.2% |
| Ibaraki | 1.4% | 1.1% | 0.7% |
| Tochigi | 1.0% | 0.6% | 0.2% |
| Gunma | 1.1% | 0.7% | 0.5% |
| Saitama | 4.1% | 2.7% | 1.4% |
| Chiba | 3.1% | 2.5% | 1.2% |
| Tokyo | 32.7% | 42.6% | 71.4% |
| Kanagawa | 6.7% | 5.4% | 3.1% |
| Niigata | 1.2% | 0.8% | 0.4% |
| Toyama | 0.7% | 0.4% | 0.2% |
| Ishikawa | 0.8% | 0.6% | 0.2% |
| Fukui | 0.5% | 0.4% | 0.1% |
| Yamanashi | 0.5% | 0.4% | 0.2% |
| Nagano | 1.4% | 0.9% | 0.4% |
| Gifu | 1.2% | 0.7% | 0.3% |
| Shizuoka | 2.3% | 1.6% | 0.7% |
| Aichi | 5.5% | 3.6% | 2.6% |
| Mie | 0.8% | 0.6% | 0.4% |
| Shiga | 0.6% | 0.5% | 0.3% |
| Kyoto | 2.0% | 2.8% | 1.6% |
| Osaka | 9.6% | 13.2% | 4.6% |
| Hyogo | 3.1% | 2.5% | 1.8% |
| Nara | 0.6% | 0.5% | 0.3% |
| Wakayama | 0.4% | 0.3% | 0.1% |
| Tottori | 0.2% | 0.2% | 0.1% |
| Shimane | 0.3% | 0.2% | 0.0% |
| Okayama | 1.1% | 0.8% | 0.5% |
| Hiroshima | 1.6% | 1.1% | 0.6% |
| Yamaguchi | 0.5% | 0.4% | 0.1% |
| Tokushima | 0.3% | 0.3% | 0.2% |
| Kagawa | 0.5% | 0.4% | 0.2% |
| Ehime | 0.6% | 0.6% | 0.2% |
| Kochi | 0.3% | 0.2% | 0.1% |
| Fukuoka | 3.0% | 2.7% | 2.0% |
| Saga | 0.3% | 0.2% | 0.2% |
| Nagasaki | 0.5% | 0.4% | 0.1% |
| Kumamoto | 0.7% | 0.6% | 0.2% |
| Oita | 0.4% | 0.3% | 0.1% |
| Miyazaki | 0.4% | 0.4% | 0.1% |
| Kagoshima | 0.5% | 0.4% | 0.1% |
| Okinawa | 0.6% | 0.6% | 0.4% |

02.4 Transition of DNS Configuration Rate



| Year/Month | Organizational/Geographic Type | General-use (ASCII) | General-use (Japanese) |
|---------------|--------------------------------|---------------------|------------------------|
| January, 2009 | 98.1% | 94.3% | 71.4% |
| January, 2010 | 98.3% | 95.4% | 75.1% |
| January, 2011 | 99.0% | 96.3% | 76.0% |

02.5 Number of Accredited JP Registrars



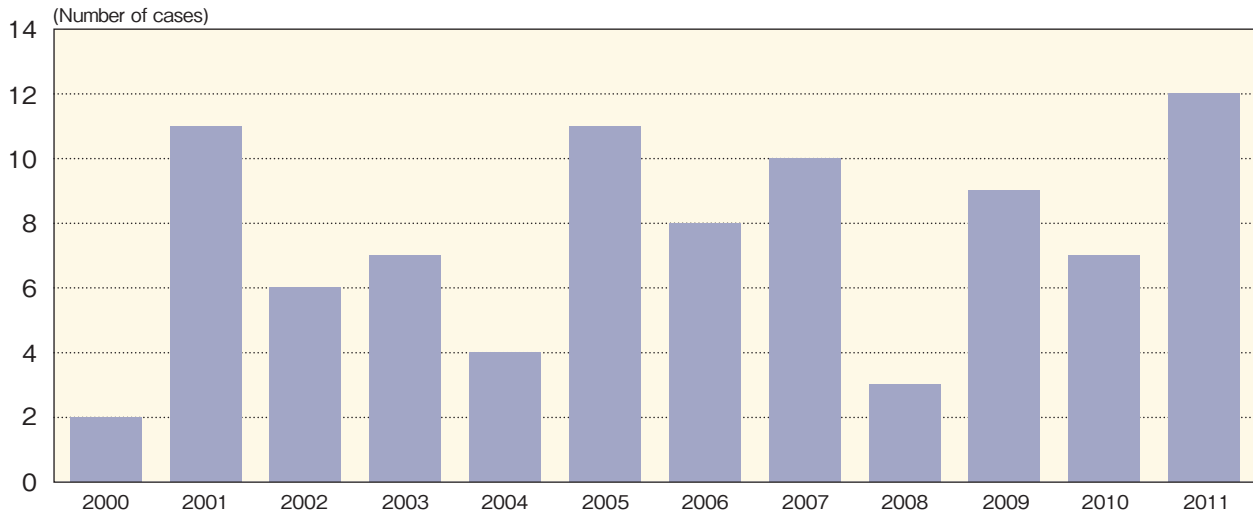
(Number of Registrars)

| Year/Month | Organizational/Geographic Type | General-use | Total |
|---------------|--------------------------------|-------------|-------|
| April, 2001 | — | 443 | 443 |
| January, 2002 | — | 490 | 490 |
| January, 2003 | 560 | 546 | 1,106 |
| January, 2004 | 557 | 559 | 1,116 |
| January, 2005 | 553 | 564 | 1,117 |
| January, 2006 | 562 | 576 | 1,138 |
| January, 2007 | 559 | 572 | 1,131 |
| January, 2008 | 557 | 573 | 1,130 |
| January, 2009 | 558 | 577 | 1,135 |
| January, 2010 | 555 | 577 | 1,132 |
| January, 2011 | 563 | 582 | 1,145 |
| January, 2012 | 571 | 590 | 1,161 |

*The number of JP Registrars for the Organizational/Geographic Type JP domain names is the figure after April 2002 when management and administration was transferred from JPNIC to JPRS.

02.6

Number of Complaints Based on the Domain Name Dispute Resolution (JP-DRP)



(Number of cases)

| Year | Number |
|------|--------|
| 2000 | 2 |
| 2001 | 11 |
| 2002 | 6 |
| 2003 | 7 |
| 2004 | 4 |
| 2005 | 11 |
| 2006 | 8 |
| 2007 | 10 |
| 2008 | 3 |
| 2009 | 9 |
| 2010 | 7 |
| 2011 | 12 |

*For details of domain name disputes, please refer to the “JP Domain Name Dispute Resolution Policy (DRP)” posted by the Japan Network Information Center (<http://www.nic.ad.jp/ja/drp/>).

03·1 History

| | | |
|------|--|---|
| 2000 | Dec. | JPRS was established. |
| 2001 | Feb. Apr. May | General-use JP Domain Priority Registration Phase started. General-use JP Domain Concurrent FCFS Registration started. General-use JP Domain Formal FCFS Registration started. |
| 2002 | Feb. Apr. Oct. Oct. | ccTLD Sponsorship Agreement was concluded with ICANN. Management and administration of .JP TLD was transferred from JPNIC to JPRS. LG.JP was established. JPRS started distributing a plug-in for Microsoft Internet Explorer®, “i-Nav™.” |
| 2003 | Jan. Jun. Jul. Dec. | Total number of JP domain name registrations reached 500,000. JPRS received approval from ICANN to start IDN service. RFC-based Japanese JP domain name registration service started. “Japanese JP Access Site (http://jajp.jp/)” for mobile phones was established. |
| 2004 | Feb. Feb. Jul. Dec. | IP Anycast technology was introduced in JP DNS service ([a.dns.jp] [d.dns.jp]). “Nihongo JP Navi” service was started. JP domain name started full support for IPv6, for the first time in the world as a TLD. The portal site “Nihongo dot JP” (http://日本語.jp/) for promoting Japanese JP Domain Names was launched. |
| 2005 | Jan. Jun. Dec. | The portal site “Nihongo dot JP” (http://人名事典.jp/) for promoting Japanese JP Domain Names was launched. Work on eliminating risks due to inadequate management of DNS servers was started. Eki Machi Guide” (http://駅街ガイド.jp/), which provides information on areas around stations using Japanese JP domain names which consist of station names throughout Japan, started. “JPRS started operation of the M-Root DNS server in cooperation with the WIDE Project. |
| 2006 | Jan. Apr. Sep. Nov. Dec. | JPRS started deleting improper DNS server registrations. JPRS shortened the processing time for JP DNS update. JPRS changed the number of GO.JP domain names which each government organization can register. Japanese JP domain names reserved for the government were released for relevant government organizations. Cumulative number of General-use JP Domain Names exceeded 500,000. JPRS published guidelines for making URLs consisting of Japanese domain names clickable in email text. |
| 2007 | Jan. Mar. Dec. | Cumulative number of registered CO.JP domain names exceeded 300,000. “Procedure for recovering deleted domain name registration” was introduced for General-use JP domain names. IP Anycast technology was introduced to the JP DNS service ([e.dns.jp]). |
| 2008 | Mar. Jun. Oct. | Cumulative number of registered JP domain names exceeded one million. JPRS started the real-time application process service for CO.JP domain names. The JP DNS server configuration was changed (c.dns.jp and g.dns.jp added). |
| 2009 | Apr. Nov. | JPRS announced its participation in the BIND 10 development project. JPRS extended the coverage of the real-time application process service. |
| 2010 | May | JPRS distributed a cartoon booklet “How the Internet Works” free of charge to junior and senior high schools across Japan. |
| 2011 | Jan. Feb. May Sep. | JPRS introduced DNSSEC to the JP domain name service. The cumulative number of registered JP domain names exceeded 1.2 million. JPRS published “DNS Practices”, a book on DNS, written by JPRS engineers. JPRS decided to establish new “Prefecture Type Domain Names” (planned to start in 2012). |

03.2 JP Domain Name Advisory Committee

The JP Domain Name Advisory Committee was established in 2002 in order to maintain fairness and neutrality of the .JP registry operations. The committee members from outside of JPRS with various viewpoints consider policies for JP domain names. Below are the issues which were discussed in the committee in 2011.

(1) Consultations and Advisories

| Consultation / Advisory | Consultation Date Document No. | Advisory Date Document No. |
|--|----------------------------------|----------------------------|
| Relaxation of 1-domain-name-per- organization limitation on organizational/geographic type JP domain names in case of organizational mergers | Sep. 6, 2011 JPRS-ADV-2011001 | (under consultation) |

*For details about consultation and advisory themes, please refer to the “JP Domain Name Advisory Committee”.

(2) Advisory Committee Meetings

- Mar. 9 **36th Domain Name Advisory Committee meeting**
Committee members confirmed the report “Method for appointing the members of the 6th JP Domain Name Advisory Committee” (JPRS-ADVRPT-2010002), and then recommended the candidates.
- May 19 **37th Domain Name Advisory Committee meeting**
A report was made on the appointment of all the members recommended in the 36th meeting. Mr. Shigeki Goto was elected and appointed Chair, and Mr. Tsuneo Matsumoto as Vice Chair of the Committee.
JPRS explained its response to the report “Method for appointing the members of the 6th JP Domain Name Advisory Committee” (JPRS-ADVRPT-2010002).
JPRS also explained its response to the report “Reconstruction of Geographic Type JP Domain Name” (JPRS-ADVRPT-2010001).
JPRS explained the general situation of JP and other domain-name-related issues, and committee members made various comments on the subject.
- Sep. 6 **38th Domain Name Advisory Committee meeting**
Committee members offered comments on the JPRS’s inquiry “Relaxation of one-domain-name-per-organization limitation on organizational/geographic type JP domain names in case of organizational mergers” (JPRS-ADV-2011001).
- Dec. 9 **39th Domain Name Advisory Committee meeting**
A basic agreement was reached on an outline of the draft advisory report developed based on the discussion at the 38th meeting on the inquiry “Relaxation of one-domain-name-per-organization limitation on organizational/geographic type JP domain names in case of organizational mergers”.

03 · 3 Proposals and Presentations

* Original materials are written in English, unless otherwise specified.

| Date | Title | At | Hosted by |
|------------|---|---|--------------------------------------|
| Jan. 20 | What is returned by JP DNS - Changes to DNS traffic caused by DNSSEC deployment - | JANOG27 Meeting | JANOG (*1) |
| Feb. 16 | The way to DNSSEC in .JP | CENTR Admin Workshop | CENTR (*2) |
| Feb. 18 | DNSSEC deployment in .JP | APTLD 2011 Hong Kong Meeting | APTLD (*3) |
| Feb. 21 | DNSSEC deployment in .JP | APNIC31 DNSSEC Executive Summit | APNIC (*4) |
| Feb. 22 | An IDNA2008 implementation - idnkit-2.1 - | APNIC31 IDN SDC Meeting | APNIC |
| Feb. 23 | DNSSEC technical evaluation report of JP | APRICOT-APAN 2011 Conference: DNS | APRICOT (*5) APAN (*6) |
| Mar. 3 | Latest trends of domain names and DNS | HOSTING-PRO 2011 | HOSTING-PRO Executive Committee (*7) |
| Mar. 13 | JPRS' DNS server evaluation | DNS-OARC 2011 San Francisco Workshop/ ICANN40 ccNSO Tech Day | DNS-OARC (*8) ccNSO (*9) |
| Mar. 13 | DNSSEC validation measurement | DNS-OARC 2011 San Francisco Workshop/ ICANN40 ccNSO Tech Day | DNS-OARC/ccNSO |
| Mar. 15 | IDN ccPDP WG2 - Inclusion of IDN ccTLDs in the ccNSO - | ccNSO Members Meeting | ccNSO |
| Mar. 27 | Number of DNSSEC validators seen at JP | 80th IETF IEPG Meeting | IETF (*10) |
| Apr. 20 | Making of "Please allow duplication" | 11th dnsops.jp BoF | DNSOPS.JP (*11) |
| Apr. 20 | Situation after the introduction of DNSSEC to .JP | DNSSEC 2011 Spring Forum | DNSSEC Japan (*12) |
| May 2 | JP's key management and DNS traffic by DNSSEC | 24th CENTR Technical Workshop | CENTR |
| May 5 | Changes to JP DNS traffic by DNSSEC - from DSC of a.dns.jp - | RIPE 62 DNS Working Group | RIPE (*13) |
| Jun. 21 | JP experience of earthquake, tsunami, and nuclear plant accident | ccNSO members meeting | ccNSO |
| Jun. 22 | IDN ccPDP WG2 - 1 vote per territory or per member - | ccNSO members meeting | ccNSO |
| Jun. 22 | DNSSEC deployment in .JP | DNSSEC Workshop | ICANN (*14) |
| Jun. 22 | Number of DNSSEC validators seen at JP | DNSSEC Workshop | ICANN |
| Jul. 14-15 | Key administration operation | JANOG28 Meeting | JANOG |
| Jul. 26 | draft-ietf-eai-popimap-downgrade-02 | IETF EAI WG | IETF |
| Aug. 18 | Security, stability, and reliability required of DNS | 260th RIST Forum | RIST (*15) |
| Aug. 29 | Use cases of DNS servers, BIND 9 compatibility, Resolver function requirements | BIND 10 Open Day | ICS (*16) |
| Sep. 2 | Japan and JP registry's experience of earthquake, tsunami, and nuclear plant accident | AP*Retreat (Busan, Korea) | Apstar (*17) |
| Sep. 22 | DNSSEC deployment in .JP | APEC TEL 44 | APEC TEL (*18) |
| Sep. 27 | JP registry's experience of earthquake, tsunami, and nuclear plant accident | IGF 2011 | IGF (*19) |
| Oct. 12 | Action required for "ICANN new gTLD program" | web seminar.jp | web seminar .jp |

* Original materials are written in English, unless otherwise specified.

| Date | Title | At | Hosted by |
|---------|--|---|------------------------------|
| Oct. 25 | IDN ccPDP WG2 report | ICANN42 | JccNSO |
| Oct. 25 | ccNSO Update | ICANN42 | AFRALO (*20) |
| Oct. 26 | Opening up prefecture-SLDs under .JP | ICANN42 | ccNSO |
| Nov. 15 | draft-ietf-eai-popimap-downgrad-03 | IETF EAI WG | IETF |
| Nov. 15 | Precis mappings | IETF82 precis WG Meeting | IETF |
| Nov. 29 | ccNSO-related report | ICANN debriefing | JPNIC (*21) IAjapan (*22) |
| Nov. 30 | What we must consider for IPv6 (but a different subject I came up with later) | 12th dnsops.jp BoF | DNSOPS.JP |
| Nov. 30 | Reality of DNS operation | Internet Week 2011 DNS DAY | JPNIC |
| Nov. 30 | DNS-related trend update - Relating to domain names - | Internet Week 2011 DNS DAY | JPNIC |
| Nov. 30 | JP DNS Update | Internet Week 2011 DNS DAY | JPNIC |
| Nov. 30 | Dispelling the urban legend related to DNS dissemination - Lunch with DNS - | Internet Week 2011 Lunch Seminar | JPNIC |
| Dec. 2 | DNS DAY | Internet Week 2011 IP Meeting Lightning Talk | JPNIC |

| | | |
|-----|---|---|
| *1 | JANOG: Japan Network Operators' Group | http://www.janog.gr.jp/ |
| *2 | CENTR: Council of European National Top Level Domain Registries | http://www.centro.org/ |
| *3 | APTLD: Asia Pacific Top Level Domain Association | http://www.aptd.org/ |
| *4 | APNIC: Asia Pacific Network Information Centre | http://www.apnic.net/ |
| *5 | APRICOT: Asia Pacific Regional Internet Conference on Operational Technologies | http://www.apricot.net/ |
| *6 | APAN: Asia-Pacific Advanced Network | http://www.apan.net/ |
| *7 | HOSTING-PRO 2011 Executive Committee | http://hosting-pro.jp/ |
| *8 | DNS-OARC: Domain Name System Operations Analysis and Research Center | http://www.dns-oarc.net/ |
| *9 | ccNSO: Country-Code Names Supporting Organization | http://ccnso.icann.org/ |
| *10 | IETF: The Internet Engineering Task Force | http://www.ietf.org/ |
| *11 | DNSOPS.JP: Japan DNS Operators Group | http://dnsops.jp/ |
| *12 | DNSSEC Japan | http://dnssec.jp/ |
| *13 | RIPE: Reseaux IP Europeens | http://www.ripe.net/ripe/ |
| *14 | ICANN: Internet Corporation for Assigned Names and Numbers | http://www.icann.org/ |
| *15 | RIST: Kumamoto Technical Innovation and Integration Research Group | http://www.rist.gr.jp/ |
| *16 | ISC: Internet Systems Consortium | http://www.isc.org/ |
| *17 | Apstar: The Community of Asia Pacific Internet Organizations | http://www.apstar.org/ |
| *18 | APEC TEL: APEC Telecommunications and Information Working Group | |
| *19 | IGF: The Internet Governance Forum | http://www.intgovforum.org/ |
| *20 | AFRALO: African Regional At-Large Organisation | |
| *21 | JPNIC: Japan Network Information Center | http://www.nic.ad.jp/ |
| *22 | IAjapan: Internet Association Japan | http://www.iajapan.org/ |

03 · 4 Press Releases

* Original materials are written in Japanese.

| Date | Title |
|---------|--|
| Jan. 17 | JPRS Deploys DNSSEC in the JP Domain Name Service - To Contribute to the Internet by Improving the Security of JP Domain Names - |
| Feb. 2 | Cumulative Number of Registered JP Domain Names Tops 1.2 Million in a Decade after the Establishment of JPRS - The cumulative number of general-use JP domain names reached about 800,000 in a decade after its introduction - |
| Feb. 28 | JPRS Supports the 13th ThinkQuest JAPAN, a Web Contest for Junior and Senior High School Students, and Presents the “Best Domain Naming Award (JPRS Special Award)” - Supporting the Internet education of young people by allowing them to try using JP domain names - |
| Mar. 23 | Hirofumi Hotta of JPRS Appointed Co-Chair of the ICANN ccNSO Council - Helping to solve global issues in the ccTLD community including “.jp” - |
| Mar. 28 | JPRS Releases “JP Domain Name Registry Report 2010” Today - JP domain names recognized as one of the world’ s safest country code domains two years in a row for improved reliability and stability - |
| May 13 | JPRS Distributes Free Cartoon Booklet “How the Internet Works” to Educational Institutions in Japan - Free distribution for second consecutive year to respond to demand from educational institutions that appreciate the booklet - |
| May 27 | JPRS Publishes “DNS Practices” , a Book on DNS Compatible with the Latest Technical Standards - Covering DNSSEC and IPv6, the book provides a basic knowledge of DNS and explains specific settings and operations - |
| Sep. 26 | JPRS Decides to Establish a New Domain Name Space “Prefecture Type JP Domain Names” Rooted in Local Communities - Registration is scheduled to start in the latter half of 2012 to contribute to local communities and Internet-based activities - |
| Dec. 15 | JPRS Distributes 50,000 copies of the Free Booklet in 2 Years to Educational Institutions across Japan - More than 90 percent of readers responded that the cartoon booklet was “useful” for its clear explanations of how the Internet works - |

*Please refer to “Press Release” (<http://jprs.co.jp/en/press/>) for the latest releases in English.

About JPRS

JPRS provides domain name services such as domain name management, administration and distribution, and also performs domain name system (DNS) operations.

In addition, JPRS is engaged in research and development of various Internet technologies.

● Domain Name Management and Administration

JPRS manages and administers domain names. In particular, JPRS plays an important role as the registry of JP domain names, or domain names of Japan. You may have seen addresses for websites and emails such as `http://○○○.jp` and `△△△@○○○.jp`. We manage and administer a part of these addresses, namely, strings in the form of “○○○.jp”.

Domain names are the key to accessing the Internet. JPRS is constantly improving its services so that JP domain names will continue to assist the activities of all kinds of Internet users, including companies, organizations, and individuals.

● DNS Operation

DNS (Domain Name System) is a system for identifying computers connected to the Internet using domain names. DNS is sometimes referred to as the “phone book for the Internet.”

If DNS were to fail, people would not be able to access websites or exchange emails using domain names. To prevent such a catastrophe, JPRS has established a 24/7 system to ensure safe operation of the “JP DNS” for managing JP domain names.

● R&D of Internet Technologies and International Activities

JPRS takes an active part in the research and development of advanced technologies to promptly respond to changes in the Internet environment and social needs. Specifically, we are conducting standardization activities and technical verification for the smooth deployment of DNSSEC, a mechanism for improved DNS security. We are also verifying the technical aspects of email address internationalization (EAI) that will allow non-English characters such as Japanese to be used in email addresses. JPRS actively publishes the results of these activities and shares information at IETF and other meetings to contribute to the network society.

Translated: 15 May, 2012

Note: This English translation is provided for informational purposes only.
For accuracy, please refer to the Japanese version.

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