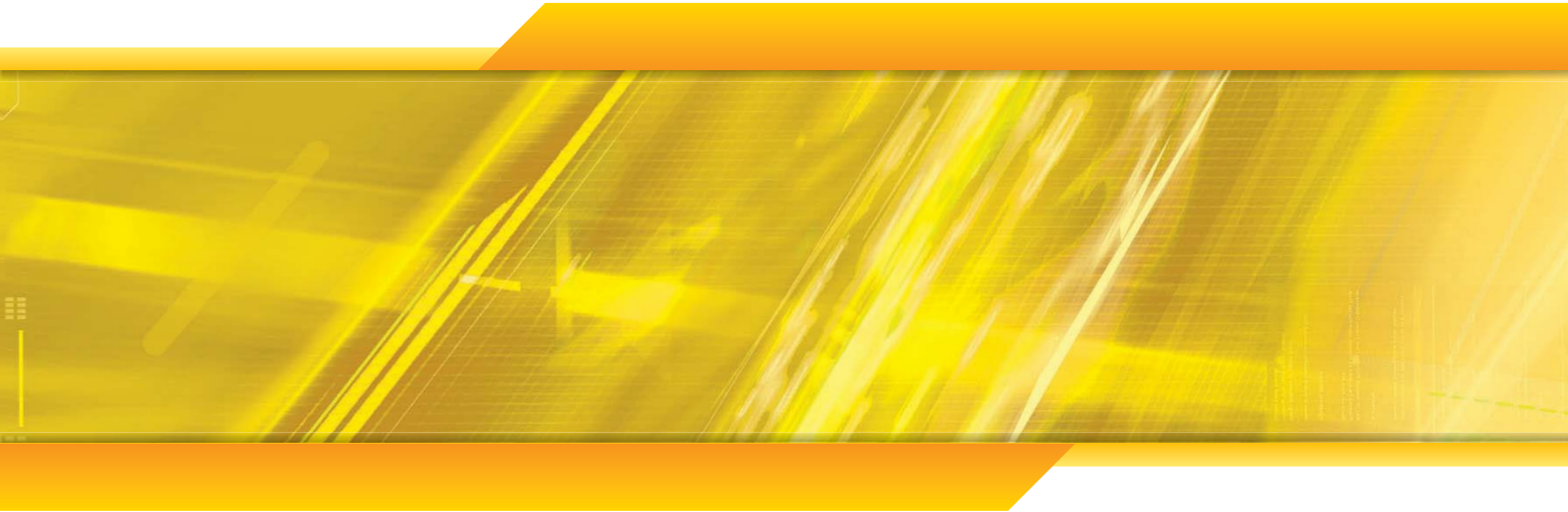!.Jp

JP Domain Name
Registry Report

jPRS
JAPAN REGISTRY SERVICES

Japan Registry Services Co., Ltd.

Introduction

As the Internet is being used in increasingly diverse areas of society, the need for domain names is growing and the area of domain name use is getting broader.

With this background, the total number of registered JP domain names topped 1.35 million as of January 2014. Also, the "Prefecture Type JP Domain Name," which was launched in November 2012 to meet the growing demand for domain names, attained 10,000 registrations in March 2013.

As a new movement in the domain name industry, ICANN[*1]'s New gTLD Program made further progress, and ICANN started accepting applications for new gTLD strings. Evaluation of the applications was completed in 2013, and so numerous new gTLDs are expected to be introduced from 2014 onward.

On the other hand, we have also seen a number of challenges related to the Internet infrastructure, such as DDoS attacks which exploit DNS servers, cyber attacks against registries and registrars, as well as the vulnerabilities of 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 for everyone to use. To this end, JPRS promptly provides information and deals with risks and challenges as they arise. JPRS also actively contributes to discussions of global issues and conveys relevant information to the community 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
http://www.icann.org/

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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 JPRS competes and collaborates with other registries of Top Level Domains (TLDs) [1] 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.

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[1] TLD: Top Level Domain

01·2　Activities in 2013

In 2013, JPRS continued to contribute 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.

15th ThinkQuest JAPAN (February)

JPRS supported the "15th ThinkQuest JAPAN[1]," a Web contest which was held by JAPIAS[2] for junior and senior high school students. JPRS provided 762 General-use JP domain names (both in Japanese and ASCII) free of charge for the works of 381 teams so that they could have original domain names.
JPRS also presented the "Best Domain Naming Award" to the team who had chosen the most effective domain name to increase the appeal of their work.

● http://jprs.co.jp/press/2013/130225.html (in Japanese)

Provision of a Japanese JP Domain Name to "UenoPandaLive.jp" (April)

JPRS presented the Japanese JP domain name "うえのパンダライブ.jp" to "Live Streaming Site Broadcasting Giant Pandas in Ueno Zoological Gardens (UenoPandaLive.jp)" in order to raise awareness of Japanese domain names. UenoPandaLive.jp is a service provided by the Tokyo Zoological Park Society which aims to take advantage of the convenience of the web and to help people, including those who may not visit Ueno Zoological Gardens themselves, to learn more about giant pandas.

Ueno Panda Live

● http://jprs.co.jp/press/2013/130410.html (in Japanese)

Publication of "JP Domain Name Life Cycle" Webpage (April)

JPRS published a new webpage that describes the flow of the process from JP Domain Name registration to deletion as well as how the statuses of JP domain names change in response to applications and other requests.

JP Domain Name Life Cycle

● http://jprs.jp/about/dom-rule/lifecycle/ (in Japanese)

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

"Info-Communications Promotion Month" is a nationwide initiative that has been conducted as part of Internet-related educational activities. In line with this, from May 15 to June 30, JPRS set up the channels including a special webpage (http://マンガで学ぶ.jp) where teachers at junior and senior high schools and technical colleges could apply for the educational material produced by JPRS. JPRS distributed the material free of charge to those who applied. Recognizing the growing importance of Internet-related education and shortage of teaching materials in schools, JPRS has worked on this project since 2010, in parallel with the "Info-Communications Promotion Month" that starts on May 15 every year.

Ponta's Great Adventure
in the Network

JPRS has published and offered the booklet for the fourth year in a row and received a number of applications from educational institutions across the nation. The number of copies distributed in these 4 years amounted to over 100,000. The material that JPRS distributed is a graphical comic-style booklet entitled "Ponta's Great Adventure in the Network." It contains a story with many illustrations to help readers learn how the Internet functions, how to reach particular websites and how the Internet address or "domain name" works. The result of the survey conducted upon distribution of the booklet revealed that many teachers appreciated receiving and using it as appropriate teaching material for Internet-related lessons.

● http://jprs.co.jp/press/2013/130702.html (in Japanese)

[1] ThinkQuest JAPAN : The current name is "Japan High School Web Contest."
　　　　　　　　　　　　http://webcon.japias.jp/
[2] JAPIAS　　　　　　 : Japan Association for Promotion of Internet Application in School Education
　　　　　　　　　　　　http://japias.jp/

Interop Tokyo 2013 (June)

In its exhibition booth at the venue, JPRS gave mini-seminars to visitors and explained the basics of domain names and DNS technical information on "Open DNS Resolvers: Issues and Solutions" through a presentation and related exhibit panels.

● http://jprs.co.jp/topics/2013/130603.html (in Japanese)

JPRS booth

Information Provision at the Planning Subcommittee within the Committee on Information and Telecommunication Policy, Keidanren (October)

As part of JPRS's efforts to provide information, Takeshi Mitamura of JPRS gave a presentation entitled "Recent Developments on Domain Names" at the Planning Subcommittee within the Committee on Information and Telecommunication Policy, Keidanren on October 11, 2013. He presented statistics on the results of the new gTLD evaluations and outlined the trademark protection measures taken for new gTLDs.

Change of TTL Value of the DSs RR on JP DNS Servers (November)

JPRS changed the TTL value of the DS Resource Records (DS RRs) on JP DNS from 86400 (one day) to 7200 (two hours).
The purpose of this change is to shorten the time necessary to fix the DNSSEC validation errors caused by rollover failures of KSK registered to JPRS as well as the time necessary for the KSK rollovers.

● http://jprs.jp/whatsnew/notice/2013/20131106-ds-ttl-change.html (in Japanese)

Internet Week 2013 (November)

JPRS supported Internet Week 2013 as a sponsor and assigned Yoshiro Yoneya and Tomoya Sakaguchi to the Program Committee where they played a leading role in planning DNS DAY. Other JPRS staff members also took part in the event by giving presentations.

Takafumi Mizuno, Takaharu Ui and Yoshitaka Aharen presented an update on JP DNS and domain names together with the evaluations and measurements of DNS at DNS DAY. At a lunch seminar entitled "Let's Think of the Size of DNS Messages - Lunch with DNS -," Yasuhiro Morishita and Satsuki Hori talked about recent topics and developments regarding the size of DNS messages.

Internet Week 2013

● http://jprs.co.jp/topics/2013/131001.html (in Japanese)

JPRS/ICANN Joint Seminar (November)

Under the New gTLD Program carried out by ICANN, more than 1,000 TLDs are expected to be introduced in the next few years. JPRS responded to this new development by collaborating with ICANN to hold a joint seminar entitled "'Latest Developments Regarding Internet Domain Names' -What Businesses Should Consider in the Lead-up to the Diversification of Domain Names-" on November 27, 2013. In the seminar, JPRS and ICANN described the New gTLD Program and its current status, and then discussed how businesses could utilize and protect their intellectual property in the field of domain names.

JPRS/ICANN Joint Seminar

Atsushi Endo of JPRS gave a presentation entitled "Latest Developments of Domain Names in Japan and the World" and gave statistics on the results of new gTLD applications and an overview of the trademark rights protection mechanism with approximately 50 participants including companies and patent attorneys. Then Mr.Yu-Chuang Kuek of ICANN, the organization responsible for the New gTLD Program, and Ms. Vicky Folens of Deloitte, a company engaged in rights protection measures, illustrated the business potential of new gTLDs and explained the details and usage of the Trademark Clearinghouse (TMCH) in the session entitled "ICANN's New gTLD Program and Trademark Rights Protection Mechanism." These presentations were followed by a Q&A session at which the participants actively asked questions to the speakers and gave ICANN various feedback on the rights protection measures.

Cooperation with the Company Visit of Nagasaki Minami High School (December)

JPRS gave an overview of its organization and domain name services to the students of Nagasaki Minami High School which visits various companies to help students think about their future career. JPRS cooperated with this educational activity of the school.

Events and Seminars for JP Registrars

May "JP Registrar Seminar – An Introduction to Domain Name Registration and Administration –"

JPRS provided basic information on domain names and outlined how to register and administer them to the newly accredited JP Registrars and those staff of JP Registrars who recently started handling JP domain names.

Jun. "JPRS Technical Seminar"

The session "DNS-related Hot Topics" was intended for engineers and covered topics such as an overview of and countermeasures against DDoS attacks utilizing open resolvers as well as attacks against registries and registrars that had been occurring frequently. JPRS illustrated each issue with reference to actual cases. JPRS also shared the information useful for DNS server administration and latest updates on BIND 10 and provided basic knowledge on DNS and DNSSEC to the newly-appointed technical staffs.

Oct. "12th JP Partners' Meetings"

JPRS described developments in the domain name industry, its service plans including future service changes as well as information useful for day-to-day operations. JPRS also explained the contents of the "DNS-related Hot Topics" introduced in the "JPRS Technical Seminar" for non-technical participants.

Nov. "JP Registrar Seminar – An Introduction to Domain Name Registration and Administration –"

JPRS provided basic information on domain names and outlined how to register and administer them to the newly accredited JP Registrars and those staff of JP Registrars who recently started handling JP domain names.

01·3   International Relations

1. Participation in ICANN

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 and root servers.

ICANN holds three public meetings each year in different regions of the world to enable global stakeholders to participate in person and discuss policies and rules for resource management. In 2013, ICANN held its 46th meeting in Beijing, China, the 47th meeting in Durban, South Africa and the 48th meeting in Buenos Aires, Argentina.

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With the participation of numerous parties interested in ccTLD[1] and gTLD[2], ICANN meeting has always functioned as an important forum for exchanging views and debating issues on policies and governance concerning domain name management. In recent years, ICANN has also come to play a vital role in discussions and information-sharing on technical issues including DNS and DNSSEC.

The development of a long-term overall policy for the introduction of IDN ccTLDs continued to make progress. Under the New gTLD Program, ICANN concluded the Initial Evaluation and has proceeded with the process to sign the Registry Agreement with TLDs that passed the evaluation.

ICANN also continued with its reorganization by decentralizing the headquarters function originally performed only in Los Angeles and setting up a local hub office in Istanbul, Turkey and another in Singapore. This was part of ICANN's initiative toward organizational management based on multistakeholder cooperation with various stakeholders, which has been the goal set by Mr. Fadi Chehade, the CEO of ICANN who assumed office in September 2012.

Since its foundation, JPRS has been actively participating in the organization of ICANN and various policy discussions, and supporting the coordination of Internet resource management 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 within ICANN, as well as by conducting presentations and information exchanges at different meetings, JPRS assists in policy development and implementation-planning to cope with issues facing ICANN and registries. Also via ICANN, JPRS is sharing its experience in JP registry operations with the global community, thereby contributing to the development of the Internet as a whole.

The following reports JPRS's activities in ICANN organizations:

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[1] ccTLD : Country Code Top Level Domain
[2] gTLD : Generic Top Level Domain

(1) ccNSO

ccNSO*3 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. JPRS has been the member of ccNSO since its inception in 2003, and Hirofumi Hotta of JPRS has served as a ccNSO Council member during the same time. As a result of the ccNSO Council Election held in December 2013, Hotta was re-elected as the Council member and will continue to serve until 2017.

One of JPRS's biggest contributions in ccNSO is the planning and designing of the IDN ccTLD Fast Track*4 Process. Since the official start of this process in November 2009, 40 IDN ccTLDs have been introduced (as of January 24, 2014).

While implementing the ccTLD Fast Track Process, ccNSO has revisited the permanent policy for IDN ccTLDs. Major topics of the discussions include (1) reviewing the definition of character strings allowed as IDN ccTLDs and (2) redefining ccNSO membership after the introduction of IDN ccTLDs. To study these issues, ccNSO appointed two working groups in the first half of 2010, and Hirofumi Hotta of JPRS has participated in this initiative from the start. He took part in the working group for (1) above as an observer and chaired the working group for (2), taking the initiative in the discussions and compiling the final report. Based on the final report, ccNSO, through the ccNSO Council, made a proposal to the ICANN Board in September 2013 and recommended changing the related sections in the ICANN Bylaws.

In every ccNSO meeting held in conjunction with the ICANN meeting, the members exchanged information on the state of Internet governance and related efforts taken in each country as well as international discussions regarding the United Nations and international treaties, which strongly reflected the keen interest of the participants and rapid evolution of the discussions. JPRS also explained the state of governance in Japan, which attracted considerable interest among other member ccTLDs as they compared the case of Japan with that of their own countries. Through these activities, the members recognized the importance of such information exchanges.

With respect to financial contributions by the ccTLDs to ICANN, ccNSO discussed about the proper amount of contributions. The amount of the contribution by each gTLD has been stipulated on the basis of the number of domain name registrations. On the other hand, ccTLDs in general continue to contribute on a voluntary basis for historical reasons. Under the circumstances, only a small number of ccTLD registries decide the amount in advance and provide funding to ICANN, while many ccTLD registries do not make any financial contribution. Therefore, ICANN has called on the ccNSO to define a proper amount.
In response, ccNSO discussed the model to be used for determining the amount of financial contribution by ccTLD registries to ICANN. This resulted in a new guideline specifying that ccTLD registries would contribute the amount calculated according to the number of registered domain names, while in principle the contribution should be determined on a voluntary basis. This guideline was supported by the ccNSO members and the Council, and took effect in November 2013.

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*3 ccNSO   : Country Code Names Supporting Organisation
              http://ccnso.icann.org/
*4 Fast Track : A method designed to enable the timely introduction of a limited number of IDN ccTLDs to meet an immediate need for ccTLDs
                in non-Latin scripts, while ccPDP, a policy development process for the formal launch of IDN ccTLD, is underway.

On the other hand, we saw a number of attacks against registries and registrars in 2013. The ccNSO meeting held in Buenos Aires in November described the security incident in Costa Rica (.cr) on October 13, 2013*5, and the participants learned the steps taken in response and the knowledge gained from the experience (recommendation for the other ccTLDs).

In the presentation about the experience, the speaker described how the registry communicated with ICANN Security Team and the local CSIRT*6, how it compiled the documents for publication, and how it dealt with the media and provided information to customers. The presenter went on to point out the significance of immediacy and transparency in communicating with customers, effective cooperation with the ICANN Security Team and the local CSIRT, prior planning of the media strategy as well as advance preparation of internal response procedures. The participants also learned that it is critical to distribute accurate information and that it is difficult to correct information once it has spread.

(2) IDN Variant TLD Program

The "IDN Variant TLD Program" is a series of activities to develop Label Generation Rules (LGR) for the root zone and aims to establish procedures to add non-ASCII script to the root zone.

Yoshiro Yoneya of JPRS has been a member of this project as an expert on IDN. In April 2013, the ICANN Board adopted the final report compiled by the project, thus completing the root LGR.

To establish specific rules for the root zone, "Generation Panels," which create a set of character usage rules specific to each script, and an "Integration Panel," which integrates these rules into a single unified LGR for the root zone, have been established. JPRS has experience of developing such rules for Japanese domain names, and so plans to lead the Japanese Script Generation Panel by consulting experts in Japan and working in close coordination with CNNIC of China, TWNIC of Taiwan and KISA of Korea, all of which use Kanji.

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*5 The security incident in Costa Rica (.cr) : The attackers exploited a vulnerability in the registry's webpage and abused customers' accounts, resulting in unauthorized changes to the registration data for 8 domain names including google.cr.
*6 CSIRT : Computer Security Incident Response Team. CSIRT is a security incident response team/function to be set up within organizations. A CSIRT monitors problems, examines the causes if problems occur, and investigates the extent of the impact. JPCERT/CC is one of the major CSIRTs in Japan.

（3） WHOIS RT IRD WG

The WHOIS Protocol Specification (RFC 3912) does not define specifications for exchanging data encoded in character sets other than US-ASCII. Therefore, each TLD has to develop its own specification to internationalize its WHOIS (to enable it to handle character sets other than US-ASCII). The number of WHOIS service users who are only familiar with languages that require character sets other than US-ASCII keeps increasing, so it is desired to develop a new standardized protocol and replace the legacy WHOIS protocol with it for internationalization of domain name registration data.

With this background, ICANN considered that it was necessary to recommend internationalized registration data requirements applicable to gTLDs and in 2013 formed "WHOIS RT IRD WG[7]," a working group to for it.

This working group is tasked with deciding the requirements and data model for internationalized registration data. The results of the working group will be subjected to go through the ICANN public comment process and will form the basis for further policy development and a contractual framework for gTLDs.

The members of the working group were publicly sought, and a number of experts from IETF, registry and registrar operators were gathered. Naoki Kambe of JPRS is also participating in the working group as a member representing the registry operator and is helping to determine the requirements and design data model for internationalized registration data.

（4） DNSSEC Workshop Program Committee

As part of its efforts to promote DNSSEC, ICANN holds the DNSSEC Workshop in every ICANN meeting. This DNSSEC Workshop functions as a forum for registries, registrars, Internet service providers and businesses to share their experience in deploying DNSSEC and to learn the latest technological trends related to DNSSEC.

Yoshiro Yoneya of JPRS serves on the DNSSEC Workshop Program Committee as a member representing Asia and plays a part by planning the workshops and informing the other members of the situation in Japan.

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*7 WHOIS RT IRD WG : WHOIS Review Team Internationalized Registration Data WG
　　　　　　https://community.icann.org/display/whoisird/WHOIS+RT+IRD+WG+Home

(5) SSAC

SSAC[8], 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 mainly of technical experts, such as registries, registrars, root server operators, and Internet-related researchers.

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

(6) 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, and the procedure specifically conducted by ICANN for the root zone is called ICANN KSK[9] Ceremony.

Root servers are an indispensable foundation of the Internet, so it must be demonstrated 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 the COs (Crypto Officer: one of the roles played by TCR) in the ICANN's facility on the West Coast (in Los Angeles, USA).

The ICANN KSK Ceremony 12 was held in February 2013 and was attended by 20 participants, including Minda and three other COs. At the ceremony, the signatures for the period between April and July 2013 were created. The schedules, status and results of the ICANN KSK Ceremonies are posted on the ICANN website[10].

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*8 SSAC : Security and Stability Advisory Committee
       http://www.icann.org/en/groups/ssac
*9 KSK   : Key Signing Key
*10   : http://www.dns.icann.org/ksk/

2. Participation in IETF

IETF[1] was established in 1986 by IAB (Internet Architecture Board) to promote standardization of Internet technologies. There are a number of Working Groups in IETF that intend to create Internet-related standards in various technology areas.

Discussion and other activities of IETF are handled via its mailing lists. IETF also holds meetings three times per year, and these meetings are attended by engineers gathering from around the world. In 2013, IETF 86 was held in Orlando, USA; IETF 87 in Berlin, Germany; and IETF 88 in Vancouver, Canada.

JPRS is participating in the standardization activities in IETF by working on internationalization of the identifiers to be used in the protocols that IETF specifies, suggesting solutions to the issues related to DNS operations and proposing standardization of the technologies employed by registries.

The following reports JPRS's activities in IETF:

IETF88

（1）Revision of Internationalized Domain Name Protocol

IDN[2] refers to domain names in Kanji, Hangul, Arabic 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.

JPRS revises idnkit-2 from time to time, in accordance with the revisions of Unicode and the updates of the IANA table, which basically defines the set of characters used in IDN labels. In 2013, JPRS prepared for the release of the new version that corresponded to Unicode 6.3.0.

● **http://jprs.co.jp/idn/index-e.html**

（2）Internationalization of Email Addresses

EAI*3 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. Then, IETF drew up a standard protocol to be used in actual operations. In February 2012, the SMTP extension, an enhancement to the Internet Message Format and extended delivery status as well as disposition notifications became the standard. Furthermore, the standardization of POP*4 and IMAP*5 was concluded in March 2013. Among those standards, RFC 6856 and RFC 6857 were coauthored by Kazunori Fujiwara of JPRS.

RFC 6856: Post Office Protocol Version 3 (POP3) Support for UTF-8
RFC 6857: Post- Delivery Message Downgrading for Internationalized Email Messages

● **http://jprs.co.jp/topics/2013/130314_2.html (in Japanese)**

（3）Promotion of the Standardization of Internationalized Identifier Processing

Internationalized identifiers generally refer to identifiers containing at lease one 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)*6" to discuss revisions to stringprep. Yoshiro Yoneya from JPRS was appointed Co-Chair of the WG to lead its activities.

In March 2013, RFC 6885 was published as the first RFC that clearly articulated the issues to be addressed by the precis WG. The discussion on the framework for resolving issues was nearly completed in 2013, and it is expected to result in an RFC by the end of 2014.

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*3 EAI   : Email Address Internationalization
*4 POP   : Post Office Protocol. A protocol that allows a user to retrieve emails from a mail server.
*5 IMAP   : Internet Message Access Protocol. A protocol that allows a user to manipulate email messages on a mail server.
*6 precis WG : Preparation and Comparison of Internationalized Strings WG
           https://datatracker.ietf.org/wg/precis/

（4） weirds WG

weirds WG[7] is a working group set up to develop a new protocol to replace the legacy WHOIS protocol and to conduct interoperability tests through implementing the prototypes.

The legacy WHOIS specification needed to be replaced, as the data format of responses has not been standardized and the specification does not take internationalization into account. Therefore, the development of a new protocol to replace the legacy WHOIS protocol has long been discussed.

To settle the issue, the weirds WG adopted RDAP (Registration Data Access Protocol) as the protocol for web-based queries on registration data and JSON (JavaScript Object Notation) as the protocol to display structured and internationalized registration data.

The participants in the WG including ARIN[8] and RIPE NCC[9] publish the prototype in which these protocols are implemented. Interoperability tests by applying such implementation are conducted on a regular basis, and the issues that are identified by the results of these tests are then discussed in the WG.

JPRS has paid close attention to these activities since the WG was established and is also working on implementation of a prototype of RDAP and JSON. JPRS plans to participate in the interoperability tests in 2014.

● **http://jprs.jp/related-info/event/2013/1217IETF.html (in Japanese)**

（5） dnsop WG

The name of dnsop WG[10] derives from DNS Operations, and aims to compile a guideline for DNS operation in general, including administration of DNS servers and registration data.

JPRS has actively participated in the dnsop WG with its expertise as the JP DNS operator, by proposing RFC 4074, presenting the issues caused by misconfigurations of DNS servers and playing a part in the discussions on the change of DNS operators at the time of DNSSEC operation.

In 2013, JPRS pointed out the increase of DS queries caused by the addition of DNSSEC validators and discussed possible countermeasures.

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*7 weirds WG : Web Extensible Internet Registration Data Service WG
              https://datatracker.ietf.org/wg/weirds/
*8 ARIN   : American Registry for Internet Numbers
              https://www.arin.net/
*9 RIPE NCC : Réseaux IP Européens Network Coordination Centre
              http://www.ripe.net/
*10 dnsop WG : Domain Name System Operations WG
              https://datatracker.ietf.org/wg/dnsop/

3. Participation in Registry Associations

(1) APTLD

JPRS has been a member of APTLD[1] since 2002. As the registry for JP domain names, JPRS proposes improvements of APTLD activities, provides information and exchanges views at presentations and meetings so that the ccTLD community in the Asia-Pacific region can gain experience and expertise and raise the level of service standards. Besides this, Hirofumi Hotta of JPRS was elected APTLD Board Director in 2013, and his term of office runs until March 2015.

We have seen a number of IDN ccTLDs and new gTLD registries entering the market recently, marking the advent of a new era. In this light, APTLD set up the "mission & objectives WG," a new working group with a mandate to revisit the mission and objectives of APTLD. Hotta serves as the Chair of the WG.

In February, he led the discussion among the members about potential future issues including the possible stance that APTLD might adopt in facing new gTLDs. In August, Yuri Takamatsu of JPRS described its plan to conceal the registrant names in WHOIS. The plan was under internal consideration in JPRS at that time, and she shared with the APTLD members the service contents being studied and the issues that had triggered the internal discussion. The participants asked her a number of questions such as how the service would impact on the existing rules and the benefits that could be gained by providing such service, which stimulated the debate among themselves.

As an Ordinary Member, JPRS is contributing to the activities of APTLD through giving presentations such as the above and participating in the discussions with other members in the APTLD 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 addition, CENTR conducts surveys and information-sharing among members, so JPRS is actively taking part in these activities to consider its future services in the light of what it learns in CENTR.

At the CENTR meeting held in June, Hirofumi Hotta of JPRS introduced the service contents, sales promotion tools and possible manner of utilizing the Prefecture Type JP Domain Name.

In October, the TV commercial produced by JPRS entitled "May cause drowsiness" was nominated for the marketing and communications award and was highly rated in the "CENTR Awards 2013," a series of prizes given to those CENTR Members that have carried out outstanding projects in areas ranging from research and development, to marketing, communications and security. JPRS's commercial introduced domain names and DNS, which Internet users are usually unaware of, and outlined the activities of JPRS as the registry. This extraordinary communication effort targeting the Internet community was highly appreciated.

● **http://jprs.co.jp/en/topics/2013/131004.html**

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*1 APTLD : Asia Pacific Top Level Domain Association
        http://www.aptld.org/
*2 CENTR : Council of European National Top Level Domain Registries
        https://www.centr.org/

4. Other International Activities

（1） Participation in the Internet Governance Forum (IGF)

IGF[1] is an international conference that has been held annually since 2006. IGF 2013 was held in Bali, Indonesia, starting with pre-IGF events on October 21st and lasting until October 25th.

JPRS also participated in the conference and mentioned the importance of multistakeholder cooperation for the evolution of ever-changing services in the "High Level Leaders' Meeting." In the session entitled "Country Code Top Level Domain as a Supreme Gateway for Local Content Development," JPRS gave a presentation and participated in the discussion. JPRS remarked in the discussion that ccTLDs should not only support IDNs but also contribute to society by taking such measures as literacy development to promote Internet usage and the provision of sound domain name spaces, with which the audience agreed.

（2） Participation in Asia Pacific Regional Internet Governance Forum (APrIGF)

APrIGF[2] has been held annually since 2010, with the participation of mainly the members of the community in the Asia Pacific. It has been a forum for discussing Internet governance issues and other issues specific to the region.

In 2013, the APrIGF was held in Seoul, Korea from September 4 to 6. JPRS took part in the meeting and talked about the concept of community contribution as the ccTLD registry, introduced its analysis of IDN deployment in Japan and played a part in the discussion as a panel member.

（3） Efforts Related to Internet Governance

a) Submission of Comments in Response to the Questionnaire of the Working Group on Enhanced Cooperation under the United Nations

On August 30, 2013, JPRS submitted its comments in response to the questionnaire of the "Working Group on Enhanced Cooperation, Commission on Science and Technology for Development (CSTD WGEC)" within the United Nations.

WGEC will play a part in the review of the Tunis Agenda adopted in the World Summit on the Information Society (WSIS) in November 2005 and so published the above-mentioned questionnaire as part of its study on the status of enhanced cooperation to gather inputs from a broad range of entities not limited to governments.

JPRS has supported the coordination of Internet resource management led by the private sector based on the open, bottom-up and multistakeholder model. From this standpoint, JPRS submitted its written opinion in response to the request for comments.

● **http://jprs.co.jp/en/topics/2013/130902.html**

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*1 IGF　　: Internet Governance Forum
　　　　　　http://www.intgovforum.org/
*2 APrIGF : Asia Pacific Regional Internet Governance Forum
　　　　　　http://www.rigf.asia/

b) Submission of Comments to the Council Working Group on International Internet-related Public Policy Issues (CWG-Internet)

On October 7, 2013, JPRS submitted its comments in response to the call for public comments by the Council Working Group on International Internet-related Public Policy Issues (CWT-Internet).

The objectives of CWG-Internet are to study and promote international Internet-related public policy issues to stimulate discussion in ITU[3], and this public consultation attracted extensive comments from the community at large.

JPRS has supported the whole Internet administration, ranging from its operation to utilization, led by the private sector on the open, bottom-up and multistakeholder basis. From this standpoint, JPRS submitted its comments in response to the consultation.

● **http://jprs.co.jp/en/topics/2013/131008.html**

In addition to the above, JPRS is engaging in activities related to Internet governance, in consultation with the relevant parties including the Ministry of Internal Affairs and Communications.

⑷ Participation in the DotAsia Organisation

The DotAsia Organisation[4] is the sponsoring organization and registry for the ".asia" top level domain. It is a not-for-profit organization incorporated in Hong Kong and contributes its proceeds of the .asia registration services toward promoting the Internet in the Asia-Pacific region by carrying out various community projects.

The DotAsia Organisation's Internet advancement initiatives include the Secretariat of APrIGF and the Asia Pacific Next Generation (APNG) Camp and the "NetMission Ambassadors Program," a capacity building effort for young people who are expected to play a role in the evolution of the Internet.

JPRS has participated in the DotAsia Organisation as a Sponsor Member since its foundation, and Atsushi Endo of JPRS plays a role in its organizational operation as one of the Board Directors.

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*3 ITU : International Telecommunication Union
       http://www.itu.int/
*4   DotAsia Organisation
       http://www.dot.asia/

(5) 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.

As one of the operators of the M-Root DNS server, JPRS has also been participating in RSSAC[*5], one of the Advisory Committees within ICANN that advises the ICANN Board on matters relating to the operation of the Root Server System. In 2013, RSSAC discussed the method for traffic data acquisition common to all root servers in order to maintain stable operation even after the introduction of new gTLDs.

(6) Participation in the BIND 10 Development Project

BIND is the DNS server software most widely used on the Internet. In April 2009, ISC[*6], 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).

Since the outset of the project, JPRS has been offering not only financial support but also human resources, assigning its engineers, Kazunori Fujiwara, Naoki Kambe and Yoshitaka Aharen to the development team.

In 2013, JPRS conducted a field test for BIND 10 using the JP zone and gave the development team feedback on the test results. Consequently in June 2013, version 1.1.0 of the authoritative DNS server function was released, and the performance relating to bug fixing and zone transfer was improved. In addition, counters for statistics were deployed in each internal module, thereby expanding the statistical functions.

In January 2014, ISC announced the completion of the initial development program of BIND 10.

● **http://jprs.co.jp/en/topics/2014/140131.html**

(7) Activities in Academic Societies

JPRS is conducting ongoing research on DNS. In 2013, Takeshi Mitamura and Kazunori Fujiwara of JPRS respectively presented their findings to academic societies at home and abroad. Both of their papers were accepted and published in respective research journals.

- Lecture at the Memorial Symposium on "Information Propagation Mechanism Analysis" for the 40th + 101st Anniversary of the University of Tsukuba
  Title: 'Analyzing the Transition of Social Interest in the Internet'
  Author: Takeshi Mitamura
- Paper published in "Journal of Information Processing Vol. 21 No. 3"
  Title: 'DNS Traffic Analysis – CDN and the World IPv6 Launch'
  Authors: Kazunori Fujiwara, Akira Sato and Kenichi Yoshida
- Presentation (invited lecture) at the international conference entitled "IEICE Technical Committee on Internet Architecture, Oct. 2013"
  Title: 'Cardinality in Big Data - Examples in L3 & L7 Network'
  Authors: Takeshi Mitamura and Kenichi Yoshida
- Paper published in "Journal of the Japan Society for Management Information 22.3, 2013"
  Title: 'Analyzing People's Behavior Using Network Data'
  Authors: Takeshi Mitamura and Kenichi Yoshida

(8) Participation in DNS-OARC

DNS-OARC[7] is an international organization established in 2004 for the purpose of improving the stability and quality of DNS through various activities related to operation, analysis and study of DNS, the system widely used on the Internet. DNS-OARC conducts the DITL[8], which involves collecting and evaluating server packets of DNS including the root servers once a year for 50 hours.

DNS-OARC has held two workshops each year. In the workshops held in 2013, JPRS raised the issue on the increase of DS queries due to the growth of DNS validators and reported the comparison between the DITL data of root servers and that of JP DNS.

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*7 DNS-OARC : The DNS Operations, Analysis, and Research Center
               https://www.dns-oarc.net/
*8 DITL   : Day In The Life of the Internet
               https://www.dns-oarc.net/oarc/data/ditl

01·4　Activities in Japan

(1) Participation in the JApan Network Operators' Group

JANOG[1] is the organization established to promote the smooth operation of networks through discussions and information-sharing among network operators to contribute to Internet users and engineers. The members discuss various issues on the mailing list and gather at JANOG Meetings held twice a year. JANOG also convenes its Interim Meeting as necessary between the regular JANOG meetings.

JANOG31 Meeting

In 2013, the JANOG Meetings were held in January and July, and the Interim Meeting was held in April. JPRS supported these JANOG Meetings as one of the sponsors. Also, the engineers of JPRS participated in the discussion on the mailing list as well as in the meetings and gave presentations in the sessions.

In the JANOG31 Meeting held in January, Kazunori Fujiwara of JPRS made a presentation entitled "Email Address Internationalization" and talked mainly about the changes that had taken place since the previous report delivered in the JANOG25 Meeting.

In the JANOG32 Meeting held in July, a panel discussion session entitled "Skills Necessary for Engineers to Survive as a Cloud Service User and Provider" was held, and Yasuhiro Morishita of JPRS presented "An Enjoyable Way of Working with Younger Colleagues" and took part in the discussion as a panelist.

(2) Participation in DNS Operators' Group, Japan

DNS Operators' Group, Japan (DNSOPS.JP[2]) was established in 2006 with the intention of contributing to the stable operation of the Internet through the administration of DNS. Yasuhiro Morishita of JPRS participated in the establishment as one of the founding members. DNSOPS.JP serves as a forum where DNS operators can exchange and share information and discuss related issues.

DNSOPS.JP holds a BoF (Birds of a Feather) forum for technical presentations and discussions twice a year. Also, in 2012, it started a new initiative to hold an annual "DNS Summer Days," a two-day event consisting of tutorials and workshops relating to DNS.

In the tutorial within "DNS Summer Days 2013" held for two days from July 18, Takafumi Mizuno of JPRS gave a presentation entitled "An Introduction to DNS Operations for Beginners" and talked about possible troubles in DNS operations and the keys to effective troubleshooting. Yasuhiro Morishita of JPRS also described how cache DNS servers operate and provided related technical information in his presentation entitled "What Textbooks Don't Tell You about DNS."

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[1] JANOG　　　: JApan Network Operators' Group
　　　　　　　　　http://www.janog.gr.jp/
[2] DNSOPS.JP : DNS Operators' Group, Japan
　　　　　　　　　http://dnsops.jp/

(3) 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 JPNIC[3] and IAjapan[4]. The sessions were held in May and August 2013 and January 2014, where JPRS reported the latest developments and issues of the following organizations and discussed the key agenda matters of ICANN with the other participants.

- ・ccNSO (Country-Code Names Supporting Organization)
- ・RySG (Registries Stakeholder Group)
- ・NTAG (New TLD Applicant Group)
- ・SSAC (Security and Stability Advisory Committee)
- ・RSSAC (DNS Root Server System Advisory Committee)

(4) Participation in IETF Reporting Session

ISOC-JP[5] was established in August 1994 and made various efforts to promote the Internet in Japan as the Japan Chapter of ISOC[6]. There was a time when ISOC-JP was temporarily inactive. However, ISOC-JP resumed its activity thanks to volunteers who realized its importance, and in 2012 it was approved as the Japan Chapter again.

In 2013, ISOC-JP and JPNIC jointly organized three IETF Reporting Sessions, and JPRS reported on the status of discussions in IETF in these sessions.

In the reporting session in April, Yasuhiro Morishita of JPRS made a presentation entitled "Update on Compiling the History of the Internet" and introduced the activities related to the Networking History BoF within IETF as well as the efforts of the JPNIC History Compilation Committee. Yoshiro Yoneya of JPRS also outlined the initiatives in IETF related to internationalization and the activities of the Applications Area Review Team[7] in his presentation entitled "Introduction to Internationalization Efforts/Applications Area Review Team."

In the sessions in September and December, Kazunori Fujiwara of JPRS gave a presentation entitled "Topics Related to DNS" and reported on the activities of the working groups relating to DNS.

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.

To respond to expanding needs and enhance the usability of the JP Domain Name, JPRS has considered measures to make Geographic Type JP Domain Name more user-friendly. As a result, it introduced "Prefecture Type JP Domain Name," a new domain name space in 2012. In March 2013, the number of registered Prefecture Type JP domain names reached 10,000. This number of registrations largely exceeded that of the Geographic Type JP Domain Name.

Utilizing its expertise as the JP Domain Name registry, JPRS conducted activities to disseminate information and promote understanding of domain names and DNS. At the international level, it continued its participation in the policy development for the introduction of IDN ccTLDs. JPRS also contributed to technical standardization efforts by submitting proposals on the internationalization of email addresses, and these proposals were later issued as RFC.

Recognizing the growing importance of Internet-related education in schools, JPRS has distributed a free booklet on how the Internet works to educational institutions across Japan for four years in a row as part of its Internet-related educational support activities. As a result, the number of copies distributed in these 4 years amounted to over 100,000. JPRS also provided free JP domain names to junior and senior high school students and cooperated with the career education of a senior high school that visited various companies.

The Great East Japan Earthquake that occurred in 2011 has added further weight to need for the reliability and stability of the Internet infrastructure. Against this backdrop, JPRS set up an operation base in the Kansai region and constructed a new system site to fully duplicate its registry system, with the objective of ensuring faster restoration of all services after a disaster.

For the future, JPRS plans to further reinforce and implement the disaster-torelant service structure. Another challenges is to readjust the balance between publication of the JP domain name registration data through Whois and the protection of personal information. This issue is under discussion in the JP Domain Name Advisory Committee.

As the registry of JP domain names, JPRS will continue its efforts to provide better and stable services.

02·1 Change in the Cumulative Number of Registered JP Domain Names

As of January 1, 2014, the cumulative number of registered JP domain names reached 1,356,102, an increase of 37,387 in one year.
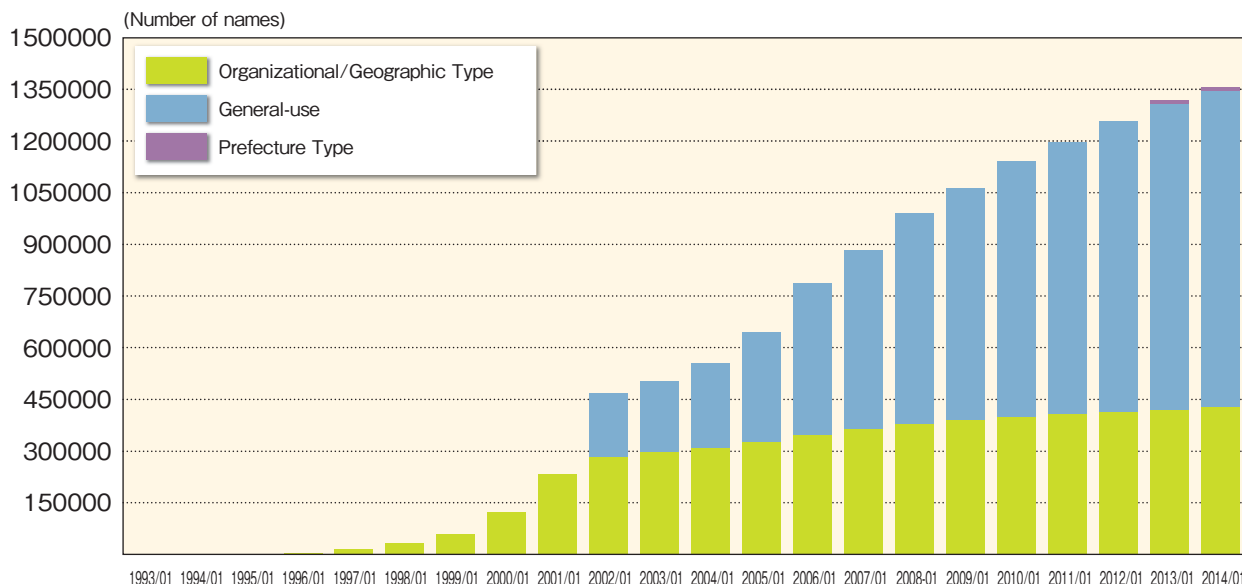
(Number of names)

Year/Month	Organizational/ Geographic Type	General-use (Japanese domain name)	Prefecture Type (Japanese domain name)	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	183,499（ 61,507）	——	466,839
2003/01	297,413	205,493（ 51,544）	——	502,906
2004/01	309,193	245,100（ 45,402）	——	554,293
2005/01	327,742	317,455（ 63,324）	——	645,197
2006/01	346,340	439,784（116,602）	——	786,124
2007/01	363,768	518,557（124,153）	——	882,325
2008/01	378,903	609,983（141,858）	——	988,886
2009/01	389,598	674,133（134,921）	——	1,063,731
2010/01	399,339	740,820（133,754）	——	1,140,159
2011/01	406,856	791,249（123,711）	——	1,198,105
2012/01	413,332	845,054（119,337）	——	1,258,386
2013/01	421,606	888,657（122,394）	8,452（1,915）	1,318,715
2014/01	428,467	915,854（126,182）	11,781（2,948）	1,356,102

*Please refer to "Domain Name Statistics" (http://jprs.co.jp/en/stat/) for the latest information.

02·2 Breakdown of the Cumulative Number of Registered JP Domain Names

*As of January 1, 2014

Prefecture Type
0.9%

Organizational/
Geographic
Type
31.6%

General-use
67.5%

CO: 84.6%

ED: 1.1%
GO: 0.1%
GR: 1.7%
LG: 0.4%
NE: 3.6%
OR: 7.0%
Geographic Type: 0.6%
AC: 0.8%
AD: 0.1%
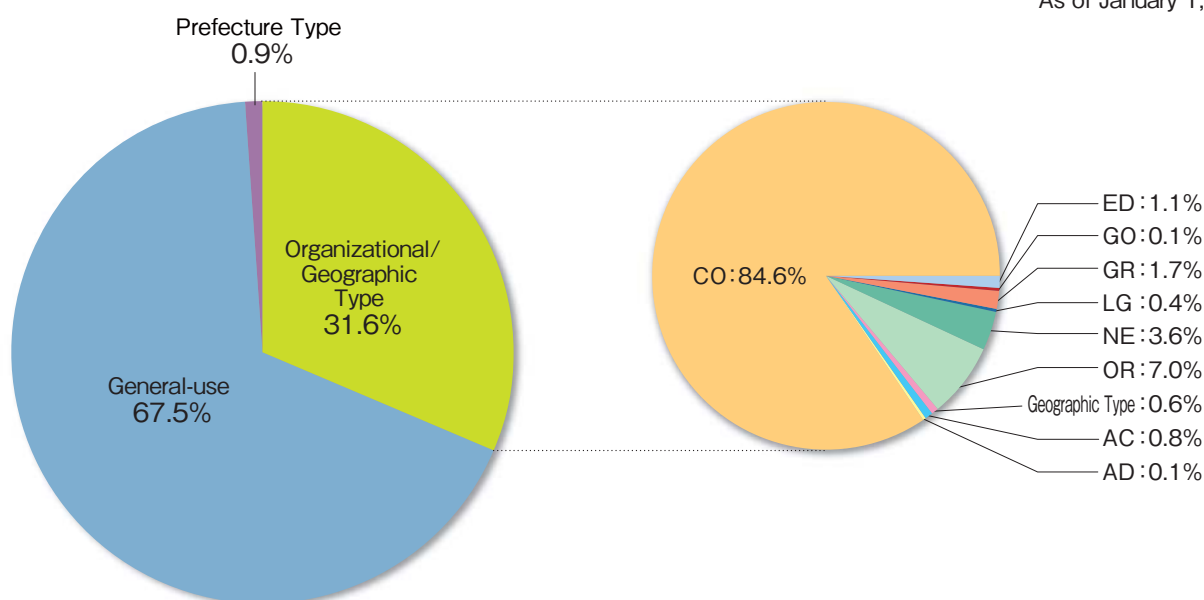
(Number of names)

JP Domain Name Types		1 Jan 2014 Number of Registrations	1 Jan 2013 Number of Registrations	Difference
Organizational/ Geographic Type	AC: Higher education institution	3,536	3,537	−1
	AD: JPNIC Member	261	268	−7
	CO: Company	362,364	355,942	+6,422
	ED: Primary school, junior and senior high school	4,832	4,777	+55
	GO: Japanese government	621	656	−35
	GR: Group	7,072	7,281	−209
	LG: Japanese local authority	1,840	1,836	+4
	NE: Network service	15,345	15,820	−475
	OR: Corporation other than company	30,116	28,948	+1,168
	Geographic Type	2,480	2,541	−61
General-use (Japanese domain name)		915,854 (126,182)	888,657 (122,394)	+27,197 (+3,788)
Prefecture Type (Japanese domain name)		11,781 (2,948)	8,452 (1,915)	+3,329 (+1,033)
Total JP Domain Name Registration		1,356,102	1,318,715	+37,387

*Please refer to "Domain Name Statistics" (http://jprs.co.jp/en/stat/) for the latest information.

02·3 Number of JP Domain Name Registrations by Prefecture

*As of January 1, 2014

Prefecture	Organizational/ Geographic Type	General-use	Prefecture Type
Hokkaido	2.8%	2.0%	1.7%
Aomori	0.5%	0.3%	0.3%
Iwate	0.4%	0.3%	0.2%
Miyagi	1.3%	0.8%	0.6%
Akita	0.4%	0.2%	0.2%
Yamagata	0.6%	0.3%	0.4%
Fukushima	0.8%	0.5%	0.3%
Ibaraki	1.4%	1.0%	0.5%
Tochigi	1.0%	0.5%	0.5%
Gunma	1.1%	0.7%	1.2%
Saitama	4.2%	2.9%	3.0%
Chiba	3.1%	2.5%	3.1%
Tokyo	32.7%	44.0%	41.8%
Kanagawa	6.7%	5.2%	4.4%
Niigata	1.2%	0.7%	0.9%
Toyama	0.7%	0.4%	0.4%
Ishikawa	0.7%	0.5%	0.3%
Fukui	0.5%	0.4%	0.2%
Yamanashi	0.5%	0.3%	0.2%
Nagano	1.4%	0.9%	0.8%
Gifu	1.2%	0.7%	1.1%
Shizuoka	2.3%	1.5%	0.9%
Aichi	5.5%	3.6%	2.6%
Mie	0.8%	0.5%	0.6%
Shiga	0.6%	0.5%	0.9%
Kyoto	2.0%	2.8%	7.3%
Osaka	9.5%	13.0%	8.6%
Hyogo	3.1%	2.4%	1.7%
Nara	0.6%	0.5%	1.0%
Wakayama	0.4%	0.3%	0.2%
Tottori	0.2%	0.2%	0.1%
Shimane	0.3%	0.2%	0.1%
Okayama	1.1%	0.8%	3.2%
Hiroshima	1.6%	1.0%	1.9%
Yamaguchi	0.5%	0.4%	0.3%
Tokushima	0.3%	0.3%	0.1%
Kagawa	0.5%	0.4%	0.4%
Ehime	0.6%	0.5%	0.3%
Kochi	0.3%	0.2%	0.1%
Fukuoka	3.0%	2.7%	4.1%
Saga	0.3%	0.2%	0.2%
Nagasaki	0.5%	0.4%	0.2%
Kumamoto	0.7%	0.6%	0.6%
Oita	0.4%	0.3%	0.4%
Miyazaki	0.4%	0.4%	0.3%
Kagoshima	0.5%	0.4%	0.4%
Okinawa	0.6%	0.6%	1.3%

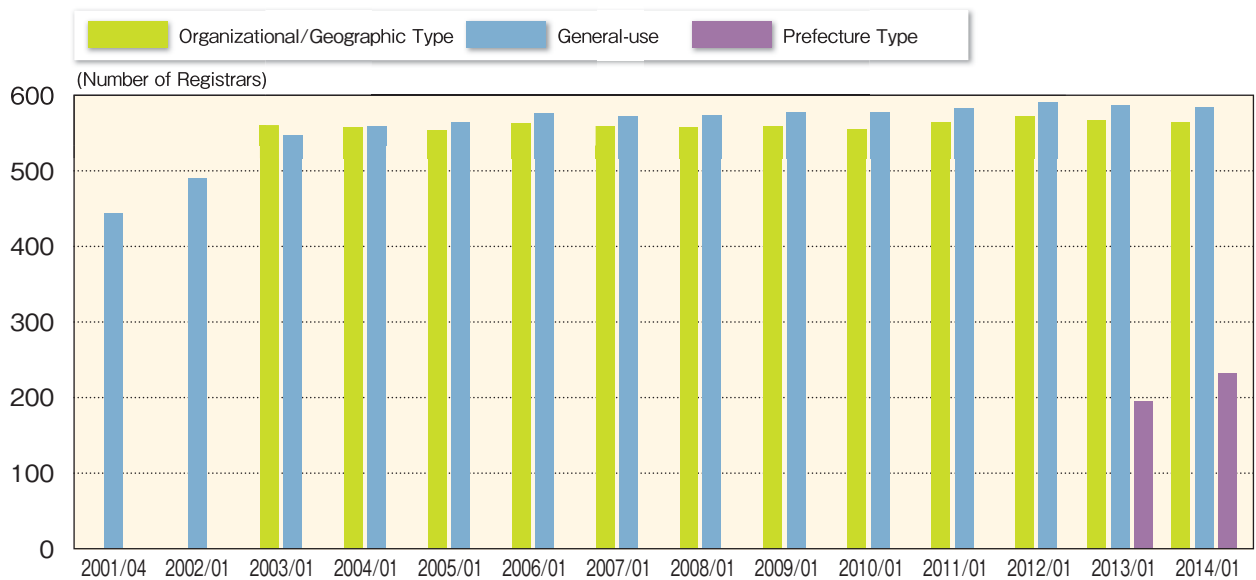# 02·4 Transition of DNS Configuration Rate

*As of January 1, 2014
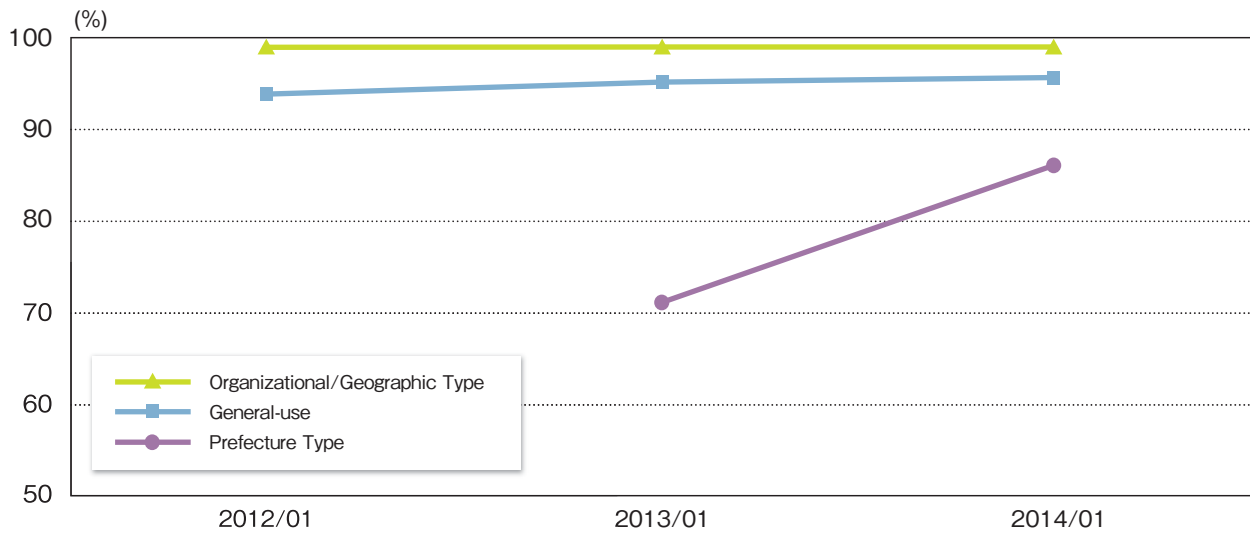
Year/Month	Organizational/Geographic Type	General-use	Prefecture Type
2012/01	98.9%	93.9%	——
2013/01	99.0%	95.3%	71.0%
2014/01	99.0%	95.6%	86.9%

02·5 **Number of Accredited JP Registrars**

Legend: Organizational/Geographic Type | General-use | Prefecture Type

(Number of Registrars)

(Number of Registrars)

Year/Month	Organizational/ Geographic Type	General-use	Prefecture Type	Total
2001/04	———	443	———	443
2002/01	———	490	———	490
2003/01	560	546	———	1,106
2004/01	557	559	———	1,116
2005/01	553	564	———	1,117
2006/01	562	576	———	1,138
2007/01	559	572	———	1,131
2008/01	557	573	———	1,130
2009/01	558	577	———	1,135
2010/01	555	577	———	1,132
2011/01	563	582	———	1,145
2012/01	571	590	———	1,161
2013/01	566	586	197	1,349
2014/01	564	582	227	1,373

*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 JP Domain Name Dispute Resolution Policy (JP-DRP)
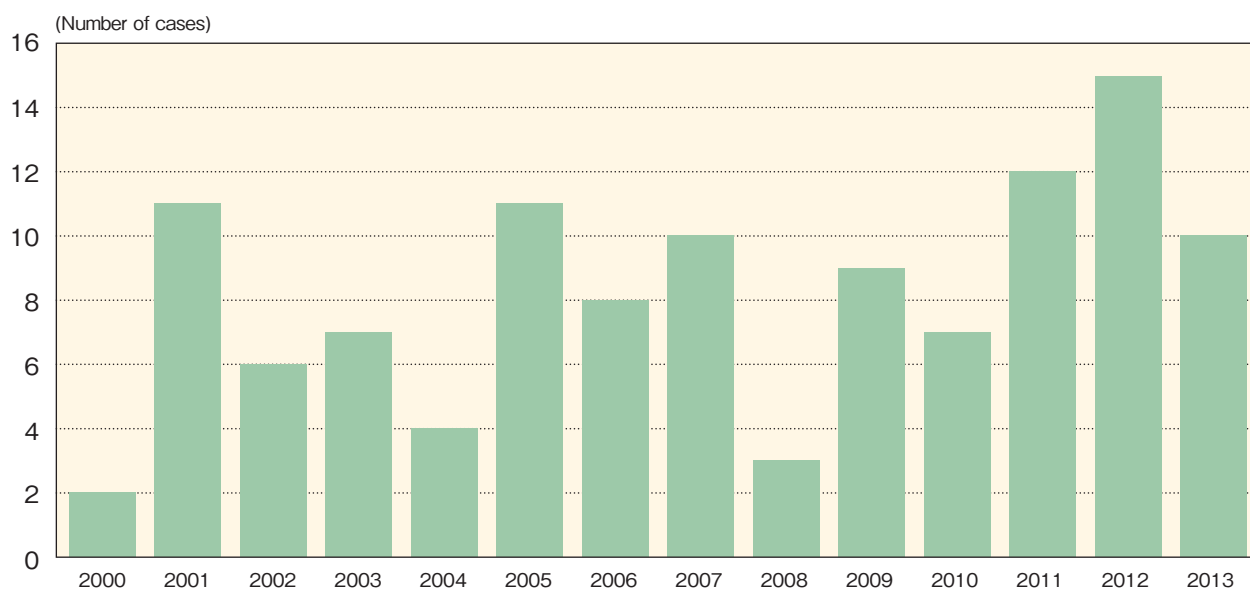
(Number of cases)

(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
2012	15
2013	10

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

03·1 History

2000	Dec.	JPRS was established.

2001 Feb. General-use JP Domain Priority Registration Application started.
     Apr. General-use JP Domain Concurrent Registration Application started.
     May General-use JP Domain First-Come First-Served Registration Application started.

2002 Feb. ccTLD Sponsorship Agreement was concluded with ICANN.
     Apr. Management and administration of .JP TLD was transferred from JPNIC to JPRS.
     Oct. LG.JP was established.
          JPRS started distributing a plug-in for Microsoft Internet Explorer®, "i-Nav™."

2003 Jan. The cumulative number of JP domain names exceeded 500,000.
     Jun. JPRS received the approval from ICANN to start IDN service.
     Jul. RFC-based Japanese JP Domain Name registration service started.
     Dec. "Japanese JP Access Site (http://jajp.jp/)" for mobile phones was established.

2004 Feb. IP Anycast technology was introduced in JP DNS service ([a.dns.jp] [d.dns.jp]).
          "Nihongo JP Navi" service was started.
     Jul. JP domain name started full support for IPv6, for the first time in the world as a TLD.
     Dec. The portal site "Nihongo dot JP" (http://日本語.jp/) for promoting Japanese JP Domain Name was launched.

2005 Jan. The portal site "Jinmei Jiten dot JP" (http://人名事典.jp/) to introduce Japanese JP domain names using personal names was launched.
     Jun. Work on eliminating risks due to improper management of DNS servers was started.
     Dec. "Eki Machi Guide" (http://駅街ガイド.jp/), which provides information on areas around stations using Japanese JP domain names consisting of station names throughout Japan, started.
          JPRS started operation of the M-Root DNS server in cooperation with the WIDE Project.

2006 Jan. JPRS started deleting improper DNS server registrations.
     Apr. JPRS shortened the processing time for JP DNS update.
     Sep. JPRS changed the number of GO.JP domain names which each government organization can register.
          Japanese JP domain names (for public administration, judiciary and legislative process) reserved for the government were released for relevant government organizations.
     Nov. The cumulative number of registered General-use JP domain names exceeded 500,000.
     Dec. JPRS published guidelines for making URLs consisting of Japanese domain names clickable in email text.

2007 Jan. The cumulative number of registered CO.JP domain names exceeded 300,000.
     Mar. "Procedure for recovering deleted domain name registration" was introduced for General-use JP Domain Name.
     Dec. IP Anycast technology was introduced to the JP DNS service ([e.dns.jp]).

2008 Mar. The cumulative number of registered JP domain names exceeded one million.
     Jun. JPRS started the real-time application process service for CO.JP Domain Name.
     Oct. The JP DNS server configuration was changed (c.dns.jp and g.dns.jp added).

2009 Apr. JPRS announced its participation in the BIND 10 development project.
     Nov. 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. JPRS deployed DNSSEC to the JP domain name service.
     Feb. The cumulative number of registered JP domain names exceeded 1.2 million.
          JPRS published "DNS Practices", a book on DNS, written by JPRS engineers.
     Sep. JPRS decided to establish "Prefecture Type JP Domain Name".

2012 Jul. Priority Registration Application of the Prefecture Type JP Domain Name started.
     Aug. The cumulative number of registered JP domain names exceeded 1.3 million.
     Sep. Concurrent Registration Application of the Prefecture Type JP Domain Name started.
     Nov. General Registration Application of the Prefecture Type JP Domain Name started.

2013 Mar. The cumulative number of registered Prefecture Type JP domain names exceeded 10,000.
     Nov. The TTL value of the DS RR for JP DNS servers was changed.

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 name services.

(1) Consultations and Advisories

Consultation / Advisory	Consultation Date Document No.	Advisory Date Document No.
Registration data collected by the registry and display of registrant names via WHOIS	Sep. 10, 2012 JPRS-ADV-2012001	Mar. 21, 2013 JPRS-ADVRPT-2012001
Method for appointing the members of the 7th JP Domain Name Advisory Committee	Dec. 13, 2012 JPRS-ADV-2012002	Jan. 8, 2013 JPRS-ADVRPT-2012002

*For details about consultation and advisory themes, please refer to "JP Domain Name Advisory Committee" (http://jprs.jp/advisory/) (in Japanese).

(2) Advisory Committee Meetings

Mar. 1   **44th JP Domain Name Advisory Committee meeting**
A basic agreement was reached on the draft advisory report developed according to the discussion at the 43rd meeting on the inquiry "Registration data collected by the registry and display of registrant names via WHOIS." The discussion was continued on the mailing list after the meeting, and the advisory report was finalized and submitted to JPRS on March 21.

After confirming the advisory report "Method for appointing the members of the 7th JP Domain Name Advisory Committee" (JPRS-ADVRPT-2012002), the committee recommended to JPRS the specific candidates as the successor members.

JPRS reported to the committee that the total number of registered Prefecture Type JP domain names, which had been introduced in November 2012, exceeded 10,000 as of March 1, 2013.

May 30   **45th JP Domain Name Advisory Committee meeting**
It was reported that all the candidates who had been recommended in the 44th Committee meeting accepted their appointment. Then Mr. Shigeki Goto was elected and appointed the Chair, and Mr. Tsuneo Matsumoto the Vice Chair of the 7th JP Domain Name Advisory Committee.

JPRS explained its response to the report "Method for appointing the members of the 7th JP Domain Name Advisory Committee" (JPRS-ADVRPT-2012002).

JPRS explained its response to the report "Registration data collected by the registry and display of registrant names via WHOIS" (JPRS-ADVRPT-2012001).

JPRS summarized the state of JP Domain Names and spoke on other topics related to the handling of domain name lists and zone information managed by registries as well as the trademark rights protection mechanism for new gTLDs (TMCH). Following that, the committee members exchanged opinions on issues such as the advantages and disadvantages of publicizing the zone information and asked questions about the TMCH.

Sep. 10   **46th JP Domain Name Advisory Committee meeting**
The resignation of Mr. Tsuneo Matsumoto from the 7th JP Domain Name Advisory Committee was reported.

Accordingly, Mr. Kazushi Hayashi was appointed as the successor Vice Chair and assumed office.

JPRS described the latest issues related to domain names such as domain name aftermarkets including the secondary market, phishing and improper settings of DNS servers. The committee members exchanged opinions on the contents of the presentation.

Dec. 25   **47th JP Domain Name Advisory Committee meeting**
It was reported that Mr. Hironao Kaneko replaced Mr. Tsuneo Matsumoto who had resigned from the 7th Advisory Committee.

In its presentation on the latest trends in the domain name industry, JPRS outlined the attacks against registries and registrars and the developments in the Domain Name Policy Subcommittee under the Information and Communications Council in the Ministry of Internal Affairs and Communications. The committee members discussed the contents of the presentation which included JPRS's response to the attacks and talked about the need for cooperation among businesses.

JPRS reported on the progress of its considerations on the relaxation of one-domain-name-per-organization limitation on Organizational/Geographic Type JP Domain Names, and the committee members provided their comments on that report.

03·3 Proposals and Presentations

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

Date	Title	At	Hosted by
Jan. 24	E-mail Address Internationalization (Changes Since JANOG25) (in Japanese)	JANOG31 Meeting	JANOG
Feb. 21	new gTLD's and ccTLD Registries	APTLD	APTLD
Feb. 22	Mission and Objectives WG	APTLD	APTLD
Mar. 7	Around the ccTLDs world – The journey continues – (in Japanese)	IGF Baku Reporting Session	GLOCOM
Apr. 8	Generation of Character set and Variants – Japanese Scripts –	ICANN APRALO Multistakeholder Policy Roundtable	APRALO*1
Apr. 10	Community Activities in Japan	ICANN DNSSEC Workshop	ICANN
Apr. 11	Registry Data Escrow Experience in .jp ccTLD	CNNIC Workshop on Strategic Cooperation for Developing Countries in Asia, ICANN 46	CNNIC*2
Apr. 18	Update on Compiling the History of the Internet (in Japanese)	IETF Reporting Session (86th, Orlando)	ISOC-JP/JPNIC
Apr. 18	Introduction to Internationalization Efforts/Applications Area Review Team (in Japanese)	IETF Reporting Session (86th, Orlando)	ISOC-JP/JPNIC
May 12	An increase of DS queries to JP DNS servers and a proposal for its countermeasures	DNS-OARC Spring 2013 Workshop	DNS-OARC
May 23	Latest Developments in the Registry Stakeholder Group and New TLD Applicant Group (NTAG) in ICANN GNSO/ the New gTLD Program (in Japanese)	36th ICANN Debriefing Session	JPNIC/IAjapan
May 23	Report on ccNSO-related Issues (in Japanese)	36th ICANN Debriefing Session	JPNIC/IAjapan
Jun. 3	.JP Topics	CENTR Admin Workshop	CENTR
Jun. 3	Products for the registry databases and preparation for the disaster recovery	CENTR Tech Workshop	CENTR
Jun. 4	.JP Topics	CENTR Marketing Workshop	CENTR
Jun. 4	Marketing of newly introduced Prefecture	CENTR Marketing	CENTR
Jun. 12-14	Open DNS Resolvers: Issues and Solutions – You May Also Be An Unknowing Accomplice – (in Japanese)	Interop Tokyo 2013	Interop Tokyo 2013*3 Steering Committee
Jun. 12-14	Basics of Domain Names and DNS (in Japanese)	Interop Tokyo 2013	Interop Tokyo 2013 Steering Committee
Jun. 18	Report on DNS-OARC / RIPE 66 DNS WG + Introduction to IPv6 Pollution Traffic Analysis (in Japanese)	24th JPNIC Open Policy Meeting	JPNIC/Japan Open Policy Forum
Jun. 28	Status of Domain Name Registry's Countermeasures against Illegal and Harmful Information (in Japanese)	Okinawa ICT Forum 2013	JAIPA*4
Jul. 4	An Enjoyable Way of Working with Younger Colleagues (in Japanese)	JANOG32 Meeting	JANOG
Jul. 17	CJK Generation Panel – JET Reload Proposal –	ICANN Meeting	ICANN
Jul. 17	Key Management in JP	DNSSEC Workshop	ICANN
Jul. 19	An Introduction to DNS Operations for Beginners – Troubles and Keys to Effective Troubleshooting – (in Japanese)	DNS Summer Days 2013	DNSOPS.JP
Jul. 19	What Textbooks Don't Tell You about DNS (in Japanese)	DNS Summer Days 2013	DNSOPS.JP
Jul. 28	Increase of probable DNSSEC Validations and DNSSEC side effect	IEPG Meeting	IEPG*5

Date	Title	At	Hosted by
Aug. 1	draft-fujiwara-dnsop-ds-query-increase-01: Side effect of DNSSEC: an increase of DS queries	IETF87 dnsop WG	IETF
Aug. 1	Outline of and Countermeasures against DNS Reflector Attacks Using Open Resolvers – You May Also Be An Unknowing Accomplice – (in Japanese)	22nd Workshop of The Special Interest Group on Internet and Operation Technology (IOT) (invited lecture)	Information Processing Society of Japan *6
Aug. 20	Latest Developments in the Registry Stakeholder Group (RySG) and New TLD Applicant Group (NTAG) in ICANN GNSO/ the New gTLD Program (in Japanese)	37th ICANN Debriefing Session	JPNIC/IAjapan
Aug. 20	Latest Developments in ICANN Security and Stability Advisory Committee (SSAC) / DNS Root Server System Advisory Committee (RSSAC) (in Japanese)	37th ICANN Debriefing Session	JPNIC/IAjapan
Aug. 22	ccNSO Update	APTLD	APTLD
Aug. 22	Hiding Registrant Name in Whois	APTLD	APTLD
Aug. 23	Interim report of APTLD Mission and Objective Working Group – Phase1: factual analysis –	APTLD	APTLD
Sep. 5	Governance Framework of .JP ccTLD Registry	APrIGF	APrIGF
Sep. 5	Report on IETF 87 – Topics Related to DNS – (in Japanese)	IETF Reporting Session (87th, Berlin)	ISOC-JP/JPNIC
Sep. 6	Acceptance of IDNs in Japan	APrIGF	APrIGF
Sep. 6	APTLD activities re. IDN ccTLDs	APrIGF	APrIGF
Sep. 18	Abuse Management Protocols and Practices – .JP Registry –	eCrime Research Summit 2013	APWG*7
Oct. 6	An analysis of DITL root data and comparison with JP data	DNS-OARC Fall 2013 Phoenix Workshop	DNS-OARC
Oct. 16	Tutorial: Basic Components of DNS and Points to Note When Implementing IPv6 (in Japanese)	IPv6 Summit in KYOTO 2013	IAjapan/Cyber Kansai Project*8/ Academic Center for Computing and Media Studies, Kyoto University*9/ The Consortium for Information Society in Kyoto*10
Oct. 21	Local Content Development – ccTLD as a leverage –	IGF2013 Pre Event	PANDI*11
Oct. 21	APTLD activities re. IDN ccTLDs	IGF2013 Pre Event	PANDI
Nov. 5	Side Effect of DNSSEC – An Increase of DS Queries –	IETF dnsop WG	IETF
Nov. 7	.JP Topics	CENTR Admin Workshop	CENTR
Nov. 7	Hiding Registrant Name in Whois output	CENTR Admin Workshop	CENTR
Nov. 7	Nation-wide discussion on the reliability and transparency of registry management	CENTR Admin Workshop	CENTR
Nov. 20	DS TTL shortening experience in .JP	ICANN DNSSEC Workshop	ICANN
Nov. 20	Recent Developments of Governmental Movements in Japan	ccNSO members meeting	ICANN
Nov. 26	A History of Networking (Networking History BoF@IETF) (in Japanese)	BoF for the Members of "Different History Projects"	JPNIC
Nov. 27	Latest Developments of Domain Names in Japan and the World (in Japanese)	JPRS/ICANN Joint Seminar	JPRS/ICANN
Nov. 28	Let's Think of the Size of DNS Messages – Lunch with DNS – (in Japanese)	Internet Week 2013 Lunch Seminar	JPNIC

Date	Title	At	Hosted by
Nov. 28	JP DNS Update (in Japanese)	Internet Week 2013 DNS DAY	JPNIC
Nov. 28	Evaluation and Measurement of DNS – Introduction of RRL to JP DNS – (in Japanese)	Internet Week 2013 DNS DAY	JPNIC
Nov. 28	Topics Including Comparison of the Number of Query Source IP Addresses between the Root and JP DNS (in Japanese)	DNSOPS.JP BoF	DNSOPS.JP
Nov. 28	An Increase of DS Queries Observed in JP DNS (in Japanese)	DNSOPS.JP BoF	DNSOPS.JP
Nov. 28	Management and Administration of Domain Names, Global Cooperation of DNS and Efforts Undertaken by JPRS (in Japanese)	Domain Name Policy Subcommittee	Information and Communications Council*12
Nov. 29	Summary of Internet Week 2013 DNS DAY (in Japanese)	Internet Week 2013 IP Meeting 2013	JPNIC
Dec. 4	DS TTL shortening experience in .JP	DNSSEC Workshop @ IPv6 Summit 2013	TWNIC*13
Dec. 20	Report on IETF 88 – Topics Related to DNS – (in Japanese)	IETF Reporting Session (88th, Vancouver)	ISOC-JP/JPNIC

*1   APRALO: Asian, Australasian and Pacific Islands Regional At-Large Organization
     https://community.icann.org/pages/viewpage.action?pageId=2266081
*2   CNNIC: China Internet Network Information Center
     http://www.cnnic.cn/
*3   Interop Tokyo 2013
     http://www.interop.jp/2013/
*4   JAIPA: Japan Internet Providers Association
     http://www.jaipa.or.jp/
*5   IEPG: Internet Engineering and Planning Group
     http://www.iepg.org/
*6   Information Processing Society of Japan
     https://www.ipsj.or.jp/
*7   APWG: Anti-Phishing Working Group
     http://www.antiphishing.org/
*8   Cyber Kansai Project
     http://www.ckp.jp/
*9   Academic Center for Computing and Media Studies, Kyoto University
     http://www.media.kyoto-u.ac.jp/
*10 The Consortium for Information Society in Kyoto
     http://www.it-kyoto.jp/
*11 PANDI : Pengelola Nama Domain Internet Indonesia
     https://www.pandi.or.id/
*12 Information and Communications Council
     http://www.soumu.go.jp/main_sosiki/joho_tsusin/policyreports/joho_tsusin/
*13 TWNIC: Taiwan Network Information Center
     http://www.twnic.net.tw/

03·4 Press Releases

*Original materials are written in Japanese.

Date	Title
Feb. 20	JPRS Agrees on Further Cooperation with ICANN Activities during Visit by ICANN President – ICANN affirms value of JPRS partnership in activities in Asia and Japan –
Feb. 25	JPRS Supports the "15th 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 –
Feb. 26	Hirofumi Hotta of JPRS Appointed to APTLD Board of Directors
Mar. 4	Total Number of Registered Prefecture Type JP Domain Names Tops 10,000 – Tokyo Ranks Top, Osaka Second and Kyoto Third by Number of Registrations –
Mar. 26	"JP Domain Name Registry Report 2012" published today – JPRS establishes the Prefecture Type JP Domain Name to improve "usability" –
Apr. 10	JPRS Provides a Japanese JP Domain Name to "UenoPandaLive.jp" – http://うえのパンダライブ.jp becomes accessible today –
May 15	JPRS Distributes Free Cartoon Booklet on "How the Internet Works" to Educational Institutions in Japan Again This Year – Booklet redesigned with latest trends and improved readability –
Jul. 2	JPRS's Distribution of Free Educational Materials to Educational Institutions in Japan Totals 100,000 Copies – Given out to about 550 institutions in 4 years –
Aug. 19	Application for New gTLD ".jprs" Passes Initial Evaluation

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

03·5 Provision of Technical Information Related to DNS

Date	Title
Jan. 7	Configuration Changes with the Change of IP Address at d.root-servers.net (D-Root)
Jan. 25	Service Outage of Named Caused by Implementation Bugs of BIND 9.8.x/9.9.x with DNS64/RPZ Enabled (Published on January 25, 2013)
Mar. 27	(Urgent) Critical Vulnerability of BIND 9.x (Excessive Memory Consumption) (Published on March 27, 2013) – Immediate action is strongly recommended for both caching and authoritative servers –
Apr. 18	Configuration Guide: How to Deactivate Open Resolvers [for BIND]
Apr. 18	Technical Description: "DNS Reflector Attacks"
Jun. 5	(Urgent) Vulnerability of BIND 9.x (DNS Service Outage) (Published on June 5, 2013)
Jul. 27	(Urgent) Vulnerability of BIND 9.x (DNS Service Outage) (Published on July 27, 2013) – Version upgrade is strongly recommended for both caching and authoritative servers –
Nov. 7	Vulnerability of BIND 9.x (Unexpected Access Permission) (Published on November 7, 2013) – Version upgrade is strongly recommended, but only for Windows systems –

*For the latest information, please refer to the "Technical Information Related to DNS" (http://jprs.jp/tech/) (in Japanese).

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 Name, or domain names of Japan. You may have seen addresses for websites and emails such as "http://○○○.jp" and "△△△@○○○.jp". JPRS manages and administers 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, so it 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, it conducts standardization activities and technical verification for the smooth deployment of DNSSEC, a mechanism for improved DNS security. JPRS is also engaged in other standardization activities through contributing to internationalization of the identifiers used for protocols, working out methods of resolving issues concerning DNS operations and submitting proposals to standardize registry technologies. JPRS actively publishes the results of these activities and shares information at IETF and other meetings to contribute to the network society.