ICANNWiki QUICK GUIDE

ICANN64 KOBE, JAPAN

giving everyone a voice in the future of the internet

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ICANN KOBE64

Welcome to ICANN64, the 2018 Community Forum and another edition of the ICANNWiki Quick Guide in Kobe. Japan has a rich history in the development of the Internet, both locally and globally. Nearly 27 years ago the second INET conference, home to the inaugural meetings of the Internet Society, was held in Kobe.

This will be an important conference. It is the final ICANN meeting before the Temporary Specification for gTLD Registration Data expires, putting pressure on the EPDP to reach an acceptable outcome. Additionally, we hope to see major steps forward for Internationalized Domain Names (IDNs), as the ICANN Board will consider ratifying of the IDN Variant TLD Implementation recommendations, which are a result of many years of hard work.

This Quick Guide is packed with issue primers, a history of the Internet in Japan, and the best acronym glossary you'll find.

At ICANN64, we are hosting another ICANNWiki Edit-a-thon -- a community-driven event that focuses on collaboratively developing content about ICANN and Internet governance. Come join us and roll up your sleeves to make ICANNWiki a better resource for all.

ABOUT ICANNWiki

ICANNWiki is a grassroots, community effort to create and curate articles describing the people, organizations, terms and topics within the ICANN community. We actively seek worldwide collaboration to increase understanding of how policy is created for the continued development of the Internet, a tool which we all use everyday. In particular we cover the Internet Corporation for Assigned Names and Numbers (ICANN) and related multistakeholder policy and management bodies.

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ICANN64 LOCAL HOST COMMITTEE (LHC) WELCOMES YOU TO KOBE!!

LHC consists of 18 members, including registries, registrars, ISPs and the Internet Associations in Japan, with two supporting observers, government and the convention bureau which made financial support to ICANN64, yes, we believe in the multistakeholderism even in the Local Host!!

ICANN 64 COMMUNITY FORUM
KOBE
9–14 March 2019

ICANN64 Local Host Committee

GMO INTERNET GROUP
JPRS JAPAN REGISTRY SERVICES
IIJ Internet Initiative Japan
IA japan
JPNAP
INTERLINK
NTT docomo
TELESA
JPNIC
BR GROUP
kcg.edu The Kyoto College of Graduate Studies for Informatics
Com Laude Corporate Domain Management
Valideus Domain Registry Consultancy and Services
Discount Japan Registrar JP Domains
JAIPA Japan Internet Providers Association
WIDE PROJECT
NTT Communications Transform. Transcend.
KDDI
NTT WEST

HISTORY OF THE INTERNET IN JAPAN

The Internet in Japan, like many other countries, began as an experimental network of academics established to share computing resources, as well as information and ideas. In 1974, the N1 project, which was supported by the Ministry of Education of Japan, became the first effort to establish a national academic network. Due to regulations at the time, however, the network operated exclusively as a resource-sharing network and did not have any mail or news exchange facilities.

Then, in 1984, a group of researchers, led by Dr. Jun Murai launched JUNET (Japan University Network), which connected computers at the Tokyo Institute of Technology, Keiō University, and the University of Tokyo. JUNET benefited greatly from the passage of 1984 Telecommunications Business Act, which denationalized the telecommunications industry, thereby facilitating its success as an email and e-news network, becoming Japan's first research computer network.

Around this time, there was a proliferation of different networks utilizing a variety of their own protocols. In Japan, the National Center of Science Information System (NACSIS) started operating the NACSIS network (currently, SINET 5) in 1987 and the Japan Academica Inter-University Network (JAIN) started in 1988.

During this expansion of the networked computing, there was a movement to connect the growing number of academic networks to each other. Ultimately, TCP/IP was selected as the protocol that would achieve this goal and lead to what we now know as the Internet. In Japan in 1985, Dr. Murai took the lead in establishing the Widely Integrated Distributed Environment (WIDE), creating the experimental WIDE Internet, which adopted the use of TCP/IP. After successful experimentation, it became the WIDE Project, began official operations in 1988, and connected to the NSFNet in 1989, connecting Japan to the global Internet.

In the early 1990s, online service providers faced several interconnection challenges as they entered the Japanese market. In 1994, the installation of NSPIXP-1 by WIDE Project at Tokyo NOC (Network Operation Center) made data exchange between telecommunications companies possible. NSPIXP-1 was designed primarily for commercial ISPs and within a year of becoming operational it grew its interconnection from 4 ISPs to 20 ISPs. This growth led to the launch of NSPIXP-2 in Tokyo in 1996 and NSPIXP-3 in Osaka in 1997.

During the 1990s, Japan became one of the leaders in research and innovation of the Internet, including the development of IPv6 and the internationalization of browsers. While there was interest in utilizing the Internet by computer-related companies and university researchers, the adoption of Internet technologies by the majority of companies and the governmental offices was lacking. This lack of online services and usage began to shift in 2000 when the Mori Yoshirō administration established an IT Strategic Headquarters. While there is still progress to be made with some government offices and small businesses, Japan is one of the world leaders in adoption of the Internet.

The Names

The .junet TLD was in use from 1982 until 1989 when the Japanese Internet community migrated to .jp. The ccTLD was delegated to Jun Murai by Jon Postel in 1986. Then in 1988, the major academic networks in Japan endorsed the migration from .junet to .jp. In the process of migrating, a new structure of different organization types was introduced at the second level, such as .ac.jp and .co.jp.

The administration of .jp was initially handled by Dr. Murai within the "junet-admin" group until the need for a new solution became evident. This led the Japan Committee for Research Networks (JCRN) to establish the Japan Network Information Center (JNIC), which assumed the management and administration functions of the .jp ccTLD in 1991.

The management of .jp further evolved in 1993 with the reorganization of JNIC into JPNIC . This shifted the structure from a volunteer operation to a business service, which was characterized by its financially stable membership and fee based system. JPNIC's structure also evolved to include a Board, Steering Committee, working groups, and public comment processes; overall leading to a transparent and responsible decision making process policy development process based on the consensus of members.

After eventually incorporating in 1997, JPNIC faced structural challenges as the use of domain names was shifting with the commercialization of gTLDs like .com, .org, and .net . Additionally government guidelines for public service organizations created complications spurring from JPNICs need for long-term investment, as well as increased revenue from the growing domain space.

To respond to shifting market dynamics, JPNIC prepared for the introduction of general-use .jp domain names, establishing a dispute resolution policy and transitioning the management and administration of the .jp domain to the newly founded Japan Registry Service Co., Ltd. (JPRS).

The Numbers

In Japan, IP addresses were originally assigned by Jon Postel to Nippon Telegraph and Telephone Corporation (NTT) in 1986 and the University of Tokyo in 1987. Subsequently, in 1989, in a far-sighted experiment in bulk assignment, Jun Murai received 1 Class A address, 254 Class B addresses, and 512 Class C addresses for use in Japan. The Network Address Coordination Committee, chaired by Eichi Wada, managed and assigned these IP addresses in Japan until JNIC (later JPNIC) took over IP address assignment in 1992 due to increased demand.

This experiment, along with a similar distribution to Daniel Karrenberg in Europe, were the first steps toward a more decentralized management by Regional Internet Registries, in lieu of centralized management by The NIC/IANA. In 1990, the IAB recommended that the central NIC remain the registry, while delegating address space to approved organizations for further delegation.

In response, JPNIC released "A Proposal for APNIC experiments", which led to the deliberations and eventual establishment of APNIC in 1993.

Dr. Jun Murai

Fun Fact!

The second INET conference, home to the inaugural meetings of the Internet Society, was held in Kobe, Japan in 1992. At this meeting, the Internet Society's Board of Trustees accepted recommendations to bring the Internet Activities Board (IAB) and all of its activities into the Internet Society under the new name, "Internet Architecture Board." At the IAB's first meeting under this new arrangement, the discussions around the depletion of IPv4 resources contributed to the establishment of the Process for Organization of Internet Standards Working Group (POISED) within the Internet Engineering Task Force (IETF). The eventual outcomes altered the relationship between the IAB and the IETF and clarified the relationship between ISOC and the IETF.

GET INVOLVED!

Three times a year, ICANN's Multistakeholder Community gathers for meetings in different regions of the world. These meetings are free and open to all, including remote participants. With around thousands of participants, hundreds of sessions, and various stakeholder groups, navigating ICANN as a newcomer can be difficult, but our ICANNWiki Primers are a helpful place to begin your ICANN journey.

LEARN

Learn how ICANN is structured and operates by taking a course on ICANN Learn, researching with ICANNWiki's multilingual encyclopedic resource, and exploring the vast amount of documents and information on icann.org.

FOLLOW

Follow the latest policy discussions by subscribing to some mailing lists or reading the archives. Many of the lists are publicly available, but some may be restricted to members of the Working Group.

BE HEARD

Comment on policy proposals through ICANN's public comment platform. Each proposal is open for a minimum of 40 days for community comments. At ICANN Meetings, you can also make comments at the Public Forums.

GET INVOLVED WITH ONE OF ICANN'S STRUCTURES

ICANN's Multistakeholder Community consists of seven structures, classified as Supporting Organizations (SO) and Advisory Committees (AC). Each of the seven structures have different compositions and criteria to join. Newcomers looking for a way to contribute to ICANN's multi-stakeholder, bottom-up, consensus driven model for policy development should start with the GNSO or ALAC.

SUPPORTING ORGANIZATIONS

GNSO
gnso.icann.org

The Generic Names Supporting Organization (GNSO) is the main policy-making body in ICANN. It brings together various stakeholder groups to develop and recommend policies to the ICANN Board concerning generic top-level domains (gTLDs).

ccNSO
ccnso.icann.org

The Country Code Names Supporting Organization (ccNSO) is open to and comprised of the managers responsible for operating country-code top-level domains (ccTLDs). It develops and recommends policies relating to ccTLDs.

ASO
aso.icann.org

The Address Supporting Organization (ASO) represents the Regional Internet Registries (RIRs). It is tasked with reviewing and developing Internet Protocol address policy and advise the Board accordingly. Membership is only available to RIRs.

ADVISORY COMMITTEES

ALAC

The At-Large Advisory Committee (ALAC) functions as the voice for the individual Internet user as it relates to ICANN processes, policy and more and advises the Board accordingly. It is formed of smaller groups, At-Large Structures, that are part of Regional At-Large Organizations. **Learn more at atlarge.icann.org.**

GAC

The Governmental Advisory Committee (GAC) is comprised of formally appointed governmental representatives and is responsible for providing advice to the Board relating to the concerns of governments, including how ICANN policies interact with laws and international agreements. **Learn more at gac.icann.org.**

SSAC

The Security and Stability Advisory Committee is composed of technical experts from industry and academia that advise the Board on the security and integrity of the Internet's naming and address allocation systems. The SSAC is an invite-only organization. **Learn more at ssac.icann.org.**

RSSAC

The Root Server System Advisory Committee is made up of representatives from the organization responsible for operating the 13 root name servers. It advises the Board on issues related to the operation, administration, security, and integrity of the Internet's Root Server. **Learn more at rssac.icann.org.**

The Variants in Internationalized Domain Names

Internationalized Domain Names are making a truly multilingual Internet possible and opening up the DNS to a wider user base by enabling the use of domain names in scripts such as Arabic, Chinese, Cyrillic and more. Since ICANN opened the application for the first IDN ccTLDs in 2009, over 50 IDN ccTLDs and over 90 IDN gTLDs have been added to the root zone. While this growth has been promising, there have been and continue to be important and unique considerations for the security, stability and user experience of the DNS.

One of these considerations, is the use of "variants." While there is no single definition of variants, it generally refers to technically distinct IDNs that are visually or conceptually indistinguishable. As a result, the ICANN Board resolved in 2010 not to delegate any variant IDNs until variant management mechanisms could be developed.

Community work includes the development of two mechanisms:

1. Defining IDN variant labels

Label Generation Rules (LGR) describe sets of code points and the related constraints that are needed to generate IDNs in a particular script. They're typically selections from a particular repertoire of Unicode code points, which identify permitted code points, both as individual characters and whole labels. The Root Zone LGR (RZ-LGR) Project is tackling the monumental task of developing these LGRs for IDNs, which require a community based Generation Panel (GP) for each script that will be used in the RZ. The GPs start with the Maximal Starting Repertoire and propose rules, which include the identification of variants and determining if they are allocatable or if they should be blocked.

2. Determining how they should be managed

The ICANN organization developed a set of recommendations on mechanisms for implementing variant TLDs, which include:

1. Root Zone Label Generation Rules (RZ-LGR) the only source for valid TLDs and their variant labels.
2. IDN variant TLDs {t1, t1v1, ...} allocated to the same entity.
3. Same second level label under IDN variant TLDs s1.{t1, t1v1, ...} registered to the same entity.
4. Second-level variant labels under IDN variant TLDs {s1, s1v1, ...}.{t1, t1v1, ...} registered to the same entity.
5. Second-level IDN tables offered under IDN variant TLDs harmonized.
6. Second-level variant label allocatable or activated under IDN variant TLDs not necessarily same.
7. Same registry service provider for IDN variant TLDs
8. Update existing policies & associated procedures to accommodate recommendations for IDN variant TLDs
9. All other existing TLD policies and procedures apply to IDN variant TLDs, unless otherwise identified

At ICANN64, the ICANN Board will consider ratifying the IDN Variant TLD Implementation recommendations, which are a result of many years of hard work. This will mark an important moment for IDNs and a multilingual Internet.

More on IDNs:
There is important work being carried out by the Universal Acceptance Steering Group and the Dynamic Coalition on DNS Issues to promote the Universal Acceptance of IDNs.

The Evolving Governance of the DNS Root Server System

The current Root Server System (RSS) developed and scaled to meet the needs of increasingly interconnected networks, as the global Internet emerged. Throughout this process, the Root Server Operators (RSOs) have been chosen based on technical capabilities, while keeping in mind regional diversity and a variety of operating practices. These RSOs operate completely independently based on a system of goodwill and trust without any direct oversight. A system that continues in 2019.

The exponential growth of the Internet has presented new threats, greater demand and higher stakes in the event that this demand is not met. While this ad hoc system, which is currently operated by 12 independent organizations, has successfully served the global Internet and its evolution well, the Root Server System Advisory Committee (RSSAC) has taken up an effort to develop a new governance model in an attempt to ensure sustainability, stability, and accountability in light of an evolving ecosystem. After three years of deliberations, the RSSAC produced, "A Proposed Governance Model for the DNS Root Server System," which sets forth a potential replacement for the current governance structure.

The proposed model aims to ensure accountability, transparency and continuity. In this process, the principles that have guided RSOs will continue to be a core element of the RSS operation., but structure and process will change. The proposed change would formalize the role of stakeholders, including the ICANN Community, in the implementation of five distinct functions, which establish the three main constructs of the RSS: governance, DNS root operations and the onboarding and offboarding of RSOs. The various elements of this model are crafted using three design principles: separation of function, avoidance of conflict of interest, and transparency and accountability.

Guiding Principles

1. To remain a global network, the Internet requires a globally unique public namespace.
2. IANA is the source of DNS root data.
3. The RSS must be a stable, reliable, and resilient platform for the DNS service to all users.
4. Diversity of the root server operations is a strength of the overall system.
5. Architectural changes should result from technical evolution and demonstrated technical need.
6. The IETF defines technical operation of the DNS protocol.
7. RSOs must operate with integrity and an ethos demonstrating a commitment to the common good of the Internet.
8. RSOs must be transparent.
9. RSOs must collaborate and engage with their stakeholder community.
10. RSOs must be autonomous and independent.
11. RSOs must be neutral and impartial.

Who are the Stakeholders?

IAB and IETF

These distinct, but closely linked groups both concern themselves with the technical issues related to the DNS. As such, they have been and will be engaged stakeholders.

ICANN Community

The resolution of the root servers is key to the correct operation of the DNS and the community has an obvious stake in successful operation of the RSS.

Root Server Operators

The RSOs collectively ensure the successful operation of the RSS. The support and budget for this service is provided by parent organizations, which are themselves stakeholders.

The Five Functions

The proposed model suggests the creation of five new components in a single framework that formally implements the RSS's guiding principles including accountability, transparency and continuity.

1. Secretariat Function
2. Strategy, Architecture, and Policy Function
3. Designation and Removal Function
4. Performance Monitoring and Measurement Function
5. Financial Function

The Three Constructs

Governance

Architecture, operating standards, policies, accountability measures, and designation/removal functions constitute the governance, which will be ensured by the stewardship of the stakeholders.

DNS Root Operations

The collective operation of the root server system, with the addition of coordination of communications and activities, which would be facilitated by the Secretariat Function.

Onboarding/Offboarding

The Performance Monitoring and Measurement Function will measure the performance of the current RSOs and the eligibility of the potential new RSOs.

The Three Design Principles

Separation of Function	The model groups certain activities, while separating others to avoid risk. For example, reporting, evaluating and compliance are grouped into one function, while collectively separated from the fuunction that carries out the decision making activities.
Avoidance of Conflict of Interest	The model ensures that there are no unfair benefits to any individual or entity involved with any of the functions. This is accomplished with narrowly scoping the functions for each body, requiring transparency and ensuring multistakeholder participation.
Transparency and Auditability	The model aims to avoid too much influence in any one construct by leveraging checks and balances within the ICANN ecosystem. For example, there is a requirement for communication with stakeholders about strategic, architectural, and policy decisions.

What's Next?

The model proposed by the RSSAC was intended to be an initial starting point of a new framework. As such, they recommended that the ICANN Board initiate a process to produce a final version of the model. This inlcudes working with the community to implement a model based on accountability, transparency, sustainability and service integrity. Additionally, it includes developing a system of financial sustainability that accounts for the investment costs of kickstarting the model and meeting the current operating standards of the RSS, as well as the the continued running costs of the model and the RSS itself.

Input from the various stakeholder groups in the ICANN community will be essential to ensuring the successful operation of the Root Server System on which we all rely.

Expedited Policy Development Process

for the Temporary Specification for gTLD Registration Data

The European Union's General Data Protection Regulation (GDPR) forced ICANN to make changes to the WHOIS service ahead of the May 25, 2018 enforcement deadline. WHOIS has long been a central part of DNS management, and is a service through which ICANN's contracted parties (registries and registrars) are required to provide public and unrestricted access to data on registered domain name including name, email address and more. Needless to say, this was not GDPR compliant.

Facing this dilemma, and a short timeline, the Temporary Specification for gTLD Registration Data (Temp Spec) was developed by the ICANN Organization, enabling contracted parties to comply with the GDPR, without breaching their contractual WHOIS requirements. While the ICANN Community and others were consulted in this process, it was a departure from ICANN's bottom-up, consensus driven policy development process.

The ICANN Board approved the policy, giving the community one year, until May 25, 2019, to reach consensus on a replacement for the Temp Spec. The subsequently established Expedited Policy Development Process (EPDP) Team was tasked with two phases of work.

PHASE 1:

Replace the Temp Spec with community-driven, consensus policy

The Team delivered its first Final Report to the GNSO Council on February 11, 2019 and a revised version on February 20, including a set of 29 recommendations. Of these, 27 of these reached consensus or full consensus, leaving two in a state of 'divergence' in the final report.

The points of consensus include purposes for processing gTLD registration data, the data elements to be collected and displayed, the commitment to develop an access model in Phase 2, accuracy requirements, allowing registries and registrars to distinguish between natural and legal persons, issues concerning dispute resolution processes, and more.

The two 'Divergent' recommendations, include the consideration of additional purposes in phase 2 and whether registries and registrars are able to, and/or required to, differentiate between registrants on a geographic basis.

As of print time (March 1, 2019), the GNSO Council had not yet voted on the Final Report, due to a request to defer the vote from February 21 to March 4. If approved, the report will go through a Public Comment period and then be sent to the ICANN Board for ratification ahead May of 25 deadline and the EPDP Team can begin work on Phase 2.

PHASE 2:

If, and when, Phase 1 is approved, the EPDP will shift its focus to a unified access model, standardizing the process for accessing registrant data under specific circumstances.

Stay Tuned

Internet Governance ABC's

ALAC	At-Large Advisory Committee
ALS	At-Large Structure
APRALO	Asia, Australasia, and Pacific Islands, Regional At-Large Organization
ASO	Address Supporting Organization
BC	Business Constituency
ccNSO	Country Code Names Supporting Organization
ccTLD	Country Code Top-Level Domain
CPH	Contracted Party House
CSG	Commercial Stakeholder Group
DC-DNSi	Dynamic Coalition on DNS Issues
DNS	Domain Name System
DNSSEC	DNS Security Extensions
EPDP	Expedited Policy Development Process
GAC	Governmental Advisory Committee
GDPR	General Data Protection Regulation
GNSO	Generic Names Supporting Organization
GP	Generation Panel
gTLD	Generic Top-Level Domain
IAB	Internet Architecture Board
IANA	Internet Assigned Numbers Authority
ICANN	Internet Corporation of Assigned Names and Numbers
IDN	Internationalized Domain Name
IETF	Internet Engineering Task Force
IPC	Intellectual Property Constituency
IPv4	Internet Protocol Version 4
IPv6	Internet Protocol Version 6
ISPCP	Internet Service Providers and Connectivity Providers Constituency
JICA	Japan International Cooperation Agency
JETRO	Japan External Trade Organization
LGR	Label Generation Rules
LHC	Local Host Committee
METI	Ministry of Economy, Trade and Industry (Japan)
MIC	Ministry of Internal Affairs and Communications (Japan)
MOFA	Ministry of Foreign Affairs (Japan)
NARALO	North American Regional At-Large Organization
NCPH	Non-Contracted Partiy House
NCSG	Non-Commercial Stakeholder Group
NCUC	Non-Commercial Users Constituency
NOMCOM	Nominating Committee
NPOC	Not-for-Profit Operational Concerns Constituency
PDP	Policy Development Process
PTI	Public Technical Identifiers
RDS	Registration Directory Services
RFC	Request for Comment
RIR	Regional Internet Registry
RPM	Rights Protection Mechanism
RrSG	Registrar Stakeholder Group
RSEP	Registry Service Evaluation Process
RSO	Root Server Operator
RSS	Root Server System
RSSAC	Root Server System Advisory Committee
RySG	Registry Stakeholder Group
RZERC	Root Zone Evaluation Review Committee
SSAC	Security and Stability Advisory Committee
TLD	Top-Level Domain
TLG	Technical Liaison Group
TMCH	Trademark Clearinghouse
UASG	Universal Acceptance Steering Group
UDRP	Uniform Dispute Resolution Process
URS	Uniform Rapid Suspension
WG	Working Group
WIPO	World Intellectual Property Organization

More Acronyms at
ICANNWiki.org/Acronyms