

# On the 20th Anniversary of JPRS

President, Japan Registry Services, Co., Ltd. **Koki Higashida** 



On December 26, 2020, JPRS celebrated the 20th anniversary of its foundation.

I wish to take this opportunity to thank everyone who uses our services, JPRS Partners and the many people who have kindly helped JPRS.

For the twenty years since the foundation of JPRS, the environment surrounding the Internet has drastically changed. Internet usage has expanded worldwide, and modes of utilization have become diverse along with the popularization of smartphones. The Internet has evolved into an integral part of people's lives and economic activities.

Under the circumstances, JPRS has embraced its corporate mission, "As a company dedicated to maintaining the Internet infrastructure of Japan, JPRS contributes to the development of the Internet and the building of a better future for everyone," and has worked to provide better registration and administration services as well as ensure stable DNS operation as the registry for JP domain names.

Moreover, JPRS has been supporting the business of our partners, the JPRS Partners, and taking on new challenges beyond its role as the .JP Registry for the past ten years, with a view to growing together with the partners. The initiatives include "gTLD Registration Services," "Digital Certificates Issuance Services" and the launch of ".jprs," a TLD for research and development related to the Internet.

Thanks to your support, the gTLD Registration Services grows in terms of the number of domain names under management, currently JPRS is the second largest ICANN-accredited Registrar in Japan. Meanwhile, the certificates provided by the Digital Certificates Issuance Services have been recognized as one of the top brands in the country.

JPRS will continue to strive to achieve its mission of building a better future for everyone, and will keep on tackling new challenges by quickly responding to changes surrounding the Internet.

Once again, thank you for generously supporting JPRS over the past two decades. I would greatly appreciate your continued support.

A History of JPRS for the Last 20 Years

# Establishment of JPRS and Introduction of General-use JP Domain Names

In the late 1990s before JPRS was established, the number of Internet users was growing rapidly. As the use of email and creation of websites spread, the uptake of domain names increased. During this time of expanding Internet use, JP domain names were operated under strict rules such as "one domain per organization" to make the domain name space secure. However, due to this restriction, domestic demand for domain names tended toward ".com" and other domains.

The Japan Network Information Center (JPNIC), the then manager of .JP, acknowledged the situation and identified two countermeasures: the creation of a new domain name space where any entity including individuals with a postal address in Japan could register any number of domain names, and the establishment of a new registry organization that could survive the competition among TLDs. As a result of intense debate, the first measure resulted in the "General-use JP Domain Name" service, and the second took shape as the JP Domain Name business with the incorporation of Japan Registry Services, Co., Ltd. (JPRS) on December 26, 2000.

The first challenge for JPRS was to introduce General-use JP Domain Names smoothly. As these domain names were intended to be available to anyone, it was clear that launching without safeguards would cause confusion. Therefore, JPRS introduced priority period in which registrants of Organizational Type JP domain names could preferentially apply the corresponding string in the General-use JP domain name. JPRS then introduced concurrent period, under which all applications that arrived before general availability were regarded as having been received at the same time, and a lottery was held in the case of contention. These

mechanisms, including a lottery in which winning numbers were designed to be unpredictable, turned out to be a pioneering approach in the world. Thanks to these measures, General-use JP Domain Names were launched on May 7, 2001 with no problems.

# Infrastructure Development as the .JP Registry and Contribution to Development of the Internet

During the first decade after its establishment, JPRS examined how it could contribute as the .JP Registry and made strenuous efforts to realize its aspirations. The Internet expanded rapidly and became part of the social infrastructure in the 2000s. In response, JPRS took various initiatives focusing on continually improving the JP Domain Name services, operating JP DNS with no accidents or outages, and contributing to the Internet through policy development and technical standardization to encourage more people to use the Internet and .JP domain names.

As a major service enhancement, JPRS created the "LG.JP Domain Name,", a category of Organizational Type JP Domain Names for Japanese local authorities, in October 2002. "LG. JP" was established for local government services such as e-government to enable users, both residents and businesses, to file applications and notifications over the Internet.

In 2004, ".jp" became one of the first TLDs in the world to fully support IPv6. This contributes to progress of IPv6 deployment. Besides, in 2006, JPRS shortened the processing time for the JP DNS update. Until then, it took one day after registering a domain name to be able to use the website or email associated with the domain name. As a result of the shortening, JP domain names became active in about 15 minutes.

Furthermore, from 2003 JPRS accelerated its efforts to improve the stability of JP DNS. It started to operate JP DNS servers in Osaka in collaboration with the WIDE Project in 2003. Then in 2004, JPRS introduced IP Anycast technology to JP DNS to allow the DNS servers to be deployed in multiple locations and pushed ahead with distributing the DNS servers globally.

In terms of contributing to the evolution of the Internet, JPRS has participated in the activities of the ICANN community, which coordinates Internet resources like domain names globally, and joined the discussions in IETF which promotes the standardization of Internet technologies. JPRS staff members have served as moderators and key figures in ICANN meetings and have contributed to technical standardization of the Internet in IETF by authoring technical specifications that were issued as Request for Comments (RFCs).

In 2005, JPRS partnered with the WIDE Project to start operating the M-Root DNS server, the Root DNS server\* set up for the first time in Japan as well as the Asia Pacific region. Since then, JPRS has been contributing to the stable operation of the Internet as a whole.

\* Name servers that manage the top-level information in the DNS hierarchy.

## Venturing into a New Realm

JPRS's corporate mission is "As a company dedicated to maintaining the Internet infrastructure of Japan, JPRS contributes to the development of the Internet and the building of a better future for everyone." To accomplish this mission, JPRS embarked on new challenges in 2011.

As a first step, JPRS started in 2011 the gTLD Registration Services through which JPRS Partners could treat gTLD domain names such as ".com" and ".net" from JPRS. For the JPRS

Partners trading directly with overseas ICANN-accredited registrars to retail gTLD domain names, differences in commercial customs, exchange rate risks and the language barrier made life difficult. JPRS launched the gTLD Registration Services to act as a matchmaker between gTLD registries and the Japan-based JPRS Partners in order to smooth the way for JPRS Partners and eventually contribute to the evolution of the domain name market in Japan.

The new service allowed JPRS, which had served only as the .JP Registry until then, to gain important experience and understanding of other TLD registries and registrars, and to apply that knowledge to the JP domain name business.

In 2015, JPRS started the operation of ".jprs," a new TLD created with the primary objective of research and development related to the Internet. JPRS launched a joint research project on enhancing fault-tolerance through the distributed arrangement of DNS servers using ".jprs" and published a report on the results in 2017. Moreover, JPRS applies the expertise gained from launching the TLD to provide operational support for the new gTLDs of Japanese companies.

In 2016, JPRS began issuing digital certificates. As the importance of the Internet in society grew, demands for safety on the Internet increased. Unlike the gTLD Registration Services, digital certificates were a new area for JPRS. Nevertheless, JPRS started issuing digital certificates to raise the security of domain names and the Internet as a whole.

## **Building up on Prior Achievements**

The past decade witnessed several major disasters such as the Great East Japan Earthquake and the COVID-19 pandemic, while the importance of the Internet was recognized during the same period. Reflecting these situations, JPRS has



From left, "Ponta's Great Adventure in the Network," "Secret of the Internet (New Edition)," "Textbook to understand DNS well"

accepted new challenges and intensified its efforts to improve the JP Domain Name Services and contribute to the evolution of the Internet.

In 2012, JPRS reframed the existing Geographic Type JP Domain Names and introduced Prefecture Type JP Domain Names, which provide a registrant-and user-friendly domain name space intended to assist local development. Prefecture Type JP domain names such as "〇〇○.aomori.jp" and "〇○○.東京.jp" are shorter than Geographic Type JP domain names, while registrants can still use a prefecture name as the second-level label. In addition, being available to anyone just like General-use JP domain names, registrants can use domain names in the Prefecture Type name space more conveniently than in the Geographic Type name space.

The Great East Japan Earthquake in 2011 highlighted the importance of the reliability and stability of Internet infrastructure. Against this backdrop, JPRS re-realized the need to design the JP DNS along with the entire domain name registry services to be robust in the event of large-scale disasters. Thus, JPRS set up an operation base in Osaka in 2013, and has since reinforced its human resources and service continuity structure.

Regarding contributing to the evolution of the Internet, JPRS continued to participate in policy development and technical standardization. In addition, JPRS focused on Internet-related education and embarked on greater support for such activities.

JPRS has distributed "Ponta's Great Adventure in the Network," a free comic-style booklet on domain names and DNS, every year since 2010 in order to help the younger generation acquire accurate knowledge. In 2017, JPRS collaborated with Gakken to produce a learning material for elementary school students entitled "Secret of the Internet (New Edition)" and donated copies to about 20,000 elementary schools and 3,100 public libraries throughout Japan. Moreover, JPRS has been publishing information related to DNS from the viewpoint of educating engineers. In 2018, JPRS participated in the publication of "Textbook to Understand DNS Well," an instruction book authored by JPRS engineers.

#### The future

JPRS has worked hard as the .JP Registry and continued to embrace new challenges for the two decades since its establishment. It started with about 40 employees, and now has more than 100 as of December 2020. The company is advancing to the next stage.

From the year 2021, JPRS will step up its existing initiatives and create new values to make greater contributions to society by practicing its corporate mission: "As a company dedicated to maintaining the Internet infrastructure of Japan, JPRS contributes to the development of the Internet and the building of a better future for everyone."

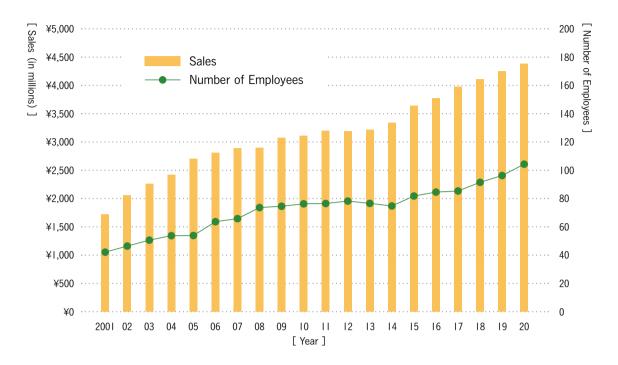


# ■ History

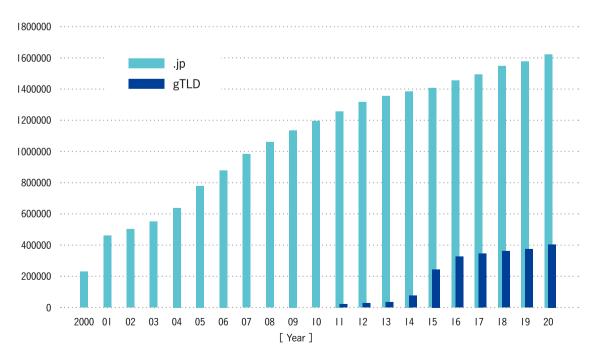
2000	Dec 22	Resolution was adopted at 11th Japan Network Information Center (JPNIC) General Meeting to establish a new company for management and administration of .JP top-level domain.
	Dec 26	Japan Registry Services Co., Ltd. (JPRS) was established.
2001	Feb 5	JPRS signed contract with JPNIC to handle registration of General-use JP Domain Names on behalf of JPNIC.
	Feb 22	JPRS started Preliminary Registration Application Period for General-use JP Domain Names.
	May 7	JPRS launched First-Come-First-Served Basis Registration Application Period for General-use JP Domain Names.
2002	Jan 30	The Government of Japan informed ICANN that it endorsed the transfer of the management and administration of the .JP top-level domain from JPNIC to JPRS.
	Feb 27	JPRS and ICANN signed the ccTLD Sponsorship Agreement.
	Apr I	The management and administration of the .JP top-level domain was transfered from JPNIC to JPRS.
	Dec 20	JPRS allocated shares to third parties (II new shareholder companies).
2003	Jun 30	JPRS received approval regarding Internationalized Domain Name (IDN) service from ICANN.
	Oct I	JPRS allocated shares to third parties (2 new shareholder companies).
2004	Apr I	Partial transfer of JPRS shares held by JPNIC was approved (4 new shareholder companies).
2005	Dec 20	JPRS started joint operation of the M-Root DNS server with WIDE Project.
2006	Apr 3	JPRS shortened processing time for JP DNS update.
2007	Mar 4	"Procedure for recovering deleted domain name registration" was introduced for General-use JP Domain Names.
	Dec 4	IP Anycast technology was introduced to the JP DNS service.
2008	Mar I	The number of JP domain name registrations surpassed I million.
2009	Apr 22	JPRS announced its participation in the BIND 10 development project.
2011	Jan 16	JPRS deployed DNSSEC in the JP Domain Name services.
	Feb 21	JPRS started gTLD Registration Services.
2012	Nov 18	JPRS launched a new registration service of Prefecture Type JP Domain Name.
2013	Mar 13	JPRS and JPNIC entered into the Memorandum with regards to the transfer of the management and administration of the .JP top-level domain.
	Nov I	Osaka Office was established.
2014	Nov 3	JPRS introduced Japanese characters into Prefecture Labels of Prefecture Type JP Domain Names.
2015	Jun 22	JPRS signed MoU with ICANN and JPNIC on Japanese translation of ICANN materials.
2016	Apr 26	JPRS started digital certificates issuance service.
	Jun 13	JPRS submitted a notification of the telecommunication business with the enforcement of the Law for Partial Revision to the Telecommunications Business Act, etc.
2017	Sep I	The number of General-use JP domain name registrations surpassed I million.
	Oct 31	JPRS and 8 ISPs of the electric power corporation group published the report of joint research on continued use of the Internet in case of a large-scale desaster.
2018	Feb I	The number of JP domain name registrations surpassed 1.5 million.
	Nov I	JPRS started General Registration Application Period of Japanese JP Domain Names for school names.
2019	Sep 25	JPRS acquired ISO27001 certification for its domain registry business.
2020	Jan 21	JPRS obtained WebTrust accreditation for Certification Authorities.

7

# Trend in the Sales and the Number of Employees



# ■ Trend in the Number of Registered JP Domain Names and the Number of gTLD Domain Names under Management



# ■ Company Profile

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#### JPRS HISTORY OF 20 YEARS

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