

Universal Acceptance: Let's start supporting Japanese domain names and email addresses!

Athena Foo
Stakeholder Engagement Manager (APAC), ICANN

3 July 2024



Universal Acceptance

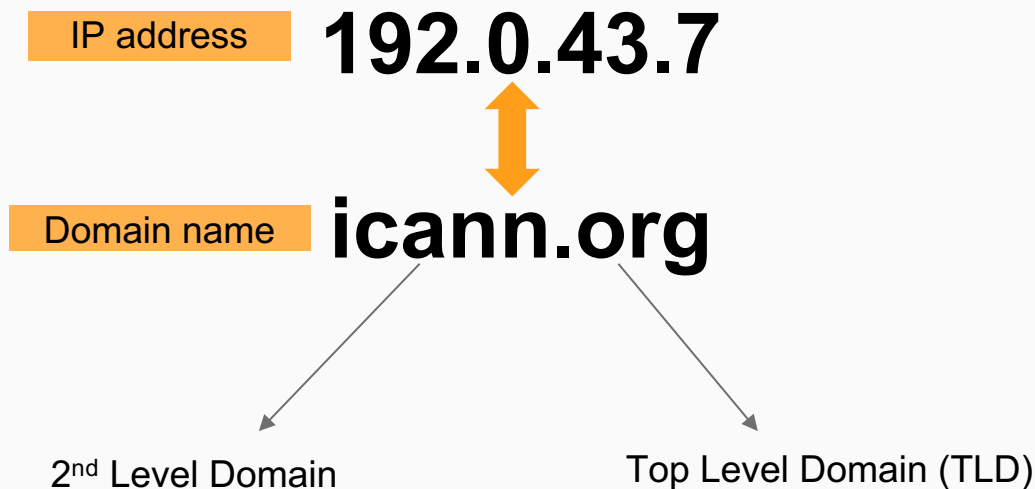
Agenda

- * What do we do at ICANN?
 - Domain Names and the Domain Name System (DNS)
 - Expanding the DNS through Internationalized Domain Names (IDNs)
- * What is Universal Acceptance (UA) & Why is it important?
 - Challenge for IDNs (and Email Address Internationalization)
- * Supporting IDNs and EAIs as an ISP
- * Get involved!



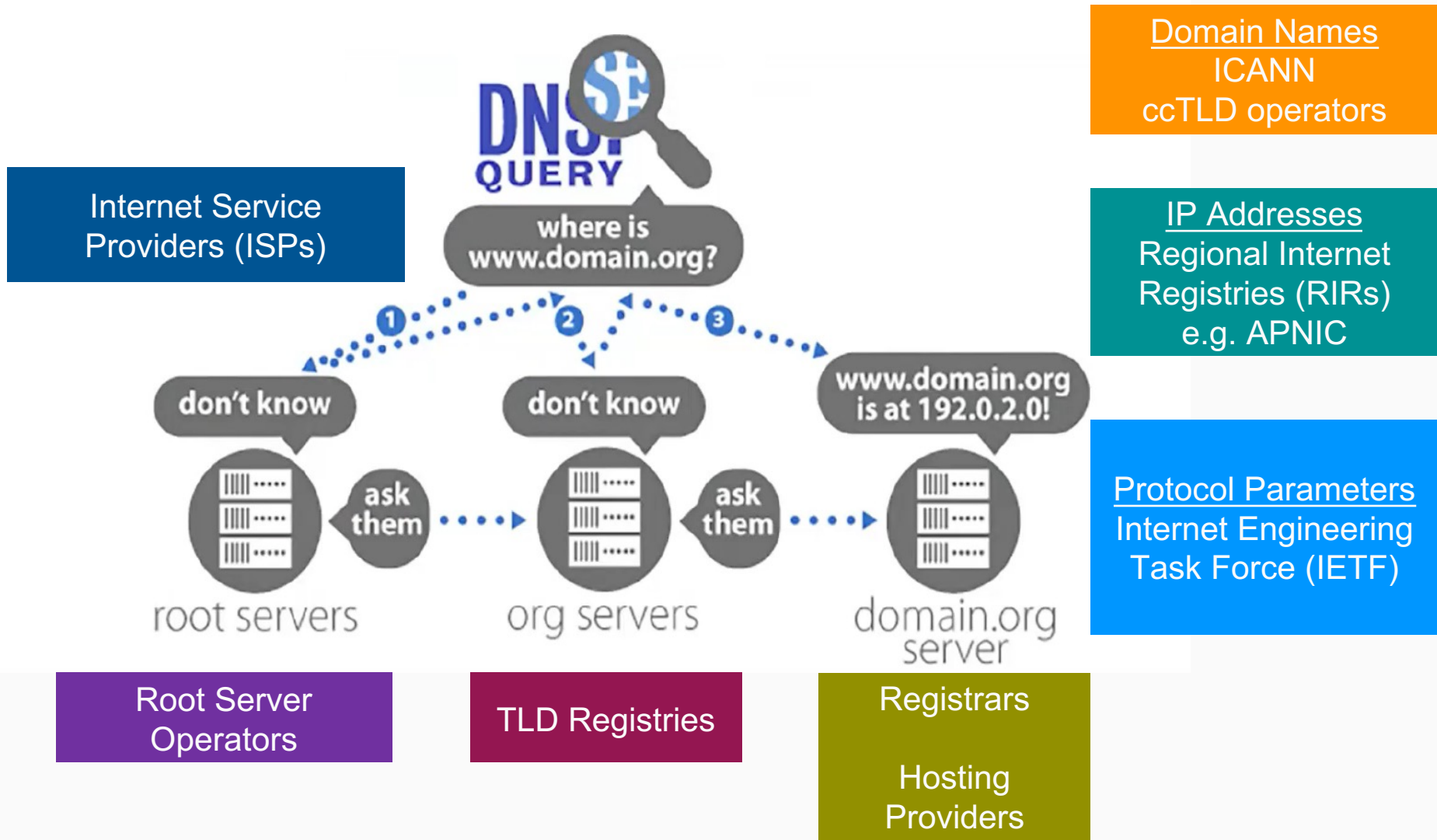
What do we do at ICANN?

- * ICANN coordinates the Internet's unique identifiers (domain names and IP addresses). The Domain Name System (DNS) makes it possible for your device to connect to any other device on the Internet across the globe.



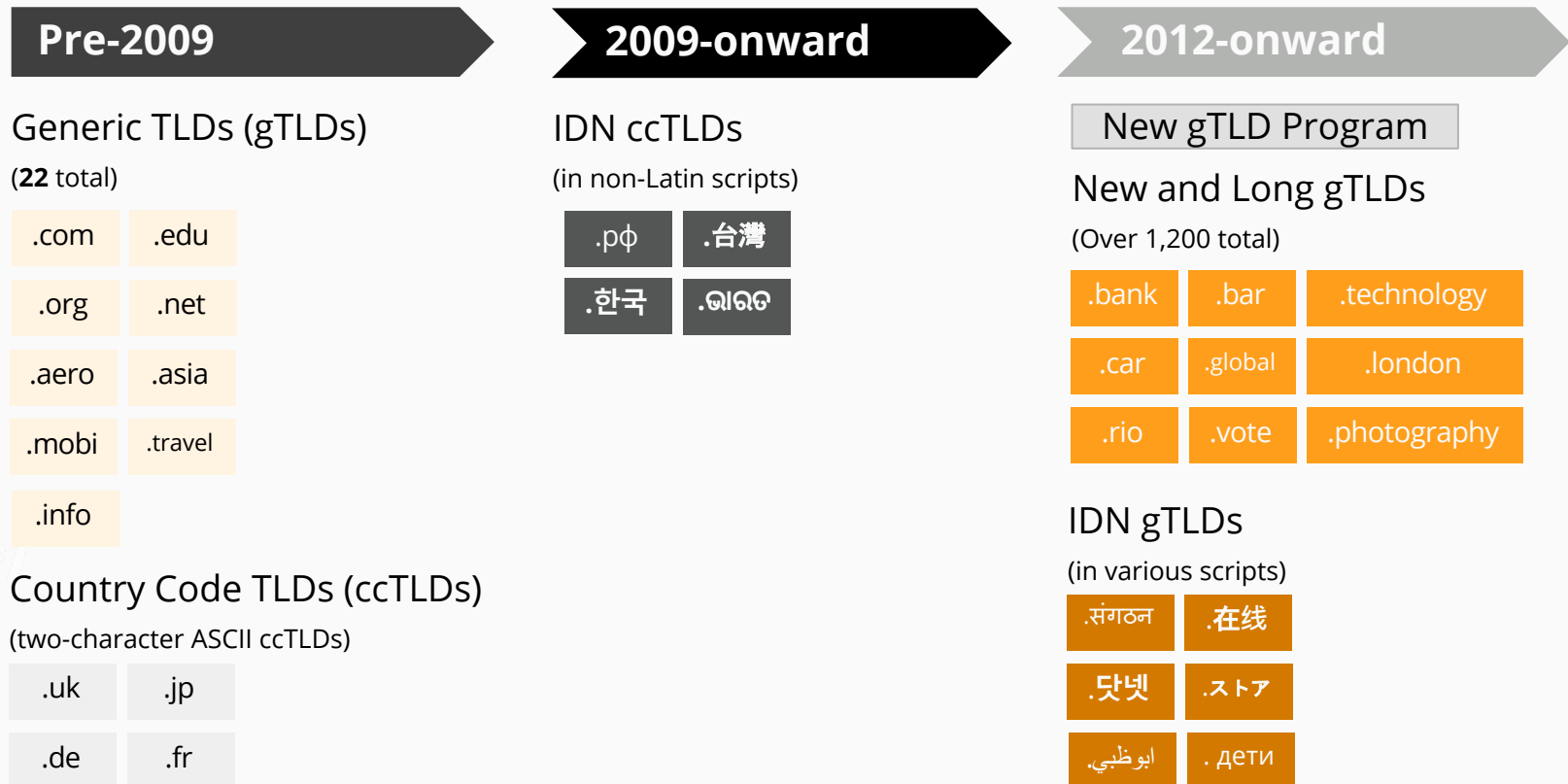
- * Without the DNS, we would not have a global, interoperable Internet.

DNS ecosystem – you are a part of it!



Evolution of Top-Level Domains (TLDs) and DNS

The introduction of new gTLDs, including long TLDs and IDNs, into the Internet ecosystem through the New gTLD Program enabled the largest expansion of the DNS.



Examples of IDNs

1. համընդհանուր-ընկալում-թեստ.hայ Armenian
2. മുൻ‌ഭരവാഹ-ଏകമേവു-ശേഷം.ଭାରତ Oriya
3. უნივერსალური-თავსობადობის-ტესტი.გე Georgian
4. 다국어도메인이용환경테스트.한국 Korean
5. സാർവത്രിക-സമീകാര്യതാ-പരിശോധന.ഭാരതം Malayalam
6. تجربة-القبول-الشامل.موريتانيا Arabic
7. ユニバーサルアクセプタンス.クラウド Japanese

New gTLD Program: Next Round

- * New opportunities to obtain a new generic top-level domain (gTLD), including Internationalized Domain Names (IDNs), are on the horizon
- * The application window for the next round is expected to open in Q2 2026
 - Next Round policy recommendations allow Single Character gTLDs in Han (Kanji) script (e.g. .信, 'trust' in Japanese)
- * The next expansion of the Domain Name System (DNS) will enable people and organizations to manage their presence and identity on the Internet
- * Domain names in various languages and scripts will help build online digital inclusivity
- * Learn more: <https://newgtldprogram.icann.org/en>



Email Address Internationalization (EAI)

- * Initially, email addresses were also not available in local languages and scripts
- * Email Address Internationalization (EAI) addresses this limitation and allows for having email addresses in local languages and scripts
- * Internationalized email addresses are not related to the text in the body of the email, which is managed through the Multipurpose Internet Mail Extensions (MIME)



Examples of Internationalized Email Addresses

1. Էլփոստ-թեստ@հայրենիհանուր-ընկալում-թեստ.հայ Armenian
2. 电子邮件测试@普遍适用测试.我爱你 Chinese
3. ईमेल-परीक्षण@सार्वभौमिक-स्वीकृति-परीक्षण.संगठन Devanagari
4. تجربة-بريد-الالكتروني@تجربة-القبول-الشامل.موريتانيا Arabic
5. ηλεκτρονικό-μήνυμα-δοκιμή@καθολική-αποδοχή-δοκιμή.ευ Greek
6. மின்னஞ்சல்-சோதனை@பொது-ஏற்பு-
சோதனை.சிங்கப்பூர் Tamil
7. メールテスト@ユニバーサルアクセプタンス.クラウド Japanese

What is Universal Acceptance (UA)?

- * While the DNS has evolved, not all domain names and email addresses, especially IDNs and EAIs, can be validated.
- * ICANN aims to promote Universal Acceptance (UA), a concept which ensures that all domain names, including IDNs, and email addresses are treated equally and be used by all Internet-enabled applications, devices and systems.
- * The next billion of new Internet users are more likely to come from Asia and Africa where they are less likely to use English as their first language. It is all the more important that our Internet is able to allow these new users to navigate the Internet in a language/script that is familiar to them.



Why is UA important? (IDNs)

Wow, ユニバーサルアクセ
プタンス.クラウド is a
cool website!
I will share with my friend.

copy
URL



Oh wait, it shows
*xn--
cck0aqsjy3fwb2dyh8bvfe_xn-
-gckr3f0f !?*

*paste in a chat application -
send*



Is it spam??
*xn--
cck0aqsjy3fwb2dyh8bvfe.xn
--gckr3f0f !?*

Why is UA important? (EAs)

I want to create an account on this website

Input email:

めーるてすと@どこでもつかえる.みんな



Hmm.. I cannot use my email...
??



Email Address *



めーるてすと@どこでもつかえる.みんな

! Please enter a valid email address

Why Does UA Matter?

Achieving UA ensures every person has the ability to navigate and communicate on the Internet using their chosen domain name and email address that best aligns with their interests, business, culture, language, and script.

UA can also help:

- * Support a diverse and multilingual Internet
- * Enable greater competition, innovation, and consumer choice
- * Create business opportunities
- * Offer career advantages for developers and system administrators
- * Assist governments and policymakers in reaching their citizens

Benefit for ISPs in being UA-ready

- * Opportunity to upsell another product
- * Most ISPs sell packages “DSL connection + email + web hosting” (using domain registered through registrar/reseller)
 - Cost: DSL connection
 - Upsell: Email, web hosting
- * Differentiate from other ISPs by upselling a second version of website on a Japanese domain
 - Advantage over non-Japanese ISPs too



Examples of Categories Affected by UA

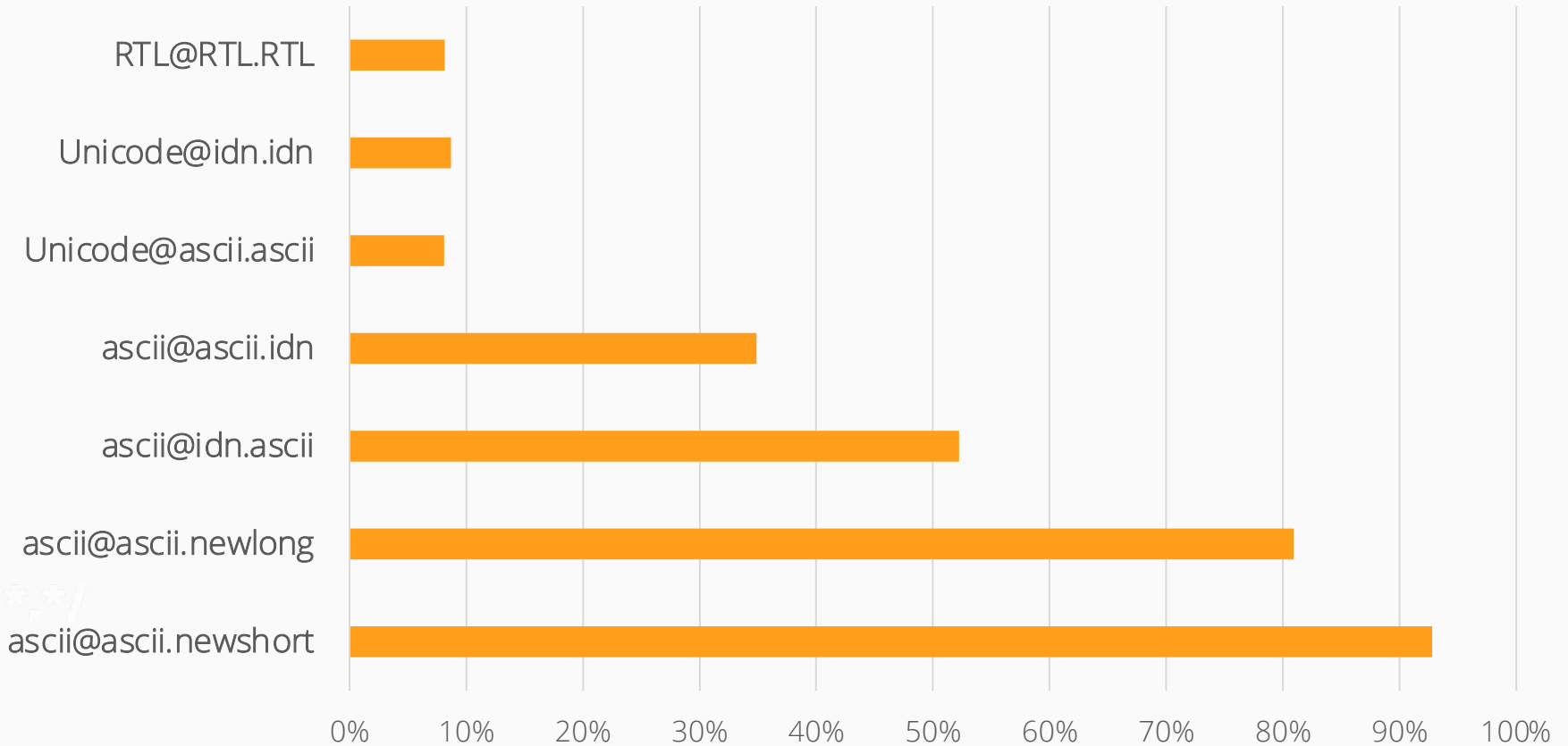
- * Domain Names that may not work in applications:
 - * ASCII: example.sky
 - * ASCII: example.engineering
 - * Unicode: คน.ไทย
- * Internationalized email addresses (EAI) that may not work in applications:
 - * Unicode: marc@société.org
 - * Unicode: 测试@example.com
 - * Unicode: ईमेल@उदाहरण.भारत
 - * Unicode: ای-میل@مثال.موقع (written right-to-left, RTL)

ASCII is based on letters A-Z, a-z, digits 0-9 and hyphen.

Unicode supports characters of global languages and scripts.

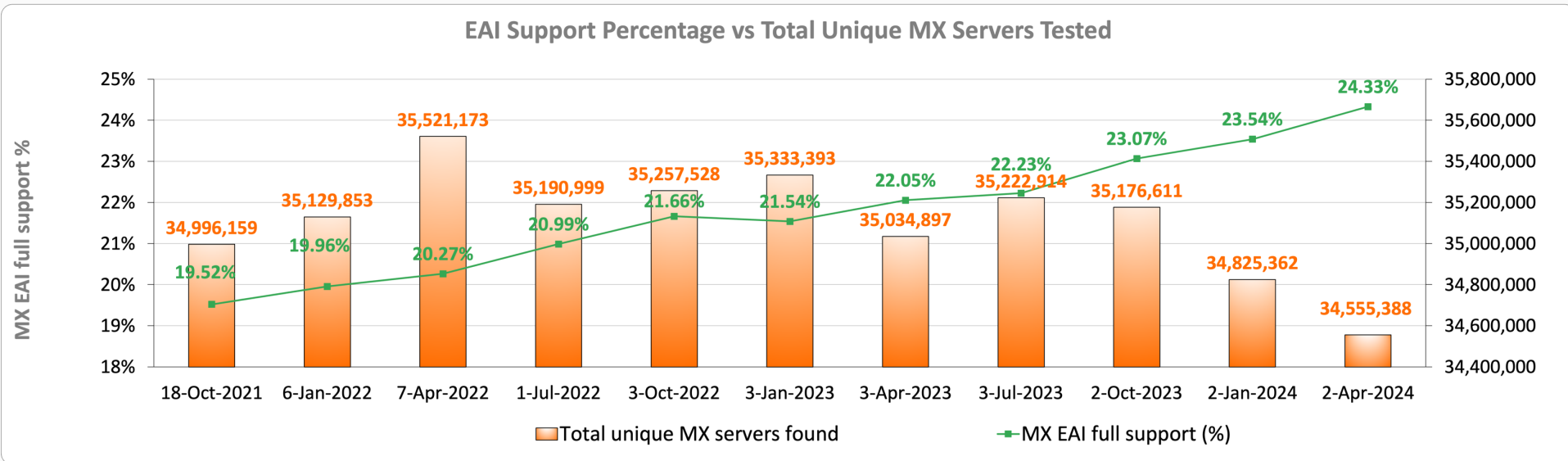
Challenge: Acceptance by Websites

EAI Acceptance Rates in Form Fields on 2000 Websites



Source: UASG039 at <https://uasg.tech>, published in 2022

Challenge: Support Across Email Servers



Source: <https://ithi.research.icann.org/graph-eai.html>

Does Your Email Server Support EAI?

Enter your email and check now at: <https://uasg.tech/eai-check/>



About

Information

Media

Case Studies

Test Your Email

Log Issue

CONTACT



Email Address Internationalization

EAI Check

This widget takes an email address and checks to see if the mail server advertises support for receiving EAI (Email Address Internationalization) email addresses.

Check to see if your email address is EAI compliant. Enter a valid email address below:

Enter Valid Email Address

CHECK ADDRESS



Getting UA-Ready

* Support all valid domain names and email addresses:



Accept



Validate



Process



Store



Display

- * Accept: The user can input characters from their local script into a text field
- * Validate: The software accepts the characters and recognizes them as valid
- * Process: The system performs operations with the characters
- * Store: The database can store the text without breaking or corrupting
- * Display: When fetched from the database, the information is correctly shown

Supporting IDNs and EAIs as an ISP

- * Develop internal capacity to register and deploy (with security certificate) a website using a Japanese IDN (e.g. <https://ユニバーサルアクセプタンス.クラウド/>)
 - Suggest IDNs as second domains on registrar pages
 - Advantage over non-Japanese ISPs in Japanese IDN suggestions
- * Upgrade email system to be able to configure and deploy a Japanese EAI (e.g. メールテスト@ユニバーサルアクセプタンス.クラウド)
 - Offer Japanese email addresses to users
 - Use an updated email spam filter to be able to support these email addresses
- * Update webhosting platform to allow users to configure it using IDNs and EAIs in Japanese
- * Provide help desk for inquiries on Japanese IDNs and EAIs, and any third party UA-related issues faced by customers
 - Report bugs related to UA in other products and services to relevant provider

Working Towards UA-Readiness

- * The ICANN community committed to promote UA-readiness globally, including the Universal Acceptance Steering Group (UASG)
- * ICANN and its community work to achieve UA-readiness by:
 - * Organizing outreach to raise awareness on UA issues
 - * Conducting detailed studies to identify technical gaps
 - * Determining solutions to address the technical gaps
 - * Submitting bug reports in the relevant tools, systems, and applications
 - * Conducting technical training on the solutions for supporting UA-readiness
 - * Developing curricular recommendations for IT programs

/// * More info at <https://www.icann.org/ua-evaluations-en>

Ongoing Work at ICANN

UA

Updating own software and systems to support all valid domain names

Supporting community to raise awareness and capacity

ccTLDs

IDN ccTLD Fast Track available

Expanded policy and process under development

gTLDs

Delegated first IDN gTLDs through the application round in 2012

Next gTLD application round under development

LGR

Developing secure Label Generation Rules (LGR) for multiple scripts

Developing tools to use these LGRs

For further information visit <https://icann.org/idn> and <https://icann.org/ua>.

Get Involved with UA!

- Contact the UASG at <https://uasg.tech/contact/> or email info@uasg.tech
- Meet the people of the UASG: <https://uasg.tech/about/people/>
- Join UASG working groups: <https://uasg.tech/join/>
- Participate in UA general discussions: <https://uasg.tech/subscribe>
- Report UA problems with other applications: <https://uasg.tech/global-support-center/>
- Follow the UASG on its social channels: [Twitter](#) | [Facebook](#) | [LinkedIn](#)

Universal Acceptance
Steering Group info &
recent developments:
www.uasg.tech

Thank you!
Questions / Feedback?