



79 | COMMUNITY FORUM



Universal Acceptance Community Update

ICANN79 Prep Week | 20 Feb 2024

UASG, ICANN org, UAC by ccNSO



Universal Acceptance

Session Overview

Updates from the UASG

- * Measurement WG
- * Technology WG
- * Email Address Internationalization (EAI) WG
- * Communications WG

Updates from Universal Acceptance Committee (UAC by ccNSO)

Updates from ICANN org

- * UA-remediation and training updates and plans
- * UA-readiness of ICANN org systems

Community Feedback - Question and Answer (Q&A)

Universal Acceptance and Categories Impacted

UA: All valid domain names and email addresses work in all software applications.

Domain Names (including Internationalized Domain Names):

- * New short top-level ASCII domain names: example.sky
- * New long top-level ASCII domain names: example.engineering
- * Internationalized Domain Names (IDNs): คน.ไทย

Email Addresses (including internationalized email):

- * ASCII@ASCII (new and long TLD): ekrem@misal.istanbul
- * ASCII@IDN: marc@société.org
- * Unicode@ASCII: 测试@example.com
- * Unicode@IDN: όνομα@παράδειγμα.eu
- * Unicode@IDN; right-to-left scripts: ای-میل@مثال. موقع



Accept



Validate



Process



Store



Display

Call to Action for UA Adoption

For Businesses:

- * Ask for UA explicitly when making a technology purchase.
- * For any seller of a product which uses domain names or email addresses, support UA in your product. Advertise UA explicitly.

For Governments:

- * Evaluate the possibility of including [UA requirements](#) in government procurements.
- * Coordinate with your national ccTLD managers and ICANN Governmental Advisory Committee (GAC) delegates to participate in and strengthen UA-related actions.

For Academia:

- * Update IT curricula to include teaching and learning of UA and software internationalization-related concepts.

Engage with UASG at ICANN79

ICANN79 Universal Acceptance Meetings

- ◉ Sat, 2 Mar. ccNSO-UA Committee and UASG meeting
- ◉ Sun, 3 Mar. GAC: Brief on Universal Acceptance Strategies
- ◉ Sun, 3 Mar. Fellows and NextGen Getting to know UASG session
- ◉ Tue, 5 Mar. UASG Governance and Plans Work Session
- ◉ Wed, 6 Mar. Universal Acceptance Day 2024

UA Measurement WG Update

UA Measurement WG



UA Curriculum for the Academia

The curricula in relevant technical programs
(e.g., computer engineering)
do not cover background in internationalization
(i18n) and
technical topics, specifically IDNs and EAI.

Objectives:

- Introduce basic internationalization, including Unicode, IDNs and EAI.
- Operationalize UA use cases, i.e., accept, store, process, validate and display.
- Learn to use built-in as well as third parties libraries for processing Unicode and IDNs.
- Provide technical knowledge and skills on standards or RFCs for IDNs and EAI.
- Produce test cases and procedures to verify UA support.

UA-Aware IT/Computer Science Curriculum

- [Module 1 - Unicode Programming Fundamentals](#)
 - [Instructor Guide](#)
- [Module 2 - Unicode Advanced Programming](#)
 - [Instructor Guide](#)
- [Module 3 - Unicode in Data Structures and Algorithms](#)
 - [Instructor Guide](#)
- [Module 4 - Unicode in Database Systems](#)
- [Module 5 - Introducing Internationalized Domain Names \(IDNs\)](#)
- [Module 6 - Programming in Internationalized Domain Names \(IDNs\)](#)
- [Module 7 - Email Address Internationalization \(EAI\)](#)
- [Module 8 - Advanced Topics in Internationalized Domain Names \(IDNs\)](#)
- [Module 9 - Programming in Email Address Internationalization \(EAI\)](#)
- [Module 10 - Processing IDNs and EAI in Mobile Apps](#)
- [Module 11 - IDN Security](#)
- [Module 12 - Unicode, IDNs and EAI Support in Operating Systems](#)

UA Technology WG Update

Survey on the UA Strategy

Objective:

To identify the big picture and challenges in adopting UA.

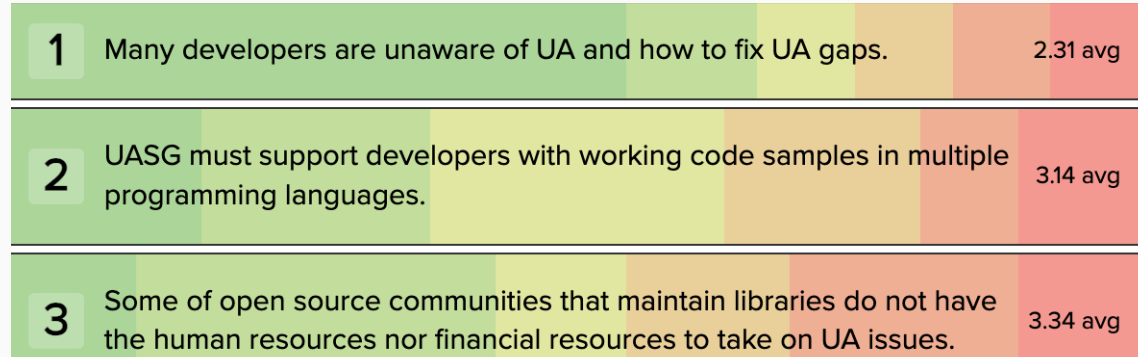
Completed

- * Consulted to 69 UA experts; 35 of them responded.
- * Asked 14 questions.
- * [Draft survey report](#) has been crafted.



Next steps

- * Publishing the summary report.
- * Conducting different surveys for governments, businesses and developers.



Email processing and HTML generation using Javascript libraries React, Angular and Node

- * A new [Statement of Work](#) has been crafted to address UA readiness issues with programming languages and software development frameworks.
- * Software that uses React, Angular and Node.js often performs functions such as
 - * storing information in a ticket (e.g. "customer x sent message y to customer service at time z"),
 - * composing replies (e.g. "we are sorry that we failed to reply within four hours").
- * This work item tests whether it's possible, simple, to write such services that handle IDNs and EAI addresses in the same way as legacy addresses.



Email Address Internationalization (EAI) WG Update



Self-hosting an EAI system (phase 1)

- * The Statement of Work has been posted to [call for proposals](#).

Objective

- * To facilitate experimentation by system admins by providing them with technical working EAI setup, configuration and testbed for self-hosting. This takes the form of a script that people can run on a Linux server to provide EAI mail service.

Main Highlights of the Work

- * Demonstrate EAI support at a Gold or Platinum level as per the EAI Self Certification Guide, by performing the UASG self-certification process on the contractor's own testing site.
- * Provide installation instructions and other documentation in UASG formats and templates.

What's Ahead with the EAI Self Certification Guide

#	Task	Description
1	Self-certification guide for EAI	Beta release of self certification guide for EAI.
2	Items related to UASG resources for a future self-certifier	EAI self certification website on uasg.tech Training videos
3	Items related to self-certification and score generation	-Develop code to perform Automated tests of software being evaluated -Online or client-side program for generating EAI self certification score
4	Items related to score Submission processes	
5	Accepting scores and confirming proper process	
6	Items related to self-certifier using logo and promoting scores	

UA Communications WG Update

Join a UA Day Event Near You!

UA Day events aim to rally local, national, regional, and global organizations and communities to create a “buzz” around adopting UA.

Nature of the UA Day Event	Number of Events
UA Academic Curricula	4
UA Adoption	15
UA Awareness	23
UA Regional Strategy	2
UA Technical Training	12



Universal Acceptance

UA Day
#Internet4All

- * 56 events are shortlisted out of 133 proposals.
- * UA Day 2024 events will take place in more than 50 countries.
- * Timeline: from 1 March through 30 May 2024.
- * Keystone UA Day event will be in Belgrade, Serbia on 28 March 2024.
- * To join a UA Day event, see details on <https://universalacceptance.day/>.

UASG Newsletter #2 (October 2023)

Coverage on the following topics:

- * UASG highlights
- * Remarks from the leadership
- * Call to action from WG leaders
- * UASG social media
- * Recent events, workshops, and reports

Newsletter Repository:

<https://community.icann.org/display/TUA/UASG+Newsletters>

Five New UA Ambassadors Join the UA Ambassador Program



Amina Ramallan



Krislin Goulbourne-Harry



Balendu Sharma

Five new UA Ambassadors have joined the UA Ambassador Program. There are now a total of 18 Ambassadors.

The new UA Ambassadors are: Amina Ramallan (Nigeria), Krislin Goulbourne-Harry (St. Vincent and the Grenadines), Lia Marcia Solis Montaña (Bolivia), Chilufya Theresa Mulenga (Zambia), Balendu Sharma (India).



Lia Marcia Solis Montaña



Chilufya Theresa Mulenga

The profiles of all the Ambassadors can be found at <https://uasg.tech/about/people/>.

56 UA Events Held as part of UA Day 2023



A total of 56 UA days were held across the globe over a three-month period to mark the 2023 UA Day celebrations.

Out of the total events held, 37 percent were done in the APAC region, 36 percent in Africa, and 20 percent were held in the Latin America and Caribbean region. North American and European regions' share of the event were 4 percent and 3 percent respectively.

The full report of the 2023 UA Day celebrations is available at:

<https://uasg.tech/2023/07/thousands-rally-worldwide-to-support-a-multilingual-internet/>

Be on the lookout for the call for proposals for the 2024 UA Day celebration.

Get Involved!

Follow, share, like, and engage with the UASG on social media.

Use the UASG hashtag in relevant posts: [#Internet4All](#)

X: [@UASGTech](#)

LinkedIn: <https://www.linkedin.com/company/uasgtech/>

Facebook: <https://www.facebook.com/uasgtech/>

Join the UA Discuss email alias: <https://uasg.tech/subscribe>

Report a problem if you find an application or webpage that is not UA-ready:
<https://uasg.tech/global-support-center/>

For more information, visit <https://uasg.tech> or email info@uasg.tech.

ccNSO Universal Acceptance Committee (UAC)

Raising awareness about UAC and its work
Abdalmonem Galila, UAC Chair | مصر.

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Universal Acceptance Community Update

About ccNSO UAC

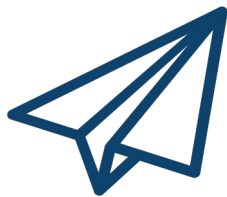
- ⑥ **PURPOSE UAC** | To provide a platform for the ccTLD community to interact and exchange information on a global level - among ccTLDs and with other groups under the ICANN umbrella - on issues related to UA and IDN acceptance.
- ⑥ **WHY ccNSO UAC?** | Established to fill (perceived) gaps in information sharing and act as a point of contact. Complementary to already existing efforts at local, regional and global levels. The ccNSO UAC should avoid overlap and duplicating other efforts.
- ⑥ **UAC MEMBERSHIP** | Open to representatives from all ccTLDs (IDN & ASCII), irrespective of ccNSO membership.
- ⑥ **READ MORE** | <https://community.icann.org/x/UlfxDg>

ABOUT ccNSO | The Country Code Names Supporting Organisation (ccNSO) provides a global platform for ccTLD managers to: (i) Undertake policy and policy-related work, (ii) cooperate and learn, (iii) engage with other stakeholders. The ccNSO is the supporting organizations of ICANN specifically for ccTLD managers and the decisional participant through which the ccTLD Managers act.

ccNSO UAC: recent activity

- ⦿ ccNSO appointed liaison to UASG regularly informs ccNSO Council & UAC about UASG activities
- ⦿ UAC defined its work plan for the year ahead
 - Taking into consideration the UAC scope as defined in its charter, UAC further explored the relevance of the themes for the ccTLD community and ccNSO in general, to better understand how to organise potential work on these themes.
 - Phased approach:
 - Brainstorming via napkin pitches (completed)
 - Performing an impact-effort analysis (ongoing)
 - Setting priorities (ongoing)
- ⦿ Launch of the UA library
 - **WHAT IS THIS?** | a vetted list of resources on UA, Internationalised Domain Names (IDNs) and Email Address Internationalisation (EAI) for ccTLDs. Includes: link to tools, articles, reports and more.
 - **PURPOSE** | Provide central and open space of relevant information for ccTLDs
 - **HOW?** | UAC subgroup acts as Editorial Board for the UAC library. The Editorial Board reviews incoming requests for inclusion in the library. The group is guided by its Terms of Reference.
 - **READ MORE?** | <https://community.icann.org/x/UIAvEQ>

ccNSO UAC: future plans



Reaching out to ccTLD managers globally, to increase awareness about UAC and its activities. (E-mail by UAC leadership team)



Finalising the UAC work plan



Assisting in organizing sessions on UA readiness and practices during ICANN public meetings. (e.g. Tech Day, ccNSO Members Meetings)



Liaising with other relevant ICANN groups (e.g. UASG, GAC IDN WG, Board IDN/UA WG)



Creating an e-mail list for all ccTLDs interested in UA, IDNs and EAI, as a platform for information exchange

Thank you



Abdalmonem Galila

ccNSO UAC Chair | مصر.



Regina Fuchsová

ccNSO UAC Vice Chair | .eu, .eu and .eu

ICANN | ccNSO

Country Code Names Supporting Organization

ccNSO UAC at ICANN79:

- **UAC working session**
Sunday, 3 March (13:15-14:30 local)
- **Status update to ccTLD community**
Wednesday, 6 March (13:15-14:30 local)

UA Updates From ICANN org

Universal Acceptance Community Update

Arnt Gulbrandsen
Neelam Kumar

ICANN79 Prep Week | 20 Feb 2024



Overview

- ◉ UA-remediation and training updates and plans by ICANN org – Arnt Gulbrandsen
- ◉ UA-readiness of systems at ICANN org – Gary Turchan

UA Remediation and Training

Status and plans

Arnt Gulbrandsen
UA Technology Sr. Mgr.

ICANN79 Prep Week
20 February 2024



Overview

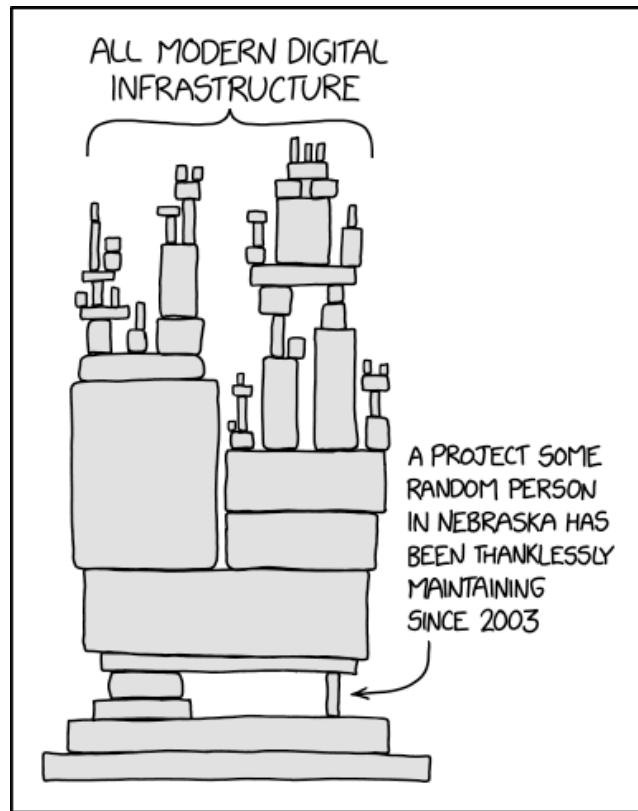
- ⊙ Strategy:
 - Outreach towards influential software
 - Contributions to key components
 - Training
- ⊙ Current ongoing work:
 - Linkification
 - Email
 - EAI Survey
 - Patches
 - Miscellaneous
- ⊙ Plans for the near future

Strategy: Influential Software

- ⊙ Most relevant areas feature one dominant product, some other notables, and a long tail of small contenders.
 - Email: Gmail variously 60-74% market share, the next biggest 8-15%.
 - Web: WordPress 25-40% market share.
- ⊙ ICANN org:
 - Identify the biggest actors.
 - Test and identify relevant problems – input welcome!
 - uaprogram@icann.org
 - We provide specific, actionable requests.
- ⊙ ICANN org spends more effort on responsive companies, less on unresponsive ones.

Influential Components

- ◉ WordPress is an example of a big square in the cartoon on the right.
- ◉ WordPress depends on 1,200+ helpers, plugins, components, and other things. Sites often use more, but never fewer.
- ◉ We look for heavily used components with UA-relevant features and sometimes contribute fixes.
- ◉ Examples from WordPress: linkify-it, php-autolink and phpmailer.
- ◉ All needed testing, two needed a change; one change has been accepted and released, we're discussing the other with the maintainer.



Contributing to Influential Components

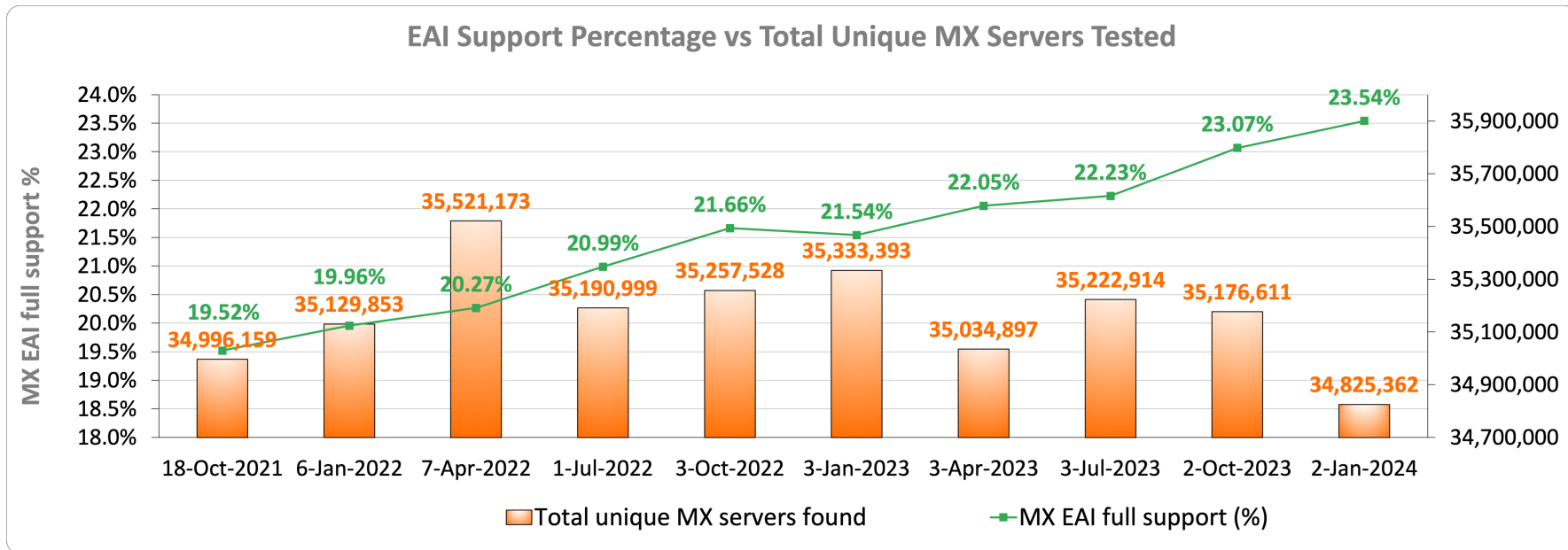
- ⦿ Identify important components:
 - Based on usage in major products.
 - Based on usage in programming languages.
 - Based on recommendations.
- ⦿ Identify problems or features.
- ⦿ Reach out and contribute.

Some Examples of Contributions

- ◉ Languages:
 - Java
 - Ruby
 - Python
- ◉ Well-known applications:
 - Roundcube
 - WordPress
 - Firefox/Thunderbird
- ◉ Unknown little things:
 - Linkify-it-py
 - PHP-Autolink
 - Rails-Autolink

UA-Readiness of Deployed Mail Servers

To measure how widely internationalized email addresses are accepted, quarterly surveys of email servers across domains registered in hundreds of TLDs are being conducted.



Test your email server for EAI support: <https://uasg.tech/eai-check/>

Training

- ⊙ We offer trainings for:
 - ISPs/webhosts/registrars
 - Developers
 - Email admins
- ⊙ Hackathons in cooperation with local hosts.
- ⊙ One-on-one technical assistance when possible (rarely).

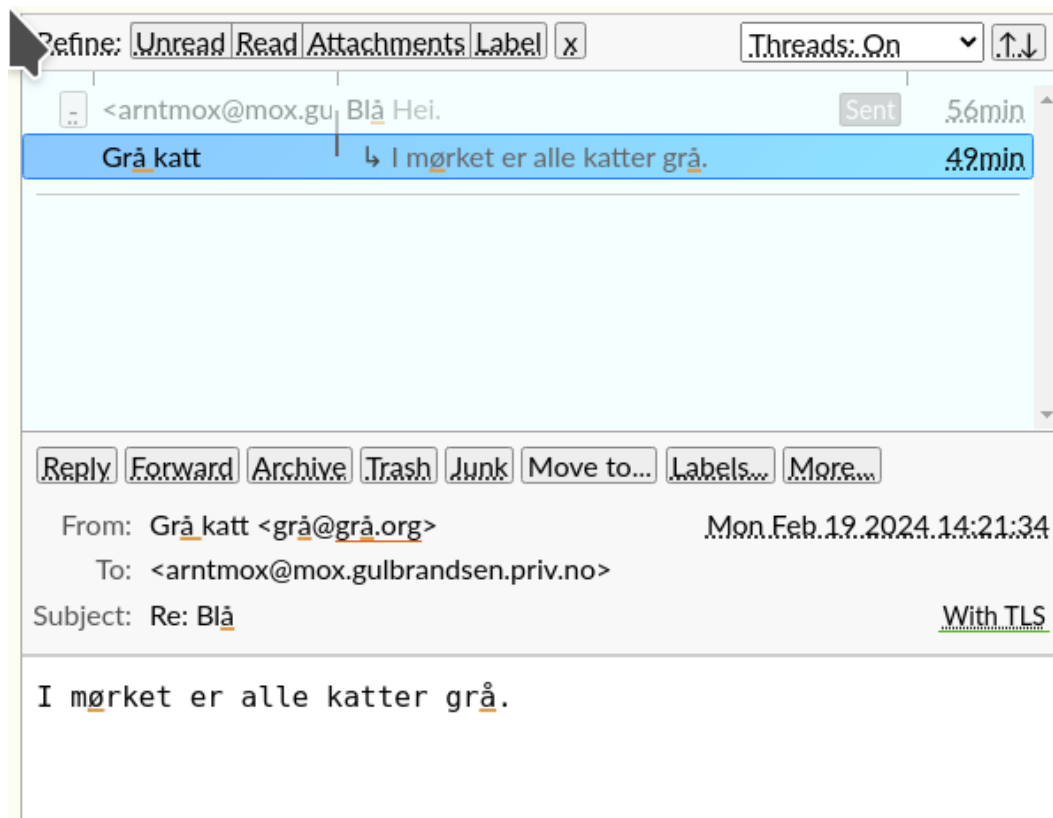
Current Focus

- ⦿ Outreach.
- ⦿ Email.
- ⦿ More comprehensive issue papers for big tech companies.
- ⦿ More methodical testing (also related to the issue papers above).
- ⦿ Coalition for Digital Africa.

Future Plans

- ⦿ Making a pass at the top ten CMSes:
 - Identify a likely list of top ten CMSes.
 - Testing and possibly contributing fixes.
 - Writing how-to guides if anything is nontrivial.
- ⦿ Provide an easy-to-install self-hosted mail server.
- ⦿ Following up with companies we've reached out to.

Progress



Universal Acceptance-Readiness

UPDATES & NEXT STEPS

Neelam Kumar
Project Manager ||
ICANN – Engineering & IT, Los Angeles

ICANN79 Prep Week
20 February 2024



Background

Per ICANN's FY24-28 Operating & Fiscal Planning document, a 3-phased approach was devised to achieve UA-readiness.

- Phase 1 - Support of short and long ASCII domains. **(Completed)**
- Phase 2 - Support of IDNs in both Unicode and ASCII form. **(Completed)**
- Phase 3 - Support of Email Address Internationalization (EAI)
 - 3a. Gap Analysis of all ICANN products that need to be UA-Ready.
 - 3b. Implementation of UA-Readiness for products identified in the Gap Analysis.
 - ICANN staff can now send emails to and receive emails from internationalized email addresses **(Completed)**
 - Work is ongoing to ensure all pertinent ICANN internal systems are fully UA-ready **(In Process)**

UA-Readiness: Phase 3 Details

Assumptions / Considerations

- Public-facing systems are prioritized ahead of non-public facing systems on the roadmap.
- Level of Effort estimates include individual system upgrades and integration testing.
- Third-party vendor systems are dependant on vendor UA compliance/upgrade activities.

Phase 3a Findings Gap Analysis (Completed)

255 Total products identified within the ICANN's technology ecosystem.

- To date, 24 of 255 products are NOT UA-Ready.
 - UA-readiness upgrade level of effort for non third-party products estimates completed.
 - System dependencies have been identified.
 - Third-Party Vendor dependencies identified. Engagement to continue; contingency plans needed if vendor is not responsive.

Current Status

- Work is ongoing to ensure all pertinent ICANN internal systems are fully UA-ready.
 - **Proofpoint** – ICANN staff can now send emails to and receive emails from internationalized email addresses. [\(Completed\)](#)
 - **PostFix** – Outgoing mail process: Related to Proofpoint - [\(Completed\)](#)
 - Working closely with UASG Team to align E&IT ICANN org UA-R
 - **Communication with Vendors** :Much of effort includes collaborating with third-party vendors to update their services. In the broader scope of the UA program, ICANN's priority is to support UA in community-facing services
 - **Icann Account IDN support** User Identity Access: single sign-on capability. [\(In Process\)](#)
 - **Mailman** – Outgoing distribution list email processing: Related to Proofpoint - pending vendor approval. [\(In Process\)](#)
 - **Okta** – Identity Access Management: Architecture of a UA solution should be started as soon as possible. [\(In Process\)](#)

Recent UA Reports



UA Activities Report was
published in February 2024.

FY23 UA Readiness Report was
published in September 2023.



The UA Activities Report highlights:

- Outreach and engagement activities by ICANN and UASG, particularly by UA Local Initiatives and UA Ambassadors
- Technical training materials on programming languages and email configuration
- Publications to promote UA adoption
- A summary of UA Day 2023 events
- The role of the community in contributing to an inclusive and multilingual Internet

Engage with ICANN



Thank You and Questions

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Email: uaprogram@icann.org



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APPENDIX

UA Measurement WG

- * The UA Measurement WG plans, oversees, and directs the gap analysis efforts of the UASG for various frameworks and technologies and reports on UA-readiness progress.
- * Published:
 - * Draft [UA Curriculum](#) for the Academia
- * Ongoing Tasks:
 - * Statement of Work: Rating email software using [EAI Self-Certification Guide \(phase 1\)](#)
 - * 5-year action plan
 - * Whitepaper to advocate that developers change from IDNA2003 to IDNA2008, because it is important and valuable

UA Technology WG

- * The UA Technology WG focuses on the remediation of existing UA gaps in programming languages, tools, development platforms and standards, as well as the development of technical trainings. The group engages with technology enablers and technology developers as primary stakeholders.
- * **Completed:**
 - * Survey on the UA strategy with the opinion of UA experts
- * **Ongoing tasks:**
 - * Identify the big picture and challenges in adopting UA
 - * 5-year action plan
 - * Statement of Work: Email processing and HTML generation using Javascript libraries React, Angular and Node

UA EAI WG

- * EAI support enables email addresses in different languages and scripts and allows sending and receiving of such emails (RFC6530-RFC6533).
- * The EAI WG focuses on technology gaps, remediation, and training materials for email software and service providers.
- * At minimum, all email agents must be configured to send and receive internationalized email addresses.
- * We are trying to ensure that all aspects of the modern email experience deliver full UA-readiness.
- * Published:
 - * [SOW](#): Make it easier to experiment with self-hosted working EAI systems (Call for Proposals)
 - * [EAI-Readiness Self-Certification Guide](#)
- * Ongoing:
 - * 5-year action plan
 - * [EAI Self-Certification Score Generator](#) v.2

Defining EAI-Readiness Levels

The self certification guide provides Silver, Gold, and Platinum scores for individual attributes. These scores replace the old Level 1 and Level 2 concepts.

Level	Functionality
Platinum	1. Meets all Gold requirements + 2. Supports all UASG Best Practices guidelines. 3. Hosting functionality for internationalized mailboxes is enabled by default [to the user and administrator]. 4. May also includes “aspirational” extra features which improve user experience, also listed below. 5. Documentation clearly explains how to set up, use and administer Platinum-level features. 6. All tools or utilities included with the product or service should be UA-ready and EAI-enabled as well.
Gold	1. Meets all Silver requirements + 2. Hosting functionality for internationalized mailboxes is available but not enabled by default. 3. Marketing materials and public messaging promote globally inclusive email systems and features. 4. Documentation clearly explains how to set up and use Gold-level features. 5. Functionality that processes email addresses rather than messages, for example address books, can create and store Unicode email addresses .
Silver	1. Enables its users to process email messages from EAI mailboxes but does not host such mailboxes. 2. Functionality that processes email addresses rather than messages, for example, address books need not create or store Unicode email addresses.

UA Communications WG

- * The Communications Working Group develops the communication strategy for the UASG and oversees its execution in collaboration with other WGs.
- * Completed work:
 - * [UASG Newsletter #2](#) (October 2023)
 - * UA outreach and engagement activities
- * Ongoing work:
 - * Promoting and supporting annual UA Day 2024
 - * 5-year action plan
 - * Revamping the UASG.tech website