Universal Acceptance and EAI Updates

APTLD74 -2018-09-20
Purpose

To assess the state of UA and EAI Readiness within APTLD communities and identify ways of getting local developer communities more engaged.
Agenda

* Introduction to the Topic & Facilitators (5 minutes)
* Small regional group discussions (30 minutes)
* Report Back (15 minutes)
* Wrap Up and Action Items (10 minutes)
UA in a Nutshell

Universal Acceptance (UA) ensures that all domain names and email addresses can be used by all Internet-enabled applications, devices and systems.
Nitin Walia – Experience in India
World is Moving Forward by Providing Domain Names & Email Address in Language of your Choice.
Bridging The Digital Divide

Past Scenario

Present Scenario

XGEN PLUS
Most Advanced Enterprise E-mail
UA & EAI Use Case
Government Of Rajasthan Empowered 20 Million Citizens
UA Ready - EAI Enabled Mobile App for every citizen to access their email account
Awareness Drive By Rajasthan Government

FIRST VERNACULAR EMAIL IN THE WORLD

Residents of rural Rajasthan make the most integral part of the State’s Digital Revolution. As a step towards helping them adopt technology to connect with Government and the world more closely, all the residents have been given secure email accounts.

- Free email service to all the residents of the State
- Option to email id & service in Hindi

To: गीता@राजस्थान.भारत
Easy and Quick reach out to Citizens

सुशासन के पांचवें नववर्ष में प्रवेश पर आपको शुभकामनाएं।

चार साल पहले जब हमें सेवा का अवसर मिला था तब हमने राजस्थान का खोया हुआ स्वाभिमान लौटाने का संकल्प लिया था।

आज मुझे खुशी है कि टीम राजस्थान के रूप में आप और हमने मिलकर राजस्थान को कई क्षेत्रों में शीर्ष पर पहुँचाया है। आजादी के 70 साल बाद भी जिन गांवों में विकास की रोशनी से पहुँची वहाँ हमने तरकी का उजाला पहुँचाने में सफलता अर्जित की है।

नए वर्ष में एक सुनहरा भविष्य बाहर फैलाकर हमारे प्रदेश का स्वागत कर रहा है, जरूरत है तो बस इस बात की कि हम अटल निश्चय और दुरुद विश्वास के साथ कदम से कदम मिलाकर अपने लक्ष्य की ओर बढ़ते रहें।

आओ साथ चलें, राजस्थान के नव निर्माण के लिए।

हर पल आपकी सेवा के लिए समर्पित,

वसुन्धरा राजे
Compliance Found In IT Tender In India

Final RFP for IDN Compliant Mail Security & MX Gateway for RajMail

17. The solution should support message size restrictions for each configured domain.  
18. The proposed solution must support verification of user i.e. user existence on the email server before accepting any mail.  
19. The solution should support SSL (SSL certificate shall be provided by RISL).  
20. The solution should support SMTP-AUTH as defined in RFC 2554.  
21. The solution should support authenticated SMTP service and does not allow emails to be sent as ‘From internal domain’ without the successful authentication.  
22. The solution should validate the From/To addresses of outgoing emails to make sure that they are valid email addresses.  
23. If any internal user sends a new SPAM and significant number of complaints is received against the Email, the user email address should be blocked from sending out emails. Incoming emails for the user is still functional and accessible. The solution should support this capability.  
24. If a user’s password is hacked/ compromised and SPAM is sent through the account, outgoing Email privilege of the user should be automatically blocked and alert should be sent to Administrator.  
25. The solution should have Email Digest capability i.e. a web based interface should be provided for searching the blocked Emails (both Inbound and Outbound).  
26. The solution should not have any limitation on no. of mailboxes/users and IDN/Non-IDN domains configurable on the solution.  
27. Customisation: For the purpose of modifying email traffic rules and update the changes required by the purchaser, the solution provider must either own the offered source code or must be able to get the required modifications done with/ without the help of OEM without any licensing implications for RISL.

Note:  
1. All the supplied Hardware/ Software should be Interoperable, IPv6 ready and in compliance with the policies/ guidelines issued by DoITY, Govt in this regard. Also, the bidder is to quote/ propose only one make/ model against the respective item.  
2. Universal Acceptance Compliance of Supplied Product: - All Supplied Software Should be UA compliant which means all valid domain names and email address are accepted, validated, stored, processed and displayed correctly and consistently by systems. To the extent the Services and/ or Deliverables include development or provision of software and/ or devices that support network or internet connectivity of any kind, Supplier warrants and represents that all such Services and Deliverables will be fully complaint with the following provision: In whatever manner a Service/Deliverable handles a domain name, the Service/Deliverable shall do so consistently for all standards complaint names in all top-level domains listed in IANA’s Root Zone Database (accessible via https://www.iana.org/domains/root/db) at the time of delivery and guarantees consistency for the three years.
It Only Take A Moment For You

NOW CREATE EMAIL ADDRESS TO
EMPOWER YOUR IDN DOMAIN
BY XGENPLUS

available on appstore

To know more visit: www.xgenplus.com
Today’s Work
Tasks for UA / EAI Workshop @ APTLD74

* Introduce yourselves
* What’s the current take-up of IDNs or nGTLDs in community
* What does the local development community look like
* Is there government support for local languages & scripts
* What’s stopping adoption of local language names and addresses
* What steps have been taken to address these
Breakout Groups
Report Back

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Action Items

* Local
* Regional
* Global
Thank you
Contact don.hollander@uasg.tech
See www.uasg.tech
More information for reference
What’s Changed

* More Top Level Domains (TLDs) Available
* No longer just two or three characters
* No longer just in ASCII
* List of TLDs is no longer static. New names being added
* Mailbox names also no longer in ASCII

.aaa
.accountant
.amex
.asia
.ভারত
.公益
.МОСКВА
.DIP.
.ファッション
.كوم
Anatomy of an email address

username@example.com

* Username/ 测试5
  * Mailbox name
  * Can be in ASCII or Unicode

* Second level domain name (example/ 普遍接受-测试)
  * Can be ASCII or Unicode.
  * Unicode can be represented as Unicode or Punycode

* Top Level Domain name (.com/ 世界)
  * Can be ASCII or Unicode
  * Unicode can be represented as Unicode or Punycode
  * Can be 2 to 63 characters long
  * Can ONLY be from an authoritative list that is dynamic and has more than 1,000 choices
Five Verbs to UA Readiness

Accept
Validate
Store
Process
Display
Our Target Audiences

Doers

Developers & Systems Architects

Directors

CIOs and senior IT Management

Influencers

C* suite, Thought Leaders, Government Ministers and Officials
Why Bother

* Enablement for culture, society and economics
* Responsibility to comply with standards
* UA results in better User eXperience (UX)
* Provide uninterrupted support for users of new domain names
* Reduce customer support burden
Principles of Universal Acceptance
The process by which an email address or domain name is received as a string of characters from a user interface, file or API.

UASG Recommendations

* User interface elements must support:
  * Unicode.
  * Strings up to 256 characters.

* ASCII Compatible Encoded text (“Punycoded”) in place of Unicode.
  * Unicode shown by default.
  * Punycoded text shown only when it provides a benefit.
The process by which an email address or domain name – received or emitted – is checked for syntax correctness.

UASG Recommendations

* Easiest way to ensure all valid domain names are accepted.

* Should not occur unless required. If yes:
  * Verify TLD against authoritative table.
  * Query domain name against DNS.
  * Require repeated entry of email address.
  * Validate characters - no “disallowed” code points.
  * Limit to few, whole-label rules defined in RFCs
  * If string contains ‘。’ convert to ‘.’
The long-term and/or transient storage of domain names and email addresses.

UASG Recommendations

* Apps / services should support Unicode
* Information stored in UTF-8 whenever possible
* Consider end-to-end scenarios before converting between A-Labels & U-Labels
  * Consider storing in both formats
* Clearly mark email addresses and domain names during storage
Process

UASG Recommendations

* Check code points not defined when application / service was created – shouldn’t “break” user experience.
* Use supported Unicode-enabled APIs.
* Use latest IDNA Protocol & Tables documents for Internationalized Domain Names.
* Process in UTF-8 wherever possible.

Occurs whenever an email address or domain name is used by an application or service to perform an activity, or is transformed into an alternate format.
Process (continued)

UASG Recommendations

* Ensure numbers are handled as expected
* Treat ASCII numerals & Asian ideographic number representations as numbers
* Upgrade apps & servers/services together
* Perform code reviews to avoid buffer overflow attacks

Occurs whenever an email address or domain name is used by an application or service to perform an activity, or is transformed into an alternate format.
Display occurs whenever an email address or a domain name is rendered within a user interface.

UASG Recommendations

* Display all Unicode code points supported by underlying operating system.

* When developing app/service, or operating a registry, consider languages supported.

* Convert non-Unicode data to Unicode before display.

* End user should see “everyone.みんな” vs. “everyone.xn--q9jyb4c.”
Display occurs whenever an email address or a domain name is rendered within a user interface.

UASG Recommendations

* Display Unicode by default
* Use Punycoded text only when it provides a benefit
* Consider that mixed-script addresses will become more common
* Use Unicode IDNA Compatibility Processing to match user expectations
* Be aware of unassigned & disallowed characters
Tools & Resources for Developers

Authoritative Tables:

* http://www.internic.net/domain/root.zone
* http://www.dns.icann.org/services/authoritative-dns/index.html
* http://data.iana.org/TLD/tlds-alpha-by-domain.txt
* See also SAC070: https://tinyurl.com/sac070

Internationalized Domain Names for Applications:


Unicode:

* Security Considerations: http://unicode.org/reports/tr36/
* IDNA Compatibility Processing: http://unicode.org/reports/tr46/
Next Steps...

* Read the documents at [www.uasg.tech/documents](http://www.uasg.tech/documents)
  * UASG003 – Fact Sheet
  * UASG005 – Quick Guide
  * UASG007 – Introduction to Universal Acceptance
  * UASG011 – FAQs
* Subscribe to the UASG Discussion list [www.uasg.tech/subscribe](http://www.uasg.tech/subscribe)
* Get your own systems UA Ready
* Spread the word...