

Notes

EAI Gathering – Redmond Washington – April 12 & 13 2017

Version 2017-04-18

- EAI Day

There was support for something like an EAI Day – like the IPv6 Days of the past.
There were two achievements to be celebrated.
The first is when the first x Billion mailboxes can send and receive EAI mail.
A key question is how many mailboxes currently exist:
<https://www.lifewire.com/how-many-email-users-are-there-1171213>
This suggests there are 6.3 Billion email addresses.
Target is the end of this year, early 2018
The second is when the mailbox providers of the first x Billion could HOST EAI addresses.
Target is the end of 2018
- Quick Guide to EAI
 - a. A close reading of this was performed and Mark will release a revised version for confirmation later in April.
- Evaluation of known status of email software and service providers.
 - a. A matrix was built of EAI capable systems known to the group. Don to create table for review and revision by the end of April
 - b. https://docs.google.com/spreadsheets/d/1r_Atq9W_zfaDbplx4NhFiqL-z-QILJhyAY2izGiq1Ww/edit?usp=sharing
- Fuzzy Issues
 - a. Right-to-Left Scripts.
 - i. Input: These will be input as expected, mailbox@domainname.tld, entered from right to left as expected in a RTL environment.
 - ii. Display: These will be display as expected, mailbox@domainname.tld – the operating system will display from Right-to-left
 - iii. Storage: These will be stored as expected, mailbox@domainname.tld
 - b. Normalisation
 - i. The RFCs do not expect case folding or other normalisation efforts.
 - ii. The Quick Guide to EAI suggests that mailbox administrators recognise that case folding does generally operate and should avoid assigning mailbox names that could cause confusion based on case folding or potentially homographic similarities
 - iii. Normalization can modify digital signatures
 - c. ASCII Equivalent Mailboxes
 - i. Mail operators who want to provide alternative (ASCII) mailbox during an industry transition toward EAI can do so when they set the mailbox up.
 - ii. Coremail, in their MTA, revert to the pre-assigned ASCII alternative when the receiving MTA does not support SMTPUTF8. Where an intermediary MTA does support SMTPUTF8 but the recipient's MTA does NOT support SMTPUTF8 does not have a solution.
 - d. Edge Cases

- i. The UASG Technical EAI Document (not yet produced) should have extensive use cases.
 - ii. The UASG will provide a repository of ‘troublesome’ email examples that people can add to their own test suites. A technical and operational document will be produced for this repository. **ACTION: Don to facilitate discussion and publishing of material once material arrives. Action: Michael to provide seed information by end of May.**
- Introduction to EAI – A Technical Document on EAI produced by the UASG
 - a. The UASG is planning on producing a technical document for EAI like its work on Universal Acceptance. *(The UASG is still looking for someone to write this)*
 - b. A list of topics was produced and is included in Appendix A of these notes.
- Interoperability Testing
 - a. *No testing occurred during the meeting because addresses hadn’t been allocated.*
 - b. Action: People who are interested in participating in interoperability testing to advise Don by end of April.**
 - c. Coremail and Throughwave have offered to establish accounts.
 - d. Action: Don to check with others to see if they are willing to offer test accounts by end of April**
 - e. Each operator to provide an email address to report bugs.
 - f. Bugs will be anonymised and included in the repository of ‘troublesome’ email examples.
 - g. A Virtual interoperability session will be scheduled for May 2016. It will NOT run in real time but will run over a constrained period of one week.
- RFC Review
 - a. There was no indication that there were any issues that would require a review of the associated RFCs.
 - b. The group should consider Informational RFCs based on implementation practices.
 - i. Adding a bootstrap alias to the body of a message
 - ii. Dealing with aliases may be script-specific
 - iii. Determining rules and formats for NDR (non-deliverable) messages
 - iv. How to handle when email address looks like EAI (e.g. Unicode@Unicode) but the UTF8 declaration is missing
 - v. What to do when local part contains ACE prefix (i.e. “xn—”) and when remainder is compatible with Punycode transformation
 - vi. When to normalize local parts (consensus was that we shouldn’t ever change local parts, so this informational would just be a documentation of that consensus)
- Use Cases – UASG004
 - a. Additional addresses will be included serviced by different EAI operators
 - b. An additional column will be included indicating which EAI operator is hosting the use cases.
 - c. An ‘Out of Office’ response will be added to each mailbox where it is possible.
 - d. Action: Don to arrange accounts and update UASG004 by middle of May.**
- Future Events

- a. Additional major players are needed: Gmail, Apple, Yandex, Yahoo, AoL, 126.com, qq.com, Rediff, etc.
- b. Noted that there are many operators of very large email providers that don't necessarily offer a traditional email service. Facebook & LinkedIN are examples.
- c. An EAI space should be sought at the M3AAWG meeting in Toronto in October.
- EAI & Anti-Spam
 - a. The group felt it would be particularly useful to engage with the Anti-Abuse community
 - b. Many email operators participate in M3AAWG. Efforts should be made to raise awareness at the M3AAWG meeting in Lisbon in June.
 - i. **Action: Mark to contact Terry Zink about representing UASG/EAI in Lisbon**
 - ii. **Action: Don to engage with ICANN Rep**
 - iii. **Action: Don to consider attending Lisbon**
 - iv. **Action: Christian to engage with M3AAWG to get EAI on agenda – and possibly a working group space (certainly in Toronto)**
 - c. Anti-Abuse community needs to know about EAI:
 - i. Make sure that their policies take UA issues into account
 - ii. Make sure that their software takes UA & EAI issues into account.
- Other Comments
 - a. Governments should be encouraged to include EAI in their technology roadmaps and ensure that it's included in their procurement documents.

Actions:

- **Don to facilitate discussion and publishing of material once material arrives.**
- **Michael to provide seed information by end of May.**
- **People who are interested in participating in interoperability testing to advise Don by end of April.**
- **Don to check with others to see if they are willing to offer test accounts by end of April**
- **Don to arrange accounts and update UASG004 by middle of May.**
- **Mark to contact Terry Zink about representing UASG/EAI in Lisbon**
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- **Christian to engage with M3AAWG to get EAI on agenda – and possibly a working group space (certainly in Toronto)**

Attendance:

Ajay Data	XgenPlus (remote)
Arnt GulBrandsen	
Chen Yingtang	Coremail
Dennis Tan	Verisign
Don Hollander	UASG
Franck Martin	LinkedIN

Jan Nelson	Microsoft
Jiankang Yao	CNNIC
Joseph Yee	Afilias
Lars Stefan	Eco
Lin Yanzhong	Coremail
Mark Svancarek	Microsoft
Michael Slusarz	Open Exchange
Sam Clement	Microsoft
Sri Ramya Mallipudi	Microsoft
Stuart Stuple	Microsoft
Teerayut Hiruntaraporn	ThroughWave
Vikram Surolia	XgenPlus (remote)

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Append A: Topics for inclusion in “Introduction to EAI – A Technical Document on EAI”

EAI Technical Document

- Audience - Developers and Implementers who need to work with email messages or addresses
 - Email systems, but also applications and programming languages that feed into email systems
 - Technical Skill Set - developers, architects
- Error Messages
- Use Cases
- Explanation of RFCs
- Describe what EAI is
- What are the components of email ECO-SYSTEMS
 - MUA
 - MTA
 - Mail Store
 - Imap
 - Pop
- Good Practices in mailbox allocations
- Risks and Issues and solutions
- How to deal with non-EAI compliant systems
 - Aliases - suggested practices
- Status report on EAI implementations (as of publication date)
- Normalisation - ASCII & Non-ASCII
- Compatibility Mode/Mailbox encoding
- IDNA2003/2008 & Compatibility mode issues
- Inventory of Open source email eco-system choices. MUA, MTA, Mailstore, etc
- Gentle introduction of UA and EAI with examples.
- Right to left scripts (entry, storage, display)
- Validation (well formed, exist?, typos)
- Use Cases reference
- Reference of places to play/how - stack overflow tag. ua-eai, IETF,
- Email reflector - out of office
- DKIM
- Adding a bootstrap alias to the body of a message
- Dealing with aliases may be script-specific
- Determining rules and formats for NDR messages
- How to handle when email address looks like EAI (e.g. Unicode@Unicode) but the UTF8 declaration is missing
- What to do when local part contains ACE prefix (i.e. “xn—”) and when remainder is compatible with Punycode transformation

- When to normalize local parts (consensus was that we shouldn't ever change local parts, so this informational would just be a documentation of that consensus)
- Different providers handle messages sent to multiple senders differently.
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Universal Acceptance