

UASG Workshop: EAI Update

Mark Svancarek / ICANN 58/ 12 March 2017



Universal Acceptance

EAI is the protocol that allows email addresses with IDNs in the domain part and/or Unicode (non-ASCII) characters in the Mailbox name to function within the traditional email environment.



Timeline of EAI Support

Year	Provider	Send/Receive to EAI addresses	Provision EAI mailboxes
2013	Coremail	✓	✓
2014	Google Gmail	✓	
2016	Microsoft Outlook	✓	
2016	XgenPlus	✓	✓
2017	Office 365 Exchange Online	✓	

Also:

- * Afilias
- * Exim
- * iOS – EAI Mail App
- * Horde (USA)
- * OpenFind (Taiwan)
- * PostFix (Global)
- * SaudiNic (Saudi)
- * Sendmail
- * Throughwave (Thailand)
- * Yandex (Russia)

EAI Quick Guide Review

- Most of the Quick Guide should be non-controversial
- However, there are a few topics of interest:
 - A-labels in domain portion
 - A-labels in local portion
 - Providing multiple Aliases
 - IDNA

EAI Quick Guide: Client Software (MUA – Mail User Agent) 1

- Display the domain name in Unicode.
- Store and display the Mailbox name in Unicode.
- Follow good practice guides for Linkification within the body of the email
 - UASG 010 – Quick Guide to Linkification
- Follow good practice guides for validation of domain name
 - UASG 007 – Introduction to Universal Acceptance

EAI Quick Guide: Client Software (MUA – Mail User Agent) 2

- Pass the domain name to the MTA (Mail Transport Agent) in A-Label format
 - RFC 5890
- For robustness, accept this non-EAI format
 - [A-label]@[U-label].[U-label]

EAI Quick Guide: Server Software (MTA – Mail Transport Agent)

- Confirm EAI-readiness when making connection to another MTA
 - e.g. advertise SMTPUTF8 support

EAI Quick Guide:

Email Service Provider Considerations 1

- Don't enforce case-sensitivity of local-part mailbox names
 - Allow the user to enter the email address in any combination of upper-and-lowercase characters so long as the script is correct
 - Don't issue mailbox names which will duplicate other mailbox names which have the same characters but different cases
 - e.g. "user@example.TLD") and "uSer@example.tld"
- Consider offering an all-ASCII mailbox name to the user when they are issued an EAI-compatible mailbox name.
 - If both names alias to the same mailbox (i.e. can be used interchangeably) users will find it easier to initially share addresses with other users who use a different script.
 - Once the ASCII address is initially shared, a user can decide whether to also add the EAI-compatible address to their address book.

EAI Quick Guide:

Email Service Provider Considerations 2

- Consider offering mailbox names which conform to the domain name label generation rules for the selected script.
 - Such names are guaranteed to be compatible with the Punycode algorithm.
 - These email addresses can easily be shared by users with their friends and colleagues who do not use their same writing method
 - Assuming that their email client accepts the [A-label]@[U-label].[U-label] format
 - Upon use, the client MUA software should convert the A-Label to the appropriate U-Label, at which point the friend or colleague will possess the EAI formatted email address despite not having a keyboard or IME which supports the target script.

EAI Quick Guide: Challenges During Transition 1

- Until all the email software deployed is EAI-ready, there will be some challenging situations that arise in the sending and receiving of emails:
 - IDNs may display in their Punycode1 (A-Label) form. While undesirable, this should not stop messages from being delivered
 - Unicode in the Mailbox name of an email address may cause unexpected and undesirable results, including:
 - Non-delivery of messages
 - Messages received by some recipients in a multi-recipient message but not received by others
 - Inconsistency between sending messages to multiple recipients and Reply-All to those same recipients
 - Inconsistency or failure in error message creation and delivery

EAI Quick Guide: Challenges During Transition 2

- How to ensure delivery to non-EAI-ready mail systems:
 - Creating aliases by applying Punycode to the Mailbox name
 - Normalizing mailbox names in non-ASCII scripts

EAI Tech Event

12-13 April 2017

Microsoft campus (Redmond, Washington USA)

Bug bash and hackathon

Meet Microsoft engineers and other EAI stakeholders

RSVP!

Contact marksv@microsoft.com for travel assistance