Email Address Internationalization & Test bed

TWNIC
Outlines

• The Problem
• Solution
• TWNIC’S Role
• EAI Test Bed
Why I-Email Necessary

• Format of Email address
  – _local-part@domain-part_
  – domain-part has internationalized by IDNA

• Required I-Email Format
  – snw@台網中心.tw
  – 許乃文@台網中心.tw
  – snw許@台網中心.tw
  – 許乃文@台網中心.台灣

• Require Email Address Internationalization
  – not standardized on local-part
What's the Issues?

- Extended complexities
  - Computer to computer communication
    - Store and forward
  - Embedded agent/command
    - Server/client
    - Firewall
    - Spam filter
- Mail routing control information on local-part
  - %, +, !, -, ...
  - Locally defined
Mail routing information on local-part

- Ex: some mail servers implement relay function by using ‘%’ on local part
  - user%hostB@hostA ➔ mail send to user@hostB via hostA

Identify that user%hostB is on another machine hostB
Change local part: user%hostB to user@hostB and relay the message to hostB
Administrator may change the mail routing (Scenario I)

Client → Server → Relay → host

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Administrator may change the mail routing (Scenario II)

Client

user@host

Server

host

Virus scanner

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User Requirement for i-Email

- An i-Email user is able to enter and display the characters of his language in email address.
- An i-Email user is able to store i-Email addresses in an address book, and use "reply" without destroy the address.
- If the i-Email solution requires keeping extra information around for an address in some cases, the i-Email user is capable of manipulating that information, including storing that information in his address book.
Overview of Solution

• SMTP client handshake with next SMTP server check if SMTP extension is supported by the server
  – Yes: send internationalized email address and headers
  – No: downgrade the email to traditional one (ASCII email address, RFC2821/2822 compatible)
EAI Document Roadmap

Experimental RFCs

- SMTP Extension
- Header
- SMTP Downgrade
- POP Downgrade
- IMAP Downgrade

Informational RFCs

- Constraints
- Scenarios
- Results and evaluation
- Advice for MUA

Framework

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TWNIC role

• Draft header document
  – Internationalized Email Headers
    • draft-ietf-eai-utf8headers-06

• Involve in testing plan
  – Modify sendmail software to implement EAI WG drafts
  – Develop plug-in for MUA to send, receive and display I-Email address
i-email address

• EAI drafts:
  – i-email address must come with an alt-address for backward compatibility
  – Ex:
    • 許乃文@台網中心.tw
    • alt-address: snw@twnic.net.tw

• draft-ietf-eai-utf8headers-06
  – “DISPLAY_NAME” <non-ASCII@non-ASCII<ASCII@ASCII>>
Downgrade

• Downgrade is need if next SMTP server is not EAI aware
  – From: <許乃文@台網中心.tw<
    snw@twnic.net.tw>>
  – ➔
  – From: <snw@twnic.net.tw>
  – Downgrade From: <許乃文@台網中心.tw<
    snw@twnic.net.tw>>
EAI Test Bed Demonstration

SMTP Extension

Header

SMTP Downgrade

POP Downgrade

IMAP Downgrade

snw@twnic.net.tw

許乃文@台網中心.tw

snw@twnic.net.tw
EAI Test Bed Demonstration

SMTP Extension  Header

SMTP Downgrade

POP Downgrade
IMAP Downgrade

snw@twnic.net.tw
EAI Demonstration

via Network

Experience
Thank You