Work Item:

Make it easier to experiment with self-hosted working EAI systems

Ver.3: 2023-12-05

Purpose

This work will reduce barriers to Email Address Internationalisation (EAI) adoption by organizations that operate email systems, and by providers of email services, by making it easier to install prototype-grade email components which have excellent EAI support on a private network. It will 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.

Note 1:
This work will complement other initiatives to reduce barriers to EAI adoptions. For example, some EAI-compliant email service providers have trial service offerings hosted on the provider's own servers, which require no deployment of email components by the testing site. Some customers may reject that because they want control of the email components, servers, and networks. This work provides an option that provides that control.

Note2:
This work shall not require UASG.tech to host an email server for experiments, and shall not require UASG to offer email services to other parties.

Note 3:
The following text describes administrative characteristics of this SOW:
- UA Working Group proposing the work item: UA EAI WG
- Reference to the Action plan: FY24
- Reference to work item(s): E2.1

Structure of Bid

A successful bid will specify the contract price and describe the solution to be delivered, including the versions of Ubuntu and Debian where the contractor will test the script/program and the language to be used for the script/program.
As part of preparing the bid, the contractor describes the included software, type of container/VM and documentation to be provided.

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Description of Work
The project will consist of the following parts, once the bid is accepted:

1. Create the installation script, testing and documenting it to support IDNs and EAI.
2. 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.
3. Provide installation instructions and other documentation in UASG formats and templates.

Note: In this document, the "**contractor**" is the party that creates a script, the "**experimenter**" is the party that installs email software using the script and provides email to its users using a single internationalized domain provided by the "experimenter", the "**testing site**" is the domain name and server and deployed software which operates the email services, and "**user**" is an end-user who uses internationalized email provided by the "experimenter".

Deliverables
Based on the work summarized above, the contractor will provide the following deliverables:

1. An installer that installs a complete mail server package that runs on Ubuntu or Debian.
   a. The package provides the following functionality: POP, IMAP, SMTP, Antispam (may be MX gateway), Webmail, DKIM and DMARC.
   b. The installer prompts for an internationalized domain name and configures internationalized mail for this IDN, including checking for viruses and spam on inbound mail and signing outbound mail using DKIM.
   c. The installer should not configure DNS itself, but rather provide the DNS records to be created by the user running the program.
   d. The installer must run on the Long Term Support (LTS) versions of Ubuntu and/or Debian.
2. Any software, scripts or tools integrated must be with BSD, MIT or equivalent licenses.
3. Training materials and configuration materials which demonstrate or facilitate the step-by-step configuration by the experimenter to allow a testing site to use the experimenter's preferred internationalized domain name and internationalized email addresses.
   a. Training materials must also address common challenges when managing one's own spam filters and firewalls and when setting up and operating an email service.

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    b. Configuration materials specify how much memory, disk space and other resources are required for convenient usage.

4. A test report showing the test methods and results certifying that the proposed solution achieved a Gold-rating or Platinum-rating when using the [EAI Self Certification Guide](#).

5. Draft report for the instructions, resources, and FAQ list along with answers, and enough details to permit mail service providers, software vendors, and developers to produce similarly configured mail servers. This will be reviewed by the community. Draft report will include the following:

    a. Executive summary.

    b. Scope of the work.

    c. Summary of the methodology used, including configuration of tools environments and submissions.

    d. FAQ and recommendations for future testers.

    e. A visual step by step presentation for common certification operations, based on FAQ and difficulties encountered during testing.

    f. Recommendations to UASG EAI WG.

    g. Conclusions.

6. Final report integrating the community input on the draft report and content for web-based FAQ page incorporating community review.

7. Presentation (for use as training material) (using UASG PowerPoint template provided) covering the contents of the work and the report. In developing the training material consider the following:

    a. Purpose: Provide a high-level reference of the test plan, methodology, process, results and observations.

    b. Target audience: Technical manager (i.e. high level audience). Knowledgeable about EAI configuration.

    c. Length: The presentation should be constrained to no longer than 20 minutes, measured by the time one person (within the target audience) would reasonably be expected to need to review the material at his/her own pace.

Timeline

- Tentative start date: Date of signing of the contract.
- Tentative end date: Three months of the contract start date.

Conflict of Interest

To help avoid any perceived or actual conflict of interest(COI), UASG leaders, UASG Ambassadors, members holding working group's leadership positions in the UASG, and any organization(s) affiliated with individuals in these UASG roles, are prohibited from participating in this SOW. In addition, ICANN org COI applies.

Proposal Submission

UASG will provide the contractor with an inventory of tools and environments for testing EAI components and solutions which UASG believes will be helpful.

The proposal should describe the expertise of the organization with email configurations, and show a good understanding of the EAI Self Certification Guide. A high level plan should be included in the proposal based on the EAI self certification guide and based on use cases which demonstrate the expertise available and understanding of the EAI related issues. The proposal should be submitted to: UAProgram@icann.org before the submission due date.

References

The work should be in accordance with the following references:

- https://uasg.tech/eai-certification/
- UA Readiness Framework report (UASG026)
- Test domains and email addresses in various scripts UASG004 (data file)
- EAI Software Test Results UASG 030A
- https://github.com/jrlevine/eaitesttools
- https://github.com/icann/eai-survey-tool

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