

EMAILCORE WG

Interim

January 2025

Chairs:

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Note Well

- This is a reminder of IETF policies in effect on various topics such as patents or code of conduct. It is only meant to point you in the right direction. Exceptions may apply. The IETF's patent policy and the definition of an IETF "contribution" and "participation" are set forth in BCP 79; please read it carefully.
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Note Well

(continued)

- Definitive information is in the documents listed below and other IETF BCPs. For advice, please talk to WG chairs or ADs:
 - BCP 9 (Internet Standards Process)
 - BCP 25 (Working Group processes)
 - BCP 25 (Anti-Harassment Procedures)
 - BCP 54 (Code of Conduct)
 - BCP 78 (Copyright)
 - BCP 79 (Patents, Participation)
 - <https://www.ietf.org/privacy-policy/> (Privacy Policy)

IETF Code Of Conduct Guidelines RFC 7154

- Treat colleagues with respect
- Speak slowly and limit the use of slang
- Dispute ideas by using reasoned argument
- Use best engineering judgment
- Find the best solution for the whole Internet
- Contribute to the ongoing work of the group and the IETF

Administrivia

- This session is being recorded
- Meetecho:
 - <https://meetings.conf.meetecho.com/interim/?group=f68b6fc0-41c7-4bfe-9e16-c31e3d33efc7>
- Shared note taking:
 - <https://notes.ietf.org/notes-ietf-interim-2025-emailcore-01-emailcore>
- ***Note taker?***

Agenda

- Agenda bashing, administrivia, note well (chairs) - 5 mins
- Review IANA and remaining IESG feedback on **rfc5321bis**
 - ***<https://github.com/ietf-wg-emailcore/emailcore/issues/>***
- Review currently open tickets on A/S, as well as rfc5321bis feedback that might affect it

WG Status

- draft-ietf-emailcore-rfc5322bis is done
- draft-ietf-emailcore-rfc5321bis-39 is post IESG review.
Remaining DISCUSS positions from IESG review and IANA review will be discussed during this session.
 - We got 4 DISCUSSEs from Orie, Roman, Paul and Eric.
 - Eric and Orie have cleared theirs, but need to check comments.
- draft-ietf-emailcore-as-13 had some updates during the Dublin IETF week. Discuss remaining issues and get ready for WGLC.

Summary of IESG DISCUSSes as per Murray

- make the A/S reference normative (Paul's DISCUSS)
- plan to have the A/S say that STARTTLS is basically mandatory on the modern Internet (if it doesn't already)
- address Orië's DISCUSS about normative stuff in the appendices, though this may end up needing no changes
- consider/deal with Orië's other comments as appropriate
- resolve the IANA stuff (IANA comments, Roman's DISCUSS)
- ~~remove all the "//" comment blocks (with no other changes that they might have implied) (Orië's and Roman's DISCUSSes)~~
- ~~Eric V's late DISCUSS is just a wrong reference that needs to be fixed~~
- do a second LC after all that to confirm IETF consensus supports these resolutions (Paul's DISCUSS)

Reviewing Appendix E ("changes from RFC 5321")

- Can I have some volunteers?

Normative reference from rfc5321bis to A/S (1 of 2)

As per Paul's DISCUSS:

There seems to be no clear consensus on whether SMTP should be promoted to Internet Standard without recommending (or requiring) the proper minimum security of transport encryption using STARTTLS. There was a discussion on whether to add this or not to the document or to the AS. It was seen as a compromise to place this in the AS, and have a Normative reference. But now this reference is an Informative reference and thus seems to again lack clear consensus. As Security AD, I also believe the minimum is a normative reference to what are essential security and privacy requirements of defacto internet connected SMTP.

Alexey: I corrected Paul that the reference to A/S was already there and that it was always Informative. But the rest of his argument is still relevant.

Normative reference from rfc5321bis to A/S (2 of 2)

We had this discussion before. In Dublin we said we will try to see whether the Informative reference to A/S + surrounding text works for IESG.

- Changing from Informative reference to Normative is unlikely to change whether people implement STARTTLS extension. Pretty much every SMTP server implementation already does.
- Having a normative reference to A/S creates a risk with publishing rfc5321bis,
 - however, Alexey believes that A/S is ready for WGLC

Review of IANA registration models for SMTP extensions (1 of 3)

- Currently, 2 models
 - Model 1: IETF Review and Approval:
 - The document goes through the normal IETF review and approval process, culminating in a published Standards Track, BCP, Experimental, or, ***in rare cases specifically approved by the IESG***, an IETF Stream Informational RFC.
 - Model 2: Simple Registration
 - This model is approximately equivalent to "First Come First Served" as described in RFC 8126/ BCP 26.
- Roman asked in his IESG review:
 - As written it looks like "IETF Review". In what way is it just "**approximately equivalent to 'IETF Review'**"?
 - What is the additional consideration that the IESG is supposed to give due to "... or, in rare cases specifically approved by the IESG, an IETF Stream Informational RFC." By definition, the IESG is going to approve all of these documents? **What are the circumstances where the IESG would _deny_ an informational RFC brought to it?**

Review of IANA registration models for SMTP extensions (2 of 3)

RFC 8126 defines "IETF Review" as:

With the IETF Review policy, new values are assigned only through RFCs in the IETF Stream -- those that have been shepherded through the IESG as AD-Sponsored or IETF working group documents [RFC2026] [RFC5378], have gone through IETF Last Call, and have been approved by the IESG as having IETF consensus.

The intent is that the document and proposed assignment **will be reviewed by the IETF community (including appropriate IETF working groups, directorates, and other experts)** and by the IESG, to ensure that the proposed assignment will not negatively affect interoperability or otherwise extend IETF protocols in an inappropriate or damaging manner.

Unless otherwise specified, any type of RFC is sufficient (currently Standards Track, BCP, Informational, Experimental, or ***Historic***).

Review of IANA registration models for SMTP extensions (3 of 3)

- 3 possible ways forward:
 - Drop IETF Informational, as an extension can always be registered with FCFS. RFC 5321 only allowed Standards Track and IETF Experimental, so no change here.
 - Add instructions to AD when IETF Informational is or is not appropriate, to justify "in rare cases" wording
 - Drop "***in rare cases specifically approved by the IESG***", basically to allow future sponsoring ADs to decide on document type. This seems to match "IETF Review" definition.

IANA comments from Amanda

- Can we drop "Legacy" registration model?

Current Text:

RegMethod: Keyword values in the registry will indicate a level of approval as "IETF" or "FCFS" (designating, respectively, Model 1 of 2 as described in Section 8.1.1.1 or **"Legacy" for the entries for "VERB" and "ONEX" (both approved exceptionally prior to this specification)**). All other registration approved prior to completion of this specification will have "IETF" in this field.

Alexey: To be clear, IANA hasn't asked for this specifically, but Amanda's comments made me wonder if we need "Legacy" at all? Why "FCFS" is not sufficient for "VERB" and "ONEX"?

IANA comments from Amanda

- IANA asked to clarify how to handle modification requests to SMTP extensions
 - We should say that update requests must follow the same registration model as original requests, i.e. "IETF Review" --> "IETF Review" and "FCFS" --> "FCFS".
 - One special case: can "FCFS" be "upgraded" to "IETF approved specification"?
 - Looks reasonable, if the original "owner" agrees

This change is already in -39. But we need to figure out what to say about modifying "Legacy" (unless removed as per earlier discussion) in -40. Even if we just say "these entries can't be updated".

IANA comments from Amanda

- High level comment: is text in the IANA registration procedure mostly for IANA (less technical) or should it include information for implementors (and thus should help them to register)
- An example of why this matter on the next slide

Should Section 8.1.1.3. SMTP Service Extension Registration Template mention ABNF non terminals?

For example:

(3) EHLO Parameters: The syntax and possible values of any parameters associated with an extension keyword returned by the server in the EHLO command response.

Alexey: suggestion to add "See "ehlo-param" in Section 4.1.1.1."

IANA comments from Amanda

- IANA asked for a separate field (from "Contact") for "Change Controller" for SMTP extensions.
 - This is very common, e.g. Media Type registration template.
- For model 1, both are usually "IETF", but Contact can be a person or specific WG to contact for more information.
- For mode 2, the contact can be the person who submitted the registration, who might be different from Change Controller. For example for 3rd party registrations.

SMTP extension template, "Description" vs "Behavior and Impact"

John Klensin asked: Do we need both?

Alexey: Don't object to merging them into one. But it is probably worth mentioning that the description field should cover "Behavior and Impact".

IANA comments from Amanda

Amanda wrote: Because all of the current instructions to IANA will likely be changed by the RFC Editor to past-tense descriptions of the actions we took, "An additional subregistry has been added to the "VIA link types" will seem to indicate that we created it for this document rather than for RFC 5321. Could you mention 5321 here? I was going to suggest that it would be useful to point out here that it's about to be renamed, but just making it clear that it was a past action might be sufficient.

Alexey: Because of the text being changed to past tense by RFC Editor, I suggest we insert RFC numbers for actions that were done before rfc5321bis. We already say this for some registries created by RFC 821.

IANA comments from Amanda

8.3.3.2. Fields for Registry Entries

Current text:

(1) Add fields to the list of registered extensions "Additional verbs", "MAIL/RCPT Parameter Values" as specified in detail in Section 8.1.1.3 and "Contact" as described in Section 8.1.1.3, Paragraph 2, Item 10. For extensions registered prior to the date this document is posted, the value of those fields should be a reference to the document that now appears in the "Reference" field unless other ***information is readily available***.

Amanda asked to change highlighted text to: **readily-available information is provided to IANA and confirmed by an Area Director.**

John: would IESG be Ok with that?

IANA comments from Amanda

Amanda asked for something like the following to be added to the document:

All references to RFC 5321 in the IANA registries should be replaced with references to this document, except for occurrences at the following URLs:

(if there are no exceptions, drop the "except for ..." part)

Any objections?

IANA comments from Amanda

8.3.3.1. Registry Header Information Changes

Current text:

(3) The "Registration Procedure(s)" header entry under "SMTP Service Extensions" should be changed to "Either IETF review and approval or ***a variation on*** first come first serve, both described in Section 8.1.1.1 of <<This Document>>".

Amanda asked why is this "a variation on" FCFS? If it is a variation, what is different?

Alexey: suggestion to drop "a variation on". See the next slide for FCFS definition.

IANA comments from Amanda

RFC 8126: "First Come First Served" description

For the First Come First Served policy, assignments are made to anyone on a first come, first served basis. **There is no substantive review of the request, other than to ensure that it is well-formed and doesn't duplicate an existing assignment.** However, **requests must include a minimal amount of clerical information, such as a point of contact (including an email address, and sometimes a postal address) and a brief description of how the value will be used.** Additional information specific to the type of value requested may also need to be provided, as defined by the namespace. For numbers, IANA generally assigns the next in-sequence unallocated value, but other values may be requested and assigned if an extenuating circumstance exists. With names, specific text strings can usually be requested. When creating a new registry with First Come First Served as the registration policy, in addition to the contact person field or reference, the registry should contain a field for change controller. Having a change controller for each entry for these types of registrations makes authorization of future modifications more clear. See Section 2.3.

It is important that changes to the registration of a First Come First Served code point retain compatibility with the current usage of that code point, so changes need to be made with care. The change controller should not, in most cases, be requesting incompatible changes nor repurposing a registered code point. See also Sections 9.4 and 9.5.

A working group or any other entity that is developing a protocol based on a First Come First Served code point has to be extremely careful that the protocol retains wire compatibility with current use of the code point. Once that is no longer true, the new work needs to change to a different code point (and register that use at the appropriate time).

It is also important to understand that First Come First Served really has no filtering. Essentially, any well-formed request is accepted.

RFC 5321

Mentioning DKIM, SPF, etc

<https://github.com/ietf-wg-emailcore/emailcore/issues/110> (References to DKIM, etc)

Donald Eastlake (SecDir reviewer) wrote that he originally just wanted for DKIM/SPF to be mentioned in the document. He might suggest some specific text that we can discuss on the mailing list.

Alexey: I think seeing such text would help, but we might still push for it to be in A/S, instead of rfc5321bis. One reason is that there are some efforts underway to a) get rid of SPF and b) to replace DKIM, so having references to them in rfc5321bis that we don't want to touch for decades would not be great. A/S, on the other hand is likely need to be updated periodically.

Alexey: I replied to Donald why any references to DKIM and SPF from rfc5321bis are a bad idea, but we seem to agree to disagree on this.

Orie's DISCUSS

Orie wrote:

Reading of the appendix should not be necessary to safely or interoperably implement the protocol, except where the appendix is directly referenced as normative from the body.

I'd prefer to see the deprecations, and any other normative changes listed in the body of the document.

This comment applies to Appendix B and D.

John: I believe that the distinction that separated those things into appendices is between "we see these features as in active use in SMTP and recommend/require their support" (in the main body) and "these features are largely obsolete, you cannot depend on their being supported, but, if you do decide to use them, this is how they work and how you MUST (sic) implement / support them. That is quite similar to the "don't produce but must support this way" distinction of 5322bis.

Orie's comments

3.5.3. Meaning of VRFY or EXPN Success Response

Implementations generally **SHOULD** be more aggressive about address verification in the case of VRFY than in the case of RCPT, even if it takes a little longer to do so.

4.5.1. Minimum Implementation

SMTP systems are expected to make every reasonable effort to accept mail directed to Postmaster from any other system on the Internet.

In extreme cases -- such as to contain a denial of service attack or other breach of security -- an SMTP server may block mail directed to Postmaster. However, such arrangements **SHOULD** be narrowly tailored so as to avoid blocking messages that are not part of such attacks.

Orie: SHOULD --> should?

Alexey: not a big deal, but it looks like it is hard to check compliance with these requirements, so not using RFC 2119 language seems sensible.

Orie's comments

7.1. Mail Security and Spoofing

This specification does not further address the authentication issues associated with SMTP other than to advocate that useful functionality not be disabled in the hope of providing some small margin of protection against a user who is trying to fake mail.

Orie: Which **useful functionality**? I recommend removing this sentence.

Orie's comments

7.4. Mail Rerouting Based on the 251 and 551 Reply Codes

Before a client uses the 251 or 551 reply codes from a RCPT command to automatically update its future behavior (e.g., updating the user's address book), it **should** be certain of the server's authenticity. If it does not, it may be subject to a man in the middle attack.

Orie: Provide some options, or make this a SHOULD?

Next steps for EMAILCORE WG

- **John to produce rfc5321bis-40 to address remaining IESG and IANA review issues, as discussed today**
- **Quick update to A/S to clarify that STARTTLS is a required to implement on the server side. WGLC on A/S ASAP.**
- **Another interim in February 2025??**