

EMAILCORE WG

IETF 115, London

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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://www.conf.meetecho.com/conference/?group=emailcore>
- Jabber room (discussions/back channel):
 - emailcore@jabber.ietf.org
- Shared note taking:
 - <https://notes.ietf.org/notes-ietf-115-emailcore>
- **In room participants: please use masks**
- ***Note taker?***

Agenda (1 of 3)

- Agenda bashing, administrivia, note well (chairs) - 5 mins
- Tickets for the Message Format draft:
- #73 Erratum 6639: Error in obs-zone **<https://github.com/ietf-wg-emailcore/emailcore/issues/73>**
- Tickets for the Message Format and SMTP drafts:
- #74 Syntax of Received header field need to be clarified **<https://github.com/ietf-wg-emailcore/emailcore/issues/74>**
- #77 Do we need to define specific syntax for trace header fields other than Received/Return-Path? **<https://github.com/ietf-wg-emailcore/emailcore/issues/77>**
- #81 Separate registry for Trace Header Fields? **<https://github.com/ietf-wg-emailcore/emailcore/issues/81>**

Agenda (2 of 3)

- Tickets for the SMTP draft:
- #76 G.22. IANA Registration Model for Registries Other than Service Extensions **<https://github.com/ietf-wg-emailcore/emailcore/issues/76>**
- #67 Additional-registered-clauses subregistry needs to be properly defined in the IANA Considerations section **<https://github.com/ietf-wg-emailcore/emailcore/issues/67>**
- #75 G.21. Appendix B and Message Submission **<https://github.com/ietf-wg-emailcore/emailcore/issues/75>**
- #56 (Relax IANA registration policy for SMTP extensions) **<https://github.com/ietf-wg-emailcore/emailcore/issues/56>**
- #71 SMTP Registration template should have a field specifying level of approval **<https://github.com/ietf-wg-emailcore/emailcore/issues/71>**
- #68 RFC 8126 requires specifying "Change Controller" and Change Control procedure **<https://github.com/ietf-wg-emailcore/emailcore/issues/68>**

Agenda (3 of 3)

- Tickets for the A/S draft:
- #51 (*AS should cover the use of message format elements in web forms*) **<https://github.com/ietf-wg-emailcore/emailcore/issues/51>**
- #78 Advice against using URL %-encoding on non ASCII email addresses to create ASCII version of them **<https://github.com/ietf-wg-emailcore/emailcore/issues/78>**
- #80 G.6. Clarify where the protocol stands with respect to submission and TLS issues **<https://github.com/ietf-wg-emailcore/emailcore/issues/80>**
- #55 (G.14. The FOR Clause in Received header field: Semantics, Security Considerations, and Other Issues) **<https://github.com/ietf-wg-emailcore/emailcore/issues/55>**
- #38 (*Possible clarification of 78 octet limit versa the 998 line length limit*) **<https://github.com/ietf-wg-emailcore/emailcore/issues/38>**
- #66 *Recommendation about timezones to use in Date and Received header fields* **<https://github.com/ietf-wg-emailcore/emailcore/issues/66>**

RFC 5322

#73 Erratum 6639: Error in obs-zone

From <https://www.rfc-editor.org/errata/eid6639>:

Section 3.3 says:

zone = (FWS ("+" / "-") 4DIGIT) / obs-zone

It should say:

zone = (FWS ("+" / "-") 4DIGIT) / **[FWS]** obs-zone

The current syntax does not allow space before an obs-zone. Thus, it rejects header items like:

Date: Mon, 12 Jul 2021 18:32:01 GMT

which are still being produced today by, for example, mail(1) on FreeBSD.

Pete Resnick implemented a better solution:

obs-zone definition was updated by addition **[CFWS]** at the beginning and the end.

RFC 5322/5321

Better definition for trace header fields
- problem statement

<https://github.com/ietf-wg-emailcore/emailcore/issues/7>

- Various documents define trace header fields which can be added during SMTP submission, SMTP relay and/or final delivery. RFC 5322 defines ABNF (and list 2 header fields) in Section 3.6.7 ("Trace Fields"). Other RFCs added other trace header fields, e.g. Authentication-Results (RFC 7601) and more esoteric SIO-Label-History (RFC 7444).
- Also, neither RFC 8098 nor RFC 3461 say that Original-Recipient is a trace header field.

RFC 5322/5321

Better definition for trace header fields (1 of 2)

<https://github.com/ietf-wg-emailcore/emailcore/issues/7>

- This ticket is CLOSED. The following change was implemented in 5322bis Section 3.6.7:
- **OLD:**
 - A full discussion of the Internet mail use of trace fields is contained in [I-D.klensin-rfc5321bis]. For the purposes of this specification, the trace fields are strictly informational, and any formal interpretation of them is outside of the scope of this document.
- **NEW:**
 - **The trace fields document actions taken as a message moves through the transport system.** A full discussion of the Internet mail use of the "Return-Path:" and "Received:" trace fields is contained in [I-D.klensin-rfc5321bis]; other specifications describe the use of other fields that are to be interpreted as trace fields. For the purposes of this specification, the trace fields are strictly informational, and any formal interpretation of them is outside of the scope of this document.

RFC 5322/5321

Syntax of Received header field need to be clarified

<https://github.com/ietf-wg-emailcore/emailcore/issues/74>

rfc5322bis includes more generic syntax, but it is a bit misleading.

received = "Received:" [1*received-token / CFWS] ";" date-time CRLF

received-token = word / angle-addr / addr-spec / domain

rfc5321bis includes more specific syntax:

Time-stamp-line = "Received:" FWS Stamp

Stamp = From-domain By-domain Opt-info [CFWS] ";" **FWS** date-time

[...]

Opt-info = [Via] [With] [ID] [For] [Additional-Registered-Clauses]

RFC 5322/5321

Syntax of Received header field needs to be clarified

<https://github.com/ietf-wg-emailcore/emailcore/issues/74>

Questions:

1. Is the order of registered attributes (from, by, etc) fixed, at least when SMTP is used?
2. Should we allow for attributes with no values as per rfc5322bis?
 1. If we don't, it becomes possible to write a generic parser that can skip over unrecognised attributes
 2. If we don't, it would also be possible to use Received for non-SMTP transports
3. Should we have a single ABNF definition? See the next slide.

RFC 5322/5321

Syntax of Received header field need to be clarified

<https://github.com/ietf-wg-emailcore/emailcore/issues/74>

Possible options for Received header field syntax in rfc5322bis:

1. **received** = "Received:" [1*received-token / CFWS] ";" date-time CRLF
(no change)
2. **received** = "Received:" [1*(atom received-token) / CFWS] ";" date-time CRLF
(minimal change = disallow attributes with no values)
3. **received** = "Received:" [1*received-token / CFWS] ";" date-time CRLF
; See [rfc5322bis] for more specific syntax used by MTAs
(No syntax change, added a comment pointing to rfc5321bis)
4. **received** = "Received:" From-domain By-domain Opt-info ";" date-time CRLF
5. A combination of 2) and 3).
6. **received** = "Received:" unstructured CRLF
+ comment as in 3)

RFC 5321/5322

Separate registry for Trace Header Fields?

<https://github.com/ietf-wg-emailcore/emailcore/issues/81>

- Do we want a separate registry for Trace Header Fields?
 - If we do, how does this interact with existing registry of **Message Header Field Names**?
 - I.e. do we pull them out or keep them in the **Message Header Field Names** registry?
 - If not:
 - Do we want to add information about trace header fields just as comments in the Message Header Field Names registry?
 - Or we can just do nothing (i.e. don't keep this information anywhere).

RFC 5321

Quick note on recent changes/questions

- Discussion on how to represent changes since RFC 5321 is happening on the mailing list
- The possible loose end with erratum 3447 (Use of normative language (e.g., more "MUST"s), possible confusion in some sections Section 4.4
 - No further changes intended
- Obsoleting RFCs 1846 and 7504
 - Unless there are objections, these 2 documents will be marked as Obsoleted by rfc5321bis
- The use of the 450 reply code outside mail transactions to mean "**server temporarily unavailable**" rather than "mailbox temporarily unavailable"

RFC 5321

G.22. IANA Registration Model for Registries Other Than Service Extensions

<https://github.com/ietf-wg-emailcore/emailcore/issues/76>

- 8.1.2. Address Literal Tags

Additional literal types require standardization before being used; none are anticipated at this time.

- Not very specific. **Standards Action?**

RFC 5321

G.22. IANA Registration Model for Registries Other Than Service Extensions

<https://github.com/ietf-wg-emailcore/emailcore/issues/76>

- 8.1.3. Mail Transmission Types

The third, "Mail Transmission Types" [58], established by RFC 821 and renewed by this specification, is a registry of link and protocol identifiers to be used with the "via" and "with" subclauses of the time stamp ("Received:" header field) described in Section 4.4. Link and protocol identifiers in addition to those specified in this document may be registered only by **standardization** or **by way of an RFC-documented, IESG-approved, Experimental protocol extension**

- **Standards Action or IESG approved Experimental RFC?**
- Or just **IETF Review?**

RFC 5321

G.22. IANA Registration Model for Registries Other Than Service Extensions

<https://github.com/ietf-wg-emailcore/emailcore/issues/76>

<https://github.com/ietf-wg-emailcore/emailcore/issues/67>

New text was added in -13 and -14

- 8.1.4. Additional Registered Clauses

As mentioned in Section 4.4.1 above, additional clauses for the "Received:" header field may be added by future **standards track** specifications.

The above is not fully consistent with what follows:

Additional clauses may be registered only by standardization or by way of an RFC-documented, IESG-approved,

Experimental protocol extension.

- **Standards Action or IESG approved Experimental RFC?**

- Or just **IETF Review?**

- Minor: Section 4.4.1 doesn't say anything about Additional Registered Clauses anymore.

RFC 5321

Relax IANA registration policy for SMTP extensions

<https://github.com/ietf-wg-emailcore/emailcore/issues/56>

Background:

SMTP extension registry registration procedure currently says:

Standards-Track or **Experimental** RFCs specifically approved by the IESG for this purpose.

With the removal of restriction on extensions starting with "X", at least **IETF Informational** RFCs should be allowed. What about **non IETF stream Informational/Experimental**?

RFC 5321

Relax IANA registration policy for SMTP extensions

<https://github.com/ietf-wg-emailcore/emailcore/issues/56>

Status of this ticket:

1. FCFS is not satisfactory for some people.
2. The latest proposal on the table is to use Expert Review, where Experts can advise, but can't block registrations. Many people said that they can live with it.
3. John has proposed text for Expert Review. In particular section 2.2.2 was rewritten to describe advisory review, while the registration template and procedure is now in section 8.1.1. **Please review rfc5321bis-15 or at least the full version of this slide deck.**

RFC 5321

Relax IANA registration policy for SMTP extensions

In Section 8.1.1:

- (1) the textual name of the SMTP service extension;
- (2) a summary of the purpose of the extension and what it is expected to accomplish.
- (3) the EHLO keyword value associated with the extension;
- (4) the syntax and possible values of parameters associated with the EHLO keyword value;
- (5) any additional SMTP verbs associated with the extension (additional verbs will usually be, but are not required to be, the same as the EHLO keyword value);
- (6) any new parameters the extension associates with the MAIL or RCPT verbs;
- (7) Level of approval. Values: Standards Track, IETF Experimental, Individual (or reasonable abbreviations).
- (8) Message submission use. Values: "yes" if the extension is suitable for use with Message Submission [48], otherwise "no".
- (9) a description of how support for the extension affects the behavior of a server and client SMTP;
- (10) the increment by which the extension is increasing the maximum length of the commands MAIL and/or RCPT over that specified in this Standard or other registrations that might reasonably be expected to interact with it; and
- (11) Contact information for the submitter or other responsible party and identification of the change controller. The change controller value MUST be "IETF" for all SMTP extensions specified in IETF Stream RFCs and MUST provide appropriate authority and contact information for all other extensions.

RFC 5321

Relax IANA registration policy for SMTP extensions

Questions:

1. Should the change controller always be "IETF" for IETF Stream Informational/Experimental RFCs?
 1. The currently proposed text doesn't say that. Proposal: **yes**.
2. Is the registration info (the list) in 8.1.1 required to be present for IETF Stream registrations (in particular Proposed Standard)?
 1. Proposal: **yes**. Basically don't relax requirements for extensions in PS RFCs.
3. Should we change the question about suitability for Submission into suitability for submission and LMTP?
4. Do we need to be vague about mailing list used for reviews?
5. Do we need a field about "level of approval"? See next slide.

RFC 5321

SMTP Registration template should have a field specifying level of approval

<https://github.com/ietf-wg-emailcore/emailcore/issues/71>

John Klensin wrote:

Should we be distinguishing between extensions that are expected to be used generally and those that are expected to be for more private uses?

Alexey Melnikov wrote:

Possible options for the new field are "common"/"limited use", where "common" can only be used if the extension is documented in an IETF Stream document.

RFC 5321

Relax IANA registration policy for SMTP extensions

Related text in 2.2.1:

SMTP's strength comes primarily from its simplicity. Experience with many protocols has shown that protocols with few options tend towards ubiquity, whereas protocols with many options tend towards obscurity.

As part of deciding whether to implement and support an extension, regardless of its benefits, each SMTP implementation, each extension must be carefully scrutinized with respect to its implementation, deployment, and interoperability costs. In many cases, the cost of extending the SMTP service will likely outweigh the benefit.

Keep or delete?

A/S

Changes since June 2022

- Replaced Introduction placeholder with new text
- Added a minimal Security Considerations section
- Issue #51 - Added text on interoperability of email addresses in HTML forms (and in general)
- Issue #55 - Added text addressing use of FOR clause in Received header fields
- Issue #65 - Added text stating that implementations are expected to support MIME
- Added a list of contributors in Acknowledgements section
- Issues #38 and #66 - Added minimal placeholders

A/S

AS should cover the use of message format elements in web forms

<https://github.com/ietf-wg-emailcore/emailcore/issues/51>

draft-ietf-emailcore-as-06 says:

4.2. Use and Validation in HTML and Other Contexts

Email addresses are frequently used as input in HyperText Markup Language (HTML) forms but the allowed grammar of these email addresses is more restrictive than the grammar for a 'Mailbox' in Section 4.1.2 of [I-D.ietf-emailcore-rfc5321bis] (the lack of quoted strings and limited characters allowed in domains).

Implementations that intend to accept email addresses in HTML forms are encouraged to consult the valid email address grammar in Section 4.10.5.1.5 of [HTML].

A/S

AS should cover the use of message format elements in web forms

<https://github.com/ietf-wg-emailcore/emailcore/issues/51>

draft-ietf-emailcore-as-06 Section 4.2 (continues):

Additionally, the following general guidance is provided:

- * Few mail systems allow leading, trailing, or consecutive unquoted dots ('.') in the local-part of email addresses even though the HTML grammar referenced above currently allows them. Consequently, implementations are discouraged from accepting such addresses.
- * Some mail systems allow a trailing dot ('.') in the domain part of email addresses (as allowed by Domain Names [RFC1035]), but this is not interoperable with all systems. Consequently, implementations are encouraged to strip trailing dots from the domain part of email addresses.

A/S

AS should cover the use of message format elements in web forms

<https://github.com/ietf-wg-emailcore/emailcore/issues/51>

[HTML] says:

email = 1*(atext / ".") "@" label *("." label)
label = let-dig [[ldh-str] let-dig] ; limited to a length of 63 characters by RFC 1034 section 3.5
atext = < as defined in RFC 5322 section 3.2.3 >
let-dig = < as defined in RFC 1034 section 3.5 >
ldh-str = < as defined in RFC 1034 section 3.5 >

Are we (EMAILCORE) happy with this grammar suggested by HTML?

A/S

Advice against using URL %-encoding on non ASCII email addresses to create ASCII version of them

<https://github.com/ietf-wg-emailcore/emailcore/issues/78>

John Klensin wrote:

Also, given [mis]behavior seen in the wild, does A/S need an explicit caution about SMTP servers or clients assuming they can apply the popular web convention of using %NN sequences as a way to encode non-ASCII characters (<pct-encoded> in RFC 3986) in non ASCII email addresses and assuming some later system will interpret it as they expect?

A/S

G.6. Clarify where the protocol stands with respect to submission and TLS issues

<https://github.com/ietf-wg-emailcore/emailcore/issues/80>

1. submission on port 587
2. submission on port 465
3. TLS relay on a port different from 25 (whenever)
4. Recommendations about general use of transport layer (hop by hop) security, particularly encryption including consideration of RFC 8314.

The MTA-to-MTA relay case is already covered by the now closed ticket #54 ("Hop-by-hop Authentication and/or Encryption"), in particular it mentions MTA-STS [RFC8461] and DANE for SMTP [RFC7672].

Section 6.1 has text about TLS protecting messages in transit, but not in storage. So it wouldn't help against a compromised server. (Might need to clarify the last point)

Do we need to say anything about submission and RFC 8314 ("Cleartext Considered Obsolete: Use of Transport Layer Security (TLS) for Email Submission and Access")?

A/S

Possible clarification of 78 octet limit versus the 998 line length limit

<https://github.com/ietf-wg-emailcore/emailcore/issues/38>

rfc5322bis seems to be clear on this.

Should we add any clarifications or examples to A/S? For example "message bodies should always be folded at 78 octets, but longer lines in header fields are OK"?

PETE: WHERE IS THE SUGGESTED TEXT ;-)?

A/S

Recommendation about timezones to use in Date and Received header fields

<https://github.com/ietf-wg-emailcore/emailcore/issues/66>

Any text to add? No clear consensus on the mailing list so far.