

# EMAILCORE WG

## Online Bangkok 2020

Chairs:

Alexey Melnikov <[alexey.melnikov@isode.com](mailto:alexey.melnikov@isode.com)>

Seth Blank <[seth@valimail.com](mailto:seth@valimail.com)>

# 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.
- As a reminder:
  - By participating in the IETF, you agree to follow IETF processes and policies.
  - If you are aware that any IETF contribution is covered by patents or patent applications that are owned or controlled by you or your sponsor, you must disclose that fact, or not participate in the discussion.
  - As a participant in or attendee to any IETF activity you acknowledge that written, audio, video, and photographic records of meetings may be made public.
  - Personal information that you provide to IETF will be handled in accordance with the IETF Privacy Statement.
  - As a participant or attendee, you agree to work respectfully with other participants; please contact the ombudsteam (<https://www.ietf.org/contact/ombudsteam/>) if you have questions or concerns about this.

# 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)

# Administrivia

- This Meetecho session is being recorded
- Meetecho:
  - <https://meetings.conf.meetecho.com/ietf109/?group=emailcore&short=&item=1>
- Jabber room (discussions/back channel):
  - emailcore@jabber.ietf.org
- Shared note taking:
  - <https://codimd.ietf.org/notes-ietf-109-emailcore>
- Note taker?

# WG Status

- We got chartered
- We know that we haven't finalised editor selection for the "Core Email Applicability Statement" draft
  - Only 2 people volunteered
  - We would like to have more than 2 volunteers
  - We might need to conduct interviews
- Apologies for the late agenda posting and slides, for the last minute discussions on the mailing list
- Apologies for the suboptimal time of the meeting
  - Outside of our control
- Let's see if we can have a productive meeting?
  - No issue will be closed today. Everything need to be verified on the mailing list. This is the IETF way.

# Agenda

- Agenda bashing, administrivia, note well (chairs) - 5 **mins**
- \* RFC5322bis (25 mins):
  - Better definition for trace header fields <<https://trac.ietf.org/trac/emailcore/ticket/7>>
  - Erratum 3135: quoted-string definition allows for semantically invalid empty strings <<https://trac.ietf.org/trac/emailcore/ticket/35>>
  - Erratum 5918: Header Field name length limit <<https://trac.ietf.org/trac/emailcore/ticket/36>>
- \* RFC5321bis (30 mins):
  - Exploders seem to be prohibited from adding List-\* header fields <<https://trac.ietf.org/trac/emailcore/ticket/4>>
  - Need a registry of header fields that are Ok to add after submission <<https://trac.ietf.org/trac/emailcore/ticket/8>>
  - Erratum 4315: IPv6 ABNF needs updating to align with RFC 5952 and RFC 3986 <<https://trac.ietf.org/trac/emailcore/ticket/27>>
  - G.7.3. Resolvable FQDN in SMTP and private domain names <<https://trac.ietf.org/trac/emailcore/ticket/9>>
  - G.1. IP address literals in EHLO <<https://trac.ietf.org/trac/emailcore/ticket/1>>

# RFC 5322

## (Internet Message Format)

Better definition for trace header fields

- <https://trac.ietf.org/trac/emailcore/ticket/7>
- 2 remaining errata (out of 3) to be discussed:
  - **Disallow empty quoted string**
    - <https://trac.ietf.org/trac/emailcore/ticket/35>  
<https://www.rfc-editor.org/errata/eid3135>
  - **Header field name length limit**
    - <https://trac.ietf.org/trac/emailcore/ticket/36><https://www.rfc-editor.org/errata/eid5918>

# RFC 5322

Better definition for trace header fields

<https://trac.ietf.org/trac/emailcore/ticket/7>

- Various documents define trace header fields which can be added during SMTP relay and 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

## Disallow empty quoted string

<https://trac.ietf.org/trac/emailcore/ticket/35>

<https://www.rfc-editor.org/errata/eid3135>

Section 3.2.4 says:

OLD:

quoted-string = [CFWS]

DQUOTE \*([FWS] qcontent) [FWS] DQUOTE

[CFWS]

NEW (suggested in the erratum):

quoted-string = [CFWS]

DQUOTE ((1\*([FWS] qcontent) [FWS]) / FWS) DQUOTE

[CFWS]

# RFC 5322

## Disallow empty quoted string

Notes from Ashley Willis:

The text following this definition states that a "quoted-string is identical to atom, semantically." "Semantically, neither the optional CFWS outside of the quote characters nor the quote characters themselves are part of the quoted-string; the quoted-string is what is contained between the two quote characters."

Where are quoted strings used?

- "local-part" → can't be empty
- "received-token" (uses "word") → can't be empty
- "display-name" (uses "phrase", which uses "word"), "keywords" (uses "phrase")
- "name-addr" and "group" use "display-name"
  - Display-name in "name-addr" can be empty?
  - But not the name of the group?

# RFC 5322

## Header field name length limit

- <https://trac.ietf.org/trac/emailcore/ticket/36>
- <https://www.rfc-editor.org/errata/eid5918>

Section 2.2 says:

Header fields are lines beginning with a field name, followed by a colon (":"), followed by a field body, and terminated by CRLF. A field name **MUST** be composed of printable US-ASCII characters (i.e., characters that have values between 33 and 126, inclusive), except colon.

Notes from Marcus Bointon:

I'm reporting an omission rather than a correction. The description of field names in S2.2 does not describe any length limit, but it implicitly prohibits folding by not permitting WSP chars in the name. 3.6.8 defines an ABNF for field-name, but does not specify a length limit either.

As far as I can see this means that field names should be limited to 77 characters – the field name and a trailing : – after which the field body can start after FWS on the next line.

# RFC 5321

Need a registry of header fields that are Ok to add after submission

<https://trac.ietf.org/trac/emailcore/ticket/8>

## **Strawman:**

Add to IANA Considerations:

IANA is requested to create a new subregistry for email header fields that can be added to a message header section by a “relay” and/or “delivery” SMTP system. The new subregistry would show whether a header field can be added by a “relay”, “delivery” system or both. Only header fields that are already registered in <<https://www.iana.org/assignments/message-headers/message-headers.xhtml>> (whether it is registered as a Permanent Message Header Field Name or as a Provisional Message Header Field Name) can appear in this new subregistry. Registration policy for this new subregistry is “Expert Review”.

# RFC 5321

Erratum 4315: IPv6 ABNF needs updating to align with RFC 5952 and RFC 3986

<https://trac.ietf.org/trac/emailcore/ticket/27>

[https://www.rfc-editor.org/errata\\_search.php?eid=4315](https://www.rfc-editor.org/errata_search.php?eid=4315)

- The current version in the draft is aligned with RFC 3986 – good
- However it is not aligned with RFC 5952, in particular:
- RFC 5952, 4.1. Handling Leading Zeros in a 16-Bit Field
  - Leading zeros MUST be suppressed. For example, 2001:0db8::0001 is not acceptable and must be represented as 2001:db8::1. A single 16-bit 0000 field MUST be represented as 0.
- RFC 5952, 4.3. Lowercase
  - The characters "a", "b", "c", "d", "e", and "f" in an IPv6 address MUST be represented in lowercase.

# RFC 5321

Erratum 4315: IPv6 ABNF needs updating to align with RFC 5952 and RFC 3986

Currently in the draft:

h16 = 1\*4HEXDIG

; 16 bits of address represented in hexadecimal.

•**Strawman:**

- Make it clear that leading "0" are prohibited
- Only allow lowercase hex? (HEXDIG allows uppercase hex at the moment). Is this a backward compatibility issue?

# RFC 5321

Erratum 4315: IPv6 ABNF needs updating to align with RFC 5952 and RFC 3986

<https://trac.ietf.org/trac/emailcore/ticket/27>

[https://www.rfc-editor.org/errata\\_search.php?eid=4315](https://www.rfc-editor.org/errata_search.php?eid=4315)

- Bonus round:
- RFC 5952, 4.2.2. Handling One 16-Bit 0 Field
  - The symbol "::" MUST NOT be used to shorten just one 16-bit 0 field. For example, the representation 2001:db8:0:1:1:1:1:1 is correct, but 2001:db8::1:1:1:1:1 is not correct.
  - The above seem to contradict some examples in RFC 5952 and there is some errata submitted on this document

# RFC 5321

## G.7.3. Resolvable FQDN in SMTP and private domain names

<https://trac.ietf.org/trac/emailcore/ticket/9>

In Section 2.3.5 ("Domain Names"):

Only resolvable, fully-qualified domain names (FQDNs) are permitted when domain names are used in SMTP.

Editor's Note: does "in the public DNS" or equivalent need to be added to "resolvable"???

Strawman: "Resolvable" can mislead readers to think that they need to attempt resolve all domain names when received.

Proposal to drop "resolvable". Possibly discuss "private domain names" in the Applicability Statement document.



# RFC 5321

Exploders seem to be prohibited from adding List-\* header fields

<https://trac.ietf.org/trac/emailcore/ticket/4>

## 3.9. Mailing Lists and Aliases

[...] When a message is delivered or forwarded to each address of an expanded list form, the return address in the envelope ("MAIL FROM:") MUST be changed to be the address of a person or other entity who administers the list.

However, in this case, **the message header section (RFC 5322 [11]) MUST be left unchanged**; in particular, the "From" field of the header section is unaffected.

### **Strawman:**

**the message header section (RFC 5322 [11]) MUST NOT be modified, except for adding header fields related to mailing list processing (e.g. List-\* [RFC4021][RFC8058]) and/or trace header fields [rfc5322bis]; [...]**

# RFC 5321

G.1. IP address literals in EHLO

<https://trac.ietf.org/trac/emailcore/ticket/1>

# **Suggested** scope for the “Core Email Applicability Statement”

- Best practices on use of SMTP, email format/MIME.
- Don't touch POP/IMAP/JMAP or Sieve
  - They IMAP/Sieve and JMAP have their own WGs (EXTRA and JMAP respectively)
- Don't touch SMTP Submission (RFC 6409) this time around
- Reference DMARC/DKIM/SPF?
  - Note that DMARC has its own WG, so not doing any work here