

Postmaster Convention for X.400 Operations

Status of this Memo

This document specifies an Internet standards track protocol for the Internet community, and requests discussion and suggestions for improvements. Please refer to the current edition of the "Internet Official Protocol Standards" (STD 1) for the standardization state and status of this protocol. Distribution of this memo is unlimited.

Abstract

Both STD 11, RFC 822 [1] and STD 3, RFC 1123 [2] (Host Requirements) require that the email address "postmaster" be supported at all hosts. This paper extends this concept to X.400 mail domains which have registered RFC 1327 mapping rules, and which therefore appear to have normal RFC822-style addresses.

1. Postmaster Convention in RFC822

Operating a reliable, large-scale electronic mail (email) network requires cooperation between many mail managers and system administrators. As noted in RFC 822 [1], often mail or system managers need to be able to contact a responsible person at a remote host without knowing any specific user name or address at that host. For that reason, both RFC 822 and the Internet Host Requirements [2] require that the address "postmaster" be supported at every Internet host.

2. Postmaster Convention and X.400

However, RFC 822 is not the only email protocol being used in the Internet. Some Internet sites are also running the X.400 (1984) [3] and X.400 (1988) [4] email protocols. RFC 1327 specifies how to map between X.400 and RFC 822 addresses [5]. When mapping rules are used, addresses map cleanly between X.400 and RFC 822. In fact, it is impossible to determine by inspecting the address whether the recipient is an RFC 822 mail user or an X.400 mail user.

A paper by Rob Hagens and Alf Hansen describes an X.400 community known as the "Global Open MHS Community" (GO-MHS) [6]. Many mail domains in the GO-MHS Community have registered RFC 1327 mapping rules. Therefore, users in those domains have RFC 822-style email

addresses, and these email domains are a logical extension of the RFC 822 Internet. It is impossible to tell by inspecting a user's address whether the user receives RFC 822 mail or X.400 mail.

Since these addresses appear to be standard RFC 822 addresses, mail managers, mailing list managers, host administrators, and users expect to be able to simply send mail to "postmaster@domain" and having the message be delivered to a responsible party. When an RFC 1327 mapping rule exists, the X.400 address element corresponding to the left-hand-side "postmaster" is "Surname=Postmaster" (both 1984 and 1988). However, neither the X.400 protocols, North America X.400 Implementor's Agreements [7], nor the other regional X.400 implementor's agreements require that "Surname=Postmaster" and "CommonName=Postmaster" be supported. (Supporting these addresses is recommended in X.400 (1988)).

For mapped X.400 domains which do not support the postmaster address(es), this means that an address such as "user@some.place.zz" might be valid, yet mail to the corresponding address "postmaster@some.place.zz" fails. This is frustrating for remote administrators and users, and can prevent operational problems from being communicated and resolved. In this case, the desired seamless integration of the Internet RFC 822 mail world and the mapped X.400 domain has not been achieved.

The X.400 mail managers participating in the Cosine MHS Project discussed this problem in a meeting in June 1992 [8]. The discussion recognized the need for supporting the postmaster address at any level of the address hierarchy where these are user addresses. However, the group only required supporting the postmaster address down to certain levels of the O/R Address tree. This approach solved part of the problem, but not all of it. A more complete solution is required.

3. Proposed Solution

To fully achieve the desired seamless integration of email domains for which RFC 1327 mapping rules have been defined, the following convention must be followed,

If there are any valid addresses of the form "user@domain", then the address "postmaster@domain" must also be valid.

To express this in terms of X.400: For every X.400 domain for which an RFC 1327 mapping rule exists, if any address of the form

Surname=User; <Other X.400 Address Elements>

is a valid address, then the address

Surname=Postmaster; <Same X.400 Address Elements>

must also be a valid address. If the X.400 system is running X.400(1988), then the address

CommonName=Postmaster; <Same X.400 Address Elements>

must also be supported. (Note that CommonName=Postmaster will not be generated by RFC 1327 mappings, but it is recommended in the 1988 X.400 standard).

To remain consistent with RFC 822, "Mail sent to that address is to be routed to a person responsible for the site's mail system or to a person with responsibility for general site operation." [9].

3.1. Software Limitations

If software is unable to support this requirement, it should be upgraded. X.400 software developers are strongly encouraged and requested to support forwarding mail to a centralized postmaster mailbox in products.

It may be possible to support forwarding postmaster mail to a central mailbox in software packages which do not explicitly support it by applying work-around solutions. For example, some packages support creating a mailing list for "postmaster" which has one entry that points to the desired centralized postmaster mailbox. Alternatively, it may be possible to support a postmaster address using the X.400 Autoforwarding feature. The software package may also support rewriting the address in some other way.

4. Acknowledgements

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Security Considerations

Security issues are not discussed in this memo.

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6. References

- [1] Crocker, D., "Standard of the Format of ARPA Internet Text Messages", STD 11, RFC 822, UDEL, August 1982.
- [2] Braden, R., "Requirements for Internet Hosts -- Application and Support", STD 3, RFC 1123, USC/Information Sciences Institute, October 1989.
- [3] CCITT, "CCITT Recommendations X.400", Message Handling Systems: System Model--Service Elements, 1984.
- [4] CCITT/ISO, "CCITT Recommendations X.400/ ISO IS 10021-1", Message Handling: System and Service Overview, December 1988.
- [5] Kille, S., "Mapping between X.400(1988) / ISO 10021 and RFC 822", RFC 1327, University College London, May 1992.
- [6] Hagens, R. and A. Hansen, "Operational Requirements for X.400 Management Domains in the GO-MHS Community," ANS, UNINETT, RFC 1649, July 1994.
- [7] U.S. Department of Commerce, National Institute of Standards and Technology, Stable Implementation Agreements for Open Systems Interconnection Protocols, Version 7, Edition 1, Special Publication 500-214, December 1993.
- [8] Minutes, Cosine MHS Managers Meeting, June 1992, (unpublished).
- [9] Crocker, D., "Standard of the Format of ARPA Internet Text Messages", STD 11, RFC 822, UDEL, Pg. 33, August 1982.

