Anti-UBE and Anti-UCE Keywords in SMTP Banners

Status of this memo

This document is an Internet-Draft. Internet-Drafts are working documents
of the Internet Engineering Task Force (IETF), its areas, and its working
groups. Note that other groups may also distribute working documents as
Internet-Drafts.

Internet-Drafts are draft documents valid for a maximum of six months and
may be updated, replaced, or obsoleted by other documents at any time. It
is inappropriate to use Internet-Drafts as reference material or to cite
them other than as "work in progress."

To learn the current status of any Internet-Draft, please check the
"1id-abstracts.txt" listing contained in the Internet-Drafts Shadow
Directories on ftp.is.co.za (Africa), nic.nordu.net (Europe), munnari.oz.au
(Pacific Rim), ftp.ietf.org (US East Coast), or ftp.isi.edu (US West
Coast).

1. Introduction

Legislators writing laws that would limit or prohibit the sending of
unsolicited bulk email (UBE) or unsolicited commercial email (UCE) have
begun to include rules that require mail servers to include particular
wording in the SMTP banner. To date, this wording has had two distinct
purposes: to warn senders that they may not send UBE or UCE to that SMTP
host, and to state the physical location of the host so that the sender may
know which laws apply.

This document is meant to help clarify how such legislation might be
worded, and to help increase interoperability of various laws. It is not
meant to be a standard of any kind, but is meant only for its informational
value.

2. The SMTP Banner

SMTP, as defined in [RFC821], is a client-server protocol that runs over
TCP/IP. When the SMTP client connects to the SMTP server, the server TCP
immediately emits a banner, also called an "opening message" or "connection
greeting". The contents of this banner must be in the ASCII character
set, and the banner must be no longer than 512 characters, including the
response code, separator, and <CRLF> at the end of the banner.

The banner normally contains software and version information, and often
contains other useful debugging information. Most SMTP server products
allow the system administrator to specify the contents of the banner. The

banner must start with a three-digit status code followed by a space, but the rest of banner is not specified by any existing standard.

[3](). Rationale for Using the SMTP Banner for Anti-UBE and Anti-UCE Messages

There has been some debate about whether or not the SMTP banner is the best place to put notices to UBE senders.

The arguments in favor of using the SMTP banner include:

- A potential UBE sender uses almost no resources on the part of the SMTP server to find out that UBE is not allowed.

- It is very easy to describe in legislation, and thus is most likely to be upheld in courts if challenged.

- An SMTP client who wants to send UBE does not need to identify itself before determining if the SMTP server will accept such mail.

- It is easy for a mail system administrator to configure and check the SMTP banner.

- Existing banners are typically much shorter than 512 characters, so the addition of a short phrase is unlikely to violate any standard limits.

The arguments against using the SMTP banner include:

- This overloads the semantics of the banner contents.

- This could instead be done with an ESMTP extension.

- Even though the load on the recipient's mail server is low, any type of banner still represents an admission that the sender is allowed to try to send mail that they know is most likely unwanted to the recipient at the recipient's expense.

[4](). Suggested Wording for Legislation Restricting UBE and UCE

Legislation that requires wording in the SMTP banner to indicate that UBE or UCE is not allowed or is restricted on the server should include the exact phrase used. That phrase should be short, succinct, and must not be required to be in a particular position in the SMTP banner. We recommend the phrase "NO UBE" or "NO UCE", in all uppercase characters. Legislation mandating either phrase should specify that the phrase must be preceded by a non-alphanumeric character, and followed by non-alphanumeric character or the end of the banner.

Note that such a phrase will be human-readable, but it is also easily machine-readable if the exact phrase is specified in the legislation. Using such a machine-readable phrase makes it easier for potential UBE senders to avoid problems by having a program check whether or not the mail server accepts UBE before sending the mail. Although the banner phrase should be

in uppercase characters, clients should recognize the phrase in any combination of upper- and lowercase characters.

SMTP banners are rarely seen by humans. The additional wording in the SMTP banner described here is not meant to be seen by the person who is sending mail, only by their mail system.

It should also be noted that most languages around the world require characters outside the ASCII character set, but these characters must not be used in an SMTP banner. In such cases, the legislation might choose a phrase for the SMTP banner which does not make sense in the native language of the area in question but is unlikely to appear in a banner for other reasons.

5. Suggested wording for Legislation Stating Server Location

Legislation that requires a server administrator to state the location of the server should use standardized abbreviations for countries and local states or provinces. These locations should be easy to pick out from other information in the SMTP banner.

Legislation that requires that the server identify the country that it is in should use "C=" followed by the official two-letter country code defined in [ISO3166-1]. Legislation that requires the server identify the state or province that it is in should use "L=" followed by an officially-accepted abbreviation (if any) for the state or province name. Codes for locations are discussed in [ISO3166-2]. Legislation mandating either type of location should specify that the "C=" or "L=" must be preceded by a non-alphanumeric character, and followed by non-alphanumeric character or the end of the banner.

For instance, in the state of California, such legislation might require the phrase "C=US L=CA" to be included in the banner. (The "C" for country and "L" for location come from the widely-used X.500 directory standard.)

6. Security Considerations

Forcing a mail server to state its location can possibly cause an attacker to gain valuable information about the server or its characteristics.

7. References

[RFC821] RFC 821, Simple Mail Transport Protocol.

[ISO3166-1] ISO 3166-1:1997 Codes for the representation of names of countries and their subdivisions -- Part 1: Country codes.

[ISO3166-2] ISO/DIS 3166-2 Codes for the representation of names of countries and their subdivisions -- Part 2: Country subdivision code.

8. Authors' Addresses

Paul Hoffman
Internet Mail Consortium
127 **Segre Place**
Santa Cruz, CA 95060
phoffman@imc.org

John Levine
IECC
PO Box 727
Trumansburg, NY 14886
johnl@iecc.com