



E-mail Client Testing For S/MIME Compliance

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Overview

- All existing authentication methods remain.
- X.509 is an “additional” authentication method.
- X.509 can be used with sync updates and with the web updates interface, as well as by e-mail.
- PGP can only be used with e-mails.
- If your preferred e-mail client does not support S/MIME you can still sign updates with PGP.
- Our implementation of X.509 allows a choice of ‘strong’ authentication methods.

S/MIME

Secure / Multipurpose Internet Mail Extensions

It is a protocol that allows the addition of digital signatures and/or encryption to MIME, the standard format used to send mail.

The Concerns

- Proposal for additional form of strong authentication to protect objects in the RIPE Database using X.509.
- Do many mail clients support S/MIME ?
- The RIPE NCC Software Engineering Department has undertaken a study to evaluate the degree of implementation of S/MIME in mail clients.

Selection of Mail Clients

- We extracted e-mail client information from Registration Services tickets and the RIPE Database update messages.
- We selected the most commonly used clients from the list.
- We also ensured that there was at least a choice of mail clients available on each of the three platforms we used.

Testing

- We installed the e-mail client and configured it to use S/MIME.
- We sent a set of messages to the client which were composed using OpenSSL.
- We received messages from the client and verified the signatures and encryption using OpenSSL.

Informal Testing

- Whilst setting up the clients we sent signed messages between different e-mail clients.
- For those clients that support S/MIME there were no problems recognising and validating messages from other clients.
- The user interface (and friendliness) varied considerably between clients, but the bit that matters seems to be quite standard.

Results

LINUX

- Successful

Mozilla

Mutt

Mulberry

Pine

- Failed

Sylpheed

Evolution

Results

WINDOWS

- Successful

Mozilla

Outlook

Outlook Express

Mulberry

Lotus Notes

The Bat!

- Failed

Eudora

Results

APPLE MAC

- Successful
 - Lotus Notes
 - Mulberry
 - Mail (with OS X Panther)
- Failed
 - Mail
 - QuickMail Pro

Documentation

- A more detailed description of this information can be found on the web site
http://www.ripe.net/ripenncc/pub-services/db/mail_client_tests.html

On Going

- Work is in progress on several other e-mail clients to add S/MIME features.
- We would welcome feedback from members who may be able to test their own e-mail client.
- Details of these tests will be added to our testing document.

Questions, Discussion

