Verschlüsselung - PGP vs. S/MIME

Ralf Becker
Geschäftsführer, EGroupware GmbH

Hadi Nategh
Softwareentwickler, EGroupware GmbH
PGP (Pretty Good Privacy) is an encryption protocol which provides cryptographic privacy and authentication. PGP can sign, encrypt and decrypt data.

PGP’s Features:

- Confidentiality (Encryption)
- Digital signatures (Authentication)
Encrypt data using random key

Encrypt data using receiver's key

Data

Gen. Random Key

Encrypted Key

Encrypted Message

Decryption

Decryption

Data

https://en.wikipedia.org/wiki/Pretty_Good_Privacy
S/MIME (Secure/Multipurpose Internet Mail Extensions) is a protocol for sending signed and encrypted messages. S/MIME helps to digitally sign and encrypt a message and make sure the received message is originated from the sender.

Basically, S/MIME provides two main services:

- Digital signature
- Message encryption
• Digital signatures

Digital signatures are equivalent digital version of traditional signature on paper document.

Digital signatures provide three security features:

- Authentication: To validate an identity

- Non-repudiation: The uniqueness of a signature

- Data integrity: To make sure received data has not been tempered
S/MIME

- Message Encryption

S/MIME encryption provides two features:

- Confidentiality
- Data integrity
Digital signatures:

Digital signatures are equivalent digital version of traditional signature on paper document.

Digital signatures provide three security features:

- Authentication: To validate an identity
- Non-repudiation: The uniqueness of a signature
- Data integrity: To make sure received data has not been tempered
PGP vs S/MIME

Similar features – what are the differences?

**PGP**

+ Private key stays in browser
+ More secure solution
- Key exchange & validation
- Browser plugin (Mailvelope) needed
- Client support specially mobile

**S/MIME**

+ Wide client support
+ Ease of use & deployment
+ Key exchange & validation via CA
- Security of CA infrastructure
- Security relies trust in server
THANK YOU!
Bei Fragen sprechen Sie uns gerne an!
If you have any questions, please feel free to contact us!

Ihr EGroupware Team
info@egroupware.org
0631 31657-0