Gentran Integration Suite™

Encryption Method

Version 4.3

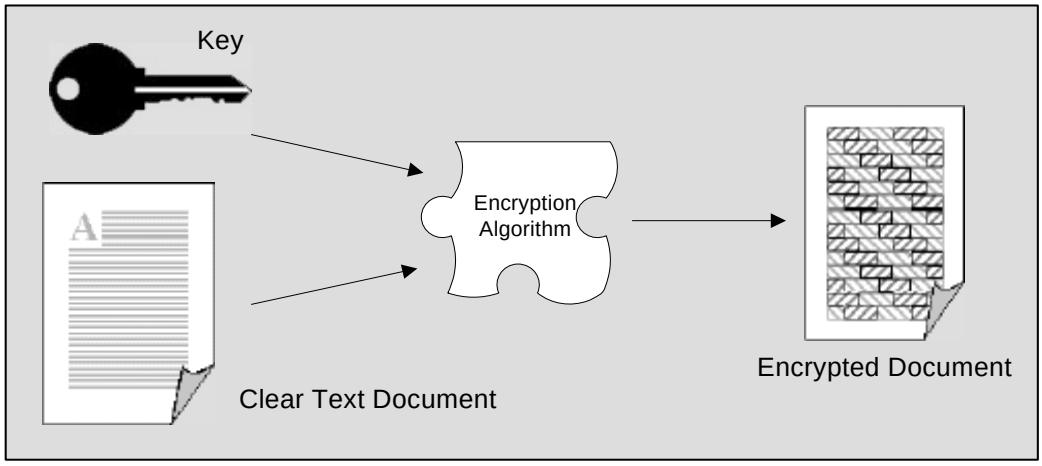
Sterling Commerce
An IBM Company

Application Encryption Method

Application uses a combination of public/private key encryption, which is also known as symmetric encryption, and asymmetric key encryption. The advantage of symmetric key encryption is that it performs the encryption task more quickly than asymmetric encryption. The advantage of asymmetric encryption is that it allows you to send an encrypted document to a trading partner who does not hold your private key. This Application hybrid method uses the best characteristics of each type of encryption and follows the widely adopted S/MIME standard for securing documents.

To use the best of both, Application uses the faster symmetric key to encrypt the document, such as a lengthy EDI transaction set, and the asymmetric key for the smaller task of encrypting the one-time session key. The session key can then be securely included with the document for exchange and allows your trading partner to decrypt the contents without sharing your secret key.

The following figure shows an encrypted document using a key acknowledgment that secures integrity during exchange:



Benefits of Encryption

Encrypting and digitally signing documents by using certificates provides you with the following assurances about each document exchange:

- Unauthorized people cannot access and read documents.
- Document integrity remains intact. That is, data cannot be changed, added, or deleted without your authorization.
- Only authorized trading partners can send you documents. Likewise, you can send documents to only those trading partners who authorized you to send documents to them.
- Trading partners who send documents cannot contend they did not send them (referred to as non-repudiation of origin).
- Trading partners to whom you send documents cannot contend they did not receive them (referred to as non-repudiation of receipt).