



Secure Email Technology

EXECUTIVE SUMMARY

The mission-critical importance of email in business today is requiring organizations to be ever-vigilant about the security of email. As companies use email for more sensitive and higher value communications and transactions with customers and partners, secure email is becoming an important corporate IT issue. In this Opinion Paper, we investigate the present challenges and threats to email security, and the solutions available in the market. The Opinion Paper also includes a qualitative comparison of product features among the top vendors of email security products.

Our key findings can be summarized as follows:

- Email security poses different challenges when messages are at rest and in transit. Various technologies have evolved to mitigate these challenges.
- S/MIME and PGP are the dominant encryption algorithms. Most email clients tend to be compatible with these standards.
- Different companies require different solutions when it comes to securing emails. Companies should choose among S/MIME, PGP, Mail VPN, and Secure Web-Mail based upon their industry, type of user, and size of business.

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SECTION ONE: OVERVIEW OF SECURE EMAIL

1. ASSESSING THE NEED FOR SECURE EMAIL

There are several reasons why an organization should consider secure email systems:

- Regulatory Obligations such as Gramm-Leach-Bliley, HIPAA¹, and Sarbanes-Oxley Act: Companies that are subject to these regulations consider secure email as a component of their compliance strategy.
- Brand Image: Unauthorized access to important records or intellectual property through email can tarnish the brand image of an organization.
- Trusted Relationships and Transactions: Organizations are built on relationships with various external entities. Secure email is a key for transacting successfully and in a trustworthy manner with these entities.

2. CHALLENGES TO SECURE EMAIL

Basic email security consists of securing the email data while it is in transit between the source and the destination, as well as when it is at rest (source and destination). Figure 1 schematically represents the challenges to email security under both these settings.