

AS1 and AS2 Information Sheet

1. What are AS1 and AS2?

Applicability Statement 1 (AS1) and Applicability Statement 2 (AS2) are the current specifications developed by EDIINT for transporting data between organizations via the Internet.

2. What is EDIINT?

EDI over the Internet (EDIINT) is a working group of the Internet Engineering Task Force (IETF) that is chartered with creating specifications for transporting EDI or XML documents over the Internet in a secure (digitally signed and encrypted), highly reliable manner.

3. Why is secure data transport important?

Security is an issue for any organization transmitting data electronically. Business data exchanged via the Internet typically includes sensitive information, such as inventory or sales figures, intended for a specific person at a specific organization. For this reason, it is important that data transmissions address privacy, access control and data integrity.

4. Why are the AS1 and AS2 standards important?

Standards, such as AS1 and AS2, simplify communication by reducing the number of technologies an organization must support and manage. If every large organization used a different data transport standard, it would be cost-prohibitive for their smaller business partners to exchange data with them electronically. AS1 and AS2 allow organizations to implement one solution for data exchange with all business partners who are using an AS1 or AS2 solution.

5. How does AS1 work?

AS1 provides S/MIME encryption and security over SMTP. S/MIME (Secure/Multipurpose Internet Mail Extensions) secures data with authentication, message integrity, non-repudiation of origin, and privacy features and is the standard means of transporting virtually all Internet email. SMTP (Simple Mail Transfer Protocol) is the protocol used by most email systems for sending email messages between servers.

6. How does AS2 work?

AS2 is an adjustment of AS1, providing S/MIME over HTTP or HTTP/S, instead of SMTP, as the transport protocol. HTTP (Hypertext Transfer Protocol) and its secure form, HTTP/S define how messages are formatted and transmitted and what actions Web servers and browsers should take in response to various commands.

7. How does AS1 compare with AS2?

Because AS1 uses SMTP it provides asynchronous, "store and forward" data transport, whereas AS2 makes use of HTTP to allow for synchronous, "real time" transmission of data with immediate message delivery notices.

8. What are the benefits of AS1 and AS2?

Secure electronic transmission of data, especially over the Internet, allows organizations to conduct business much more quickly than with paper. For example, turn-around times of business transactions are decreased when conducted electronically. With AS1, data is transferred swiftly via email. With AS2, data is transferred even faster, almost instantaneously, because it uses direct HTTP transfers.

Also, organizations benefit by greatly reducing the cost associated with traditional, Value-added Network (VAN) EDI. The AS1/AS2 specifications use the Internet to exchange data and, therefore, eliminate expensive VAN transaction fees.

In addition, because AS1 and AS2 are the recognized standards for data transport, organizations benefit by greatly reducing the time and cost associated with business data exchange. Using the recognized AS1/AS2 standards provides interoperability between data transmissions, ensuring organizations can read each other's data.

9. What about AS3?

There is no AS3 specification. While some vendor organizations claim to support AS3, it does not exist.

10. How do IPNet's products use AS1 and AS2?

IPNet's products use AS1 and AS2 to securely transport any data type with encryption and data authentication, ensuring that the sender and receiver are who they claim to be and providing notification of message delivery and receipt. On the sender side, the data is compressed and encrypted for transport. Once the data arrives on the receiving side, it is automatically decrypted and validated. Next, the recipient acknowledges receipt by returning an encrypted, signed or unsigned digital receipt to the sender. The sender receives the digital receipt and automatically decrypts it.

This secure data transfer process happens through AS1 and AS2's use of recognized security standards, specifically S/MIME, HTTP/S and digital certificates.

11. How can I be sure IPNet's products truly support AS1 and AS2?

The Uniform Code Council (UCC) in cooperation with the Drummond Group, Inc. sponsors an AS1/AS2 test program every six to nine months. This test program allows vendors to test the interoperability of their AS1 and AS2 products with those of other vendors in a setting that reproduces a customer environment. IPNet has successfully completed AS1 and AS2 interoperability testing.

12. What type of data can I transmit with AS1 and AS2?

Virtually any data. AS1 and AS2 are transport mechanisms and are not tied to any specific data format. Both AS1 and AS2 will work with almost any data type including EDI, XML, TXT, DOC, XLS and ebXML.

13. Should my company use AS1 or AS2?

That depends. AS1 and AS2 both offer the most secure data transport available. The benefit of AS2 over AS1 is that it offers real time, instantaneous notification of message delivery and receipt. AS2 requires a dedicated Web server, so, if you do not have a Web server which can be used to host your IPNet solution or your server is not always accessible from the Internet due to corporate firewall restrictions, AS2 is not an option for your organization.

AS1 software requirements:

- Email server Microsoft Exchange 5.5 SP2 or Lotus Notes R4.6 or higher
- Encryption security certificate from a certificate authority such as
 Verisign, Entrust or Thawte
- Modem if connecting to the email server via dial-up

AS2 software requirements:

- Encryption security certificate from a certificate authority such as Verisign, Entrust or Thawte
- Modem if connecting to the HTTP/S Web server via dial-up

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