



eDelivery

# What is AS4?

Connecting  
Europe

AS4 (Applicability Statement 4) is a Conformance Profile of the OASIS ebMS 3.0 specification. In particular, AS4 condenses in a single specification a series of well-known web-services specifications, such as WS-Security and SOAP (Simple Object Access Protocol) with Attachments. AS4 is typically used for the secure and reliable exchange of documents, attachments to these documents and data in general, and can be used in Business-to-Business (B2B), Business-to-Administration (B2A) and Administration-to-Administration (A2A) exchange contexts.



AS4 can be used in virtually every sector or business domain. AS4 was originally developed by the OASIS ebXML Messaging Services Technical Committee, and became an OASIS standard in 2013. In 2015, AS4 was chosen by the EU Member States, participating in the e-SENS Large Scale Pilot (LSP), as the primary protocol for B2B, B2A and A2A message exchange going forward.

Today, AS4 is the message exchange protocol promoted by the eDelivery building block of the Connecting Europe Facility (CEF). Consequently, CEF maintains the European implementation guidelines of the AS4 specification developed by the Member States within the e-SENS LSP. These implementation guidelines, also known as the e-SENS profile, provide a secure baseline for users and reduce the complexity of options available for vendors and implementers.



# ...and also:

## Reliable

- Built-in retry mechanism (“at least once”), provides robust recovery from temporary system or network failures
- Built-in duplication elimination (“at most once”)
- Details are configurable (e.g. number of retries, intervals) for parties or services

## State of the art

- Built on state of the art XML, Web Services, Web/Internet technologies and standards
- Multiple supported closed source implementations available, production proven
- Multiple supported open source implementations available, production proven
- Cloud and on-premise deployments
- Programming language independent (known implementations in Java, .NET, C and Perl)

## Payload agnostic

- Ability to carry payloads of any type (XML, binary, JSON etc.)
- Ability to carry any number of payloads (e.g. one XML payload and a second PDF payload)
- Built-in payload compression (reduces message size and can speed up transmission of large documents on slow networks)
- No a priori theoretical size limits

## Trusted

- OASIS Standard, actively supported
- On track to become an ISO Standard
- Specification freely available from the Internet
- No known IPR (intellectual property rights) issues, anyone can implement or use it

## Flexible and configurable

- Standard headers for party and service identification, as well as message identification and correlation
- Supports one way and two way message exchange
- Supports message conversation identification
- Arbitrary custom message and part properties (can help automate processes)
- Supports service-oriented and document-oriented data exchanges
- Feature set, partners and services can be configured using parameters (rather than programming)

## Supported

- CEF Conformance Testing Service available for implementers (avoids problems of incompatible or untested products)
- Community support available through the CEF eDelivery online community on CEF Digital
- Non-proprietary, meaning any compliant vendor can offer AS4-based solutions (increases access to and quality of options)

## Where is AS4 used?

AS4 is increasingly gaining interest from organizations that want to expand their B2B/B2C capabilities, both in Europe and further afield. In Europe, CEF eDelivery promotes and funds the use of AS4 for all cross-border communication between Member States. This has resulted in a number of pan-European projects adopting AS4 (through CEF eDelivery), or looking into the possibility of adoption.

### Where can you find out more?

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