CEF Definitions

Definitions

Common definitions

Architecture Management Board (AMB)

A CEF governance body responsible for the coordination and strategic alignment processes across all CEF building block DSIs. There one AMB to represent all Building Blocks, which meets on a quarterly basis.

Source: CEF Governance

Building block

Building Blocks are basic digital service infrastructures, which are key enablers to be reused in more complex digital services.

Source: Regulation (EU) No 283/2014

Client

"Clients" are the entities which have decided to reuse Building Blocks and associated services as described by the CEF Building Block DSI service offering. Such clients can for example be Directorate Generals of the Commission, or other European and National public administrations, as well as private organisations.

Source: CEF Building Block Master Service Arrangement

Connecting Europe

The Connecting Europe Facility (CEF) is a key EU funding instrument supporting the development of high performing, sustainable and efficiently interconnected trans-European networks in the fields of transport, energy and digital services (telecom).

Source: https://ec.europa.eu/inea/en/connecting-europe-facility

Core service platform

Core service platforms means central hubs of digital service infrastructures aiming to ensure trans-European connectivity, access and interoperability, and which are open to Member States and may be open to other entities

Source: Regulation (EU) No 283/2014

Digital Service Infrastructures

Digital Service Infrastructures (DSIs) describe solutions that support the implementation of EU-wide projects. They provide trans-European interoperable services of common interest for citizens, businesses and/or public authorities, and which are composed of core service platforms and generic services.

- Core Service Platforms (CSP) - the central hubs which enable trans-European connectivity. This part of a DSI is managed, implemented and operated by the Commission.
- Generic Services (GS) - the link between national infrastructures to the core service platforms. This part of a DSI is managed, implemented and operated by the Member States.

Source: Regulation (EU) No 283/2014

Digital Single Market

The European Commission has identified the completion of the Digital Single Market (DSM) as one of its 10 political priorities. A Digital Single Market (DSM) is one in which the free movement of persons, services and capital is ensured and where the individuals and businesses can seamlessly access and exercise online activities under conditions of fair competition, and a high level of consumer and personal data protection, irrespective of their nationality or place of residence.

Source: https://ec.europa.eu/digital-single-market/en/digital-single-market

DSI owner

The DSI Owner (there may be more than one) is accountable for the policy and functional side of the DSI.

Source: CEF Governance

DSI Solution Provider

The DSI Solution Provider is accountable for the delivery of the CEF Building Block, including the design and implementation of solutions in the form of Specifications, Software and Services.

Source: CEF Governance

e-SENS

Electronic Simple European Networked Services (e-SENS) is the last large scale pilot project of the ICT Policy Support Programme, with the aim of consolidating, improving, and extending the basic solutions brought by the other LSPs. The consolidated technical solutions aim to provide the foundation for a platform of "core services" for the cross-border digital infrastructure foreseen in the regulation for implementing the Connecting Europe Facility (CEF). In this way, e-SENS can be seen as the predecessor of the CEF programme.

Source: http://www.esens.eu/

Electronic Registered Delivery Service (ERDS)

Electronic Registered Delivery Service (ERDS) as a new trust service introduced by the eIDAS regulation. eIDAS defines ERDS as a service that makes it possible to transmit data between third parties by electronic means and provides evidence relating to the handling of the transmitted data, including proof of sending and receiving the data, and that protects it against the risk of loss, theft, damage or any unauthorised alterations.

Generic services

Generic services means gateway services linking one or more national infrastructure(s) to core service platform(s);

Source: Regulation (EU) No 283/2014

Information system

A system, whether automated or manual, that comprises people, machines, and/or methods organised to collect, process, transmit, and disseminate data that represent user information

Interoperability

Interoperability is the ability of disparate and diverse organisations to interact towards mutually beneficial and agreed common goals, involving the sharing of information and knowledge between the organisations, through the business processes they support, by means of the exchange of data between their respective ICT systems.

Source: European Interoperability Framework

Interoperability agreement

Interoperability Agreements are concrete and binding documents which set out the precise obligations of two parties cooperating across an 'interface' to achieve interoperability

Source: European Interoperability Framework

Large Scale Pilot

Between 2007 and 2015 the European Commission launched several cross-European projects to develop and test basic solutions for several different policy domains: e-Justice, eHealth, eProcurement, etc. These project were called Large Scale Pilots (LSPs) funded under the ICT Policy Support Program, and delivered the foundation for what we know today as the CEF Building Blocks.

Source: http://www.esens.eu/

Open source software (OSS)

Open Source Software (OSS) is computer software of which the source code is accessible. Apart from this main characteristic, other criteria concerning the distribution of the software need to be fulfilled such as non-discrimination against any person or group, allowing modifications and derived works, domain and technology neutral, etc.

Source: https://opensource.org/osd-annotated

Operational Management Board (OMB)

A CEF governance body responsible for:

- Operational matters regarding the 'operational-side' of the CEF building block DSIs, this involves: Reporting; Lifecycle management; Risk and issue management; Configuration management and Stakeholder management (this is not an exhaustive list);
- Providing advice to the operations on tactical matters taking into account the 'user side' of the CEF building block DSIs.

Each Building Block has its own OMB, which meets on a monthly basis.

Source: CEF Governance

Policy Domain Owner

The owners of the CEF sub-domains (or sectors), such as eJustice and eHealth. These are typically DG (Directorate-General) of the European Commission, e.g. DG Justice and DG Sante.

Source: CEF Governance

Profile

Most of the building blocks are based on profiles, meaning that several options of the original technical specifications were narrowed down in order to increase consistency, interoperability and to simplify deployment.

Source: European Interoperability Framework

Public Administration

Public Administration means a state, regional or local authority governed by public law or an association formed by one or several such authorities or a private entity mandated by at least one of those authorities or associations to provide public services, when acting under such a mandate.

Source: eIDAS Regulation

Sample software

Software developed by CEF that may be used to test other implementations of the technical specifications or as a working solution used in production environments.

Stakeholder

An individual or an organisation materially affected by the outcome of the information system. Stakeholders of an information system (amongst others) are: the business units, the users of the system, the supplier of the system, etc.

Standard

Standard means a technical specification, adopted by a recognised standardisation body, for repeated or continuous application, with which compliance is not compulsory, and which is one of the following:

(a) 'international standard' means a standard adopted by an international standardisation body;

(b) 'European standard' means a standard adopted by a European standardisation organisation;

(c) 'harmonised standard' means a European standard adopted on the basis of a request made by the Commission for the application of Union harmonisation legislation;

(d) 'national standard' means a standard adopted by a national standardisation body

Source: European Interoperability Framework

Standardization body

A chartered organisation tasked with producing standards and specifications, according to specific, strictly defined requirements, procedures and rules.

Standards developing organisations include:

- Recognised standardisation bodies such as international standardisation committees such as the International Organisation for Standardisation (ISO), or the three European Standard Organisations: the European Committee for Standardisation (CEN), the European Committee for Electrotechnical Standardisation (CENELEC) or the European Telecommunications Standards Institute (ETSI).
- Fora and consortia initiatives for standardisation such as the Organisation for the Advancement of Structured Information Standards (OASIS), the World Wide Web Consortium (W3C) or the Internet Engineering Task Force (IETF).

Source: European Interoperability Framework

Technical specifications

Technical Specification means a document that prescribes technical requirements to be fulfilled by a product, process, service or system and which lays down one or more of the following.

1. the characteristics required of a product including levels of quality, performance, interoperability, environmental protection, health, safety or dimensions, and including the requirements applicable to the product as regards the name under which the product is sold, terminology, symbols, testing and test methods, packaging, marking or labelling and conformity assessment procedures;
2. production methods and processes used in respect of agricultural products as defined in Article 38(1) TFEU, products intended for human and animal consumption, and medicinal products, as well as production methods and processes relating to other products, where these have an effect on their characteristics;
3. the characteristics required of a service including levels of quality, performance, interoperability, environmental protection, health or safety, and including the requirements applicable to the provider as regards the information to be made available to the recipient, as specified in Article 22(1) to (3) of Directive 2006/123/EC;
4. the methods and the criteria for assessing the performance of construction products, as defined in point 1 of Article 2 of Regulation (EU) No 305/2011 of the European Parliament and of the Council of 9 March 2011 laying down harmonised conditions for the marketing of construction products (1), in relation to their essential characteristics;

Source: REGULATION (EU) No 1025/2012 on European standardisation

eID Definitions

eID building block

The electronic identity (eID) building block helps public administrations and private online service providers to easily extend the use of their online services to citizens from other EU Member States. It allows cross-border authentication, in a secure, reliable and trusted way, by making existing national electronic identification systems

eIDAS Regulation (EU) N°910/2014

Regulation (EU) N°910/2014 on eID and trust services for electronic transactions in the internal market (eIDAS Regulation) adopted by the co-legislators on 23 July 2014 is a milestone to provide a predictable regulatory environment to enable secure and seamless electronic interactions between businesses, citizens and public authorities.

Directive 2000/31/EC (eCommerce Directive)

According Directive 2000/31/EC (eCommerce Directive), "service provider" is defined as any natural or legal person providing an information society service

Source: Eurlex

eSignature Definitions

eSignature

eSignature is a building block that block helps public administrations and businesses to accelerate the creation and verification of electronic signatures.

eDelivery Definitions

Access point

The Access Point is the key component of CEF eDelivery. At its core, public administrations adopting the same eDelivery Building Block can easily and safely exchange data with each other - even if their IT systems are independent from each other - through an Access Point.

The Access Points of eDelivery implement a standardised message exchange protocol which ensures secure and reliable data exchange.

Backend System

In the context of CEF eDelivery, the backend systems represent the IT systems of the public administrations, which need to exchange documents and data. In order to do so, the public administrations need to connect their backend systems to an eDelivery Access Point.

Connector

The Connector is a component of CEF eDelivery that facilitates the backend interaction between the Access Points and the Backend Systems of sender and receiver.

Domain Name System (DNS)

A Domain Name System (DNS) is a hierarchical and decentralised naming system for computers in a network. It translates more readily memorized domain names to the numerical IP addresses needed for the purpose of locating and identifying computer services and devices with the underlying network protocols.

Dynamic Discovery

If a participant wants to send a message using CEF eDelivery services, it should know the address of the endpoint of the recipient. CEF eDelivery does this through Dynamic discovery.

Dynamic discovery means that instead of looking at a static list of IP addresses and adding it manually to the message, the Access Point consults a Service Metadata Publisher (SMP) where information about every participant in the data exchange network is kept up to date, including the IP addresses of their Access Point.

eDelivery

eDelivery is one of the CEF Building Blocks. It helps public administrations to exchange electronic data and documents with other public administrations, businesses and citizens, in an interoperable, secure, reliable and trusted way.

eDelivery AS4 Common Profile

The eDelivery AS4 Common Profile profiles the OASIS ebMS3 and AS4 specifications. More specifically, it selects the AS4 ebHandler Conformance Profile, a specific conformance profile defined in the AS4 specification, and makes a selection of AS4 Advanced Features. The selected Conformance Profile and selected Advanced Features are profiled further for increased consistency, ease of configuration and up to date security. Finally, this Common Profile provides a common AS4 Usage Profile which is mandatory to be supported by all conformant eDelivery AS4 solutions. Additional functionality can be added in optional Profile Enhancements.

eDelivery AS4 Dynamic Receiver Profile Enhancement

The Dynamic Receiver Profile Enhancement is an optional module to the eDelivery AS4 specifications which allows parties to configure their AS4 MSH to receive user messages from Sender parties that have not been registered in the Receiving MSH and for which the party identifier and signing certificate have not been pre-shared between Sender and Receiver.

eDelivery AS4 Dynamic Sender Profile Enhancement

The Dynamic Sender Profile Enhancement is an optional module to the eDelivery AS4 specifications which allows parties to configure their AS4 MSH to send user messages to Receiver parties that have not been pre-configured. For these parties, the party identifier and AS4 protocol parameters (such as the party's encryption certificate and the address of its AS4 server endpoint) are not registered in the Sending MSH. The Profile Enhancement provides a mechanism by which P-Modes can be created dynamically and deployed on an ad hoc basis, by instantiating templates using additional parameters supplied by the Producer and data retrieved using queries on a discovery infrastructure.

eDelivery AS4 Four Corner Topology Profile Enhancement

The Four Corner Topology Profile Enhancement is an optional module to the eDelivery AS4 specifications which allows messages to be exchanged by Access Points on behalf of other parties instead of only using point-to-point message exchanges. In this so-called four corner topology, from an end-to-end perspective, there are four rather than two parties involved in the message exchange. Two parties are the original sender and final recipient parties. The other two parties are Access Points that route messages from the original sender to the final recipient and reverse route response messages.

eDelivery AS4 SBDH Profile Enhancement

The SBDH Profile Enhancement is an optional module to the eDelivery AS4 specifications which allows parties to use the eDelivery AS4 Common Profile in conjunction with the UN/CEFACT Standard Business Document Header [SBDH]. SBDH is a standard XML format that encodes common message metadata, such as identification of sender and receiver, the type of the payload and the business scope, business process, business transaction, agreement, and business quality-of-service. SBDH is widely adopted in various domains.

Electronic registered delivery service

According to the eIDAS regulation an electronic registered delivery service means a service that makes it possible to transmit data between third parties by electronic means and provides evidence relating to the handling of the transmitted data, including proof of sending and receiving the data, and that protects transmitted data against the risk of loss, theft, damage or any unauthorised alterations.

Source: http://ec.europa.eu/digital-agenda/en/trust-services-and-eid

Four-corner model

The CEF eDelivery solution is based on a distributed model called the "4-corner model". In this model, the back-end systems of the users don't exchange data directly with each other but do this through Access Points. It lends its name to the fact that a message passes four "corners" on its way:

- Corner 1 (C1) - the (backend system of the) original sender
- Corner 2 (C2) - the sending Access Point
- Corner 3 (C3) - the receiving Access Point
- Corner 4 (C4) – the (backend system of the) final recipient

As a result if this, public administrations adopting the same CEF eDelivery Building Block can easily and safely exchange data with each other through an Access Point - even if their IT systems are independent from each other.

PMode

PMode stands for Processing MODE.

PMode helps configuring AS4 Access Points. PMode parameters are either managed via a user interface or alternatively loaded into the Access Point via an XML file. Typically the following aspects are covered: Security | Reliability | Transport | Business Collaborations | Error Reporting | Message Exchange Patterns (MEPs) Message Partition Channels (MPCs). As different messages may be subject to diverse types of processing or as different business domains may have diverse requirements, Access Points commonly support several PModes. Some PMode parameters are of mandatory use, others are optional.

Public Key Infrastructure (PKI)

A Public Key Infrastructure (PKI) is a set of roles, policies, procedures and systems needed to create, manage, distribute, store and revoke digital certificates. The CEF eDelivery PKI service enables issuance and management of the digital certificates used in the CEF eDelivery components, e. g. between CEF eDelivery Access Points (AP) and Service Metadata Publishers (SMP), to ensure confidentiality, integrity and non-repudiation of the data moving across systems.

Service Metadata

Service Metadata is the information necessary for invoking a service using CEF eDelivery components. It is a combination of information on the end entity recipient (such as its identifier, certificate, supported business documents and processes in which it accepts those documents) and its associated endpoints (such as the transport protocol and its address).

Service Metadata Locator (SML)

Service Metadata Locator (SML) is a component of CEF eDelivery that is responsible for Dynamic Service Location: in order to send a message, a sender needs to discover where the information about a receiver is stored. The Service Metadata Locator (SML) serves this purpose, and guides the sender towards this location, which is called the Service Metadata Publisher (SMP).

In other words, the SML is used to add/update/delete information about the participants' SMP location on a Domain Name System (DNS). The SML is centralised.

Service Metadata Publisher (SMP)

Service Metadata Publisher (SMP) is a component of CEF eDelivery that is responsible for Capability Lookup: once the sender discovers the address of the receiver's SMP (Service Metadata Publisher), it is able to retrieve the needed information (i. e. metadata about the location and capabilities) of the receiver. With such information, the message can be sent.

In other words, the SMP is a register of the message exchange capabilities and location of participants. The SMP is usually distributed.

Service Provider

According to the eIDAS regulation a Service provider means a natural or a legal person who provides eDelivery services either as a qualified or as a non-qualified trust service provider

Source: http://ec.europa.eu/digital-agenda/en/trust-services-and-eid

Trust Establishment

In order to activate secure message exchange, two public administrations' Access Points need to establish trust between each other. This is done through digital certificates. This can be implemented through a PKI model or mutual exchange of certificates. During this process the sending Access Point uses its digital certificate to sign the data and documents; it may also encrypt it using the public key of the receiver. The receiving Access Point confirms the digital signature of the sender and decrypts the data using its digital certificate.

eInvoicing Definitions

European standard on electronic invoicing

The European standard on electronic invoicing should define semantic data elements referring, in particular, to complementary seller and buyer data, process identifiers, invoice attributes, invoice item details, delivery information, and payment details and terms. The core elements of an electronic invoice should be included in every electronic invoice. This should ensure the clear and uniform application of electronic invoicing. The European standard is due for publication Q2 2017.

Source: Art. 24, Directive 2014/55/EU)

CEF eInvoicing

CEF eInvoicing is a building block that aims to facilitate the adoption of the European standard by the market and assist Member States in implementing an eInvoicing solution that complies with the Directive 2014/55/EU.

Electronic invoice

An invoice that has been issued, transmitted and received in a structured electronic format which allows for its automatic and electronic processing.

Core elements of an electronic invoice

A set of essential information components which an electronic invoice must contain in order to enable cross-border interoperability, including the necessary information to ensure legal compliance.

Semantic data model

A structured and logically interrelated set of terms and their meanings that specify the core elements of an electronic invoice.

Syntax

The machine readable language or dialect used to represent the data elements contained in an electronic invoice.

Syntax bindings

Guidelines on how a semantic data model for an electronic invoice could be represented in the various syntaxes;

Contracting authorities

The State, regional or local authorities, bodies governed by public law or associations formed by one or more such authorities or one or more such bodies governed by public law, as defined in point 17 of Article 1 of Directive 2009/81/EC, Article 6(1) of Directive 2014/23/EU and point (1) of Article 2(1) of Directive 2014/24/EU.

Sub-central contracting authorities

All contracting authorities which are not central government authorities, as defined in point (3) of Article 2(1) of Directive 2014/24/EU.

Central purchasing body

A contracting authority providing centralised purchasing activities and, possibly, ancillary purchasing activities; as defined in point (16) of Article 2(1) of Directive 2014/24/EU;

Contracting entities

Contracting entities are entities which:

(a) are contracting authorities or public undertakings and which pursue one of the activities referred to in Articles 8 to 14;

(b) when they are not contracting authorities or public undertakings, have as one of their activities any of the activities referred to in Articles 8 to 14, or any combination thereof and operate on the basis of special or exclusive rights granted by a competent authority of a Member State.

as defined in point 17 of Article 1 of Directive 2009/81/EC, Article 7(1) and (2) of Directive 2014/23/EU and Article 4(1) of Directive 2014/25/EU;

International standard

An international standard as defined in point (a) of Article 2(1) of Regulation (EU) No 1025/2012;

eTranslation Definitions

CEF Automated Translation LR repository

The LR Repository gathers language resources i.e. data (multilingual and monolingual corpora, translation memories, lexical resources etc.) and tools needed to transform the raw input data in correctly formatted data sets that can be directly used to build the Machine Translation engines as well as tools that can be used for improving the quality of automated translation and for customising it to specific needs. The LR Repository delivers the data set required for the "Engines Factory" to build engines.

The LR Repository of CEF Automated Translation building block comprises two separate databases:

a) the "ELRC-SHARE repository" which is developed by ELRC contractors (under SMART 2014/1074 and SMART 2015/1091 LOT 2 contracts) and shall be migrated to the EC infrastructure before the contract end (December 2019); and

b) the "Euramis clone" hosted by DGT.

CEF eTranslation

eTranslation is a Connecting Europe Facility (CEF) building block. Its main goal is to help European and national public administrations exchange information across language barriers in the EU, by providing machine translation capabilities that will enable all Digital Service Infrastructures (DSIs) to be multilingual.

ELRC-Share repository

The Repository hosts the collected language resources. The repository will have a centralized part which will enable direct processing of the resources for the purposes of CEF Automated Translation, and it will allow for distributed storage (necessary e.g. to respect the access conditions /confidentiality requirements of some external language resources providers)

Language resources

Sets of language data and descriptions in machine readable form, including written and spoken corpora, grammars, and terminology databases. Language resources can be used to build, improve, or evaluate natural language systems such as machine translation engines

Natural Language Processing (NLP) tools

Natural language processing (NLP) is a field of computer science, artificial intelligence and computational linguistics concerned with the interactions between computers and human (natural) languages, and, in particular, concerned with programming computers to fruitfully process large natural language corpora. Challenges in natural language processing frequently involve natural language understanding, natural language generation (frequently from formal, machine-readable logical forms), connecting language and machine perception, dialog systems, or some combination thereof.

Neural machine translation

New machine translation paradigm which uses machine learning to generate translations.

Statistical machine translation

Statistical machine translation (SMT) is a machine translation paradigm where translations are generated on the basis of statistical models whose parameters are derived from the analysis of bilingual text corpora.