



eDelivery

Send your first AS4 Message!

eDelivery Live Hands-on Webinar

Contact: EC-DIGITAL-BUILDING-BLOCKS@ec.europa.eu

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Welcome

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**Stakeholder Management and
Communication Office**

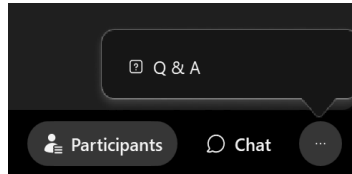
Introduction and house rules



Please note that this event is recorded.



Please ask your questions anonymously in the Q&A section on the right side of the screen.



Raise your hand if you want to ask a question.



Mute your microphone when you are not speaking.

- Transition to the **Digital Europe Programme**
- Informal Cooperation Network
- New features and improvements in the Domibus 5.0 release
- eDelivery success stories
- Support activities
- Once Only Technical System
- **eDelivery Interoperability Forum** for creators of AS4 conformant software

Agenda

This Hands-on Webinar aims to showcase the **sending of AS4 messages using eDelivery**.



14h00 – 14h05 | Welcome



14h05 – 14h20 | Introduction to eDelivery



14h20 – 14h25 | eDelivery service offering



14h25 – 15h10 | Hands-on session – Send your first AS4 message



15h10 – 15h30 | Q&A and sharing of experiences



Introduction to eDelivery

Bogdan DUMITRIU



Digital Europe Building Blocks

A **Building Block** is an open and reusable digital solution.

What?

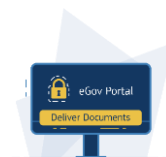
It can take the shape of **frameworks, standards, software products or software as a service (SaaS)**, or any combination thereof.

How?

It promotes the adoption of the same **open standards and technical specifications** by the **different sectors** of the Union for the most basic & common functionalities of their projects or platforms.

Why?

Building Blocks enable interoperability across borders and sectors.



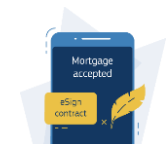
eDelivery

Exchange online data and documents reliably and securely.



eInvoicing

Promote the implementation of the European standard for electronic invoicing across borders.



eSignature

Create and verify electronic signatures between businesses and EU citizens.



eID

Allow citizens to prove who they are across borders, making it easier to access online services in another EU Member State.

and more...

How to use a Building Block?

There are 3 options: **buy**, **build** or **reuse** and you can always **co-develop** your solution with other parties.



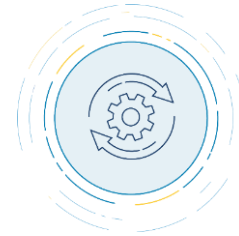
Buy

Buy a compliant, interoperable solution from the market.



Reuse

Reuse sample software available through Digital Europe.



Build

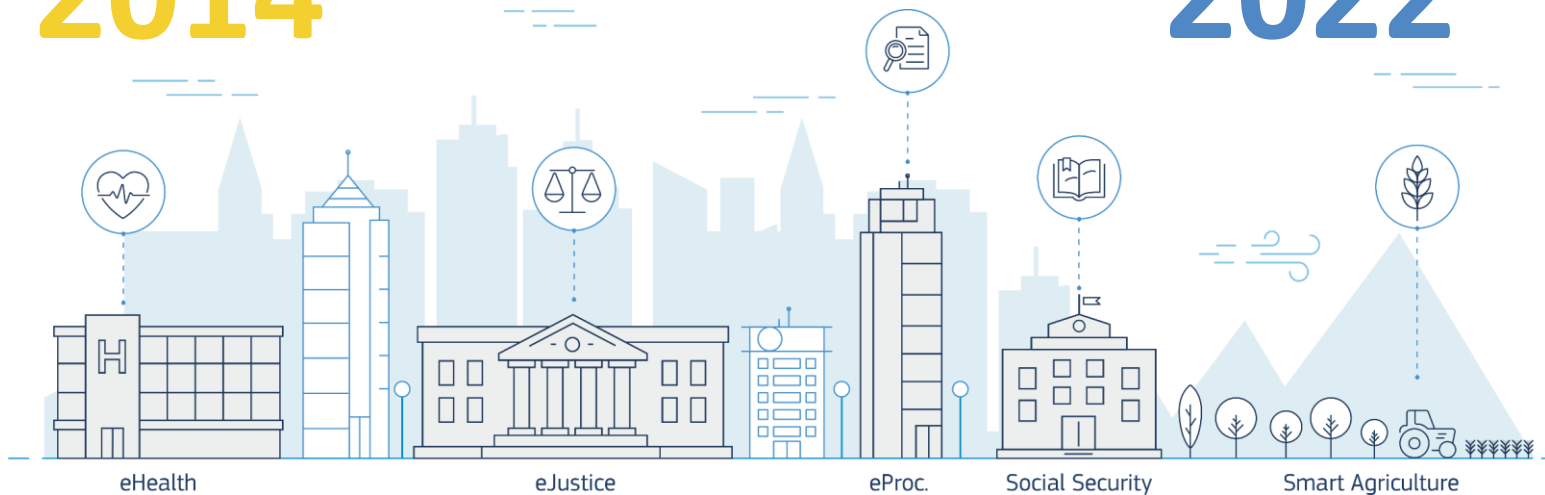
Build an EU-compliant solution from scratch based on Building Block standards.

Whatever you choose, **the relevant Digital Europe team will support you** in implementing the Building Block into your project.

Building Block adoption throughout the years & sectors

2014

2022



- **338** projects reusing a Building Block.
- **53** projects committed to reuse.

- **88** projects committed to analyse.
- **150%** increase in reuse since 2018.

What is eDelivery?



eDelivery

Exchange data and documents online reliably and securely.



Interoperability

eDelivery enables the exchange of documents and data among heterogeneous information systems using a standardized protocol, thereby laying the foundation for cross-domain and cross-project interoperability.



Scalability and performance

eDelivery solutions ensure sustainable levels of performance and maintainability even as the number of participants and/or messages in a network grows.



Security and accountability

eDelivery ensures data integrity and confidentiality in every transmission through the use of digital signatures and encryption. eDelivery also guarantees legal assurance and accountability by mandating that the recipient of a message must send a digitally signed acknowledgement of receipt for every message received.



Vendor and platform agnostic

Because this is a vendor and platform neutral solution, its specifications are not proprietary or controlled by one vendor alone. Also, eDelivery is available in multiple products and solutions from different vendors you can choose from.

Paper delivery



Write
the message



Look for a
destination
address



Put the
message in
an
envelope



Post
the letter



Transport
the
message to
its
destination



Deliver
the message

eDelivery

1

Submit

Sender sends message to sending AP

2

Send

Sending AP processes message

- Validation and compression of the user message;
- Signing of the compressed message;
- Encryption of the signed compressed message.

3

Receive

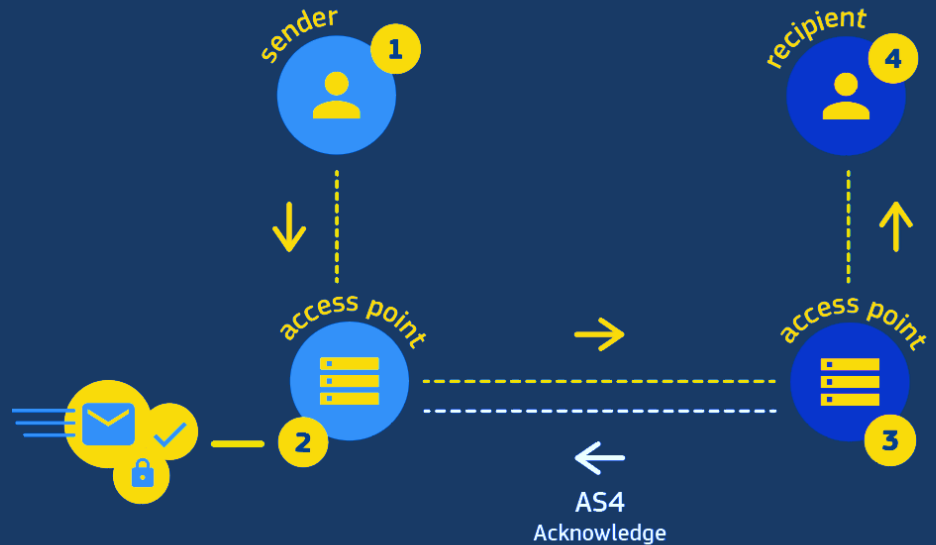
Receiving AP processes message

- Receives and decrypts the encrypted message;
- Verifies the sender's signature;
- Decompresses the decrypted message;
- Validates the original user message;
- Sends the acknowledgement to the sending AP;
- Stores the user message for download.

4

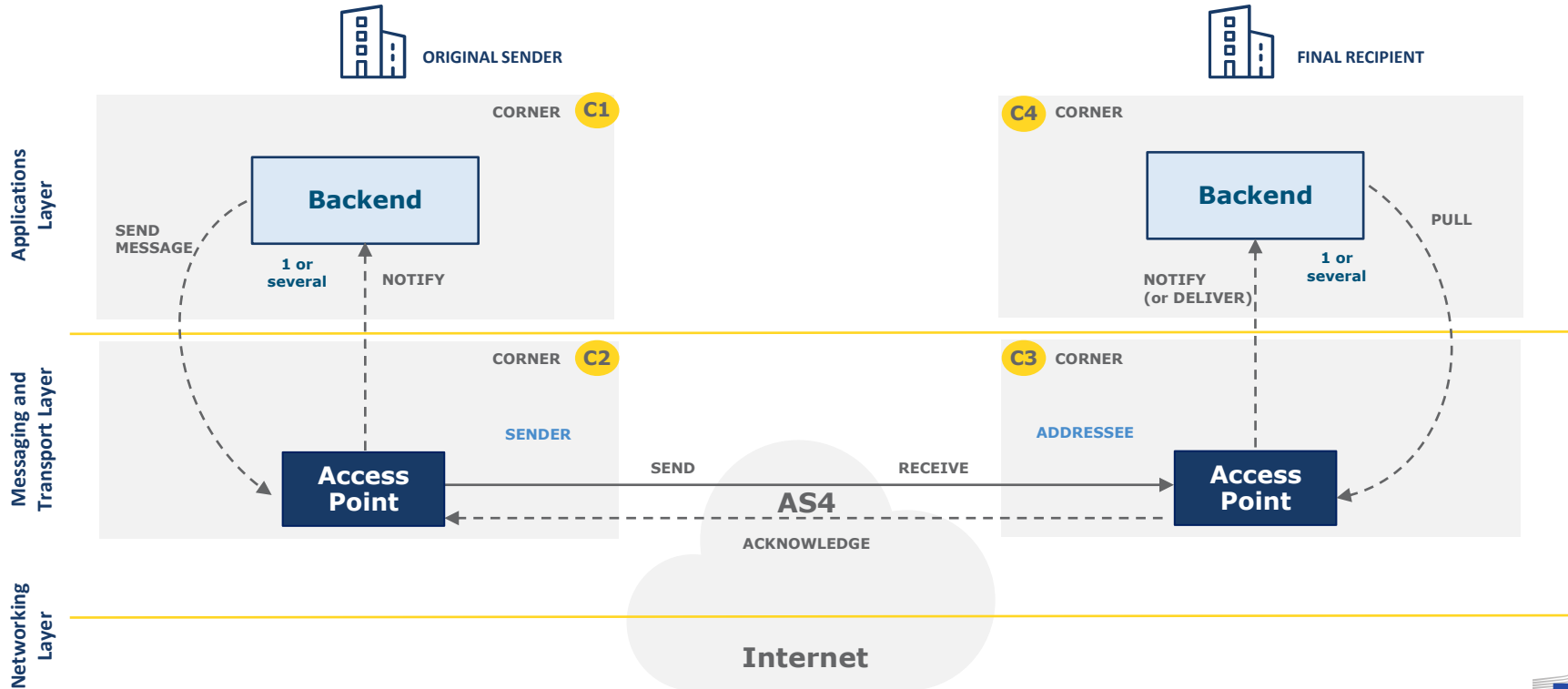
Deliver

Recipient receives message from receiving AP



eDelivery Four-Corner Model



Static discovery





eDelivery Service offering

SOFTWARE

Sample software maintained by the EC (with documentation)



Access Point (AP)  

Service Metadata Publisher (SMP) 

Service Metadata Locator (SML) 

OPERATIONS SERVICES

Managed services

Public Key Infrastructure (PKI)  



Service Metadata Locator (SML)  

Testing services

Connectivity testing 

Conformance testing  

Supporting services


Training & Deployment  

Service Desk  

STAKEHOLDER MANAGEMENT SERVICES

Onboarding services (for stakeholders)

Self-assessment tool

Onboarding of new stakeholders 

Cost estimation tool

Community management services

Developers Community

Market guide

TECHNICAL SPECIFICATIONS

Access point specifications

SMP specifications

SML specifications

Security control guidance

Trust models guidance

Guidance on digital certificates

STANDARDS OF SOs

Standards monitoring



Service offering Description (SoD)

All services are described in an SoD describing its purpose, the users for which it is for, its benefits and the process to obtain it



Service Level Arrangements (SLA)

Documents that describe Service Level Targets to be reached when delivering Building Block Services.



eLearning, videos, success stories

Some services feature multimedia such as eLearnings, instructional videos or success stories to help grasp what the service is about

Digital Europe platform

eDelivery service offering, and more about the building block, can be found online

Digital Europe

eDelivery AS4 conformant solutions

Access Point software

eDelivery AS4 conformant solutions

Domibus

Domibus releases

Domibus support arrangement

Domibus FAQs

Access Point specifications

SMP software

SMP specifications

SML software

SML service

SML specifications

PKI Service

Security Controls guidance

Connector specifications

eDelivery Stakeholders onboarding

eDelivery AS4 conformant solutions

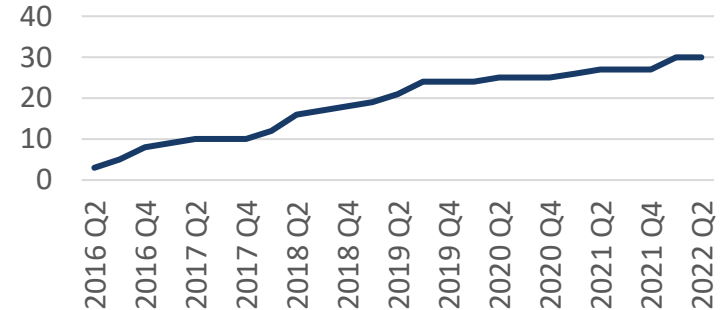
This page lists the solutions that have passed the conformance testing according to the eDelivery AS4 profile:

- [Axway](#)
- [B2BRouter](#)
- [Babelway](#)
- [Bizbrains](#)
- [CData Arc](#)
- [Cleo Integration Cloud](#)
- [Data Interchange](#)
- [DCS EIP](#)
- [Domibus](#) (EC sample implementation)
- [Edicom ASx Server](#)
- [eefacta Server](#)
- [EESSI AS4.NET](#)
- [Flame](#)
- [Galaxy Gateway](#)
- [Harmony eDelivery Access](#)
- [Holodeck B2B](#)
- [IBM](#)
- [Ida Infront iipax.com](#)
- [iFenix](#)
- [ion-AP](#)
- [Laurentius](#)
- [Mendelson](#)
- [Navitasoft - IP Systems AS4-IP](#)
- [Nota](#)
- [OXALIS](#)
- [Pagero](#)
- [phase4](#)
- [Qvalia](#)
- [SEEBURGER](#)
- [Software AG](#)
- [ViaAdValvas Gateway](#)

More information on Digital Europe

[Conformant Solutions >](#)

Evolution of AS4 conformant solutions (2016-2022)



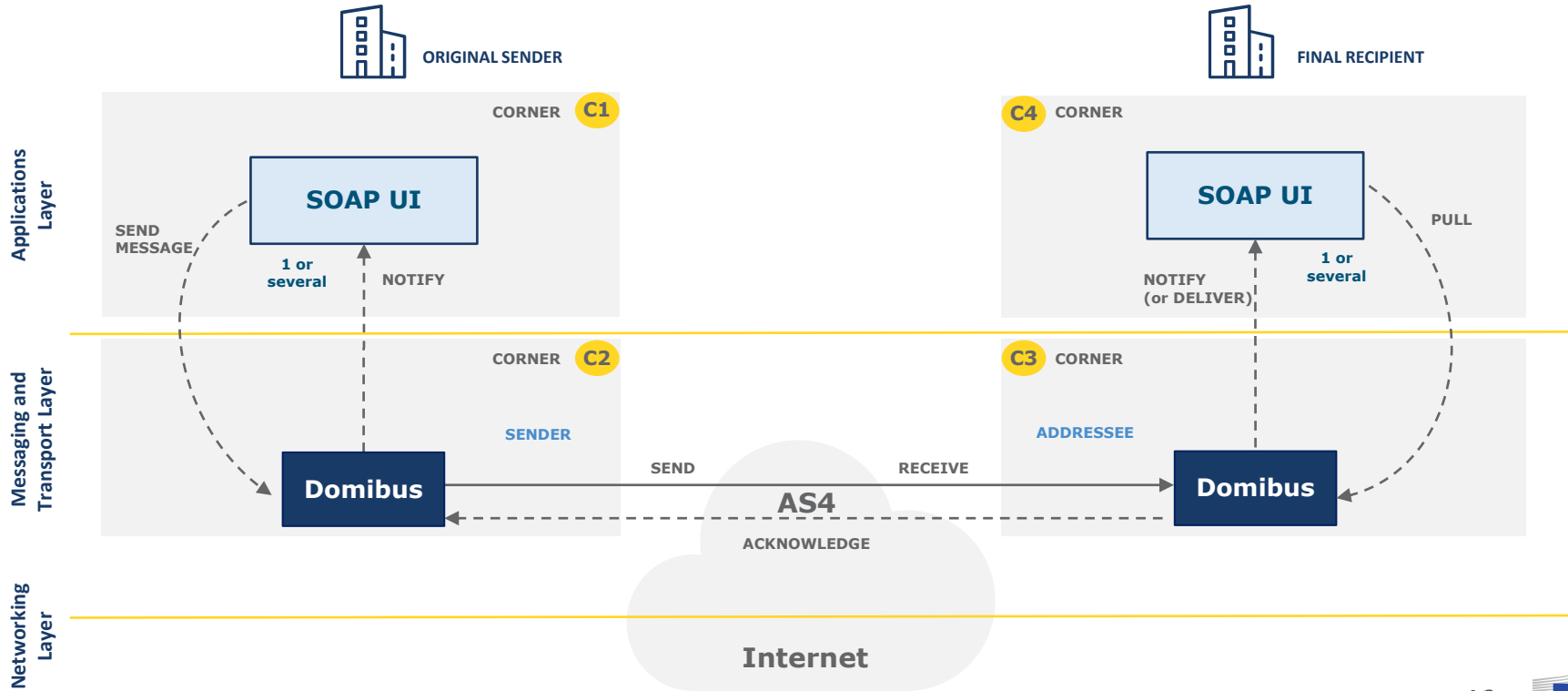


Hands-on Session:
Send your first AS4 Message!

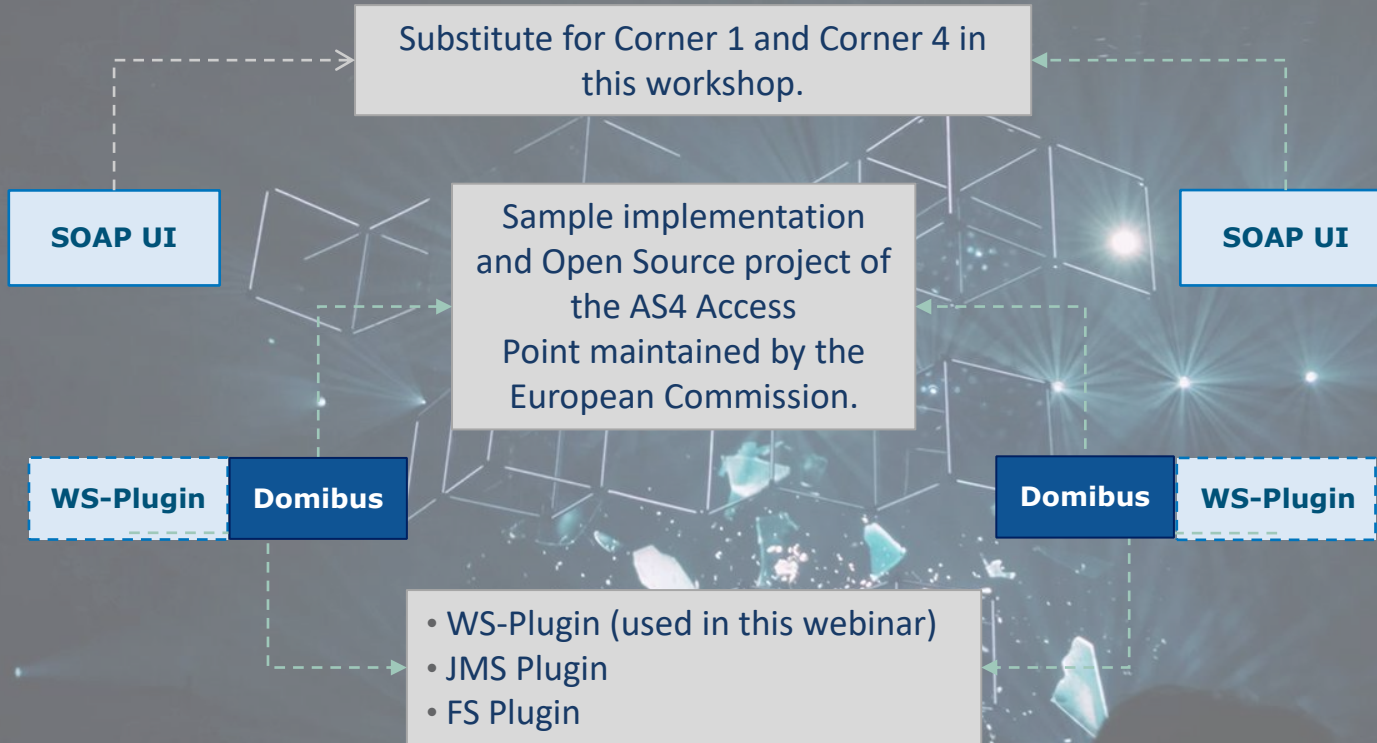
Ioana DRAGUSANU

eDelivery Four-Corner Model

Static discovery



Webinar scenario



Webinar steps

Launch instances

Docker Instance

- Launch Domibus based on the Domibus Docker image, and MySql Docker image

Configuration *(pre-configured)*

PMode File

- Configure the parties, endpoint URLs for the sending and receiving Access Points
- Configure compression, number of retries, etc.

Truststore .jks

- Configure the public certificate

Runtime Scenario

Backend C1 sends the message to Access Point C2

The Message is sent from sender Access Point C2 to receiving Access Point C3

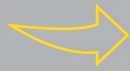
An acknowledgement is sent from C3 to C2

C4 downloads the message from C3

I. Launch instances



Docker compose file



Docker image for Domibus 5.0
Tomcat 9 and MySQL 8

```
##  
## Corner 2 - Domibus Tomcat MySQL Blue Configuration  
##  
mysqlc2:  
  image: domibustest/domibus-mysql8:5.0  
tomcatc2:  
  image: domibustest/domibus-tomcat9:5.0
```

```
# Start: docker-compose up -d  
# Logs:  docker-compose logs -f
```

II. Configuration

PMode Configuration



Configure Parties container

`PMode[1].businessProcesses.parties.party`: This parameter Contains the name of the partner Access Points and the address (endpoint URL) of the Receiver MSH to which User Messages under this PMode are to be sent.

`PMode[1].businessProcesses.parties.party.Identifier`: This Parameter contains the name of the clients' backend associated to the parent Access Point.

```
<parties>
  <party name="red_gw"
    endpoint="http://red_hostname:8080/domibus/services/msh">
    <identifier partyId="domibus-red" partyIdType="partyTypeUrn"/>
  </party>
  <party name="blue_gw"
    endpoint="http://blue_hostname:8080/domibus/services/msh">
    <identifier partyId="domibus-blue" partyIdType="partyTypeUrn"/>
  </party>
</parties>
```


II. Configuration

Truststore upload


The background features a dark, almost black space filled with numerous glowing blue light trails and starburst patterns. In the center, there is a cluster of 3D wireframe cubes, some of which are partially broken or shattering, with bright blue and white light emanating from the fragments. The overall aesthetic is futuristic and high-tech.


Truststore .jks file

Certificate Details for Entry 'blue_gw'

Certificate Hierarchy:  blue_gw

Version: 3

Subject: C=BE,O=eDelivery,CN=blue_gw 


Issuer: C=BE,O=eDelivery,CN=blue_gw 

Serial Number (hex.): 0xE07B6B956330A19A


Serial Number (dec.): 16175640775989698970

Valid From: 9/14/2017, 10:27:39 AM EEST

Valid Until: 12/1/2025, 9:27:39 AM EET

Public Key: RSA 2048 bits 

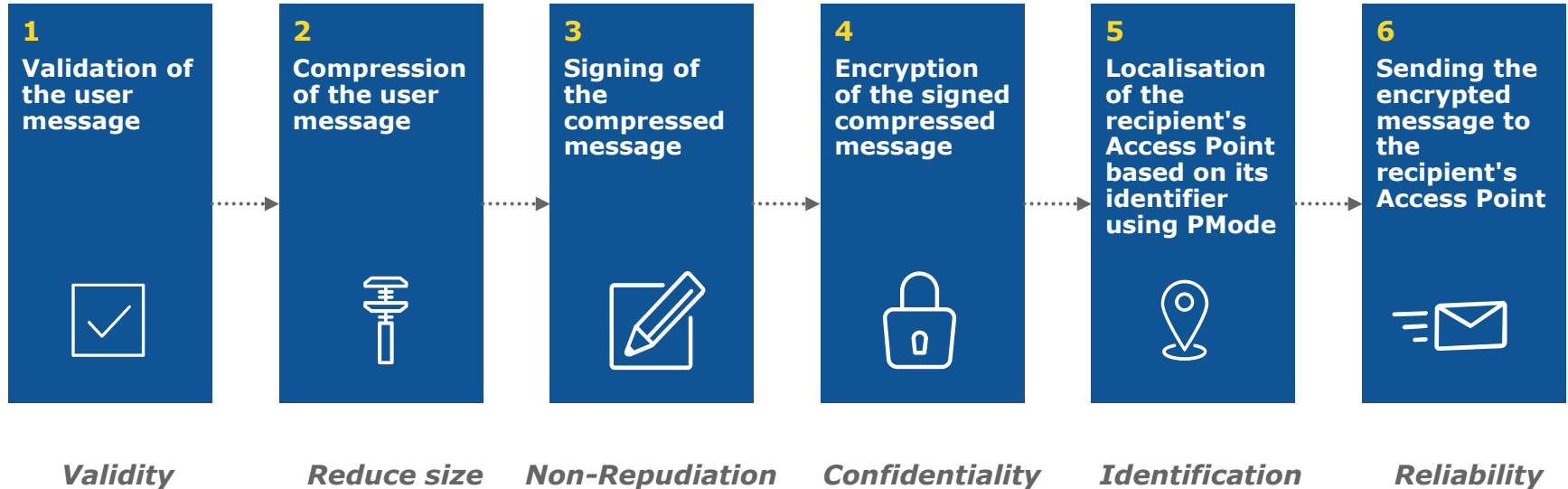
Signature Algorithm: SHA-256 with RSA

Fingerprint: SHA-1 8D:D6:A4:A2:97:E1:BB:6B:0C:E4:2D:FD:56:06:78:47:DA: 

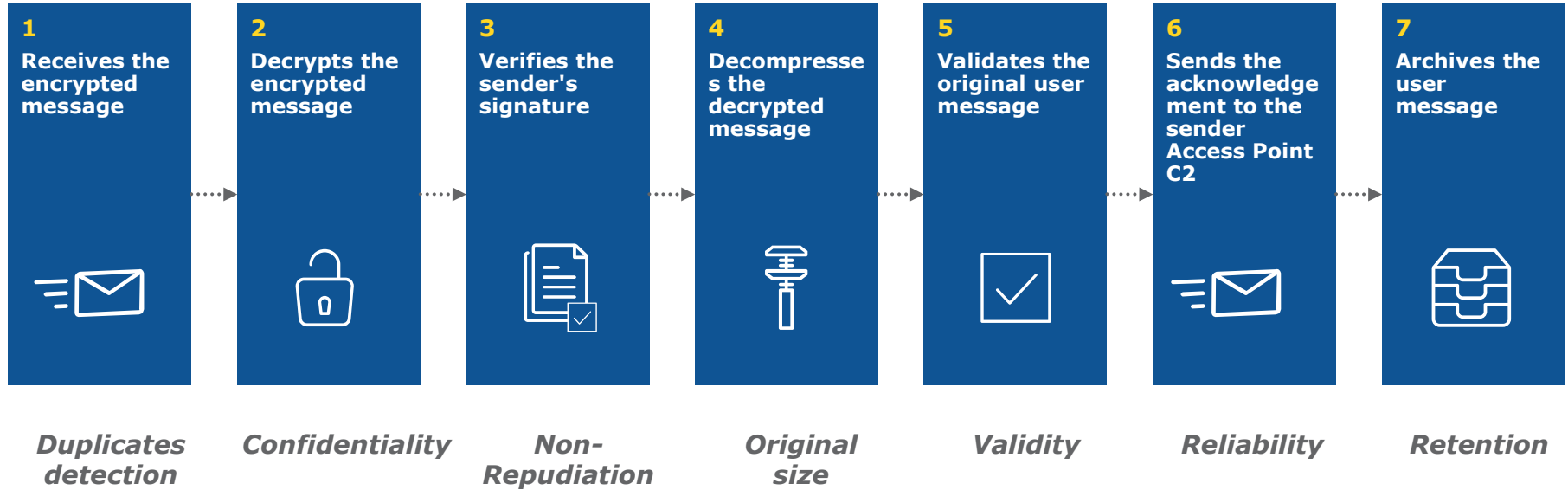
III. Run-time process

The image features a dark, atmospheric background with a grid of glowing blue wireframe cubes. Several bright light sources create starburst effects, and beams of light radiate from these points. In the center, the text 'III. Run-time process' is displayed in a bold, yellow, sans-serif font. The overall aesthetic is futuristic and technical.

SEND: Processing at C2.



RECEIVE: Processing at C3.



Domibus Release 5.0

Specifications

- eDelivery AS4 Profile 1.15
- OASIS AS4 Profile
- ebMS3 Core

App serves

- Tomcat 9, WebLogic 12, Wildly 26

Databases

- MySQL, Oracle

Technologies

- SOAP 1.2 *with attachments*
- Apache CXF
- Apache WSS4J
 - WS-Security: *WSSSMA, WSSX509, WSSSWA,*
 - WS-Policy: *rsa-sha256, aes128-gcm, rsa-oaep, mgf1sha256*
- GZIP
- WS, FS, JMS plugins

Anatomy of message

```
<?xml version="1.0" encoding="utf-8"?>
<env:Envelope xmlns:env="http://www.w3.org/2003/05/soap-envelope">
  <env:Header>
    <eb:Messaging xmlns:eb="http://docs.oasis-open.org/ebxml-msg
  <eb:UserMessage mpc="http://docs.oasis-open.org/ebxml-msg
    </eb:UserMessage>
  </eb:Messaging>
  <wsse:Security xmlns:wsse="http://docs.oasis-open.org/wss
    <xenc:EncryptedKey xmlns:xenc="http://www.w3.org/2001
      <xenc:EncryptionMethod Algorithm="http://www.w3.
        ...
      </xenc:EncryptedKey>
    <xenc:EncryptedData xmlns:xenc="http://www.w3.org/2001
      <xenc:EncryptionMethod Algorithm="http://www.w3.org/2009/xmlenc11#aes128-gcm"/>
        ...
      </xenc:EncryptedData>
    <ds:Signature xmlns:ds=""http://www.w3.org/2000/09/xmldsig#"
      ...
    </ds:Signature>
  </wsse:Security>
</env:Header>
<env:Body/>
</env:Envelope>
```

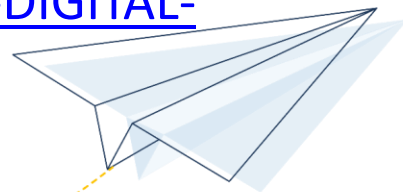
The image features a dark, atmospheric background. A grid of glowing, wireframe cubes is arranged in a roughly rectangular shape. From the vertices of these cubes, numerous bright blue light rays emanate, creating a starburst effect. The overall color palette is dominated by deep blues and blacks, with the yellow text providing a sharp contrast. The text is centered horizontally and positioned in the middle of the frame.

Q&A and sharing of experiences

Any further questions?

For policy-related questions, send us an email at EC-DIGITAL-BUILDING-BLOCKS@ec.europa.eu.

For technical support-related questions, write us at EC-EDELIVERY-SUPPORT@ec.europa.eu.



THANK YOU!



We look forward to welcoming you in our future events!

Please provide your feedback on this workshop by completing an [evaluation survey](#).

A message exchange infrastructure is

A combination of a message exchange model, discovery model and security model on top of the internet, or of a private network, to exchange structured or unstructured information encapsulated in messages.

