Common PKI Implementation in Aviation

ATIEC 2023

Patrick MANA
EATM-CERT manager
Cyber-security Program Manager
European Aviation Common PKI (EACP)
A Building Block for the European Aviation Digital Infrastructure

Improve security throughout aviation value chain
Trust Framework (governance, policies, procedures)
Common service reducing costs & providing:
- certificates
- Interoperability between existing PKI

Targeting hundreds of users

We are as strong as the weakest link
Two-track approach:
- Initial Solution (current needs)
- Target Solution (future needs)

Approach supported by NDTECH/8

~40 Dols received
EACP Initial Solution - Track1

**Digital certificates**
- Interoperability

**Commercial off the shelf PKI**

**Steering by users under existing working arrangements (subset of CYBERG)**

**EUROCONTROL Procurement 2023**

<table>
<thead>
<tr>
<th>Estimated cost (/cert/y)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EUROCONTROL use ~4,000 certs</td>
<td>~275 €</td>
</tr>
<tr>
<td>+ 6,000 certs</td>
<td>~200 €</td>
</tr>
<tr>
<td>+16,000 certs</td>
<td>~100 €</td>
</tr>
</tbody>
</table>

**Means to comply with CP1 on time**

**Interoperability and reduced cost**

**Learning from Initial Solution for further development**

**SUCCESS IS SIMPLE**

DO WHAT'S RIGHT, THE RIGHT WAY, AT THE RIGHT TIME.

**Group Buying**

Voluntary
EACP Procurement of a common service
Timeline - summary

Declaration of Interest
Who wants to benefit from Initial Solution?
Open to all aviation stakeholders:
ANSPs
Airports
Airlines
Manufacturers
CAAs...

EUROCONTROL Procurement
EACP Initial Solution - Operation

CP1 met

EACP Target Solution – Preparation

SDM consultation

SDM consultation

01/2023

01/2024

SDM Common PKI Project
Call For Tenders Technical Specifications
Governance & Funding Principles
Tech Framework & Procedures

EACP Track2 – deployment
When needed

EACP Track1

NDTECH/8

SDM Common PKI Project

SESAR R&D PCP
Airports
- France - Groupe ADP
- France - Nice
- Switzerland - Zurich
- UK - Manchester Airport Group

Airlines
- France - Air Caraïbes

MET
- Cyprus
- Finland
- Germany
- Poland
- Spain
- Switzerland

Manufacturer
- Thales

ANSPs
- Austria - Austrocontrol
- Belgium - skeyes
- Bulgaria - BULATSA
- Croatia - Crocontrol
- Czech republic – ANS-CZ
- Estonia – EANS
- Finland - FINTRAFFIC
- France - DSNA
- Germany – DFS
- Greece – HANSA
- Ireland - IAA
- Italy - ENAV
- Latvia – LGS
- Moldova - MOLDATSA
- Netherlands - LVNL
- Norway - AVINOR
- Poland - PANSA
- Romania – ROMATSA
- Serbia & Montenegro - SMATSA
- Slovakia – LPS.SR
- Slovenia - SloveniaControl
- Spain – ENAIRE
- Sweden - LFV
- Switzerland - skyguide
- Türkiye - DHMI
- UK - NATS

Italics: contribute to steering EACP
EACP Scope of the contract

**FIRM LOTS**
- Certificates for ECTL, RA
- CTL cert

To be financed by ECTL Budget

**OPTIONAL LOTS**
- More certificates for ECTL
- Certificates for others
- LRA

To be financed by ECTL Budget

To be financed by other entities (ANSPs, Airports, Airspace users, Militaries, etc.)
EACP Procurement Roadmap

**Call For Interest**
March-May 2023
Industry day: 3 May

- ~ 40 Letters of Interest received
- Teams CYBERG/6

**CFT preparation**
July 2023
- CYBERG/7

**CFT**
October 2023
- CYBERG/8

**Eval.**

**Nego.**
December 2023
Contract Award

**CSLA First draft**

**CSLA Review**

**CSLA Final**

- Conditions to involve other entities in the preparation and evaluation
- Payment mechanisms for other parties benefiting from the contract
- Governance rules
- Liabilities / responsibilities
THANK YOU

patrick.mana@eurocontrol.int
SUPPORTING EUROPEAN AVIATION
Interop criteria – local PKI

• Criteria for interop defined:
  • D1.2 Annex A3.d
  • Assessment framework & procedures
  • Acceptable proof of compliance – to be refined
  • If Local PKIs already exist, an initial “pre-assessment” can be done now
Local PKI docs

1) CP and CPS
2) PKI Specification and architecture
3) PKI Processes and Procedures
4) CA Key Management policy and procedures
5) PKI Governance structure
6) PKI term of use and agreements