SECARDEO

Office 365 OME or S/MIME with an automated certificate management

A comparison of security, usability and management

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Need for secure E-Mail

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- CEO Fraud / Business E-Mail Compromise
  - Global damage: $1.3 Bn. p.a.[1]
  - Example Pathé NL: $21.5 Mio. [2]

→ Solution: Digital Signature

- Economic Espionage
  - Damage in D: €43.4 Bn. over 2 years [3]
  - CLOUD Act obliges US companies to grant data access for US administrations. Even outside of the USA!

→ Solution: E-Mail Encryption

1) FBI 2019
2) Forbes 2018
3) Bitkom 2018

Secure E-Mail

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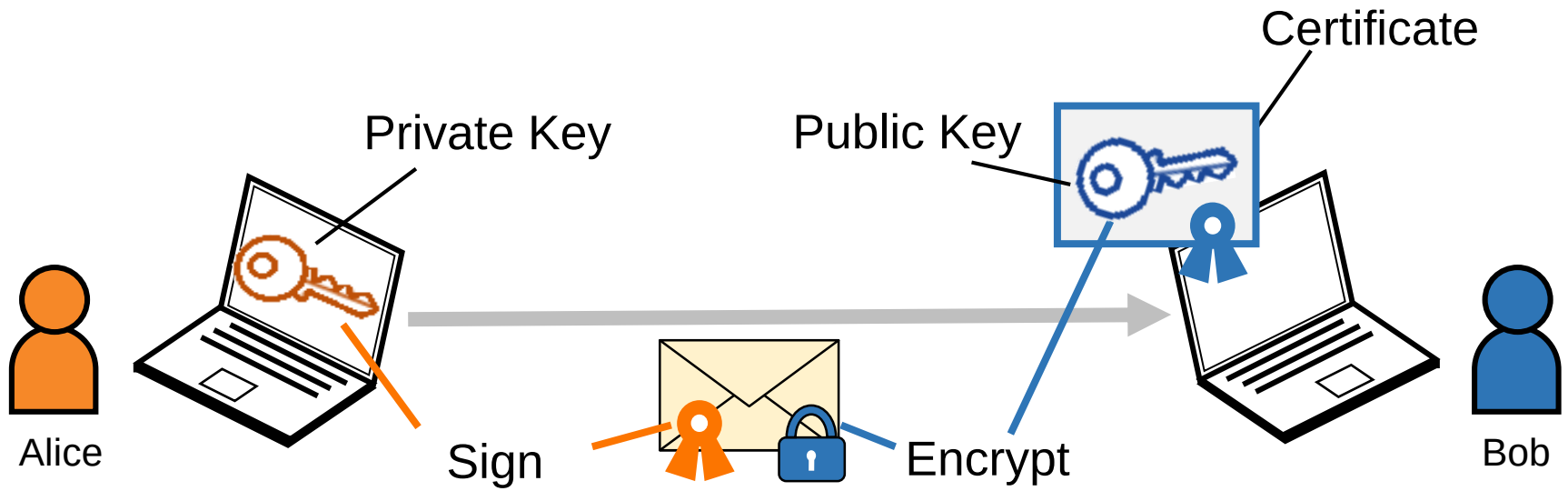

Office 365 Message Encryption

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- OME
  - Online service for e-mail encryption
  - Uses Rights Management Services (Azure RMS) as an encryption platform.
  - Part of Azure Information Protection (AIP)
- Rights management
  - Publishing License
  - AIP Labels

OME Key Management

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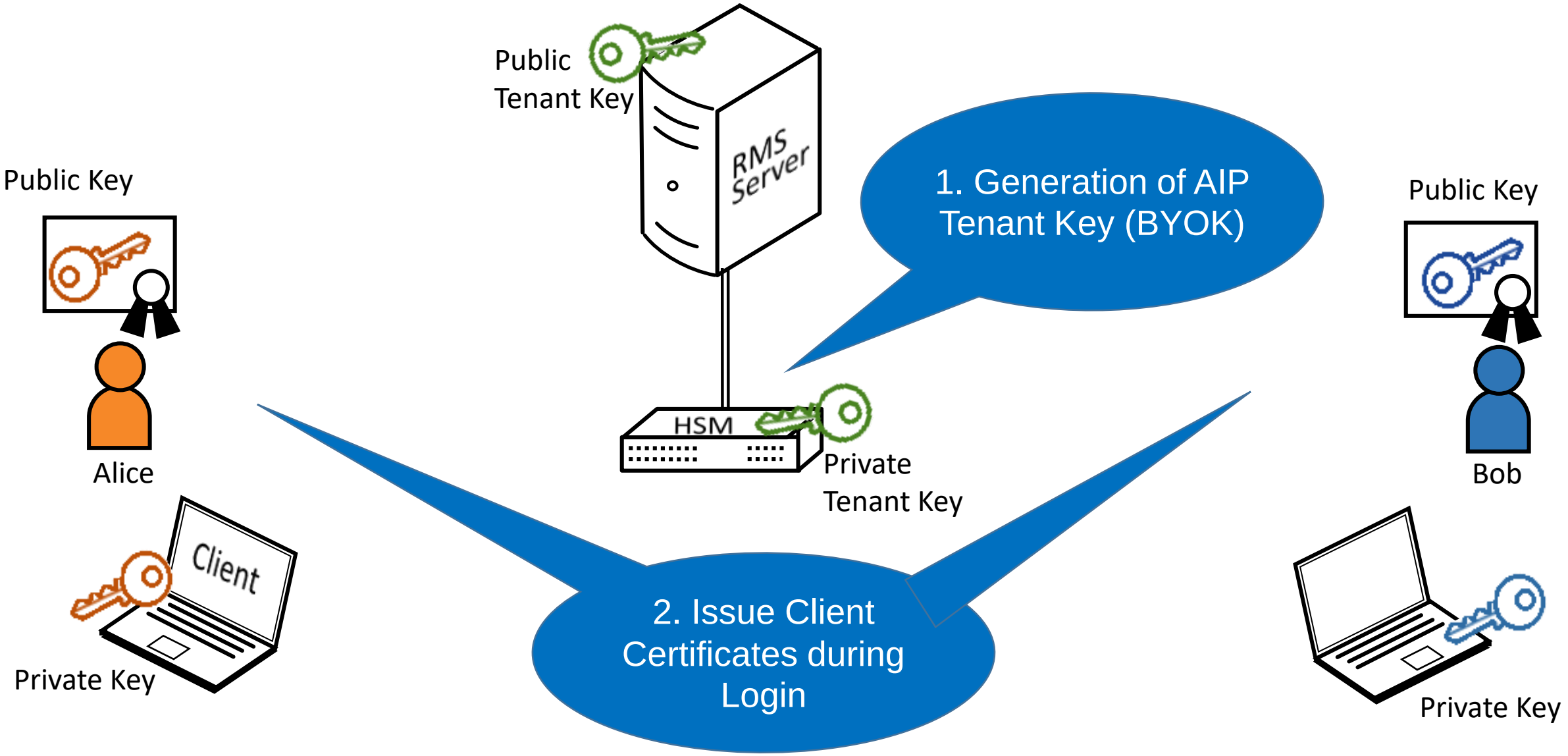

OME/RMS Process

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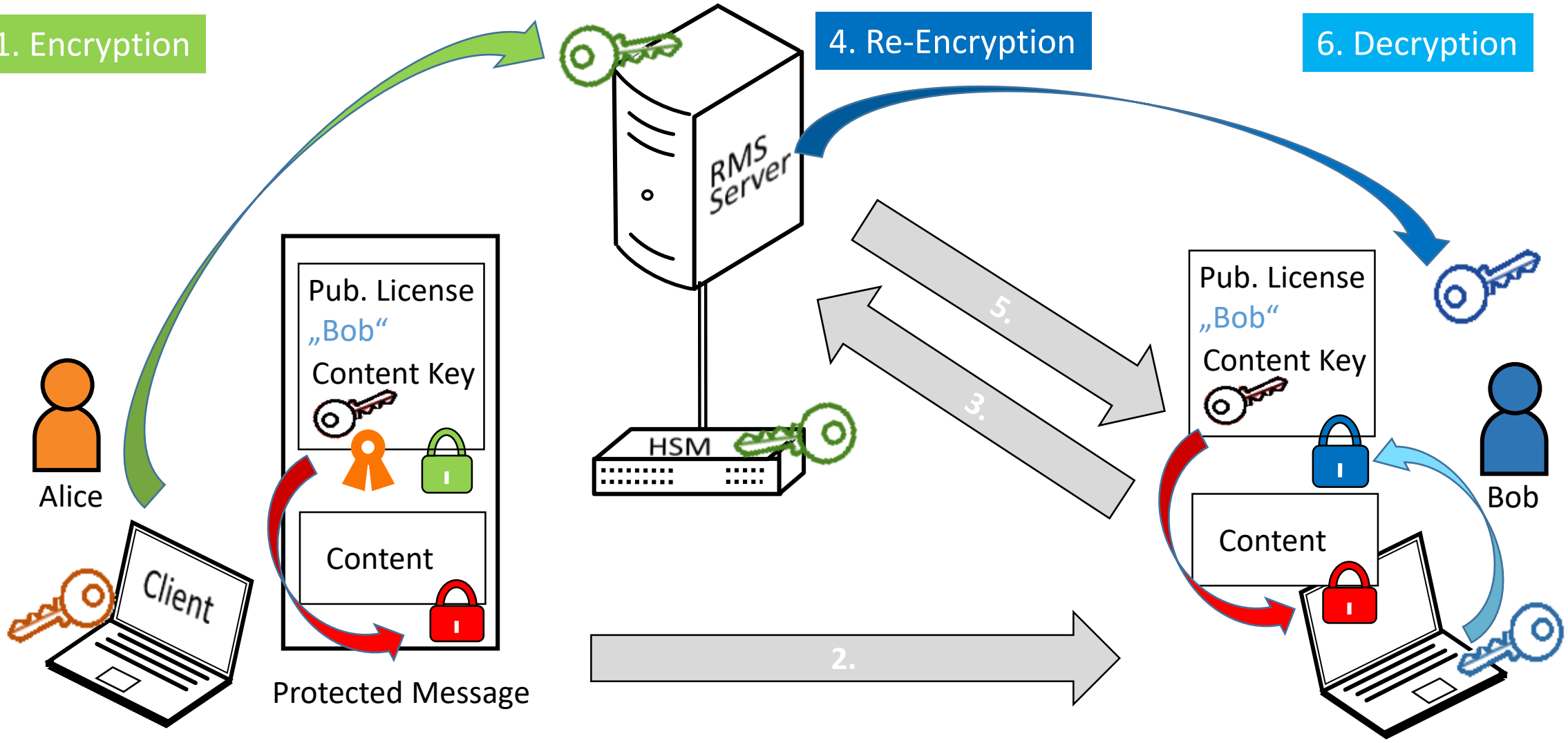

OME Valuation

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- Advantages
  - Fully integrated with MS Azure
  - Encryption for external users via web portal
  - Comfortable for a user
  - Easy implementation & management
- Challenges
  - Proprietary solution, no standard
  - RMS & HSM is under control of Microsoft
  - No end-to-end security due to re-encryption
  - All content keys are temporarily available on RMS
  - The exchange of RMS protected messages between organisations is only possible with Federated Trust
  - Digital signature is not supported

S/MIME

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- Secure / Multipurpose Internet Mail Extensions
- S/MIME v3 (1999)
  - Current v3.2: RFC 5751, 2010
- Standard for the encryption and signature of MIME-encapsulated e-mail
- Makes use of digital certificates (X.509)
- High distribution, good interoperability
  - MS Outlook, Notes, Thunderbird, …
  - Apple iOS, Android (Samsung,…)
- Is also supported by Office 365 (OWA)!

Verteilung von Zertifikaten

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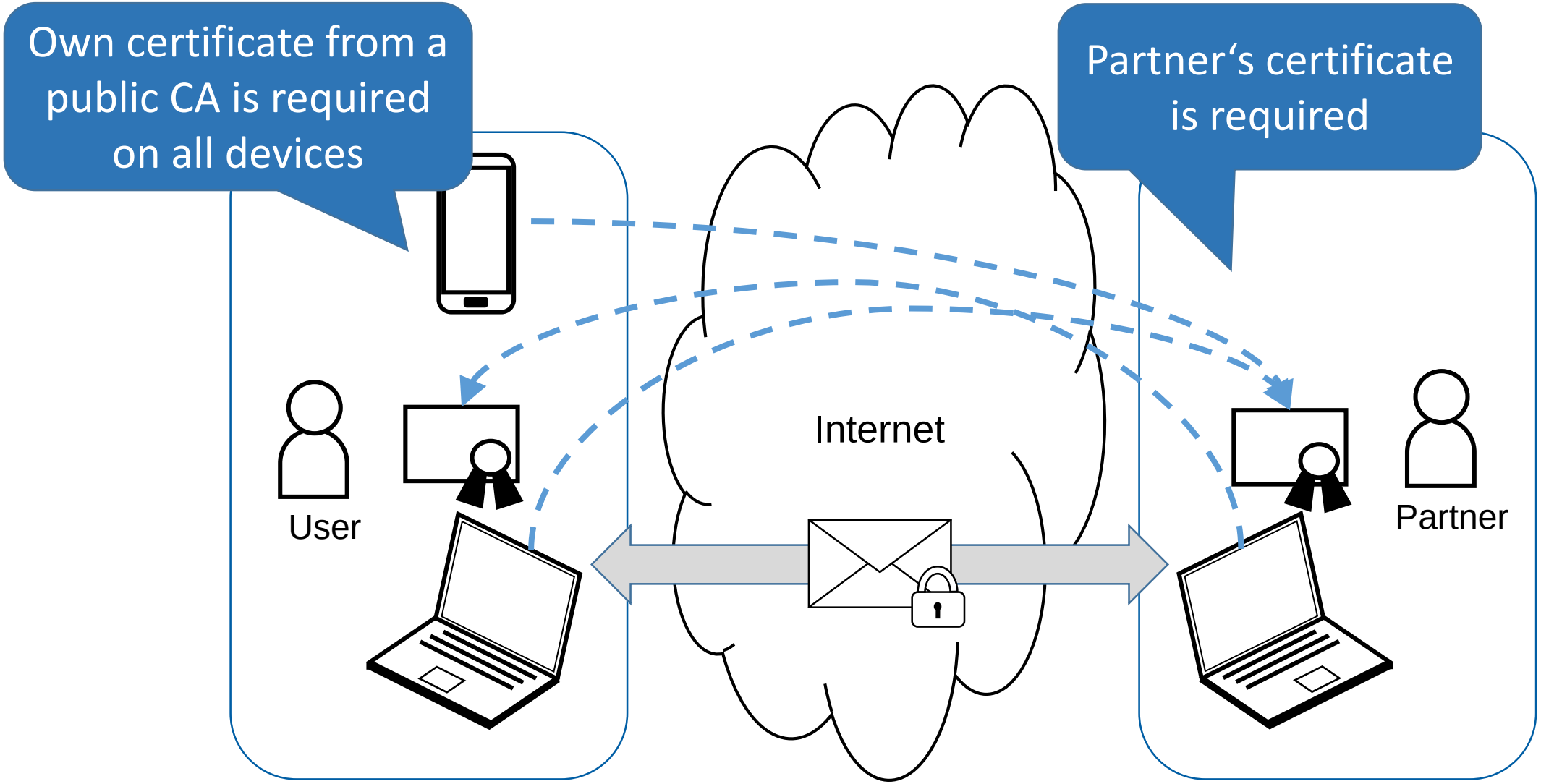

Windows S/MIME Enrollment

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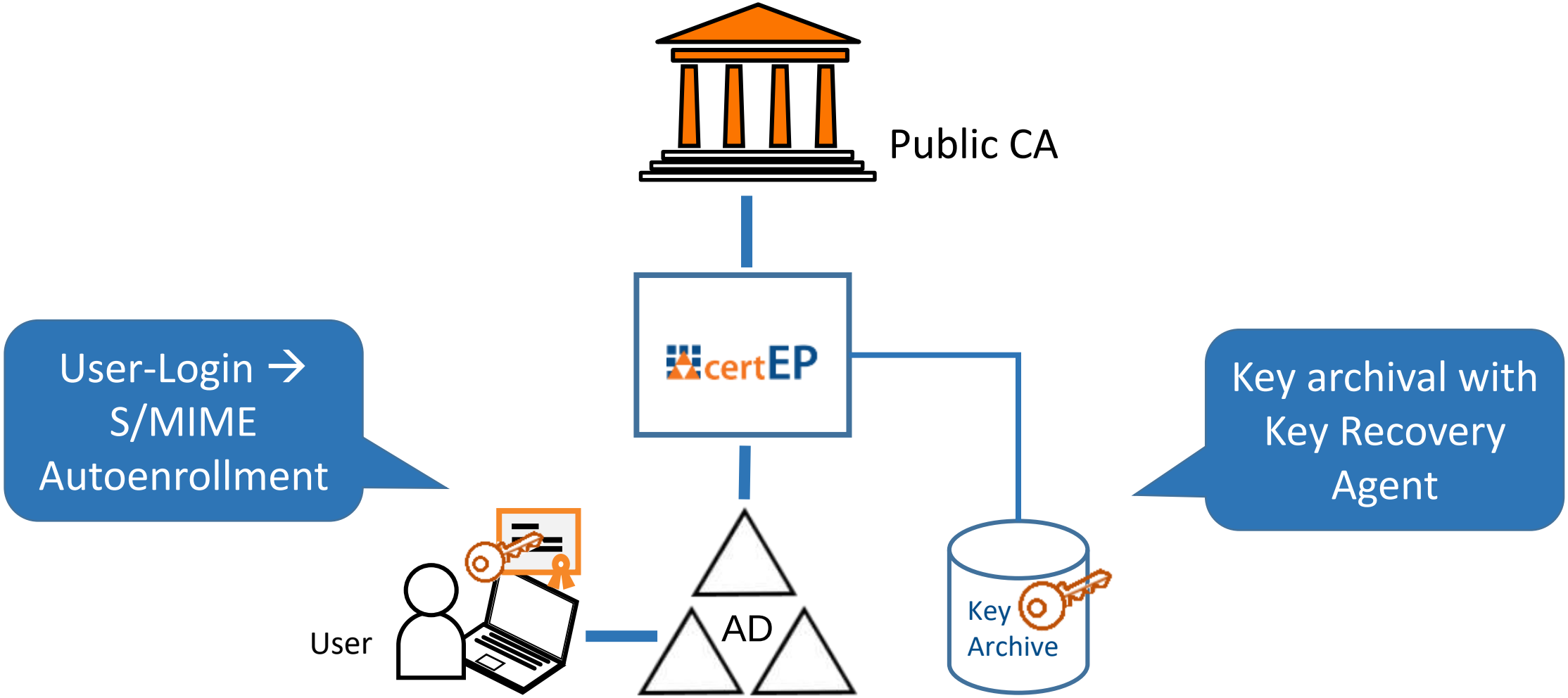

Mobile S/MIME Enrollment

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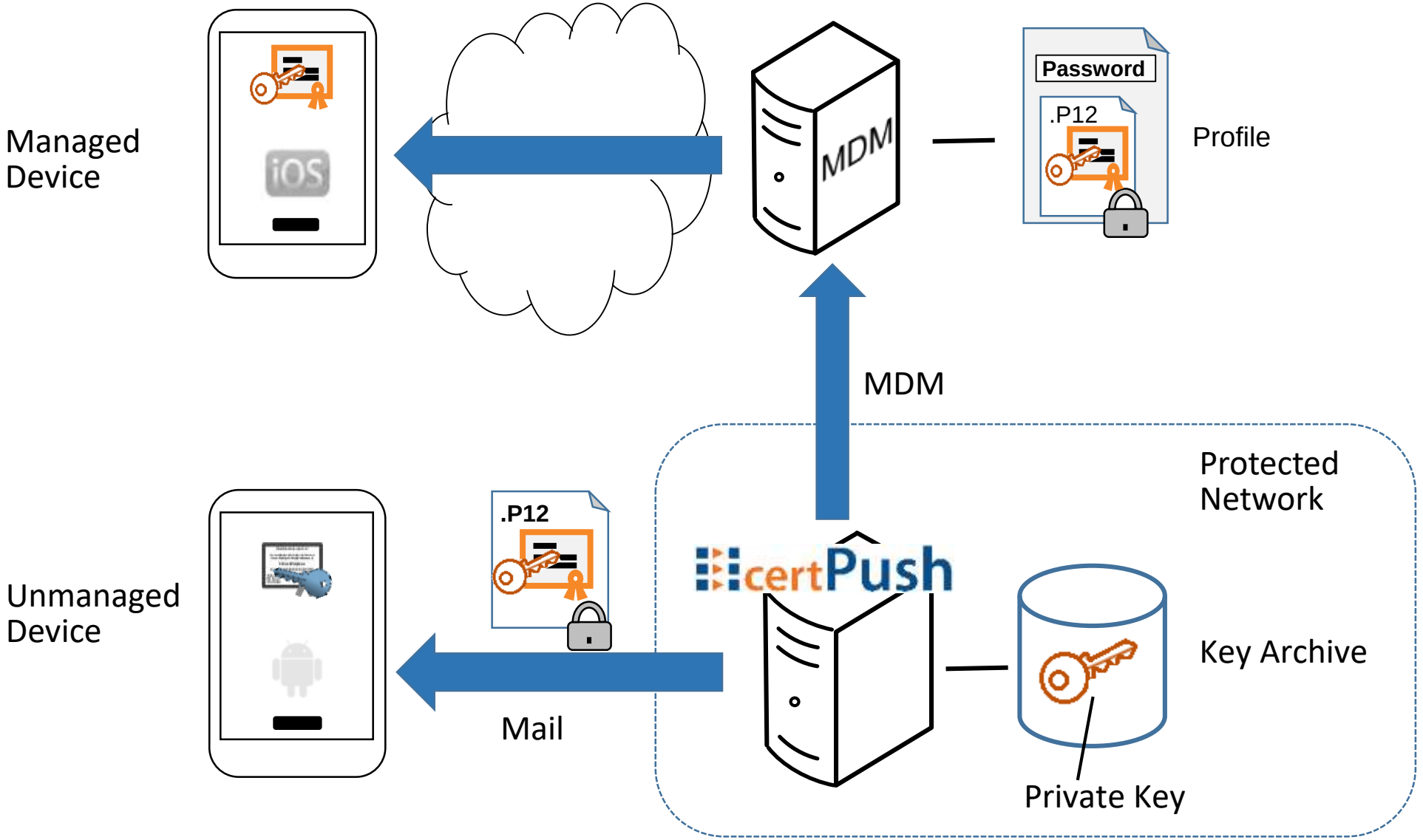

Global Certificate Retrieval

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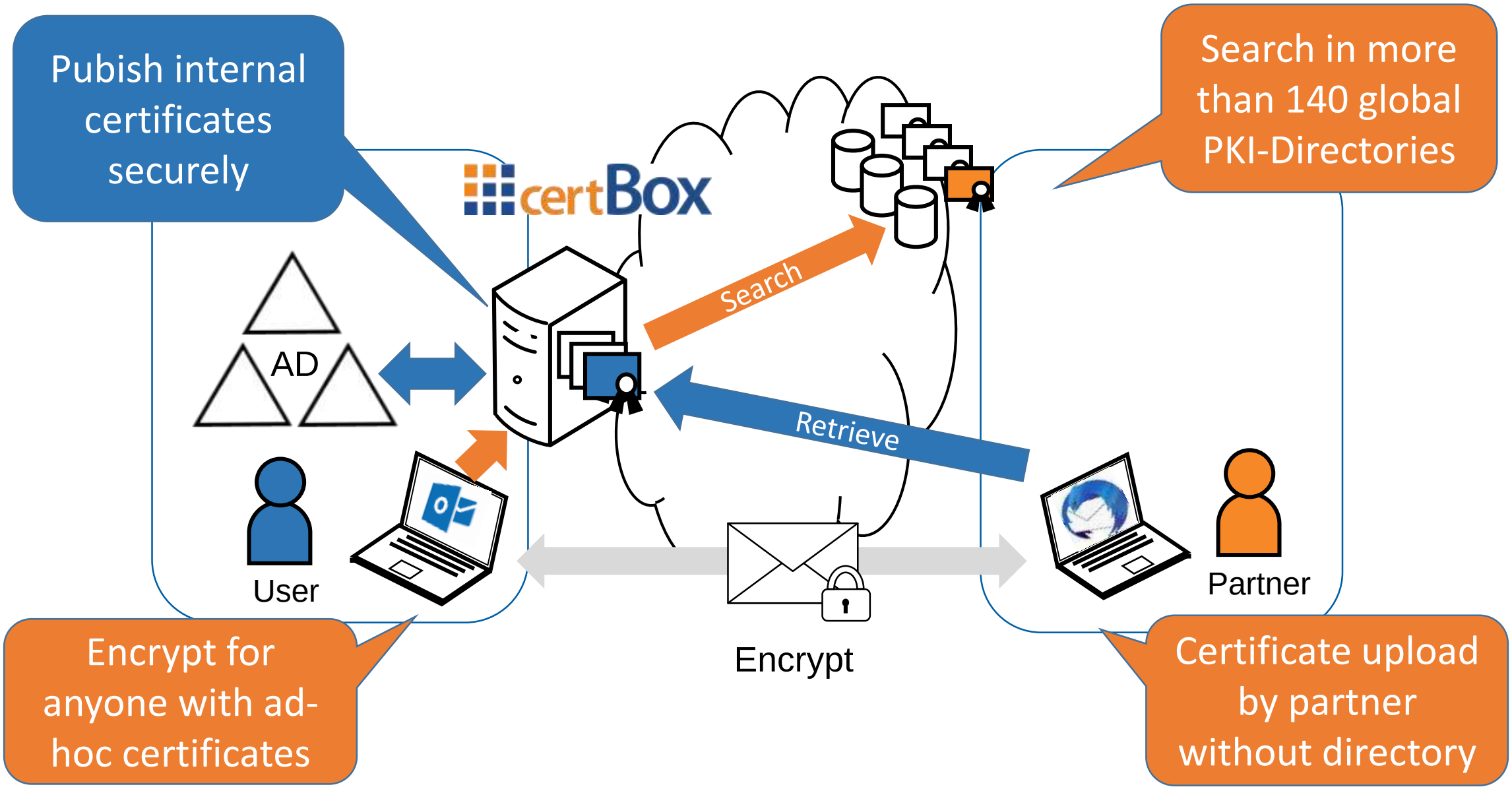

Mobile End-to-End Encryption

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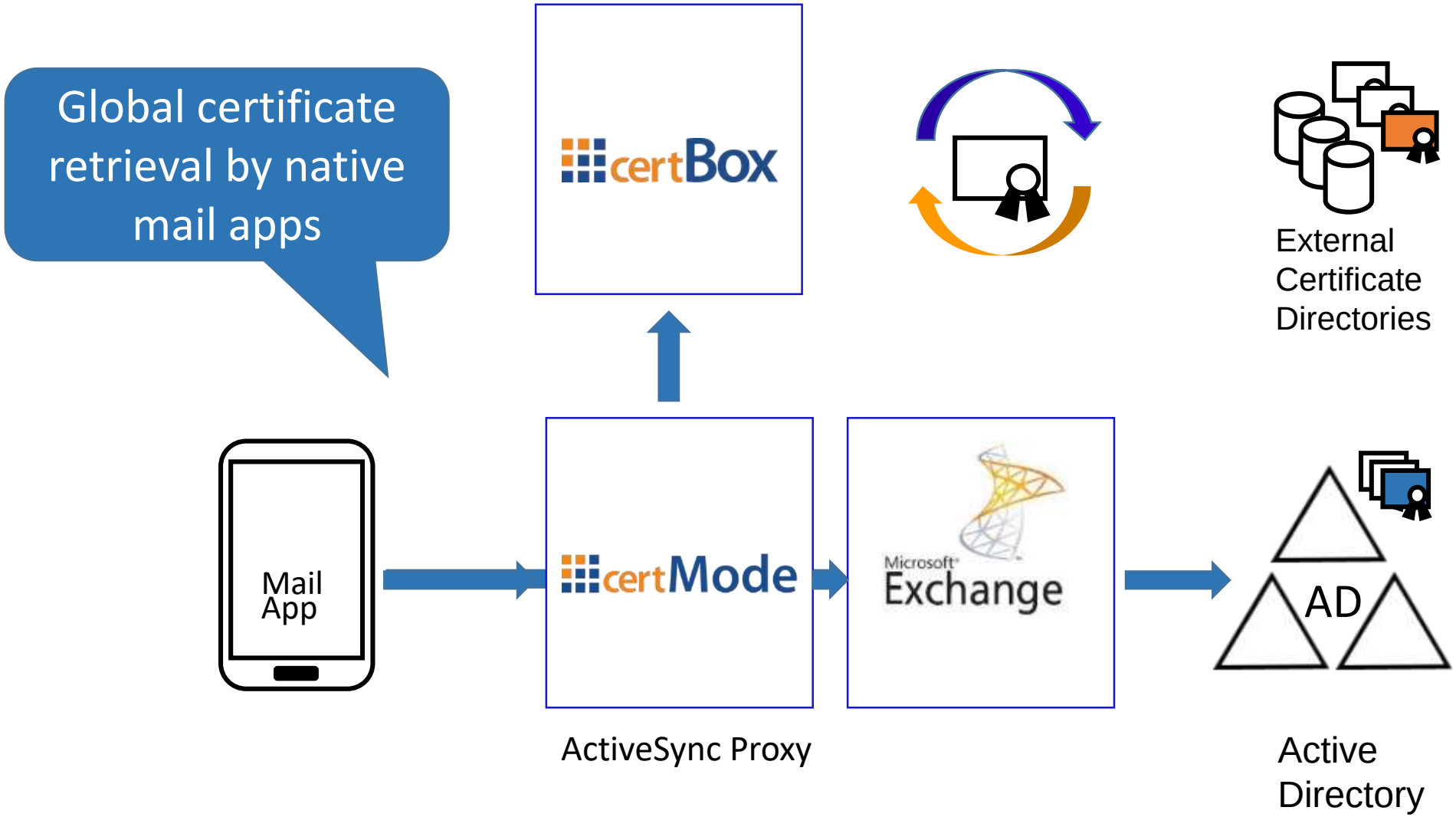

Certificate Management

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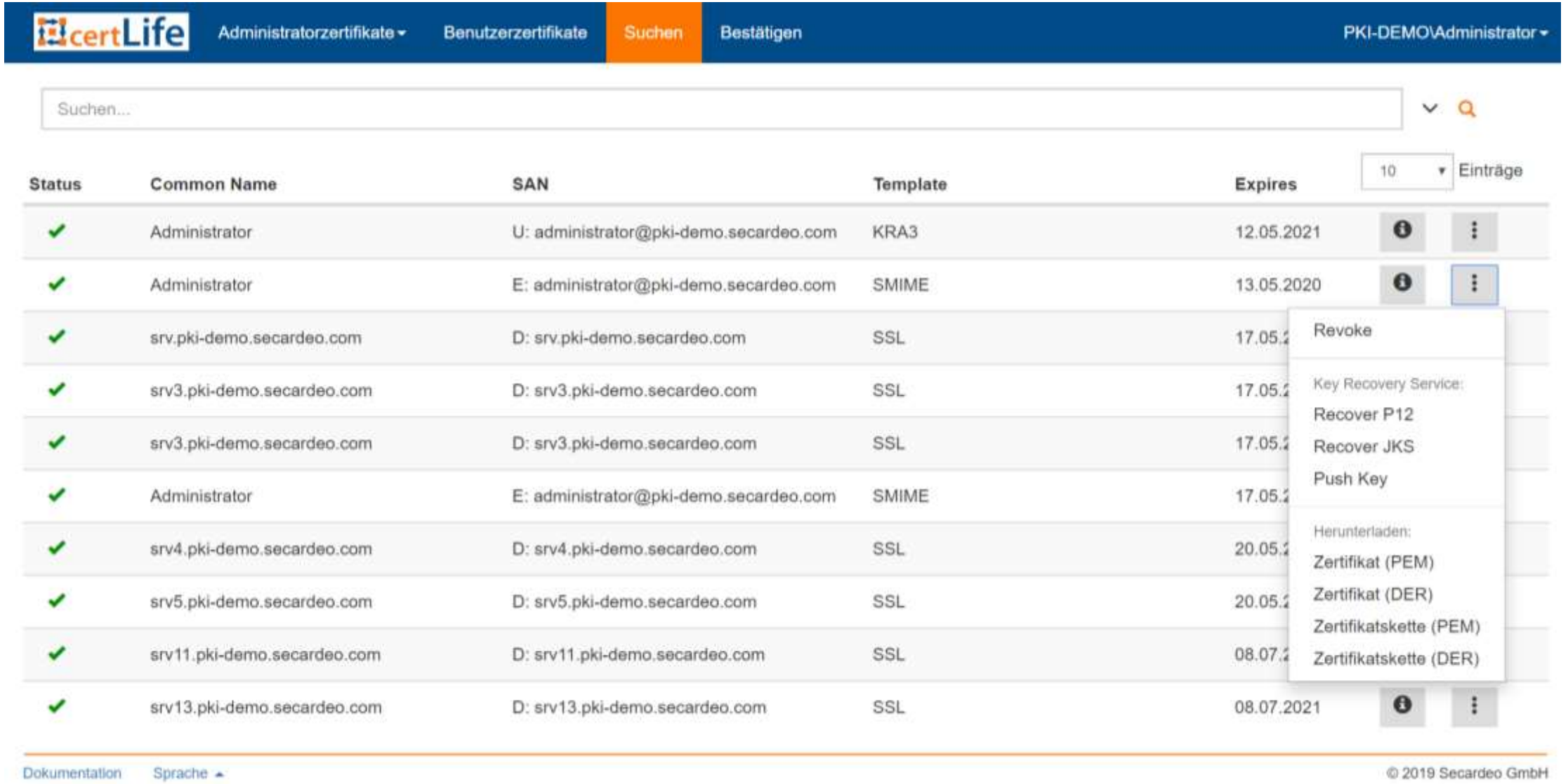

Evaluation

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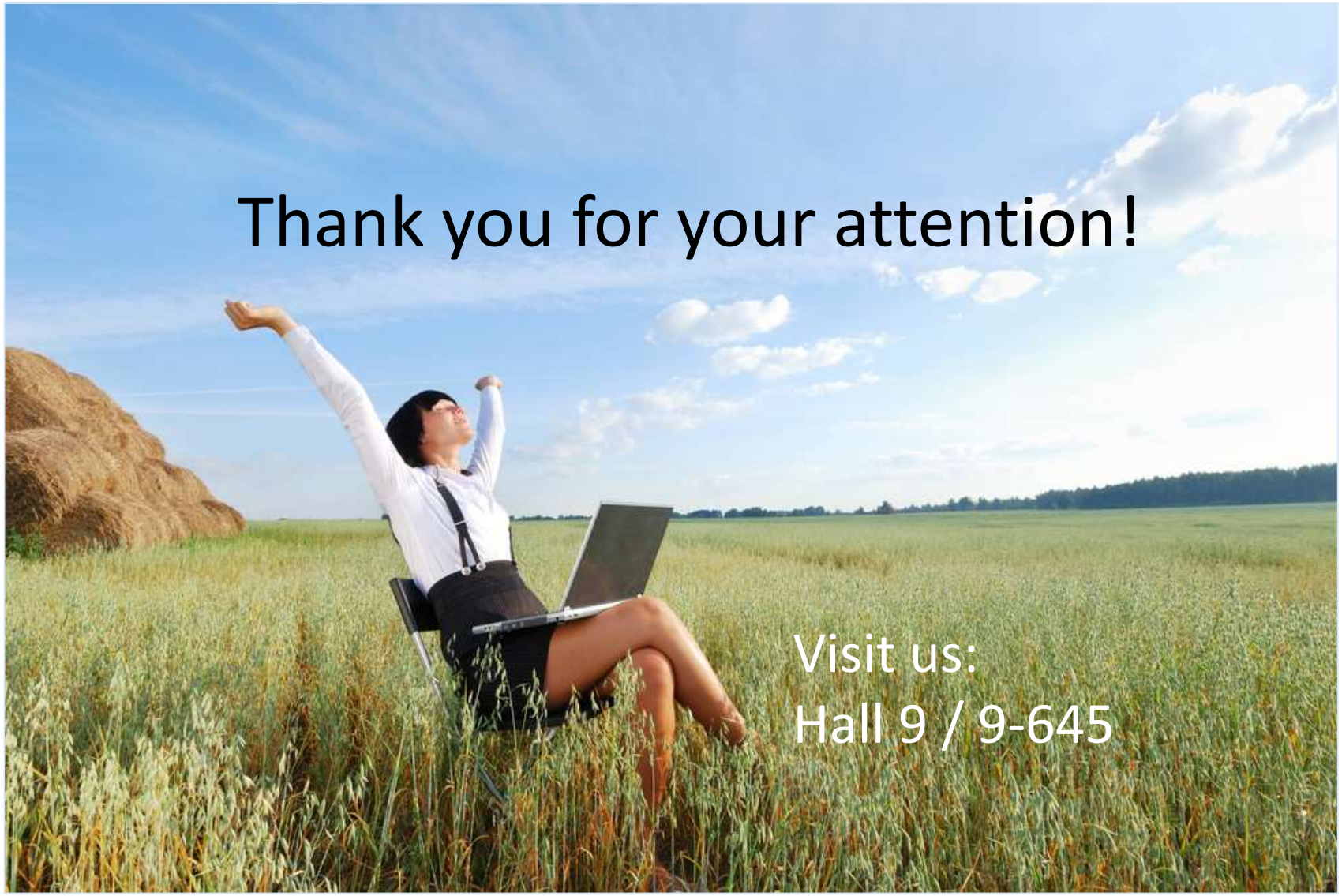
- S/MIME is standardised and widely distributed
- Supports encryption & signature
- User comfort and easy management by
  - Automated certificate enrollment & retrieval
  - Central certificate lifecycle management
- Global end-to-end encryption from any device to any partner
- SECARDEO TOPKI
  - PKI automation for arbitrary certificates
  - S/MIME, SSL/TLS, VPN, Computer/Device, …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