Help needed!
Top PKI deployment and management challenges

#1 challenge for 7 years in a row

71%

No clear ownership

51%

Insufficient resources

46%

Insufficient skills
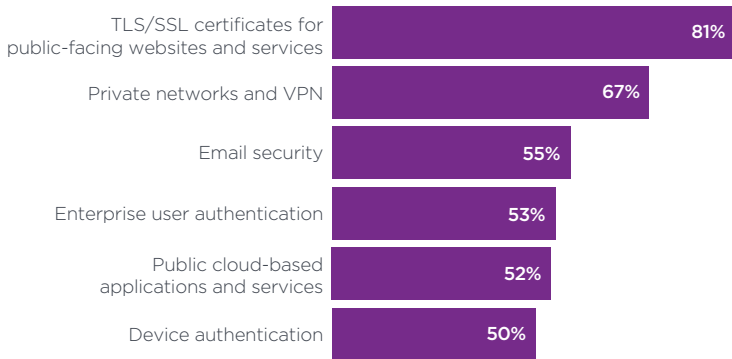
2021 GLOBAL PKI AND IoT TRENDS STUDY

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Who's in charge here?

For the 7th straight year, "**no clear ownership**" is the top challenge in deploying and managing PKI

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How PKI is driving the connected world
Top applications for PKI credentials

Application	Percentage
TLS/SSL certificates for public-facing websites and services	81%
Private networks and VPN	67%
Email security	55%
Enterprise user authentication	53%
Public cloud-based applications and services	52%
Device authentication	50%

PKI possibilities are endless, but your resources aren't

46%

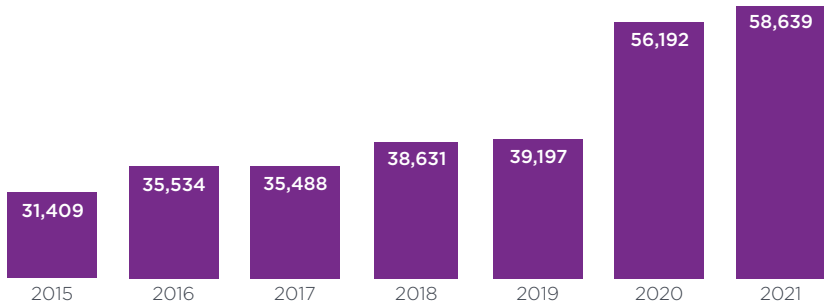46% say their organizations lack the skills needed to utilize PKI

41%

Only 41% of organizations have PKI specialists on staff
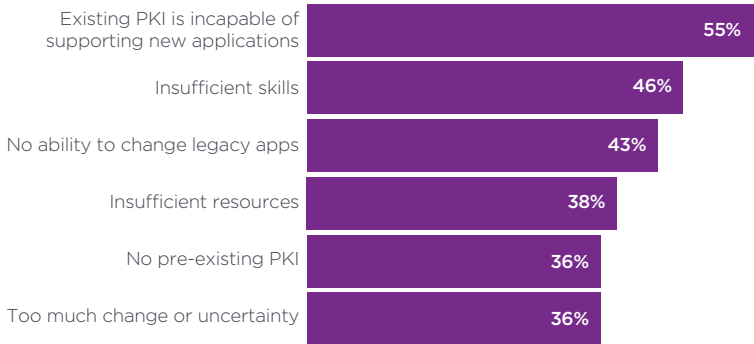
More certificates, more problems

The average number of certificates is up 50% since 2019, yet with a PKI skills shortage, is there a management issue?

Year	Average number of certificates
2015	31,409
2016	35,534
2017	35,488
2018	38,631
2019	39,197
2020	56,192
2021	58,639

*Average number of certificates issued by organization

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PKI capabilities become business possibilities. Are you ready?

The top challenges to enable applications to utilize PKI

Challenge	Percentage
Existing PKI is incapable of supporting new applications	55%
Insufficient skills	46%
No ability to change legacy apps	43%
Insufficient resources	38%
No pre-existing PKI	36%
Too much change or uncertainty	36%

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Plan for the unplanned

The top areas expected to experience
the most change and uncertainty

**The top area for the
4th straight year**

**New applications
(e.g., Internet of Things)**

41%

**External mandates and standards
(GDPR, CMMC, Fed IoT, etc.)**

37%

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Evolving for the connected world
The most important trends driving the deployment of applications using PKI

The top trend for two years in a row

Internet of Things (IoT)
47%

Cloud-based services
44%

Consumer mobile
40%

Regulatory environment
24%

Consumer-oriented mobile applications
20%

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The rise of machines and clouds

The top trends driving the deployment of applications using PKI

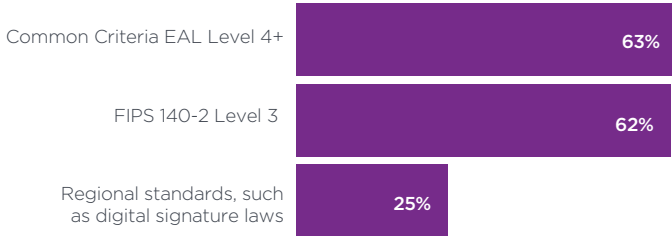**The top trend for two years in a row**
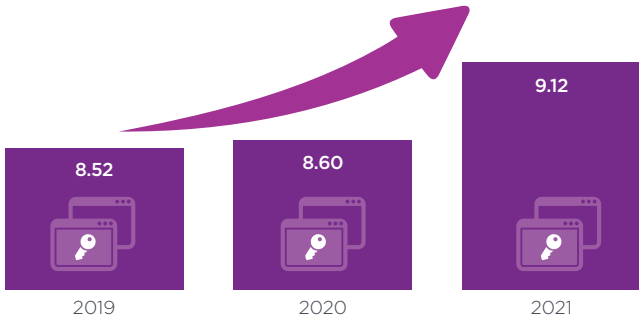
Internet of Things (IoT)

47%

Cloud-based services

44%

Who's ready to comply?

The most important security certifications when deploying PKI infrastructure

Certification	Percentage
Common Criteria EAL Level 4+	63%
FIPS 140-2 Level 3	62%
Regional standards, such as digital signature laws	25%

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PKI is the pulse of enterprise IT

Average number of distinct applications using PKI continue to rise for organizations with internal CAs

8.52 — 2019
8.60 — 2020
9.12 — 2021

Diversified PKI deployment
The most popular methods for deploying PKI

Method	Percentage
Internal CA	62%
Externally hosted private CA – managed service	44%
Public CA service	31%
Private CA running in a public cloud	23%
Business partner provided service	15%
Government provided service	9%

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