

How banks are using Cloud to improve security

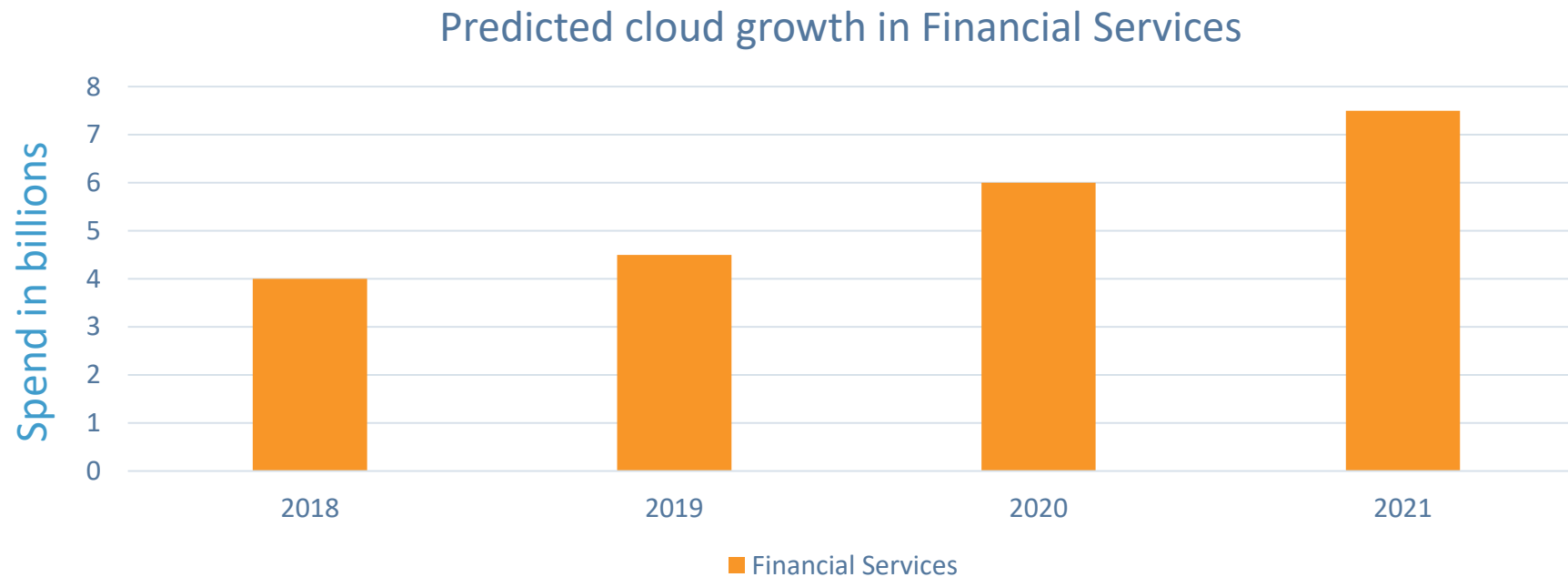
Christophe Van Mollekot | Enterprise Account Manager





Where do we go from here?

In 2018, the Financial Services industry is estimated to have spent **\$4 billion** on industry cloud solutions...and that number is expected to almost **double by 2021**.



Financial institutions across market segments are transforming on AWS.



Including Systemically Important Financial Market Utilities



“ Cloud computing has reached the tipping point as the capabilities, resiliency and security of services provided by cloud vendors now exceed those of many on-premises data centers. ”

– DTCC, Moving Financial Market Infrastructure to the Cloud

Capital Markets customers

“ AWS is a leader in cloud computing and working with their team enabled us to implement our vision for the anywhere exchange. ”

– Robert Cornish, CTO, ISE



Running market surveillance systems



Empowering enterprise data excellence



Accelerating post-trade analytics



Running a trade warehouse on Amazon S3



Deploying customer trade platforms



Enabling seamless customer communications



Processing thousands of events per second



Running scalable securities trading app

Banking customers

“ AWS is opening a bunch of new doors for us, it’s allowing us to experiment, it’s allowing us to grow, it’s **giving us access to some of the most advanced technology tools on the planet** to play with and experiment with. ”

– David Gledhill, CIO at DBS Bank Group



Creating innovative customer services



Scaling out transaction compute requirements



Realizing FinTech innovations



Increasing reliability and optimizing costs



Decreasing time-to-solution



Streamlining lending processes



Competing, at scale, with established enterprises



Complying with regulatory requirements

Insurance customers

“ Using AWS helps us reduce a 10-day process to 10 minutes. That’s transformative: it broadens our *ability to discover*. ”

– Peter Phillips, Managing Director, Aon Benfield



Deploying high-performance computing capabilities



Developing novel digital platforms



Empowering enterprise data excellence



Modernizing infrastructure and automating processes



PACIFIC LIFE

Overcoming hardware constraints



GUARDIAN

Migrating regulated workloads to the cloud



Accelerating transformation



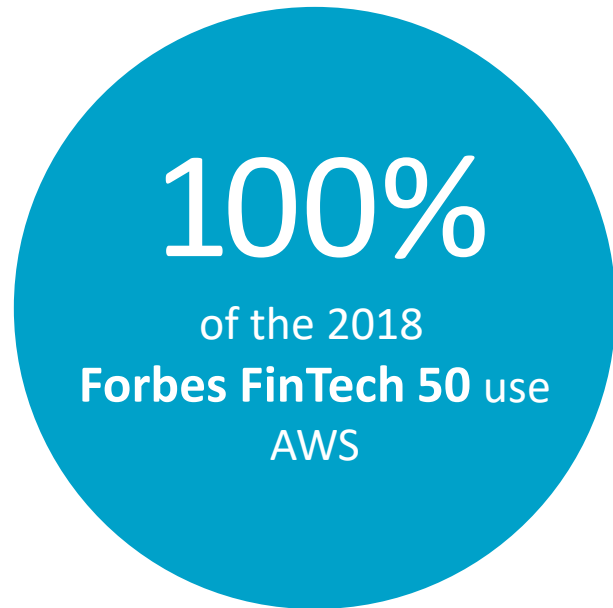
Liberty Mutual

Accelerating product go-to-market speeds

FinTech startups have also found a home on AWS.

“ Banks aren't being disrupted by FinTech technology, they're being disrupted by customer expectations. ”

— McKinsey & Company



coinbase

Launched its exchange on AWS, including real-time analytics processed by Amazon Kinesis

 **Betterment**

Built a secure big data storage and analytics system on AWS

 **robinhood**

Launched a scalable trading app, transacting over \$1B

stripe

Relies on the security best practices and auditability of AWS to run its PCI-compliant payment platform

 **TransferWise**

Adopted AWS for the service quality and the resilience it required, at a variable cost

affirm

Uses AWS managed services to process data at scale while reducing operating costs

Customers in Europe

Why We Moved Our Entire Infrastructure to Amazon



bunq

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AWS Summit Berlin | Overview | Agenda | Learnings | Expo | FAQs

PATRICK KUA, CTO, N26

Patrick Kua is the CTO of the mobile bank N26 (Berlin, Germany), where he is building the engineering group that will change modern retail banking for people like you and me. Formerly a Principal Technical Consultant at ThoughtWorks, he is the author of three books, The Retrospective Handbook, Talking with Tech Leads and most recently, Building Evolutionary Architectures.

KBC

Betalen Sparen Beleggen Wonen Gezin Voertuig

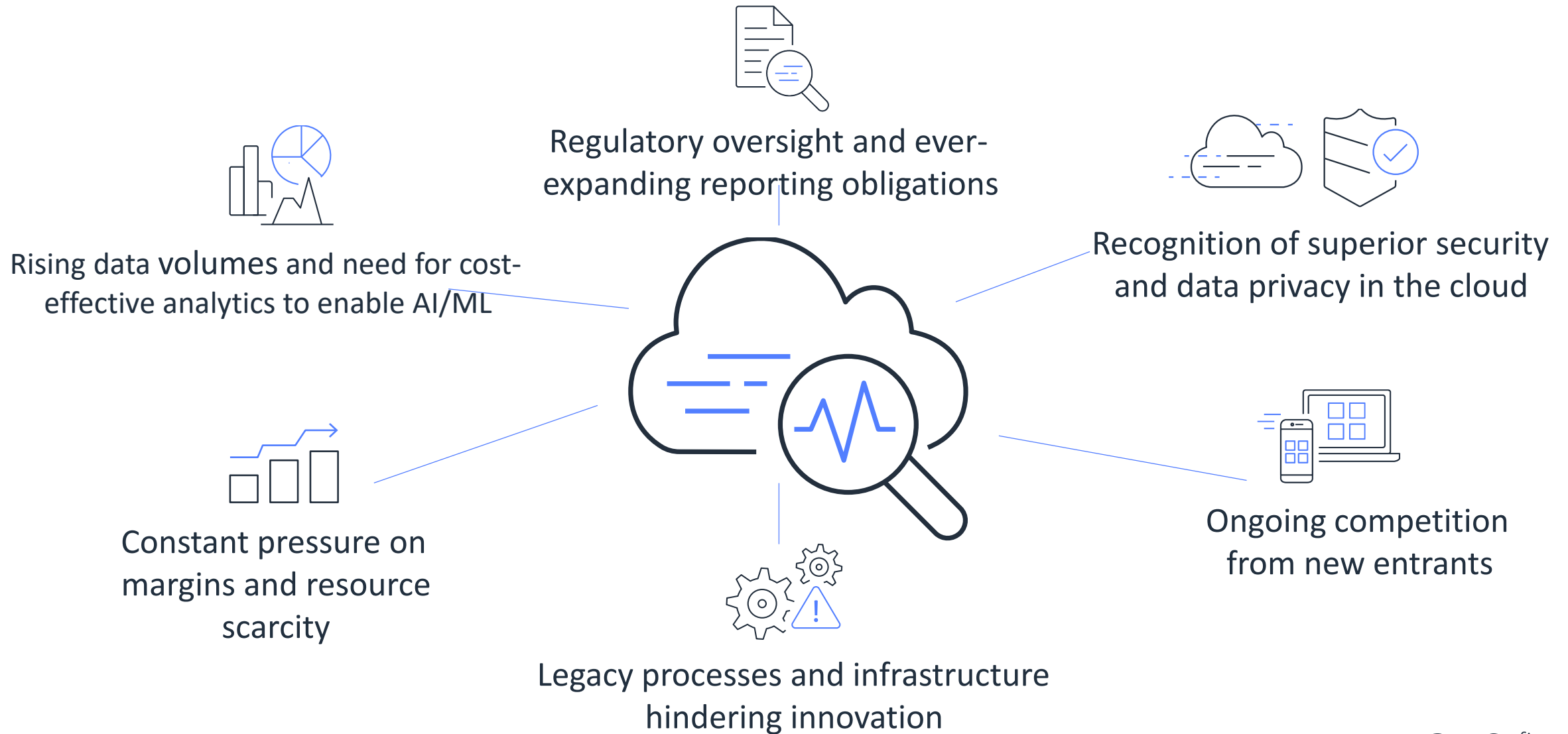
Alexa

Home > Alexa

Het saldo van je KBC-rekening opvragen via Amazon Alexa

Met de komst van digitale assistenten zoals Amazon's Alexa, Apple's Siri en Google Assistant zijn we geëvolueerd naar een wereld waar je niets meer nodig hebt dan je stem om elektrische apparaten te beheren, antwoord te krijgen op tal van vragen of zelfs pizza te bestellen. Omdat KBC nooit stil staat, zijn we op zoek gegaan naar hoe we digitale assistenten kunnen inzetten om het onze klanten nog makkelijker te maken.

Multiple forces are converging to drive cloud adoption in the industry.



Security and compliance are moving from obligation to
advantage.



Financial Institutions face unique risk and regulatory challenges.



In its shift to the cloud, the Financial Services industry is confronting a range of familiar and emerging issues



Constantly evolving regulatory requirements



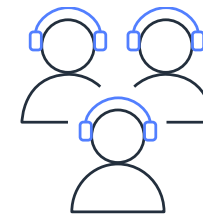
Requirements that vary significantly across regions



Highly dynamic security threat landscape

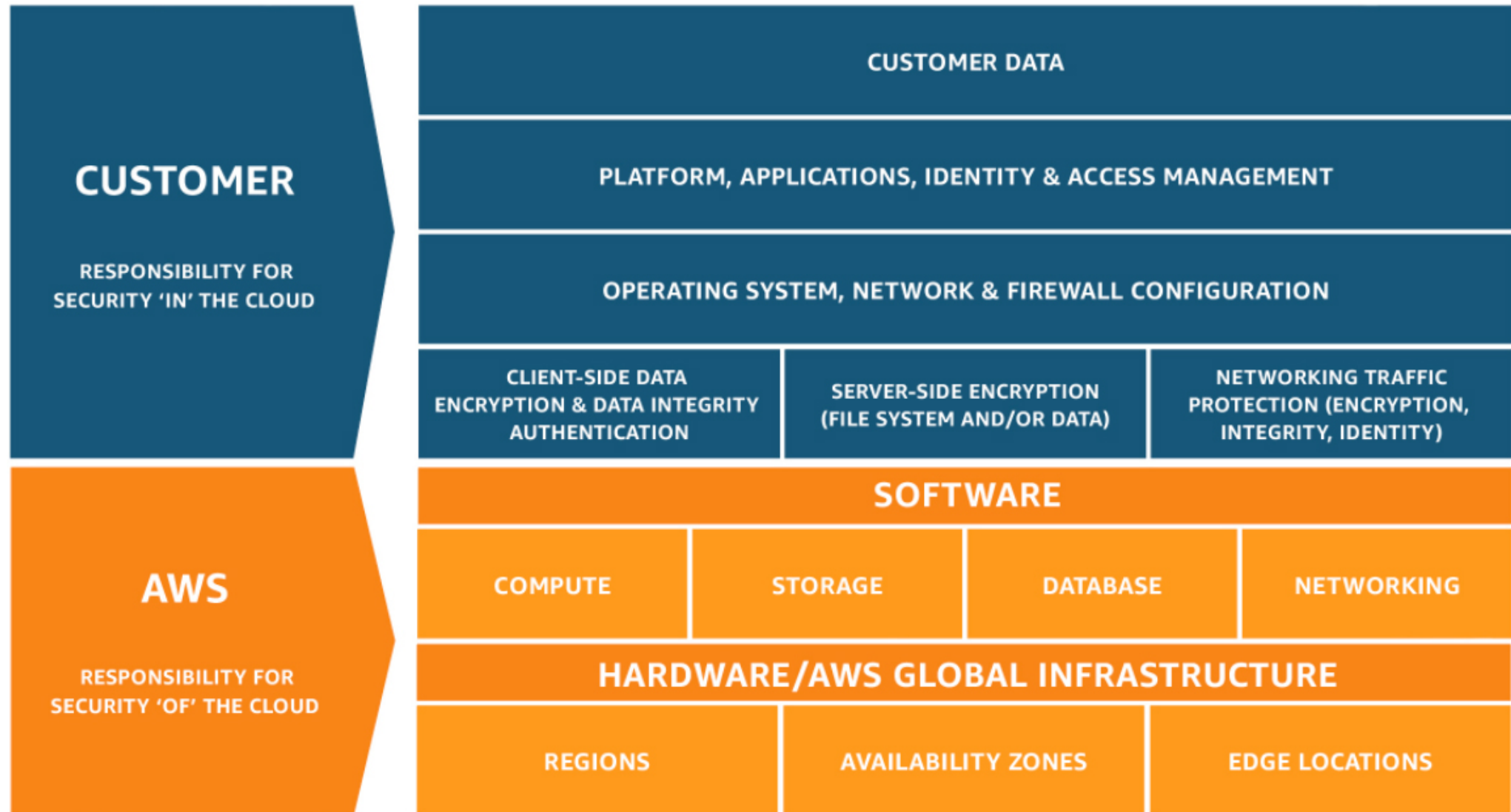


Onerous reporting and documentation requirements



Limited specialist security and compliance resources

Compliance starts with AWS' Shared Responsibility Model



Customers rely on AWS' compliance with global standards

Certifications & Attestations

Cloud Computing Compliance Controls Catalogue (C5)	DE	✓
Cyber Essentials Plus	GB	✓
DoD SRG	US	✓
FedRAMP	US	✓
FIPS	US	✓
IRAP	AU	✓
ISO 9001	🌐	✓
ISO 27001	🌐	✓
ISO 27017	🌐	✓
ISO 27018	🌐	✓
MLPS Level 3	CN	✓
MTCS	SG	✓
PCI DSS Level 1	🏠	✓
SEC Rule 17-a-4(f)	US	✓
SOC 1, SOC 2, SOC 3	🌐	✓

🌐 = industry or global standard

Laws, Regulations and Privacy

CISPE	EU	✓
EU Model Clauses	EU	✓
FERPA	US	✓
GLBA	US	✓
HIPAA	US	✓
HITECH	🌐	✓
IRS 1075	US	✓
ITAR	US	✓
My Number Act	JP	✓
Data Protection Act – 1988	GB	✓
VPAT / Section 508	US	✓
Data Protection Directive	EU	✓
Privacy Act [Australia]	AU	✓
Privacy Act [New Zealand]	NZ	✓
PDPA - 2010 [Malaysia]	MY	✓
PDPA - 2012 [Singapore]	SG	✓
PIPEDA [Canada]	CA	✓
Agencia Española de Protección de Datos	ES	✓

Alignments & Frameworks

CIS (Center for Internet Security)	🌐	✓
CJIS (US FBI)	US	✓
CSA (Cloud Security Alliance)	🌐	✓
Esquema Nacional de Seguridad	ES	✓
EU-US Privacy Shield	EU	✓
FISC	JP	✓
FISMA	US	✓
G-Cloud	GB	✓
GxP (US FDA CFR 21 Part 11)	US	✓
ICREA	🌐	✓
IT Grundschutz	DE	✓
MITA 3.0 (US Medicaid)	US	✓
MPAA	US	✓
NIST	US	✓
Uptime Institute Tiers	🌐	✓
Cloud Security Principles	GB	✓

This support includes easy access to our compliance documentation.



The **AWS Artifact tool** supports increased transparency

What is it?

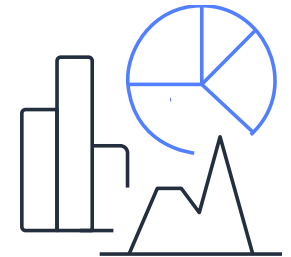
A globally available, no-cost portal that provides on-demand access to AWS' most recent external security and compliance certifications.



- **Information** on AWS policies, processes, and controls
- **Documentation** of controls relevant to specific AWS services
- **Validation** that AWS controls are operating effectively

How does it work?

Customers can review reports, align AWS controls to their own control frameworks, and use the reports to verify that AWS controls are operating effectively.



Global Certifications & Attestations



Our tools and services automate tasks and enhance security.



Identity

AWS Identity & Access
Management (IAM)

AWS Single Sign-On

AWS Directory Service

Amazon Cognito

AWS Organizations

AWS Secrets Manager

AWS Resource Access
Manager

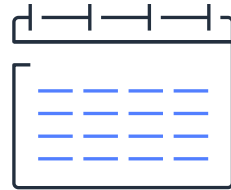
The result: AWS is the first choice for highly regulated organizations

“ We can be far more secure in the cloud and achieve a higher level of assurance at a much lower cost, in terms of effort and dollars invested. We determined that security in AWS is superior to our on-premises data center across several dimensions, including patching, encryption, auditing and logging, entitlements, and compliance. ”

– John Brady, CISO, FINRA



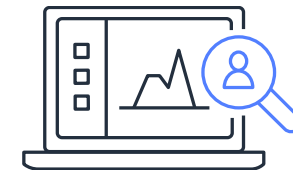
Over 50 global compliance certifications and accreditations



AWS industry-leading security teams: 24/7, 365 days a year



Security infrastructure built to satisfy military, global banks, and other high-sensitivity organizations



Security enhancements from 1M+ customer experiences

Cloud is enabling transformation and innovation in the industry

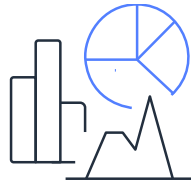
As financial institutions better understand their ability to meet regulatory compliance obligations when operating in the cloud, they are increasingly focused on leveraging the cloud to transform existing businesses and bring innovative new solutions to market.



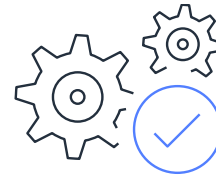
Customer experience & digital channels



Grid & high-performance computing



Data lakes & agile analytics



Core systems transformation



AI/Machine Learning



Blockchain & DLT

Widespread adoption today



Gaining traction

Thank you!

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