



CCSKTM

Certificate of
Cloud Security Knowledge

Cloud Security Course: Product Overview

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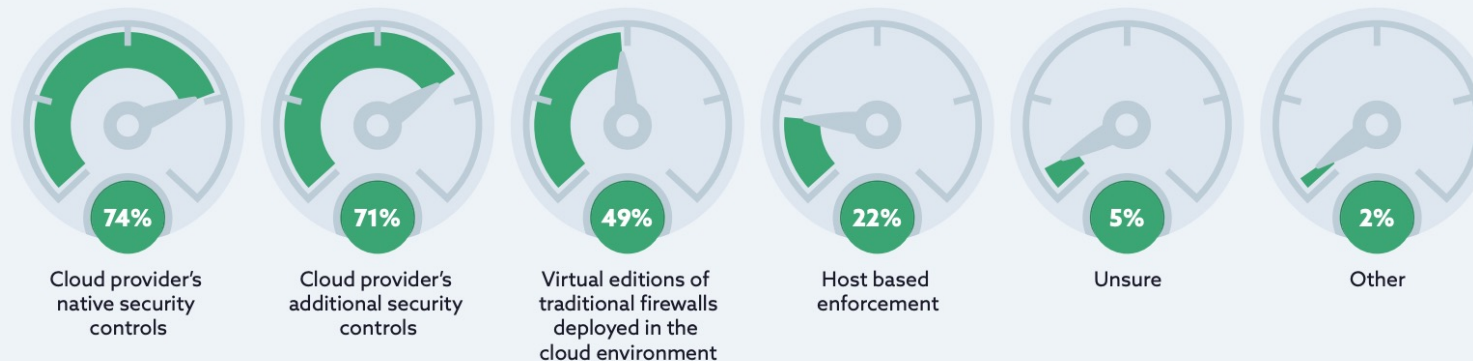
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The Importance of Cloud Security

Key Finding 2

Cloud providers' native security controls are not enough for many organizations

Organizations have increasingly turned to cloud providers' additional security controls and virtual firewalls. The use of cloud providers' additional security controls jumped from 58% in 2019 to 71% in 2021. Approximately half of the organizations turned to third party providers for virtual editions of firewalls for network security controls. This could indicate that while many organizations are moving to public cloud, many are still utilizing legacy and hybrid environments, and need uniform control across many different environments. Additionally, with the current health crisis and the dramatic increase in remote workers, many organizations are unable to secure their network as they have previously and must turn to additional and alternative security controls.



The Importance of Cloud Security



- 1 Clear visibility (topology, policy) for the entire hybrid network estate (multi-cloud and on-prem)
- 2 Proactively detect network risks
- 3 Proactively detect misconfiguration risks (e.g. IAM)
- 4 Automation, uniform change management across the different security controls
- 5 Regulatory compliance reports
- 6 Clean up cloud security controls with excessive rules
- 7 Ease of migration of workloads from on-prem to cloud

Key Finding 3

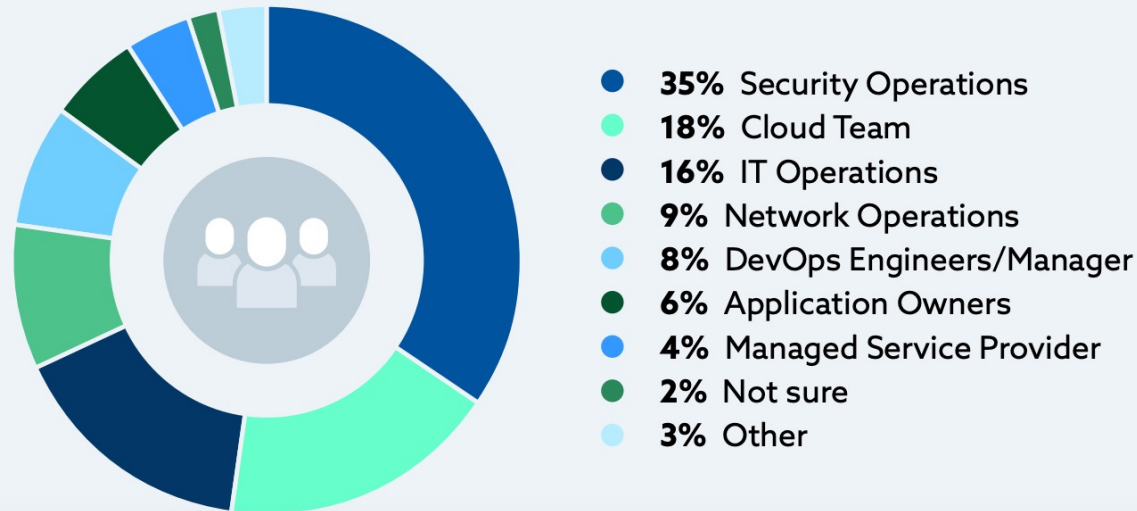
Organizations look for security tools that can supplement their workforce

A complex environment, combined with insufficient security staff and a lack of cloud knowledge, has driven organizations to turn to security tools that can help supplement their workforce. Three of the top four benefits organizations look for in security management tools are for proactive detection of risks and automation. These types of tools can supplement the challenges many organizations are experiencing with lack of expertise (47%) and staff (32%) as well as improve visibility as they move toward an ever-changing cloud environment.

The Importance of Cloud Security

Team responsible for managing security in public cloud

Respondents reported a wide variety of teams who are responsible for managing security in the public cloud. Security operations was the most common response with 35%, followed by the cloud team at 18% and IT operations with 16%. All other teams, including network operations, DevOps engineers/managers, application owners, and managed service providers, all fell below 10%. This is an area where either there is not as much consistency from organization to organization or perhaps confusion regarding which team owns public cloud security.



The Importance of Cloud Security



Demographics

This survey was conducted from December 2020 to January 2021 and gathered 1900 responses from IT and security professionals from a variety of organization sizes, industries, locations, and roles.



Role

What is your primary role?

The Importance of Cloud Security



Demographics

This survey was conducted from December 2020 to January 2021 and gathered 1900 responses from IT and security professionals from a variety of organization sizes, industries, locations, and roles.



Industry

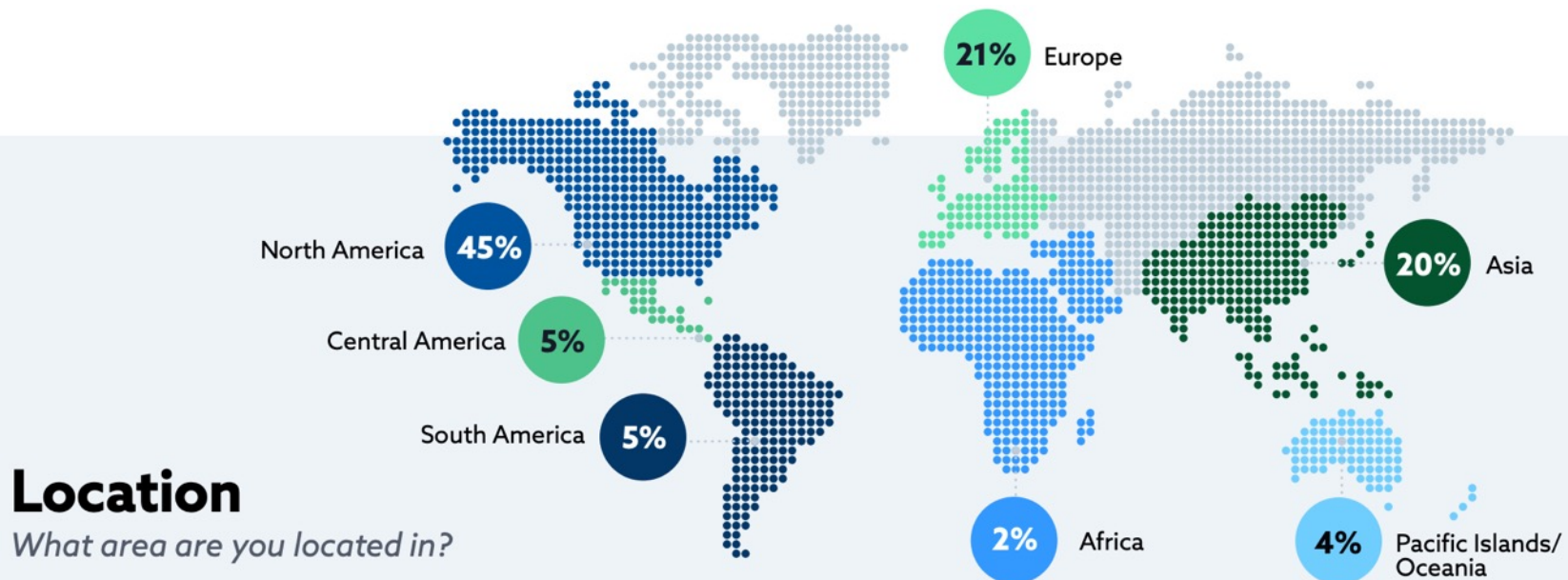
What industry does your organization belong to?

The Importance of Cloud Security



Demographics

This survey was conducted from December 2020 to January 2021 and gathered 1900 responses from IT and security professionals from a variety of organization sizes, industries, locations, and roles.



Location

What area are you located in?

The Importance of Cloud Security

Expectations being met by public cloud

Organizations often migrate to the public cloud due to the promises and expectations made by providers including: reduced cost, increased agility, and elasticity, DevOps-friendly, and improved uptime. On average, organizations are finding that public clouds meet these expectations or even slightly exceed them.



The Importance of Cloud Security

Addressing the skills gap in cloud security

The top three ways organizations are addressing the skills gap are **"industry training and certifications for staff" (55%)**, **"informal or staff self training" (54%)**, and **"customer training from vendors on products" (53%)**. Much less commonly selected at 27% was outsourcing staff. The least frequently selected option was "not addressed" at 7%.

Industry trainings and certifications for staff
(e.g. CSA, ISC2, ISACA, SANS)

55%

Informal or staff self training

54%

Customer training from vendors on products

53%

Outsourcing staff

27%

Not addressed

7%

Unsure

5%

Other (please specify)

2%

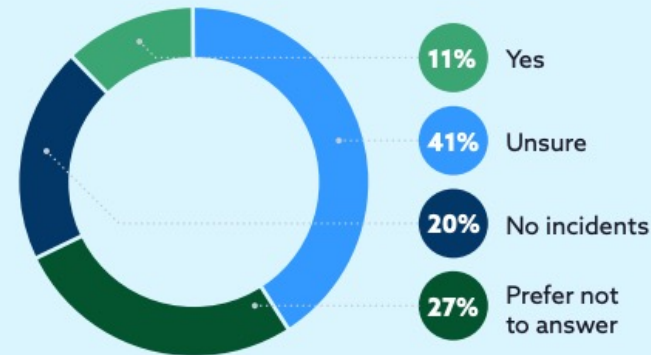
The Importance of Cloud Security



Cloud Security Incidents and Outages

Cloud-related operational incidents

Many organizations attempt to prepare for security incidents, such as breaches and outages. When asked whether their organization had experienced a cloud-related operational incident in the last 12 months, 11% reported definitively having a security incident, 20% reported no incidents, and 27% preferred not to answer. However, the most common response was unsure with 41%, which is a significant change from the 2019 survey in which only 18% didn't know whether an incident had occurred. Equally as interesting, the percentage of respondents reporting that they have had an incident (11%) has remained consistent from the 2019 survey.



Respondents were also asked to report the number of incidents that they experienced, with the average response being five. This seems relatively low when considering that large cloud platforms have many incidents throughout the week, although many may not be disruptive enough to significantly impact users.

Course Description



The Certificate of Cloud Security Knowledge course provides a broad overview of cloud security, allowing students to gain critical insights into issues such as data security, key management, and identity and access management. This course provides a self-paced learning experience through lectures and frequent knowledge checks.

Course Objectives

The objectives of the CCSK course are to:

- Spark the student's interest in cloud security
- Familiarize the student with the universal concepts of cloud computing
- Provide students with a base of knowledge on cloud computing security theory
- Acquaint students with security threats and best practices for securing the cloud
- Assist students in taking the CCSK exam

Why Earn Your CCSK?

- Globally, the importance of cloud computing for an organization's IT infrastructure is increasing. This growing priority to adopt and implement cloud infrastructure securely is creating an expanding skills gap within the IT profession. More than ever, there is a pressing need for certified professionals with knowledge tailored towards solving the challenges posed by accelerated migration to the cloud.
- Launched in 2010, the Certificate of Cloud Security Knowledge (CCSK) is a widely recognized standard of expertise and is the industry's primary benchmark for measuring cloud security skillsets. The CCSK was recently recognized as the most valuable IT certification in terms of average salary by Certification Magazine.
- Enterprises all over the world will need IT professionals who can help strengthen their security posture in the cloud. Be a part of a community of trained cloud security professionals by earning the CCSK.

Course Details

- **Target Audience**

- Learners enrolled in technology degree programs at higher education institutions and IT professionals who want to pursue a career in Cloud Security

- **Prerequisites: N/A**

- There is no official work experience required, however it is helpful for participants to have at least a basic understanding of security fundamentals such as firewalls, secure development, encryption, and identity and access management which can be learned by taking the Introduction to Cybersecurity and Cybersecurity Essentials courses

- **Certification**

- This course prepares students to take the CCSK exam. If students successfully pass the exam, they will receive their Certificate of Cloud Security Knowledge.

Course Details

- **Estimated time to complete: 35 hours**
- **Includes**
 - 6 modules
 - 20+ videos
 - 10 interactive activities
 - 37 knowledge checks
 - 1 final exam
- **Equipment & System Requirements**
 - Accessed online with no special equipment or system requirements

Course Structure

- **Module 1: Cloud Architecture**

- The fundamentals of cloud computing, cloud architectures, service, delivery, and deployment models, and the role of virtualization.

- **Module 2: Infrastructure Security for Cloud**

- Securing the core infrastructure for cloud computing, networks, management interfaces, and administrator credentials.

- **Module 3: Managing Cloud Security and Risk**


- Risk assessment, governance, and key legal and compliance issues in the cloud such as discovery requirements.


Course Structure


- **Module 4: Data Security for Cloud Computing**
 - The Data Security Lifecycle, data security issues with different delivery models, and managing encryption in the cloud.
- **Module 5: Application Security and Identity Management for Cloud Computing**
 - Federated identity, different Identity Access Management (IAM) applications, secure development, and managing application security in and for the cloud.
- **Module 6: Cloud Security Operations**
 - Key considerations for evaluating, selecting, and managing cloud computing providers, Security as a Service, and incident response.


Online Learning Environment


[Home](#) / [I'm Teaching](#) / [Cloud Security 1.00 EN](#)


Course
Home


Grades /
Completion


View as
student


Messages


Calendar

Cloud Security 1.00 EN

Welcome to Cloud Security 1.0


The Cloud Security course (Certificate of Cloud Security Knowledge training developed by Cloud Security Alliance) gives a broad overview of cloud security and allows students to gain critical insights into issues such as data security, key management, and identity and access management. This course provides a self-paced learning experience through lectures and frequent knowledge checks. There are no prerequisites for this 6 module course.

As organizations migrate to the cloud, they need information security professionals who are cloud savvy. The Certificate of Cloud Security Knowledge (CCSK) is widely recognized as the standard of expertise for cloud security, and gives you a cohesive and vendor-neutral understanding of how to secure data in the cloud. The CCSK credential is the foundation to prepare you to earn additional cloud credentials.


What are the benefits of earning your CCSK?

- **Prove** your competency in key cloud security issues through an organization that specializes in cloud research.
- **Increase** employment opportunities by filling the skills-gap for cloud-certified professionals.
- **Demonstrate** your technical knowledge, skills, and abilities to effectively use controls tailored to the cloud.
- **Learn** to establish a baseline of security best practices when dealing with a broad array of responsibilities, from cloud governance to configuring technical security controls.
- **Complement** other credentials such as the Cisco Certified CyberOps Associate, CCAK, CISA, CISSP and CCSP.

Have a question about the CCSK?
Feel free to reach out to us at: support@cloudsecurityalliance.org



CCSK[™]
Certificate of
Cloud Security Knowledge



CSA cloud
security
alliance[®]

Knowledge Checks


MENU

- Welcome
- Unit Structure
- ▶ The Amazon EC2 Story
- ▶ Resource pools
- "Static" Virtualization vs. Cloud Computing
- Definitions
- What is Cloud Computing?
- Potential Benefits of Cloud Computing
- Conclusion
- Knowledge Check**

☰ CCSK Module 1 Unit 2 - Introduction & Cloud Architecture

FAQ RESOURCES GLOSSARY

TEST YOUR KNOWLEDGE



What is the key difference between traditional virtualization and cloud?

☐ Commercial virtualization software

☐ Orchestration

☐ Hypervisors

☐ Abstraction

SUBMIT

Knowledge Checks

MENU

- Welcome
- Unit Structure
- NIST Model of Cloud Computing
- Essential Characteristics of Cloud
- Resource Pooling & Multitenancy
- Conclusion
- Knowledge Check**

CCSK Module 1 Unit 3 - Cloud Essential Characteristics

FAQ RESOURCES GLOSSARY

Click and drag the correct NIST model element to the appropriate category below.

Private

Broad Network Access

Essential Characteristics

Service Models

Deployment Models

PaaS
(Platform as a Service)

SUBMIT

Knowledge Checks


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☰ CCSK Module 1 Unit 3 - Cloud Essential Characteristics

FAQ RESOURCES GLOSSARY

Results


Congratulations,
you passed.

75%

Passing
Score

REVIEW QUIZ

75%

Your
Score

RETRY
QUIZ

<

Benefits of Earning your CCSK

- **Prove** your competency in key cloud security issues through an organization that specializes in cloud research.
- **Increase** employment opportunities by filling the skills-gap for cloud-certified professionals.
- **Demonstrate** your technical knowledge, skills, and abilities to effectively use controls tailored to the cloud.
- **Learn** to establish a baseline of security best practices when dealing with a broad array of responsibilities, from cloud governance to configuring technical security controls.
- **Complement** other credentials such as the **Cloud Security Alliance CCAK, CISA, CISSP, CCSP, and Cisco Certified CyberOps Associate.**

Take Your Cloud Knowledge Further

Once you've earned your CCSK from the Cloud Security Alliance (CSA), you will be more prepared to earn vendor specific or job-related cloud security credentials from CSA.

- **CCSK Plus**

The CCSK Plus contains all the material in the foundation course in addition to hands-on labs. Learn how to apply the knowledge from the lectures by performing a series of exercises to bring a fictional organization securely into the cloud.

- **CCAK**

The Certificate of Cloud Auditing Knowledge builds off of the material covered in the CCSK and goes more in-depth on topics around cloud governance, risk and compliance.



Career Impact

Which career paths does the CCSK help prepare for?

“I like to describe the CCSK as a “survey course” similar to those introductory classes in university. The CCSK provides a broad overview of cloud security with hooks to dig in deeper to a student’s specific coverage area. For example, developers and application security professionals will learn what is different about application security in the cloud and how and where to learn more. While an auditor will learn the fundamentals about assessing and auditing cloud and maintaining compliance. So really any career path where cloud and security overlap.” - Rich Mogull

Resources

Course Resources on NetAcad.com

- Scope & Sequence, FAQ, Product Overview slides
- Access Cloud Security Course Resources page on NetAcad.com:
<https://www.netacad.com/portal/resources/course-resources/network-security>

Resources available for download individually or in the [prep-kit](#).

- Sample question sheet (Unavailable for individual download)
- [Security Guidance](#)
- [Cloud Controls Matrix \(CCM\)](#)
- [ENISA](#)

Have a question about the CCSK or the study materials?

Join the [CSA Circle Community](#) where you can interact with other students, ask our instructors questions, or network with other CCSK holders. [Create an account on Circle to join.](#)