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Learning Style: Virtual Classroom

Technology: EC-Council

Difficulty: Intermediate

Course Duration: 5 Days

EC-Council Certified Cloud Security Engineer (CCSE)



About This Course:

The EC-Council Certified Cloud Security Engineer (CCSE) certification validates the skills needed to plan, configure, implement, and maintain a secure cloud environment across AWS, Microsoft Azure, and Google Cloud Platform (GCP). This CCSE instructor-led training delivers a structured, hands-on learning experience covering platform and infrastructure security, application and data security, security

operations, and incident response. Through this CCSE virtual bootcamp, students gain practical, lab-based experience securing multi-tenant cloud infrastructure, configuring identity and access management, protecting data at rest and in transit, and performing cloud penetration testing and forensic investigations. The course also covers governance, risk management, compliance, and business continuity planning across major cloud providers, giving students a well-rounded foundation for a cloud security career.

Course Objectives:

- ? Introduction to Cloud Security
- ? Platform and Infrastructure Security in the Cloud
- ? Application Security in the Cloud
- ? Data Security in the Cloud
- ? Security Operations in the Cloud
- ? Penetration Testing in the Cloud
- ? Incident Response in the Cloud
- ? Forensic Investigation in the Cloud
- ? Business Continuity and Disaster Recovery in the Cloud
- ? Governance, Risk Management, and Compliance in the Cloud

Audience

- ? Network & Cybersecurity Professionals Expanding into Cloud Security
- ? Cloud Administrators and Engineers

Prerequisites

- Working knowledge of network security management and a basic understanding of cloud computing concepts is recommended.

Course Outline:

Module 1: I ntroductio

n to Cloud Security

?

Understand
Cloud
Computing
Fundament
als

?

Understand
Cloud
Security
Objectives
and Issues

?

Understand
Cloud
Security
Insights

?

Evaluate
CSPs for
Security
before
Consuming
a Cloud
Service

?

Discuss
Security
Shared Res
ponsibility
Model in
Amazon
Cloud
(AWS)

?

Discuss
Security
Shared Res
ponsibility
Model in
Microsoft
Azure
Cloud

?

Discuss
Security
Shared Res

responsibility
Model in
Google
Cloud
Platform
(GCP)

**Module 2:
Platform
and Infrastr
ructure
Security in
Cloud**

?
Understand
Cloud
Platform
and Infrastr
ucture

?
Understand
the Risks
and Threats
Associated
with Cloud
Platform
and Infrastr
ucture

? Learn
how to
Secure the
Key Compo
nents of
Cloud
Platform
and Infrastr
ucture

? Learn
how to
Design a
Secure
Data Center
in Cloud

?
Understand
Cloud
Platform
and Infrastr

Structure Security in AWS ? Learn how to Implement Cloud Platform and Infrastr ucture Security in AWS ? Understand Cloud Platform and Infrastr ucture Security in GCP ? Learn how to Implement Cloud Platform and Infrastr ucture Security in Google ? Understand Cloud Platform and Infrastr ucture Security in Microsoft Azure ? Learn to Implement Cloud Platform and Infrastr ucture Security in Microsoft Azure
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Module 3: Application Security in Cloud

?

Understand
Cloud
Application
Security

? Discuss
Cloud
Application
Security
Risks

?

Understand
Secure
Software D
evelopment
Lifecycle
(SSDLC) of
Cloud
Applications

?

Understand
DevOps
and
Continuous
Integration/
Continuous
Deployment
(CI/CD)

? Discuss
Cloud
Application
Security
Controls

?

Understand
Application
Security
Features in
AWS

?

Learn
How to
Implement

Application Security in AWS
? Understand Application Security Features in Azure
? Learn How to Implement Application Security in Azure
? Understand Application Security Features in GCP
? Learn How to Implement Application Security in GCP
Module 4: Data Security in Cloud
? Understand Data Security in Cloud
? Discuss Cloud Data Storage Fundamentals
? Understand the Cloud Storage Architecture

and Life Cycle Phases
? Evaluate the Risks, Attacks, and Issues in Cloud Data Storage
? Understand Data Security Strategies and Techno logies in the Cloud
? Discuss Information Rights Man agement Systems
? Discuss Data Retention and Archiving Strategies
? Discuss Storage and Analysis of Data Events
? Understand Storage Services in Amazon Web Services (AWS)
? Learn how to Implement Data

Security in
Amazon
Web
Services
(AWS)

?
Understand
Storage
Services in
Google
Cloud
Platform
(GCP)

? Learn
how to
Implement
Data
Security in
Google
Cloud
Platform
(GCP)

?
Understand
Storage
Services in
Microsoft
Azure

? Learn
how to
Implement
Data
Security in
Microsoft
Azure

Module 5: Security Operations in Cloud

? Discuss
Cloud
Security
Operations

?
Understand
Elements

(Standards and Methods) in Cloud Data Center Physical/Logical Operations

? Learn Security Operations to Build Cloud Infrastructure

? Learn How to Perform Security Operations for Cloud Infrastructures

? Learn Security Operations to Manage Cloud Infrastructure

? Discuss Security Configurations Management for Cloud Infrastructure

? Learn to Monitor Security Operations for Cloud Infrastructure

? Understand Security Operations in Microsoft Azure

? Learn

to
Implement
Security
Operations
in Microsoft
Azure

?
Understand
Security
Operations
in Amazon
Web
Services
(AWS)

? Learn
to
Implement
Security
Operations
in Amazon
Web
Services
(AWS)

?
Understand
Security
Operations
in Google
Cloud
Platform
(GCP)

? Learn
to
Implement
Security
Operations
in Google
Cloud
Platform
(GCP)

Module 6: Penetration Testing in Cloud

?
Understand
the Scope

of Cloud
Penetration
Testing

? Learn
Generic
Penetration
Testing
Steps in the
Cloud

? Learn A
WS-Specific
Penetration
Testing
Steps

? Learn A
zure-
Specific
Penetration
Testing
Steps

? Learn
GCP-
Specific
Penetration
Testing
Steps

Module 7: Incident Response in Cloud

?
Understand
Cloud
Incident
Response

?
Understand
Cloud
Incident
Response
Lifecycle

?
Understand
How SOAR
Accelerates

Incident
Response

? Discuss
Security
Incident
Response
in AWS

? Discuss
AWS Investi
gation and
Detection
Tools

? Discuss
Security
Incident
Response
in Microsoft
Azure
Cloud

? Discuss
Security
Incident
Response
in Google
Cloud
Platform
(GCP)

Module 8: Forensic In vestigation in Cloud

? Discuss
Cloud
Forensics

? Learn
how to
Investigate
Security
Incidents in
Amazon
Web
Services
(AWS)

? Learn
how to

Investigate
Security
Incidents in
Microsoft
Azure

? Learn
how to
Investigate
Security
Incidents in
Google
Cloud
Platform
(GCP)

**Module 9:
Business
Continuity
and
Disaster
Recovery
in Cloud**

? Discuss
Cloud
Disaster
Recovery
and
Business
Continuity

? Learn
to Design
Disaster
Recovery
and
Business
Continuity
in Cloud

? Learn
to Architect
Recovery
and
Resilience
in AWS

? Learn
to
Implement
Recovery
and

Resilience in AWS
?
Understand Business Continuity and Disaster Recovery in Microsoft Azure
? Learn Disaster Recovery C onfiguration s in Azure
? Learn to Implement BC/DR with Azure SQL Database
? Learn to Configure BCDR for Azure Stack Edge VPN
? Understand Various Disaster Recovery Scenarios in Azure
? Learn to Implement BCDR in Azure
? Discuss Azure Partner Solutions for BCDR

? Discuss
BC/DR in
Google
Cloud
Platform
(GCP)

? Discuss
GCP
Resources
for Disaster
Recovery
(DR) and
Business
Continuity
Plan (BCP)

?
Understand
Disaster
Recovery
for Data in
GCP

?
Understand
Disaster
Recovery
for
Applications
in GCP

? Learn
to Architect
DR for
Cloud Infras
tructure
Outages

? Learn
to
Implement
BCDR in
Google
Cloud
Platform
(GCP)

? Discuss
Partners
Solutions
for Impleme
nting BCDR

in GCP

**Module 10:
Governance, Risk Management,
and Compliance in
Cloud**

?

Understand
GRC in the
Cloud

? Discuss
Cloud
Governance

? Learn
to
Implement
and
Maintain
Governance
for Cloud
Computing

? Discuss
Risk Management in
the Cloud

? Discuss
Risk Management
Framework
and
Process in
the Cloud

?

Understand
Cloud
Compliance

? Learn
to
Implement
GRC in the
Cloud

?
Understand
GRC in
Amazon
Web
Services
(AWS)

?
Understand
GRC in
Azure

?
Understand
GRC in
Google
Cloud
Platform
(GCP)

**Module 11:
Standards,
Policies,
and Legal
Issues in
Cloud**

?
Understand
Laws
Impacting
Cloud
Computing

? Learn
the Cloud
Computing
Standards

?
Describe
the Legal Fr
ameworks
for Data
Protection
and Privacy

? Learn
Audit
Planning
and
Reporting in

the Cloud
?
Describe Outsourcing and Vendor Management
?
Understand Standards, Policies, and Auditing in AWS
?
Understand Standards, Policies, and Auditing in Azure
?
Understand Standards, Policies, and Auditing in GCP