CompTIA CASP+ (CAS-004)

Course Overview

This course will prepare students for the CompTIA Advanced Security Practitioner CAS004 exam. In this course, students will learn about security architecture, security operations, security engineering and cryptography, and governance, risk, and compliance.

Course Introduction 17m
Course Introduction
Introduction to CompTIA CASP+ CAS-004
Instructor Introduction
What is CASP+
New CASP+ CAS-004 Exam
CASP+ CAS-004 Exam Domains
CASP+ CAS-004 Exam Objectives
CASP+ CAS-004 Exam Objectives
CASP+ CAS-004 Exam Objectives
CASP+ CAS-004 Exam Objectives
References

Domain 1 - Security Architecture 3h 43m
Security Architecture
Topic 1.1 - Securing Network Architecture
Services
Services (Cont.)
Services (Cont.)
Services (Cont.)
Segmentation
Segmentation (Cont.)
Segmentation (Cont.)
Deperimeterization and Zero Trust
Merging of Networks from Various Organizations
Software-Defined Networking (SDN)
Topic 1.2 - Infrastructure Security Design
Scalability
Resiliency
Resiliency (Cont.)
Automation
Containerization
Virtualization
Content Delivery Network
Caching
Topic 1.3 - Applications Security and Integration
Baseline and Templates
Baseline and Templates (Cont.)
Baseline and Templates (Cont.)

Software Assurance
Software Assurance (Cont.)
Considerations of Integrating Enterprise Applications
Integrating Security into Development Life Cycle
Integrating Security into Development Life Cycle (Cont.)
Integrating Security into Development Life Cycle (Cont.)
Integrating Security into Development Life Cycle (Cont.)
Topic 1.4 - Data Security Techniques
Data Lifecycle
Data Classification and Management
Data Loss Prevention
Data Loss Detection
Data Obfuscation and Masking Techniques
Topic 1.5 - Authentication and Authorization Controls
Credential and Password Management
Federated Trust Methods
Access Control Models
Authentication Protocols
Identity Proofing Mechanism
Topic 1.6 - Cloud and Virtualization Solutions
Virtualization
Containerization
Emulation
Cloud
Cloud (Cont.)
Cloud (Cont.)
Demo - Cloud
Topic 1.7 - Cryptography and Public Key Infrastructure (PKI)
Cryptographic Terms
Cryptographic Terms
Cryptographic Terms (Cont.)
Public Key Infrastructure (PKI)
Public Key Infrastructure (PKI) (Cont.)
Public Key Infrastructure (PKI) (Cont.)
Common PKI Use Cases
Common PKI Issues
Topic 1.8 - Impact of Emerging Technologies on Security and Privacy
Artificial Intelligence, Machine Learning, and Deep Learning
Virtual/Augmented Reality
Quantum Computing
Blockchain
Homomorphic Encryption
Secure Multi-Party Computation
Distributed Consensus
Big Data
3D Printing
Domain 1 Review
Domain 1 Review
Domain 1 Review
Domain 1 Review

Domain 2 - Security Operations 3h 25m

Security Operations
Topic 2.1 - Threat Management
Frameworks
Frameworks (Cont.)
Frameworks (Cont.)
Frameworks (Cont.)
Frameworks (Cont.)
Intelligence Types & Collection Methods
Intelligence Types & Collection Methods (Cont.)
Intelligence Types & Collection Methods (Cont.)
Intelligence Types & Collection Methods (Cont.)
Threat Actors
Demo - Threat Frameworks
Topic 2.2 - Indicators of Compromise and Responses
Indicators of Compromise
Indicators of Compromise (Cont.)
Indicators of Compromise (Cont.)
Indicators of Compromise (Cont.)
Indicators of Compromise (Cont.)
Safeguards and Responses
Topic 2.3 - Vulnerability Management
Vulnerability Scans
Vulnerability Scans (Cont.)
Security Content Automation Protocol (SCAP)
Security Content Automation Protocol (SCAP) (Cont.)
Vulnerability Assessment Types
Information Source Vulnerabilities
Patch Management
Topic 2.4 - Vulnerability Assessment, Penetration Testing, and Tools
Test Types
Test Types (Cont.)
Tools for Testing
Tools for Testing (Cont.)
Methods and Requirements
Methods and Requirements (Cont.)
Topic 2.5 - Vulnerabilities and Attacks
Vulnerabilities
Vulnerabilities (Cont.)
Vulnerabilities (Cont.)
Attacks
Attacks (Cont.)
Attacks (Cont.)
Attacks (Cont.)
Attacks (Cont.)
Attacks (Cont.)
Topic 2.6 - Processes for Risk Reduction
Types of Security Controls
Administrative Security Controls
Physical Security Controls

Logical Security Controls
Topic 2.7 - Incident Management
Classification
Classification (Cont.)
Triage Event
Incident Response
Incident Response
Communication
Stakeholders
Topic 2.8 - Digital Forensics Concepts
Forensic Process
Forensic Process (Cont.)
Chain of Custody
Chain of Custody (Cont.)
Data Acquisition and Preservation
Cryptanalysis and Steganalysis
Forensic Images and Clones
Forensic Workstation
Topic 2.9 - Forensic Analysis Tools
Forensic Analysis Tools
Forensic Analysis Tools (Cont.)
Domain 2 Review
Domain 2 Review
Domain 2 Review
Domain 2 Review

Domain 3 - Security Engineering and Cryptography 2h 58m
Security Engineering and Cryptography
Topic 3.1 - Secure Configurations for Enterprise Mobility
Enterprise Mobility Management (EMM)
Enterprise Mobility Management (EMM) (Cont.)
Enterprise Mobility Management (EMM) (Cont.)
Managed Configurations
Managed Configurations (Cont.)
Managed Configurations
Managed Configurations (Cont.)
Managed Configurations (Cont.)
Managed Configurations (Cont.)
Deployment Scenarios
Mobile Device Reconnaissance
Security Considerations
Topic 3.2 - Endpoint Security
Hardening Techniques
Hardening Techniques
Hardening Techniques (Cont.)
Hardening Techniques (Cont.)
Hardening Techniques (Cont.)
Protection Processes
Patching
Patching (Cont.)

Patching (Cont.)
Logging and Monitoring
Mandatory Access Control
Security-Enhanced Linux (SELinux)
Security-Enhanced Linux (SELinux) (Cont.)
Security-Enhanced Android (SEAndroid)
Trustworthy Computing
Trusted Platform Module (TPM)
UEFI and BIOS
Secure Boot
Measured Boot
Attestation Services
Hardware Security Module (HSM)
Self-Encrypting Drives (SEDs)
Host Security Controls
Topic 3.3 - Security Considerations and Impacts
Embedded Devices
Internet of Things (IoT)
Internet of Things (IoT) (Cont.)
System on a Chip (SoC)
Microcontrollers
Industrial Computer Systems
Industrial Control Systems (ICSs)
Programmable Logic Controller (PLC)
Supervisory Control and Data Acquisition (SCADA)
Heating, Ventilation, and Air Conditioning (HVAC)
Common Protocols in ICS
Common Protocols in ICS (Cont.)
Sectors
Topic 3.4 - Cloud Adoption and Impacts
Business Continuity and Disaster Recovery Considerations
Key Management Practices
Storage Configurations
Serverless
Logging and Monitoring
Cloud Access Security Broker (CASB)
Misconfiguration
Topic 3.5 - Public Key Infrastructure (PKI)
Components of PKI
Components of PKI (Cont.)
Certificate and Cryptographic Key Issues
Demo - Cloud Adoption and Impacts and PKI
Topic 3.6 - Cryptographic Algorithms and Protocols
Hashing
Hashing (Cont.)
Hashing (Cont.)
Symmetric Algorithms
Symmetric Algorithms (Cont.)
Asymmetric Algorithms
Asymmetric Algorithms (Cont.)

Cryptographic Applications and Protocols
Domain 3 Review
Domain 3 Review
Domain 3 Review

Domain 4 - Governance, Risk, and Compliance 2h 35m

Governance, Risk, and Compliance
Topic 4.1 - Risk Management
Risk Management Concepts
Risk Management Concepts (Cont.)
Risk Management Concepts (Cont.)
Risk Management Concepts (Cont.)
Risk Management Concepts (Cont.)
Risk Frameworks
Risk Frameworks (Cont.)
Risk Frameworks (Cont.)
Risk Frameworks (Cont.)
Risk Assessment Methods and Strategies
Risk Assessment Methods and Strategies (Cont.)
Risk Assessment Methods and Strategies (Cont.)
Risk Assessment Methods and Strategies (Cont.)
Risk Assessment Methods and Strategies (Cont.)
People/Insider Risk Management
People/Insider Risk Management (Cont.)
Vendor Risk Management
Vendor Risk Management (Cont.)
Vendor Risk Management (Cont.)
Vendor Risk Management (Cont.)
Vendor Risk Management (Cont.)
Vendor Risk Management (Cont.)
Topic 4.2 - Governance & Compliance Strategies
Basic Concepts
Basic Concepts (Cont.)
Managing Critical Data Assets
Managing Critical Data Assets (Cont.)
Managing Critical Data Assets (Cont.)
Managing Critical Data Assets (Cont.)
Managing Critical Data Assets (Cont.)
Regulation, Accreditation, and Standards
Regulation, Accreditation, and Standards (Cont.)
Regulation, Accreditation, and Standards (Cont.)
Regulation, Accreditation, and Standards (Cont.)
Regulation, Accreditation, and Standards (Cont.)
Regulation, Accreditation, and Standards (Cont.)
Legal Considerations & Contract Types
Legal Considerations & Contract Types (Cont.)
Legal Considerations & Contract Types (Cont.)
Legal Considerations & Contract Types (Cont.)
Demo - Regulations and Legal Considerations
Topic 4.3 - Business Continuity & Disaster Recovery

Business Continuity Planning
Business Continuity Planning (Cont.)
Business Continuity Planning (Cont.)
Business Continuity Planning (Cont.)
Disaster Recovery Planning
Disaster Recovery Planning (Cont.)
Disaster Recovery Planning (Cont.)
Disaster Recovery Planning (Cont.)
Disaster Recovery Planning (Cont.)
Disaster Recovery Planning (Cont.)
Disaster Recovery Planning (Cont.)
Testing
Testing (Cont.)
Testing (Cont.)
Testing (Cont.)
Testing (Cont.)
Testing (Cont.)
Testing (Cont.)
Domain 4 Review
Domain 4 Review
Course Closure
Course Closure
Course Closure
Course Closure
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Course Closure

Total Duration: 12h 59m