

AWS Advanced Networking ANS-C01 Exam Prep 2026

AWS ANS-C01 Advanced Networking 2026. Hybrid networks, VPC security, and performance optimization.

IT Certifications Instructor: Brian Taylor • 5 sections • 47 lessons • 14.00h total

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About this course

This course is for network engineers and cloud architects who need to pass the AWS Advanced Networking (ANS-C01) exam. We tackle the key domains with practical insights. You will learn how to design hybrid cloud networks, secure VPCs, and optimize performance using AWS services. Includes walkthroughs, cheat sheets, and case study analysis.

Course curriculum

Section 1: Foundations and Exam Overview

- **Understanding the ANS-C01 Exam Structure (12m)**
We'll break down the exam domains, question types, and scoring so you know exactly what to expect and can plan your study strategy.
- **Key AWS Networking Services to Master (18m)**
Learn the core services like VPC, Direct Connect, and Transit Gateway that are central to the exam and real-world deployments.
- **Setting Up Your AWS Lab Environment (15m)**
A step-by-step guide to creating a safe, cost-effective lab environment for hands-on practice with all networking features.
- **Reviewing the AWS Shared Responsibility Model (8m)**
Clarify what AWS manages versus your responsibilities in networking, a critical concept for exam questions and real design.
- **Creating a Personalized Study Plan (10m)**
How to map the exam domains to your learning schedule, including a downloadable template to track your progress.
- **Common Pitfalls and How to Avoid Them (14m)**
We'll discuss frequent mistakes test-takers make and share strategies to overcome them, based on real exam experiences.
- **Introduction to Hybrid Networking Concepts (20m)**
Get a high-level overview of connecting on-premises networks to AWS, setting the stage for deeper dives later.

Section 2: Core Networking Concepts

- **Designing Secure VPC Architectures (22m)**
Learn how to design VPCs with subnets, route tables, and security groups to meet security and scalability requirements.
- **Implementing VPC Peering and Endpoints (16m)**
A practical walkthrough of VPC peering and interface endpoints for secure, private connectivity.
- **AWS Transit Gateway (25m)**
Step-by-step guide to using Transit Gateway for scalable hub-and-spoke networking across multiple VPCs.
- **Configuring AWS Direct Connect (28m)**
Understand Direct Connect setup, virtual interfaces, and how to ensure high availability for critical workloads.
- **Hybrid DNS with Route 53 (12m)**
Learn to manage DNS across on-premises and AWS using Route 53 Resolver and private hosted zones.

- **Network Security with Security Groups and NACLs (14m)**
A problem-solving session on when to use security groups versus network ACLs for defense in depth.
- **AWS VPN Options: Site-to-Site and Client VPN (18m)**
Compare VPN types and learn configuration steps for secure remote access and site-to-site connections.
- **Load Balancing with ALB, NLB, and Gateway Load Balancer (20m)**
Real case study analysis of choosing the right load balancer for different application needs.
- **Introduction to AWS Network Firewall (15m)**
See how to deploy and manage network firewall rules to protect your VPC traffic.

Section 3: Deep Dive into Advanced Topics

- **Optimizing Network Performance with AWS Global Accelerator (22m)**
Learn how to improve application performance globally using Global Accelerator and its health checks.
- **Designing for High Availability and Disaster Recovery (24m)**
A step-by-step guide to building resilient networks across multiple Availability Zones and Regions.
- **Cost Optimization for AWS Networking Services (16m)**
Practical tips to reduce costs while maintaining performance, with downloadable cost calculator templates.
- **Troubleshooting Common Network Issues (20m)**
Real-world scenarios and a problem-solving session on diagnosing VPC, Direct Connect, and VPN problems.
- **Using AWS CloudWatch for Network Monitoring (12m)**
Set up alarms and dashboards to monitor network metrics and catch issues before they impact users.
- **Advanced Route 53: Traffic Flow and Geolocation (18m)**
Deep dive into Route 53 features for intelligent traffic routing based on location and latency.
- **Securing Data in Transit with AWS Certificate Manager (10m)**
Learn to manage SSL/TLS certificates for secure communications across your network.
- **Network Design for Multi-Account AWS Organizations (26m)**
A real case study on designing networks that span multiple AWS accounts securely.

Section 4: Advanced Application and Security

- **Implementing Zero Trust Network Architecture (25m)**
Step-by-step guide to applying zero trust principles in AWS using IAM, VPC, and security services.
- **Designing for Compliance: HIPAA and PCI DSS (20m)**
How to configure AWS networking to meet specific regulatory requirements, with checklists.
- **Automating Network Deployments with AWS CloudFormation (22m)**
Use templates to automate VPC and Direct Connect setups, saving time and reducing errors.
- **Integrating AWS Services for Secure Networking (18m)**
See how to combine GuardDuty, Security Hub, and Network Firewall for a unified security posture.
- **Advanced VPC Flow Logs Analysis (15m)**
Learn to use Athena and QuickSight to analyze flow logs for security insights and optimization.

- **Hybrid Networking with AWS Outposts (24m)**
A practical look at extending AWS networking to on-premises hardware with Outposts.
- **Designing for Edge Computing with AWS Wavelength (16m)**
Understand how to use Wavelength Zones for ultra-low latency applications.
- **Network Performance Tuning with Enhanced Networking (14m)**
Configure SR-IOV and other features to maximize instance network performance.
- **Using AWS Service Catalog for Standardized Networks (12m)**
How to create and manage approved network templates for your organization.
- **Problem-Solving: Migrating Legacy Networks to AWS (28m)**
A detailed case study with a downloadable migration checklist and step-by-step plan.

Section 5: Implementation and Exam Readiness

- **Final Exam Strategy and Time Management (15m)**
Tips for pacing yourself during the exam, with practice on sample question timing.
- **Hands-On Lab: Building a Complete Hybrid Network (35m)**
A comprehensive lab where you'll design and implement a network with VPC, Direct Connect, and VPN.
- **Practice Exam Walkthrough: Domain 1 (Design) (20m)**
We'll go through practice questions, explaining the reasoning behind each correct answer.
- **Practice Exam Walkthrough: Domain 2 (Implementation) (22m)**
Focus on implementation scenarios, with downloadable templates for common setups.
- **Practice Exam Walkthrough: Domain 3 (Operations) (18m)**
Learn to troubleshoot and optimize networks, with real case study analysis.
- **Practice Exam Walkthrough: Domain 4 (Security) (20m)**
Deep dive into security questions, with a problem-solving session on common pitfalls.
- **Reviewing Your Weak Areas: Customized Study Plan (12m)**
How to use practice results to create a targeted review plan, with a downloadable tracker.
- **Exam Day Checklist and Last-Minute Tips (10m)**
A step-by-step guide to what to do before, during, and after the exam for success.
- **Next Steps: After Certification (12m)**
Explore career paths, advanced certifications, and how to apply your skills in real projects.
- **Course Wrap-Up and Resources (8m)**
Access to a curated list of AWS docs, forums, and community resources for ongoing learning.
- **Q&A Session: Common Exam Questions (16m)**
We'll address frequently asked questions and clarify any remaining doubts from students.
- **Final Project: Design Your Own Network (30m)**
Apply everything you've learned to design a network for a hypothetical company, with peer review options.
- **Bonus: 2026 Exam Updates and What's New (14m)**
Stay ahead with insights into any recent changes to the ANS-C01 exam blueprint.

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