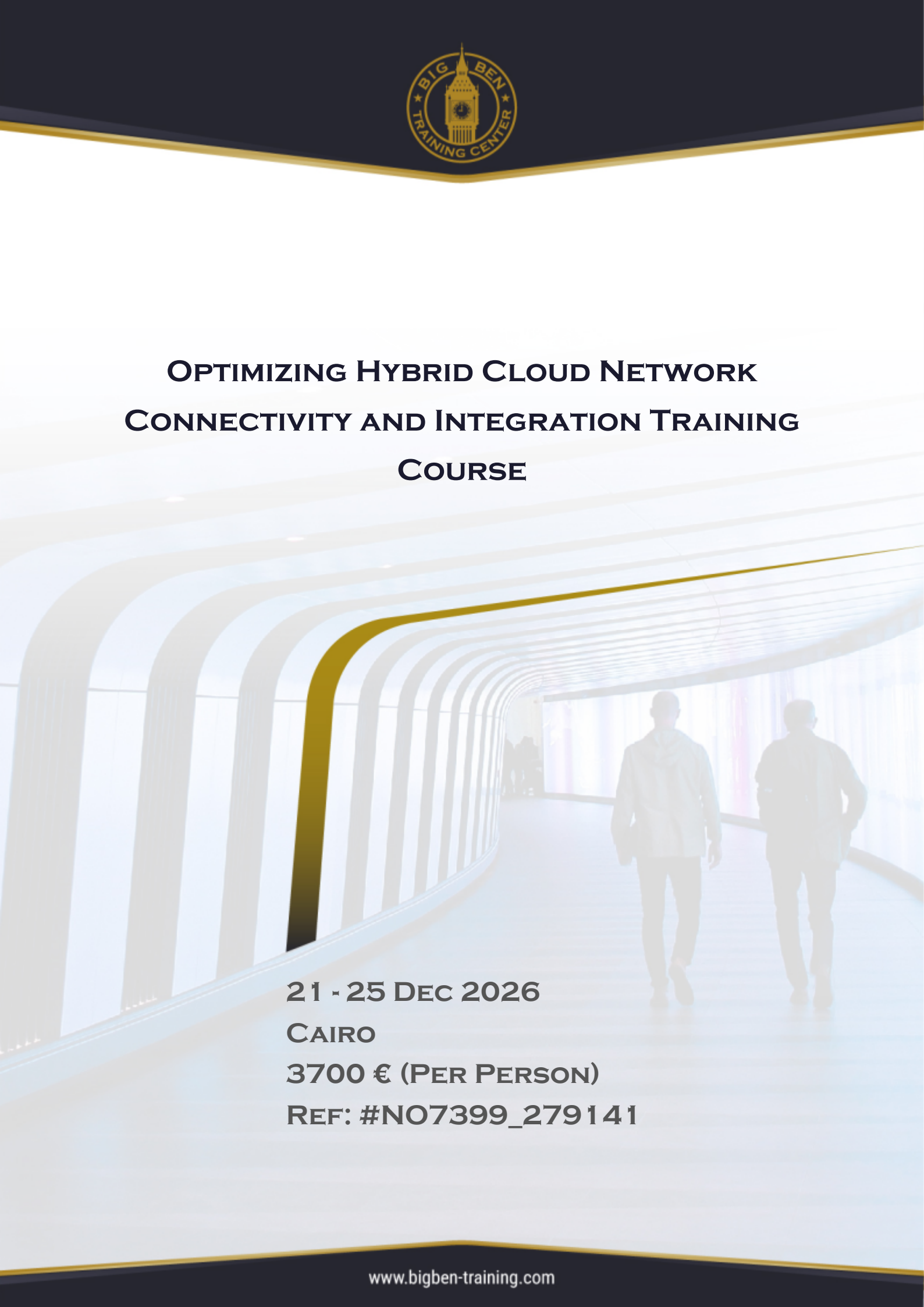
Optimizing Hybrid Cloud Network Connectivity and Integration Training Course



21 - 25 Dec 2026

Cairo

3700 € (Per Person)

Ref: #NO7399_279141

Course Introduction / Overview:

The strategic adoption of hybrid cloud models has become a cornerstone of modern IT infrastructure, offering an unparalleled blend of flexibility, scalability, and control. However, the true power of this approach is unlocked only through seamless and secure network connectivity and integration between on-premises data centers and public cloud environments. This course provides a comprehensive, A-to-Z exploration of the principles, technologies, and best practices for architecting, deploying, and managing robust hybrid cloud networks. As discussed by renowned cloud strategist David Linthicum, effective integration is not merely a technical task but a critical business enabler. Participants will delve into the complexities of bridging disparate network environments, a challenge detailed in works like "Cloud Computing: Concepts, Technology & Architecture". This program, offered by BIG BEN Training Center, moves beyond vendor-specific training to equip professionals with a holistic understanding of hybrid connectivity patterns, security protocols, automation techniques, and performance optimization strategies, ensuring they can build resilient and efficient networks that support critical business applications and drive digital transformation.

Target Audience / This training course is suitable for:

- Network Engineers and Architects.
- Cloud Solutions Architects.
- IT Managers and Directors.
- Systems Administrators.
- DevOps and Site Reliability Engineers.
- Cybersecurity Professionals.
- IT Infrastructure Specialists.
- Technical Project Managers.

Target Sectors and Industries:

- Information Technology and Services.
- Financial Services and Banking.
- Healthcare and Pharmaceuticals.
- Retail and E-commerce.
- Telecommunications.
- Manufacturing and Supply Chain.
- Government Agencies and Public Sector Organizations.
- Energy and Utilities.

Target Organizations Departments:

- Information Technology Operations.
- Network Engineering and Administration.
- Cloud Center of Excellence (CCoE).
- Infrastructure and Operations.
- Cybersecurity and Information Security.
- Application Development and DevOps.
- Digital Transformation and Strategy.
- Enterprise Architecture.

Course Offerings:

By the end of this course, the participants will have able to:

- Design resilient and scalable hybrid cloud network architectures.
- Implement secure connectivity solutions like VPNs and dedicated interconnects.
- Integrate on-premises networks with major public cloud providers.
- Automate network provisioning and configuration using Infrastructure as Code (IaC).
- Manage and monitor network performance across hybrid environments.
- Implement robust security controls and governance policies for hybrid networks.
- Troubleshoot complex connectivity and integration issues effectively.
- Optimize network costs without compromising performance or security.
- Develop a strategic roadmap for multi-cloud network integration.
- Apply Zero Trust principles to secure hybrid cloud network access.

Course Methodology:

The training methodology at BIG BEN Training Center is designed to be immersive, practical, and highly interactive, ensuring participants can translate theoretical knowledge into real-world skills. Our approach is centered on a blended learning model that combines expert-led instruction with hands-on application. Each session includes detailed presentations on core concepts, followed by practical demonstrations and simulated lab exercises that allow participants to configure and troubleshoot hybrid network environments. We emphasize learning through real-world case studies, analyzing successful hybrid cloud implementations and learning from common pitfalls. Collaborative group discussions and problem-solving workshops encourage peer-to-peer learning and the exchange of diverse perspectives. Instructors facilitate interactive Q&A sessions to address specific challenges and provide personalized feedback. This dynamic and engaging methodology ensures a deep understanding of hybrid cloud network connectivity and integration, empowering participants to confidently apply their new skills within their organizations immediately upon completion of the course.

Course Agenda (Course Units):

Unit One Foundations of Hybrid Cloud Networking

- Introduction to hybrid and multi-cloud architectures.
- Core components of on-premises and public cloud networking.
- Key challenges in hybrid network connectivity and integration.
- Comparing networking services of major cloud providers (AWS, Azure, Google Cloud).
- Understanding virtual private clouds (VPCs) and virtual networks (VNets).
- IP addressing and subnetting strategies for hybrid environments.
- Exploring the role of DNS in hybrid cloud deployments.

Unit Two Establishing Secure Network Connectivity

- Deep dive into VPN solutions for hybrid connectivity.
- Configuring site-to-site and point-to-site VPN gateways.
- Implementing dedicated interconnects like AWS Direct Connect and Azure ExpressRoute.
- Securing data in transit with encryption protocols.
- Network security groups and access control lists (ACLs).
- Firewall deployment models in hybrid cloud.
- Identity and access management (IAM) for network resources.

Unit Three Advanced Network Integration and Services

- Integrating SD-WAN with hybrid cloud environments.
- Architecting for high availability and disaster recovery.
- Global and regional load balancing strategies.
- Implementing service mesh for microservices communication.
- Centralized DNS resolution and management.
- Application and data integration patterns across clouds.
- API gateway management for hybrid applications.

Unit Four Automation and Management of Hybrid Networks

- Introduction to Infrastructure as Code (IaC) for networking.
- Automating network provisioning with Terraform.
- Using Ansible for network configuration management.
- Monitoring network performance, latency, and traffic flow.
- Implementing centralized logging and analytics for troubleshooting.
- Strategies for network performance optimization.
- Cost management and optimization for network resources.

Unit Five Security, Governance, and Future Trends

- Implementing a Zero Trust security model for hybrid networks.
- Understanding Secure Access Service Edge (SASE) architecture.
- Ensuring regulatory compliance and data governance.
- Auditing and reporting on network security posture.
- Managing secrets and credentials for network automation.
- Exploring the future of multi-cloud networking.
- Final project. developing a complete hybrid network architecture plan.

FAQ:

Qualifications required for registering to this course?

There are no requirements.

How long is each daily session, and what is the total number of training hours for the course?

This training course spans five days, with daily sessions ranging between 4 to 5 hours, including breaks and interactive activities, bringing the total duration to 20 - 25 training hours.

Something to think about:

As hybrid environments evolve towards multi-cloud ecosystems, how does the principle of 'least privilege' need to be re-architected for network access control beyond traditional perimeter-based security?

What unique qualities does this course offer compared to other courses?

This course distinguishes itself by adopting a vendor-agnostic, architectural approach to hybrid cloud networking, focusing on universally applicable principles rather than platform-specific commands. While other courses may concentrate on a single cloud provider, our curriculum equips participants with the strategic knowledge to design and manage connectivity across diverse environments, including AWS, Azure, and Google Cloud. We place a significant emphasis on automation and Infrastructure as Code (IaC), recognizing that manual configuration is no longer viable in complex, dynamic cloud infrastructures. The curriculum is uniquely structured to address the entire lifecycle of hybrid networking, from initial design and secure implementation to ongoing management, optimization, and governance. Furthermore, the course delves into advanced and forward-looking topics such as SASE and Zero Trust architecture, preparing professionals not just for today's challenges but for the future of enterprise networking. The focus on real-world case studies and strategic problem-solving ensures that participants leave with practical, actionable skills that deliver immediate value to their organizations.