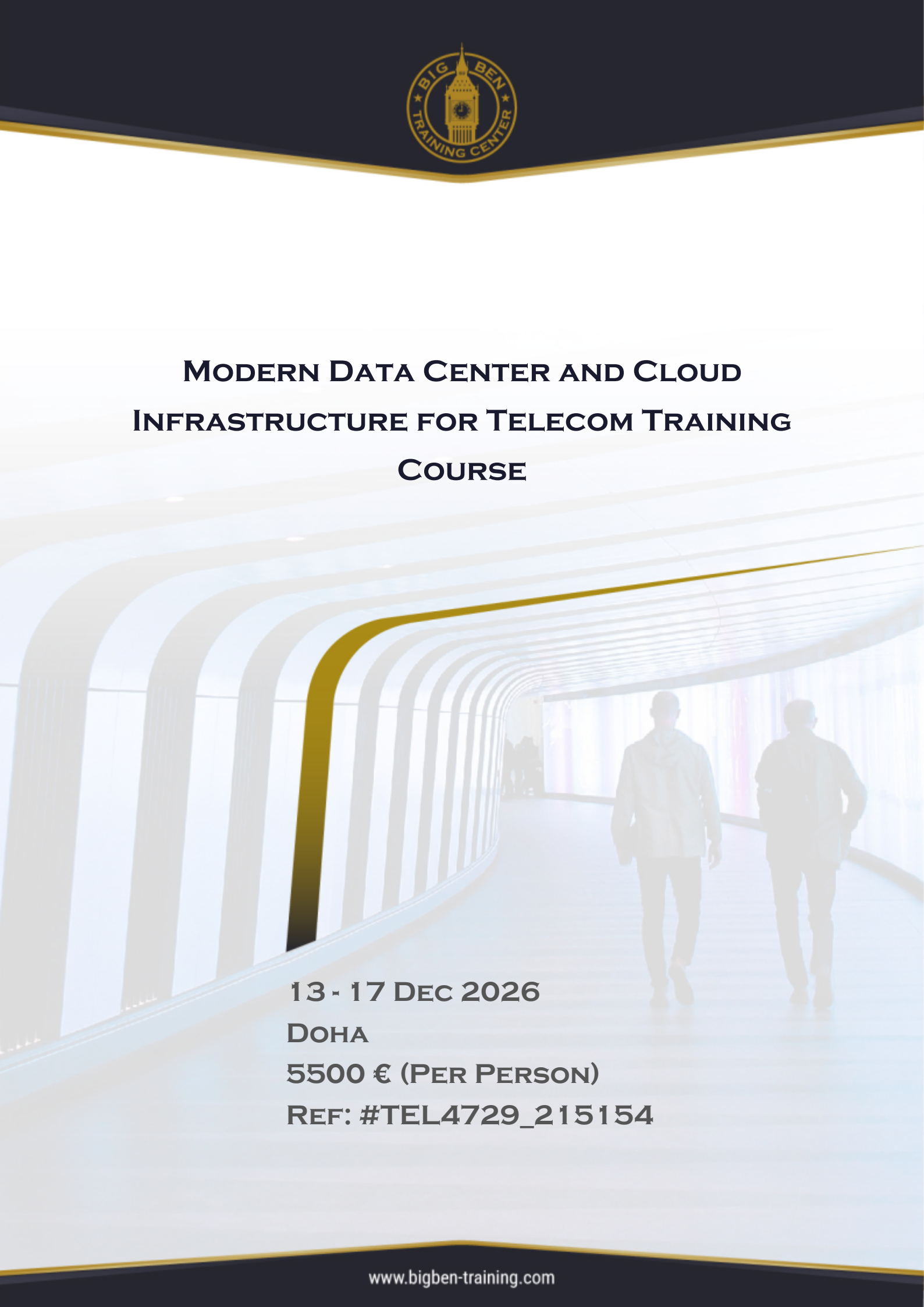
Modern Data Center and Cloud Infrastructure for Telecom Training Course



13 - 17 Dec 2026

Doha

5500 € (Per Person)

Ref: #TEL4729_215154

Course Introduction / Overview:

This training course is designed to equip telecom engineers, IT architects, and network professionals with the strategic and technical skills needed to design, implement, and manage modern data centers and cloud infrastructure for the telecom industry. As networks transition to 5G and beyond, the need for flexible, scalable, and efficient infrastructure becomes paramount. This program, offered by BIG BEN Training Center, provides a comprehensive framework for understanding the core principles of data center design, cloud computing, and network virtualization. We will explore key concepts such as NFV, SDN, and edge computing. The curriculum is informed by the academic work of authors like William Stallings, whose book, Data and Computer Communications, provides a foundational and detailed understanding of the principles behind data center networking and cloud integration. This course goes beyond a simple overview of technology to provide a deep understanding of how to implement real-world solutions that ensure network reliability, scalability, and efficiency. We prepare participants to be leaders who can build more resilient and agile telecom infrastructure.

Target Audience / This training course is suitable for:

- Data center architects.
- Cloud solution engineers.
- Network engineers.
- IT professionals.
- System administrators.
- Strategic planners.
- Project managers.
- Government agencies and equivalents.

Target Sectors and Industries:

- Telecommunications.
- Mobile Network Operators (MNOs).
- Internet Service Providers (ISPs).
- Data Center Operators.
- Cloud Service Providers.
- IT and Managed Services.
- Broadcasting.
- Government and public administration agencies.

Target Organizations Departments:

- Data Center Operations.
- Cloud Engineering.
- Network Architecture.
- IT Infrastructure.
- Strategic Planning.
- Research and Development (R&D).
- Technical Services.
- Operations.

Course Offerings:

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

- Understand the principles of data center architecture.
- Design a telecom cloud infrastructure.
- Implement Network Functions Virtualization (NFV).
- Deploy Software-Defined Networking (SDN).
- Manage virtual machines and containers.
- Master edge computing concepts.
- Ensure data center security and compliance.
- Integrate cloud services with existing networks.

Course Methodology:

This training course uses a highly practical and case-study driven methodology. The program is built on real-world examples of successful telecom cloud deployments and the challenges they faced. Participants will work in teams to design a cloud-based network solution for a specific telecom scenario, applying the tools and frameworks learned in the course. We will use interactive workshops to practice skills like virtualization planning and cloud cost management. The curriculum is designed to be a collaborative experience where participants can share their unique challenges and innovative solutions. Our trainers, with extensive experience in the field, will provide direct feedback and guidance throughout the course. BIG BEN Training Center is committed to providing a dynamic and practical learning environment, ensuring that participants leave with the skills and confidence to lead effective data center and cloud initiatives.

Course Agenda (Course Units):

Unit One: Foundations of Telecom Cloud

- The evolution from traditional data centers.
- The role of cloud computing in 5G.
- Network Functions Virtualization (NFV).
- Software-Defined Networking (SDN).
- Virtual machines vs. containers.
- Key concepts: cloud-native, microservices.
- Case studies of telecom cloud transformation.

Unit Two: Data Center Architecture and Design

- Data center topologies.
- Physical infrastructure design.
- Power and cooling systems.
- Data center networking: spine and leaf.
- Storage solutions.
- Cabling infrastructure.
- Capacity planning.

Unit Three: Cloud Infrastructure and Network Virtualization

- Cloud platforms: private, public, hybrid.
- Virtualization technologies.
- Implementing NFV for core network functions.
- SDN controllers and applications.
- Service chaining.
- Orchestration and automation.
- Cloud migration strategies.

Unit Four: Edge Computing and Security

- The importance of computing.
- Edge data center design.
- Low-latency applications.
- Data center security principles.
- Compliance and governance.
- Risk management.
- Threat detection and incident response.

Unit Five: Strategic Management and the Future

- Cloud cost management.
- Vendor selection and relations.
- DevOps in a telecom environment.
- Strategic leadership for cloud adoption.
- Career pathways in telecom cloud.
- The future of telco cloud.
- The role of AI in network automation.

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:

How can telecom professionals strategically leverage the agility and scalability of cloud computing to move beyond a traditional, hardware-centric model and build a more innovative and responsive network?

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

This training course is unique because it provides a dedicated, strategic focus on the practical design and implementation of data center and cloud infrastructure for the telecom industry. While other programs may cover general cloud computing, our curriculum is designed to empower professionals with the specific skills needed to address the unique challenges of telecom, from NFV deployment to edge computing. The program is a hands-on experience, with exercises that directly simulate the challenges and decisions involved in a real-world cloud migration or data center design scenario. We go beyond theoretical concepts to provide a clear, actionable roadmap for balancing business needs with the imperative of delivering seamless and high-quality user experience. This course is for professionals who want to lead their organizations toward a more agile, efficient, and future-proof infrastructure.