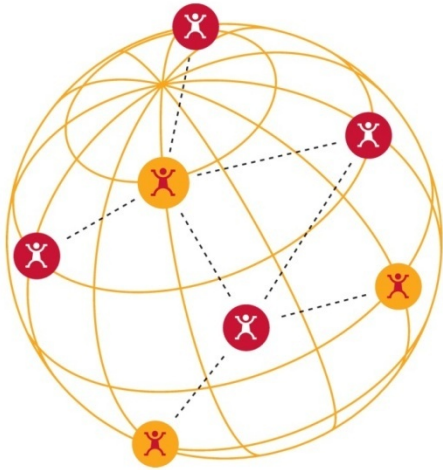


TRAINING PROGRAM OUTLINE



ENG-104E DATA CENTER INFRASTRUCTURE DESIGN & MANAGEMENT

DESCRIPTION

A 2-day Training Program to provide participants with the key factors in planning, designing, building and managing data centers.

OBJECTIVES

- Provide participants with a fundamental understanding of data centers
- Present the elements to take into consideration and to define when designing a new data center or upgrading an existing facility
- Equip participants with the relevant knowledge of data center management and its tools and techniques



TOPICS

- Data center definitions
- Tier classification methods
 - The Uptime Institute’s Tier Performance Standards
 - Telecommunication Industry Association TIA942
 - Syska Hennessy Group’s Criticality Levels™
- Tier classification for data centers
 - Difference between each tier level according to the Uptime Institute
 - Performance and operational impacts of each tier level
 - Tier sites availability
 - Tier commentary
 - Tier topologies
- Site selection
 - Evaluating the regional or geographical related risks
 - Site-related risks
 - Economic risks
 - Building a new facility in an existing building or building from the ground up
- Risk mitigation
 - Flooding
 - Hurricane
 - Earthquake
 - Thunderstorm
- Data center planning and building
 - Data centers project management
 - Floor space planning
 - Equipment layout and placement
 - Common errors in equipment layout
 - Structural room layout
 - Phased deployment
 - Floor planning sequences



- Total Cost of Ownership (TCO)
 - TCO basics
 - TCO related to racks
 - TCO components
 - Opportunities to reduce the TCO
 - Benefit of right sizing/scalability
 - Cost of over sizing and its impact on TCO

- Power requirements
 - Three modes of operation
 - Fault tolerant configurations
 - Type of local power generators
 - TCO for local power generation types
 - Earthing/grounding
 - Calculating total power requirements
 - Needs assessment
 - Component of the critical loads
 - The different type of loads
 - Sizing the electrical systems and generators

- Cooling requirements
 - Changing requirements
 - Different cooling systems
 - Hot air containment
 - Techniques for continuous cooling
 - Calculating total cooling requirements

- Cabling systems
 - Cable containment systems
 - TIA 942 for cable management
 - Cable management topologies
 - Cable labelling and identification

- Fire detection and suppression
 - Fire classification
 - Fire detection systems
 - Fire suppression systems



- Fire mitigation best practices
- Security and access control
 - Building design
 - Access control systems
 - Other security systems
 - The human factor
 - Best practices
- Data center management
 - Monitoring and alerting
 - Maintenance and installation practices
 - Documentation and inventory
 - Recovery and backups

TARGET AUDIENCE

- Telecommunications managers and personnel involved in or responsible for the design and management of data centers
- Managers looking to complement their skill-set by gaining a good understanding of data center infrastructure design and management

METHODOLOGY

Our Training Programs combine expert presentations, workshops, case studies and discussions on real-life situations faced by participants. Complete training material is provided to all participants for future reference and follow-up action plans.



LOCATION

Our Training Programs are held at regular intervals in selected cities around the world. Upon request, our expert trainers can lead Training Programs at the location of your choice. If interested, please contact us at training@neotelis.com.

EXPERTISE

Neotelis provides consulting and training services to telecommunications organizations worldwide. Its team of experts has trained thousands of executives and managers working for operators, regulators, policy-makers and governments in over 100 countries around the world.

