Training Course:
Data Centre Professional

22 July - 2 August 2024
London (UK)
Landmark Office Space - Oxford Street

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Training Course code: IT234686 From: 22 July - 2 August 2024 Venue: London (UK) - Landmark Office Space
- Oxford Street Training Course Fees: 9240 □ Euro

Introduction

Many enterprises rely on IT for the delivery of business-critical services. It is vital that the mission critical data centre is designed, maintained and operated with high availability and efficiency in mind. The Data Centre Professional knows the requirements for setting up and improving key aspects of the data centre such as power infrastructure, cooling, security, cabling and safety to ensure a data centre with a high level of availability. The course also covers some of the key operations and maintenance aspects of the data centre .

Audience

IT, Facilities or Data Centre Operations professional working in and around the data center representing both end-customers and/or service provider/facilitators and having responsibility to achieve and improve hi-availability and manageability of the Data Centre, such as: Data center managers, Operations / Floor / Facility managers, data center engineers, network/system engineers/data center sales/consultants.

Prerequisites

There is no specific prerequisite for the course. However, participants who already have at least one or two years□ experience in a data center or facilities environment may be best suited. Those with no experience just yet are most welcome to participate.

Course Benefits

After completion of the course the participant will be able to:

- Choose an optimum site for mission-critical data center based on current and future needs
- Describe all components that are important for high availability in a data center and how to effectively setup the data center
- Name and apply the various industry standards
- Describe the various technologies for UPS, fire suppression, cooling, monitoring systems, cabling standards, etc., and to select and apply them effectively to cost-efficiently enhance the high-availability of the data center.
- Review the electrical distribution system to avoid costly downtime
- Enhance cooling capabilities and efficiency in the data center by using existing and new techniques and technologies for the increased cooling requirements of the future
- Design a highly reliable and scalable network architecture and learn how to ensure installers apply proper testing techniques
- Describe high-level data center operational considerations supporting mission-critical environments
- Setup effective data center monitoring ensuring the right people get the right message
- Ensure proper security measures, both procedural and technical, are established to safeguard your company's valuable information in the data center

Course Outline

Data Centre Location, Building and Construction

- Selecting appropriate sites and buildings and how to avoid pitfalls
- Various components of an effective data center and supporting facilities setup

Raised Floor/Suspended Ceiling

- Uniform, concentrated and rolling load definitions
- Applicable standards
- Raised floor guidelines
- Signal Reference Grid, grounding of racks
- Disability act and regulations
- Suspended ceiling usage and requirement

Light

- Standards
- Light fixture types and placement
- Emergency lighting, Emergency Power Supply EPS

Power Infrastructure

- Power infrastructure layout from generation to rack level
- ATS and STS systems
- Redundancy levels and techniques
- Three-phase and single-phase usage
- Power distribution options within the computer room
- Power cabling versus bus bar trucking
- Bonding versus grounding
- Common Mode Noise and isolation transformers
- Distribution boards, form factors and IP-protection grades
- Power quality guidelines
- Real power versus apparent power
- How to size and calculate load in the data center
- Generators
- Static and dynamic UPS systems, selection criteria, how they operate and energy efficiency option
- Battery types, correct selection and testing
- Thermo-graphics

Electro Magnetic Fields

- Electrical fields and magnetic fields definitions and units of measurements
- Sources of EMF
- Effects of EMF on human health and equipment
- HEMP
- Standards
- EMF shielding solutions

Equipment Racks

- Rack standards, properties and selection criteria
- Security considerations

- Power rail/strip options

Cooling Infrastructure

- Temperature and humidity recommendations
- Cooling measurement units and conversion rates
- Sensible and latent heat definitions
- Differences between comfort and precision cooling
- Overview of different air conditioner technologies
- Raised floor versus non-raised floor cooling
- Placement of air conditioner units and limitations to be observed
- Supplemental cooling options
- Cold aisle/hot aisle containment

Water Supply

- Importance of water supply and application areas
- Backup water supply techniques

Designing a Scalable Network Infrastructure

- The importance of a Structured Cabling System
- Planning considerations
- Copper and Fiber cable technology and standards
- ANSI/TIA-942 Cabling hierarchy and recommendations
- Testing and verification
- SAN storage cabling
- Network redundancy
- Building-to-building connectivity
- Network monitoring system requirements

Fire Protection

- Standards for fire suppression
- Detection systems
- Various total flooding fire suppression techniques and systems, their benefits and disadvantages
- Handheld extinguishers
- Signage and safety
- Regulatory requirements and best practices

Physical Security and Safety

- Physical security considerations
- Physical safety considerations

Auxiliary Systems

- Data center monitoring requirements
- EMS, BMS and DCIM
- Water leak detection systems
- Alarm notification

Operational Considerations

- Service Level Management
- Organization
- Safety
- Security
- Facilities maintenance
- Monitoring
- Governance

Registration form on the Training Course:
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Complete & Mail or fax to Global Horizon Training Center (GHTC) at the address given below

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