



Giganet Certified Installer Training

Duration: 5 days

About this course

Giganet Certified Installer course that introduces Structured Cabling standards for both Copper & Fibre installations. The class-based training offers advanced hands on experience labs to prepare students for any deployment scenarios for structured cabling. It's 5 day comprehensive practical course covering copper cabling systems , Fiber cabling system with hands on practical terminations with an exam.

Objective

Delegates are equipped with the knowledge, skills and expertise to competently undertake the installation of the Structured Cabling Solutions

Course Pre-requisite

Those attending this course require basic understanding of network topology

Labs

Terminations, Troubleshooting and testing on:

- Category 6A UTP Cabling system
- Category 6A FTP Cabling system
- Trouble shooting and Testing of both Cat 6A and Cat 6A cabling
- Fibre Field terminations
- Fibre splicing
- Fibre Trouble shooting and Testing

Certificate

- Giganet Certified Installer

Course Outline

<p>COURSE CONTENT- COPPER</p> <p>Introduction to Balanced Twisted-Pair Cables</p> <p>Connecting Hardware</p> <ul style="list-style-type: none"> • Telecommunications Outlets • Patchpanels • Wiring Blocks <p>Networks</p> <ul style="list-style-type: none"> • Local and Wide Area Networks • Prons and Cons of a Network • Network Topologies • Generic (Structured) Cabling <p>Cabling Standards</p> <ul style="list-style-type: none"> • ANSI/TIA/EIA Standards • ISO/IEC Standards • CENELEC Standards • Cable Categories <p>Horizontal Cabling</p> <ul style="list-style-type: none"> • Horizontal Channels • Channel Lengths • Horizontal Pathways • Maximum Pathway Fill <p>Backbone Cabling</p> <ul style="list-style-type: none"> • Backbone Cabling Systems • Backbone Cabling Distance Limitations <p>Work Area Cabling</p> <ul style="list-style-type: none"> • Work Area Components • Telecommunications Outlets • Work Area Cable Termination <p>Telecommunications Spaces</p> <ul style="list-style-type: none"> • Equipment Rooms • Telecommunication Rooms • Entrance Facilities <p>Electromagnetic Interference (EMI)</p>	<p>CONTENT FIBER OPTICS</p> <p>Introduction to Fibre Optics</p> <ul style="list-style-type: none"> – What are Optical Fibres? – Optical Fibre Construction – Fibre Sizes <p>Optical Fibre Transmission</p> <ul style="list-style-type: none"> – Fibre optic transmission systems and data links – Transmitting and receiving devices – Transmission over different types of fibre – Electromagnetic Spectrum and Wavelengths – Fibre Optic Transmission Windows <p>Fibre Optic Cable Construction</p> <ul style="list-style-type: none"> – Loose-Tube and Tight Buffered – Simplex and Duplex – Distribution and Break-out cables – Indoor/Outdoor – Self-supporting – Armoured <p>Fibre Splicing and Terminating</p> <ul style="list-style-type: none"> – Mechanical and Fusion Splicing – Types of fibre connector – Hot and Cold Cure Termination – Mechanical Termination <p>Fiber Connector Types (Styles)</p> <ul style="list-style-type: none"> – Flat Fiber Connector – PC Fiber Connector – UPC Fiber Connector – APC Fiber Connector <p>FIBER OPTICS CONTENT</p> <p>Inspecting and Cleaning Optical Fiber Connectors</p> <ul style="list-style-type: none"> – Core alignment. – Physical contact.
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- **EMI**

- **Power Separations**

- **Installation Practices**

- Cable Management
- Bend Radius
- Cable Stacking Height
- Cable Stress
- Cable Support
- Rack Clearance
- Equipment Locations
- Mounting Connecting Hardware
- Earthing And Bonding
- Cable Pulling
- Cable Termination

- **Testing**

- Permanent Link Testing
- Channel Testing
- Test Parameters

- **Administration**

- Labels
- Records
- Administration Classes (1-4)

- **Warranties**

- Test Results
- Warranty Registration Form

- Pristine connector interface

- **Signal Degradation**

- Dispersion
- Attenuation
- Scattering
- Absorption
- Factors Affecting Splice Points

- **Designing Fibre Optic Cabling in the Local Area Network**

- Fibre vs Copper
- Fibre in the LAN
- Channel Classifications
- Channel Attenuation
- Optical Fibre Categories
- Fibre Cable Classifications
- Fibre Channel Lengths
- Optical Fibre Applications
- Fibre Cabling Design
- Fibre in the Work Area

- **Fibre Optic Safety**

- Chemical Hazards
- Optical Hazards
- Fibre Fragments
- Environment

- Safety for Everyone

- **Fibre Optic Cable Installation**

- Conduct a thorough site survey prior to cable placement.
- Develop a cable pulling plan.
- Follow proper procedures.
- Do not exceed cable minimum bend radius.
- Do not exceed cable maximum recommended load.
- Document the installation.

- **Fibre Optic Testing**

- Types of test required
- Flashlight and Visual Fault Locator
- Fibre Microscope
- Attenuation testing using Light Source and Power Meter
- Channel Attenuation Calculation
- Optical Time Domain Reflectometer

- **Fiber Troubleshooting**

- Verifying the problem.
- Isolating the source of the problem.
- Repairing the problem.

- Testing the repaired system to ensure that it functions correctly.