



HARNESS THE POWER  
OF KNOWLEDGE

## Comprehensive Training Program on Industrial Networks

TRAIN



## Introduction

Industrial networks play a crucial role in modern industrial automation systems, providing the communication backbone for connecting devices, controllers, and other components

This comprehensive 5-day training program, delivered by Global Business Minds, will equip participants with in-depth knowledge and practical skills in the design, implementation, operation, and maintenance of industrial networks

### Day 1: Fundamentals of Industrial Networks

- Overview of industrial networks and their role in industrial automation
- Understanding the principles of industrial communication protocols, such as Ethernet, PROFINET, and Modbus
- Familiarization with industrial network topologies, such as star, ring, and bus
- Exploration of industrial network devices, such as switches, routers, and firewalls

### Day 2: Industrial Network Design

- Applying network design methodologies to create effective industrial networks
- Selecting and configuring industrial network hardware and software components
- Implementing network addressing and routing schemes
- Addressing network security considerations, such as firewalls and access control lists

### Day 3: Industrial Network Implementation

- Installing and configuring industrial network hardware and software
- Testing and troubleshooting industrial network connections
- Deploying industrial network applications, such as SCADA and HMI systems
- Integrating industrial networks with other industrial systems

### Day 4: Industrial Network Operation

- Familiarization with operational procedures and protocols for industrial networks
- Monitoring and managing industrial network performance
- Identifying and resolving network issues
- Implementing network maintenance strategies and preventive maintenance programs

### Day 5: Advanced Topics in Industrial Networks

- Exploring the application of advanced industrial network technologies, such as wireless networks and Industrial Internet of Things (IIoT)
- Addressing cybersecurity challenges in industrial networks
- Staying up-to-date with the latest advancements in industrial network technology and standards

### Target Audience

This training program is designed for engineers, technicians, and professionals involved in the design, implementation, operation, and maintenance of industrial networks in various industries, including:

- Oil and gas
- Petrochemical
- Power generation
- Chemical
- Pharmaceutical
- Water and wastewater treatment
- Manufacturing
- Food and beverage
- Utilities

### Learning Outcomes

Upon completion of this training program, participants will be able to:

- Demonstrate in-depth knowledge of industrial networks and their role in industrial automation
- Apply network design methodologies to create effective industrial networks
- Select, configure, and implement industrial network hardware and software components
- Understand and apply industrial communication protocols, such as Ethernet, PROFINET, and Modbus
- Implement network addressing and routing schemes
- Address network security considerations, such as firewalls and access control lists
- Install and configure industrial network hardware and software
- Test and troubleshoot industrial network connections
- Deploy industrial network applications, such as SCADA and HMI systems
- Integrate industrial networks with other industrial systems
- Familiarization with operational procedures and protocols for industrial networks
- Monitor and manage industrial network performance
- Identify and resolve network issues
- Implement network maintenance strategies and preventive maintenance programs
- Apply advanced industrial network technologies, such as wireless networks and Industrial Internet of Things (IIoT)
- Address cybersecurity challenges in industrial networks
- Stay up-to-date with the latest advancements in industrial network technology and standards

Certificate Delivered by Global Business Minds:

- Certificate of Completion in Industrial Networks

Additional Notes

- This detailed professional training program can be tailored to specific industry requirements and application needs
- Hands-on exercises and case studies can be customized to reflect real-world challenges and scenarios faced by participants
- The training can be delivered in a blended format, combining in-person sessions with online modules for flexibility and accessibility
- Global Business Minds can provide ongoing support and resources to participants to ensure their continued success in industrial networks