

# € TRAINING

Practical SCADA and Telemetry System





# Practical SCADA and Telemetry System

## Introduction:

This training program provides participants with practical knowledge and skills to effectively design, implement, and manage SCADA Supervisory Control and Data Acquisition and telemetry systems. It empowers them to leverage SCADA and telemetry technologies for enhanced operational efficiency and reliability.

## Program Objectives:

By the end of this program, participants will be able to:

- Understand the fundamentals of SCADA and telemetry systems.
- Gain proficiency in system design and configuration.
- Learn techniques for data acquisition and remote monitoring.
- Develop skills in system integration and troubleshooting.
- Implement best practices for optimizing SCADA and telemetry systems.

## Target Audience:

- Control system engineers and technicians.
- SCADA system operators and administrators.
- Automation engineers and project managers.
- Maintenance personnel and IT professionals.
- Professionals seeking practical skills in SCADA and telemetry systems.

## Program Outline:

### Unit 1:

#### Introduction to SCADA and Telemetry Systems:

- Overview of SCADA and Telemetry Concepts.
- Components and Architecture of SCADA Systems.
- Role and Importance of Telemetry in Remote Monitoring.

- SCADA and Telemetry Applications in Industry.
- Standards and Regulations for SCADA and Telemetry.

## Unit 2:

### SCADA System Design and Configuration:

- Planning and Designing a SCADA System.
- SCADA Hardware and Software Selection.
- Network Design and Communication Protocols.
- Human-Machine Interface HMI Design.
- Redundancy and Failover Strategies.

## Unit 3:

### Data Acquisition and Remote Monitoring:

- Sensors and Instrumentation for Data Acquisition.
- Remote Terminal Units RTUs and PLCs.
- Telemetry Transmitters and Receivers.
- Data Logging and Storage Solutions.
- Real-time Data Monitoring and Visualization.

## Unit 4:

### System Integration and Troubleshooting:

- Integration of SCADA Systems with Existing Infrastructure.
- SCADA System Security and Cybersecurity Measures.
- Troubleshooting Techniques for SCADA and Telemetry Systems.
- Diagnosing Communication and Hardware Issues.
- Case Studies on System Integration and Troubleshooting.

## Unit 5:



## Optimization and Best Practices:

- Best Practices in SCADA and Telemetry System Management.
- Performance Monitoring and Optimization Strategies.
- Continuous Improvement in System Performance.
- Training and Development for SCADA Operators.
- Future Trends and Innovations in SCADA and Telemetry.