

ESRI UTILITY NETWORK

TRAINING OBJECTIVES

By the end of the training, participants will be able to:

- Understand the Utility Network architecture
- Model a network in ArcGIS
- Configure connectivity and rules
- Use network traces
- Understanding Publishing and Validation Workflows
- Using the Network in ArcGIS Applications



TARGET AUDIENCE

Advanced GIS users, analysts, GIS administrators, network managers



PREREQUISITES

Must have an ArcGIS Pro license (arx IT does not provide Esri licenses to training participants)

Bring your own laptop to the training session with Esri licenses installed and active



TRAINING MATERIALS

Digital course materials provided to participants, including real-world case studies, hands-on exercises, and technical data sheets

Evaluation questionnaires and a certificate of completion



DURATION > 2 days (14 hours)



REGISTRATION

Email > formation@arxit.com

Please contact us regarding accessibility for people with disabilities

PROGRAM

DAY 1: FUNDAMENTALS AND MODELING

1. INTRODUCTION TO NETWORKS IN ARCGIS

- Evolution of Network Models—Geometric Network vs. Utility Network
- Principles of the Utility Network
- Use Cases (Electricity, Gas, Water, Telecom)

Key Concepts: Domain Network – Network Source – Asset Group / Asset Type

2. TECHNICAL ARCHITECTURE

- Data Model Structure
- Network Layers
- Network Topology
- Role of Services

Key Concepts: Feature Classes – Join Tables / Network Index

3. MODELING A NETWORK

- Creating a Utility Network
- Creating Domain Networks
- Configuring Categories

Key Concepts: Asset Group / Asset Type – Network Categories

4. CONNECTIVITY AND NETWORK RULES

- Connectivity Rules
- Structural Attachment Rules
- Containment Rules

Key Concepts: Endpoints / Flow Direction

DAY 2: NETWORK OPERATIONS AND MANAGEMENT

5. NETWORK TOPOLOGY

- Topology Activation
- Dirty Areas
- Network Validation
- Topology Errors

6. EDITING IN THE UTILITY NETWORK

- Creating and editing assets
- Using Templates
- Association (containment, attachment)

Best Practices: Error Handling / Editing Workflows

7. TRACES/NETWORK MONITORING

- Connected trace
- Upstream / Downstream trace
- Isolation trace
- Subnetwork trace

Applications: fault location / impact analysis

8. SUBNETWORKS AND OPERATIONAL MANAGEMENT

- Definition of subnetworks
- Controllers
- Updating subnetworks
- Exporting results

