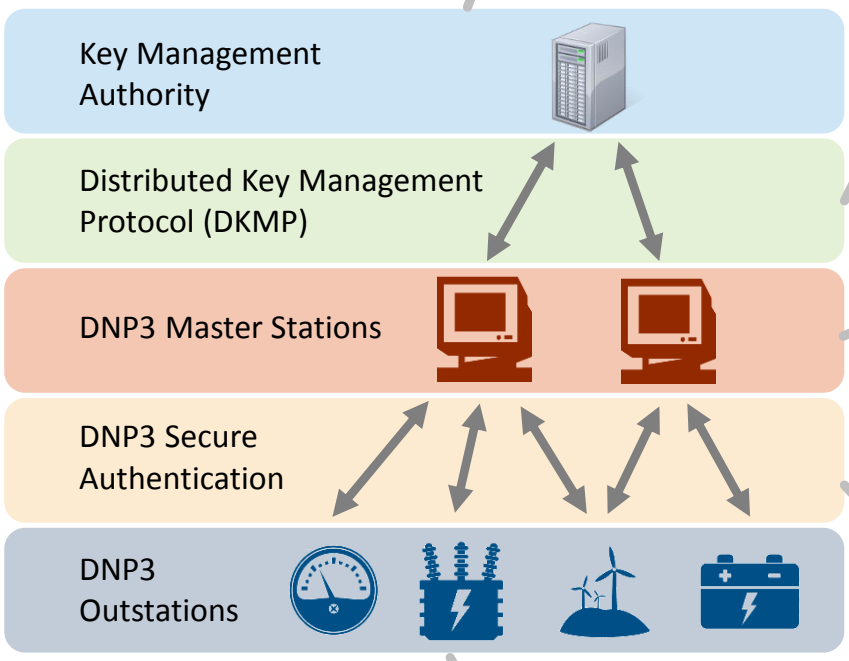
DNP3 Secure Authentication
Key Management

DNP3 Secure Authentication Workshop
EPRI – Knoxville TN
November 6, 2014

Key Management Authority

- Add and remove users
- Change role of each user
- Set expiration date for each user
- Generate Keys and Certificates
- Synchronizes Key and Certificate updates with Masters and Outstations
- Database of Users, Roles, and Expiration Dates for each DNP3 Outstation



Distributed Key Management Protocol

- Protocol used to update Users, Roles, Keys, and Certificates with DNP3 Master Stations

DNP3 Master Stations

- Users, Roles, Keys, and Certificates are passed to appropriate DNP3 Outstations
- Can challenge responses from Outstations

DNP3 Secure Authentication

- Protocol used to authenticate users and devices for critical functions
- Distributes Keys and Certificates from Master to Outstation
- Information from the Key Management Authority is used by Master Stations and Outstations to perform secure “handshake”

DNP3 Outstations

- Stores information for Users, Roles, Keys, and Certificates
- Outstations challenge critical function commands from Master Stations by using the DNP3 Secure Authentication protocol

View our free DNP3 Secure Authentication video:
www.trianglemicroworks.com/video

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Triangle MicroWorks
DNP3 Authority Administration Tool

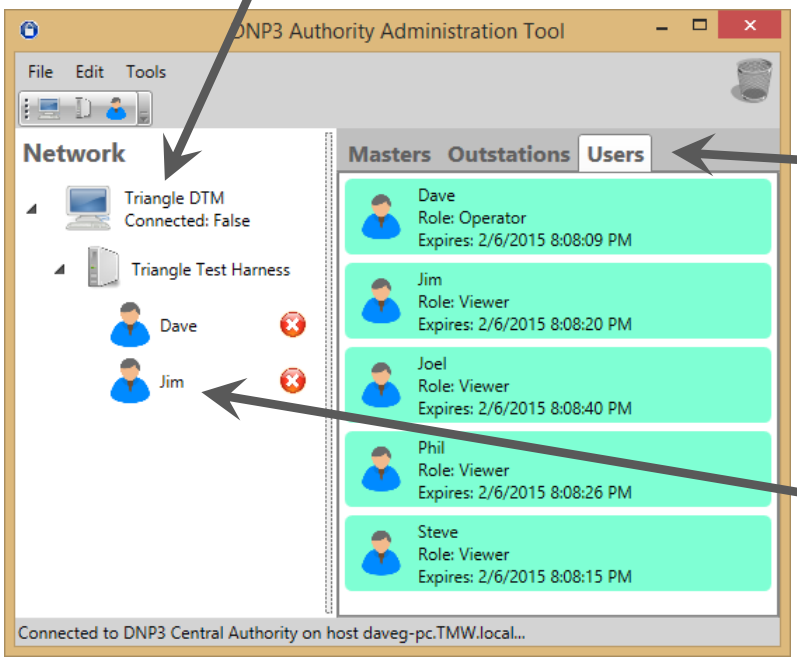
- Central application to manage remote key updates for entire DNP3 network
- Automates key update process to avoid manual pre-sharing of keys in the field
- Securely updates Users, Roles, Keys, and Certificates with devices through the DNP3 Secure Authentication standard
- Supports symmetric (shared keys) and asymmetric (public/private keys)

Build Network

- Add or remove Master and Outstation devices to network view
- View connection status between Authority and Master Stations

Generate Keys & Certificates

- Master and Outstation devices are automatically updated with appropriate Keys and Certificates that are generated



Manage Resources

- Add, remove, modify Users
- Set Roles for each User
- Set expiration dates
- Add Master Stations
- Add Outstations
- Choose Hash Function to use

Add Users to Outstations

- Add or remove authorized Users to specific Outstations

For more information please contact
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