4K's Tactical Cyber Network Operator's class is geared for IT staff who need:

Introduction to tactical networks

**Pre-Deployment Training** 



Complete Network
Operations training lab!

Learn & Configure:
Cisco Routers
Cisco Switches
Cisco Call Manager Exp
Video (FMV) distribution)

# 4K Solutions delivers the most realistic hands-on Cyber foundation training!

4K teaches the basic rudimentary and practical routing and switching skills to allow you to quickly configure your networks to enable voice over ip and video traffic.



The 4K Cyber Network Operations class provides an extensive hands-on learning experience that will help your operators effectively setup, configure, and maintain your remote networks.







# **Cyber Network Operations Training**

Switching (VLANS, Spanning Tree)

Networks/Subnets/DHCP/DNS

Multicast PIM and Rendezvous Points

VLANS (trunks, routing, multicast)

Routing (OSPF, EIGRP, Static)

Voice (CME setup)

Video (H.264, H.265)

Tunnels (IPSEC & GRE)

Active All-Hands-On; Proven Effective Lab Training! Training to empower the student!





# **CONUS & OCONUS Training Classes available**



4K Solutions is an authorized Cisco, Cubic, Klas and Motorola Solutions, Inc WAVE® value added reseller, systems integrator and training partner.



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VENDOR AGNOSTIC

CISCO

CUBIC / DTECH

KLAS TELECOM



#### 4K SOLUTIONS PROVIDES FOUNDATION CYBER TRAINING



4K Solutions delivers the Tactical Cyber Network Operations Course which supports up to 12 students who work in teams "PODs) to create 6 networks to connect to the main site network. Each consists of the following:

Physical network devices, Cisco voip phones, Video Encoders and client workstations are included in the training week. The 4K Solutions is designed for the new network operators, or as a refresher to existing network engineers.\*

# **4K Cyber Network Operations**

## Monday

- Introduction
- Training Introduction
- Basic Networking
- MAC/IP/Names
- ♦ ARP/Networks/NameResolution
- ♦ ARP Tables/DHCP/DNS
- Connecting to Devices
- ♦ Telnet/Console/TFTP

# Tuesday

- Router Configurations
- Switch Configurations
- Spanning Tree
- ♦ VLANS
- ♦ Trunks

#### Lab 1

- ♦ Lab 1a: Common Configuration
- ♦ Hostname/Login/Line
- ◆ Lab 1b— DHCP
- ♦ Lab 1c- Port Configurations
- ♦ Lab 1d- Recovery/Reset

#### Lab 2

- ♦ Lab 2a— Common Configurations
- ♦ Login
- ♦ Lab 2b- Spanning Tree
- ◆ Lab 2c- VLANS
- ♦ Lab 2d- Recovery/Reset

# Wednesday

- Routing VLANS
- Routing Multicast
- Routing to outside Networks

#### Lab 3

- Lab 3a- VLAN Configuration
- Lab 3b- Testing VLANS
- ♦ Lab 3c- Multicast on Routers
- Rendezvous Points
- ◆ PIM
- Lab 3d-Static Routes
- ♦ Lab 3d- OSPF
- ◆ Lab 3e- EIGRP

### Thursday

Voice and Video

#### Lab 4

- ♦ Lab 4a- Telephony Service
- ♦ Lab 4b- Dial Peers
- ♦ Lab 4c- Ephones and Ephone-DNs
- ◆ Lab 4d– Route Patterns
- Lab 4e– Phone Registration/Provisioning
- ♦ Lab 4f- Testing and Troubleshooting

#### Lab 5

- Lab 5a– Network configuration
- ♦ Lab 5b— Streaming VS Viewing
- ◆ Lab 5c- Optimization and Testing

# Friday Morning

- Security (Router, Switch)
- Tunnels (IPSEC, GRE)

#### Lab 6

- Lab 6a- Access Lists
- Lab 6b- Switchport Security
- ♦ Lab 6c— Security Testing

#### Lab 7

- ♦ Lab 6a- IPSEC Tunnels
- ♦ Lab 6b- GRE Tunnels

\*Classes can be tailored to meet your requirements. Class can be conducted up to 12 students. Students work in teams of two. Each team will have the following equipment available to use: a router, a switch, laptop, phones, video encoder, and video source. Each student will receive their own resource manual.





#### TACTICAL NETWORK TRAINING

- ROUTER CONFIGURATIONS
- SWITCH CONFIGURATIONS
- VOICE
- VIDEO
- SECURITY





CUSTOM NETWORK TRAINING SOLUTIONS

4K Solutions works to deliver bundled and individual training solutions that fit your demanding schedule and budget.