

# Fortinet NSE 6 - Network Security Support Engineer 7.6

This course prepares you for the Fortinet NSE 6 - Network Security 7.6 Support Engineer exam. In this Fortinet training, networking expert Keith Barker demonstrates how to diagnose and resolve real issues in enterprise FortiGate environments, including Security Fabric communication and HA cluster behavior, authentication, security profiles, routing, and VPNs. You'll practice complete diagnostic workflows, from debugging OSPF and BGP, to analyzing traffic and logs, monitoring performance, and tracing problems end to end. By passing the Fortinet NSE 6 exam, you'll fulfill one of the concentration requirements to earn your Fortinet Certified Solution Specialist (FCSS) - Secure Networking certification.

[CBT Nuggets course material](#) →

 STUDY PLAN

## WEEK 1

### FGT Troubleshooting Methodologies

- Overview of FGate Tshoot Methodologies
- Define the Problem Before Touching the FW
- Narrowing Down the Fault Domain
- Prove Traffic Flow with Sessions
- Use Debug Flow with Intent, Not Desperation
- Know When to Stop and Escalate
- Validation Troubleshooting Methodologies

### Analyze Sessions and Traffic Flow

- Intro Sessions and Traffic Flow
- Troubleshooting Tools Overview
- FortiGate Session Table
- CLI Sniffer on FortiGate
- GUI Packet Capture on FortiGate
- Debug Flow
- Troubleshooting Review and NPU Offload
- Validate and Improve Your Skills

### Troubleshoot FGT Security Fabric

- Intro to Troubleshoot FGT Security Fabric
- Security Fabric Overview
- Verify Network and Game Plan
- Configure FW-2 as Security Fabric Root
- Add FW-1 to Security Fabric
- Add Branch to Security Fabric
- Test Automation Stitches
- Validation of FortiGate Security Fabric

## **Troubleshoot FGT Central Auth**

Intro to Troubleshooting FGT Authentication  
FGT Authentication Overview  
Configure LDAP  
Troubleshoot LDAP  
Configure and Troubleshoot RADIUS  
Strategies for Troubleshooting  
Validation of Centralized Authentication

## **Managing Fortinet Single Sign On (FSSO)**

Intro to Managing Fortinet SSO  
FSSO Overview  
Preparing the Windows Server  
Configure FSSO Connector on FortiGate  
Create FSSO Group and Use in Policy  
Troubleshooting FSSO strategy  
Validation of FSSO

## **Troubleshoot FGT Security Profiles**

Intro to Troubleshooting Security Profiles  
Security Profiles Overview  
Confirming Licenses and FortiGuard Access  
SSL Inspection  
Antivirus  
IPS

WebFiltering  
Validation of Security Profiles

## **Managing FortiGate HA**

Intro to Managing FortiGate HA  
FortiGate HA Overview  
Game Plan for HA  
Confirm Data Plane on Branch\_FW-a  
Configure the HA on Primary  
Configure HA on Secondary  
Test and Monitor the HA  
Troubleshooting HA  
Test and Verify your Knowledge of HA

## **Managing IPsec VPNs**

Intro to Managing IPsec VPNs  
IPsec Site-to-Site VPNs Overview  
Game Plan and Implementation for Site-to-Site VPN  
IKEv1 and Interesting Traffic  
Working with IKEv2 IPsec  
Monitoring and Troubleshooting  
IPsec Validation Section

## **Troubleshooting FGT Routing**

Intro to troubleshoot IPv4 Routing  
Overview of IPv4 Routing and Troubleshooting  
Reverse Path Forwarding (RPF) Checking  
Configure and Verify Default Routes  
Routing Failover and Failback  
Test Your Knowledge

## **Working with BGP**

Intro to Working with Border Gateway Protocol

BGP Overview

## **WEEK 3**

Create a Game Plan for BGP

Configure FW-1 as a BGP Speaker

Troubleshooting BGP

Prefix-Lists and Filtering

BGP Validation Lesson

### **Working With OSPF**

Intro to OSPF

OSPF Overview

Game Plan for OSPF

Implement OSPF on FW-1

Implement the OSPF on FW-2

Troubleshooting OSPF

OSPF Validation Section

### **Monitor FGT Resources**

Intro to Monitor FGT Resources

Slow vs Fast Path on the FortiGate

FortiGate Memory Usage

FortiGate CPU Usage

Conserve Mode

Optimizing Memory

Crash Logs

Customer Scenario