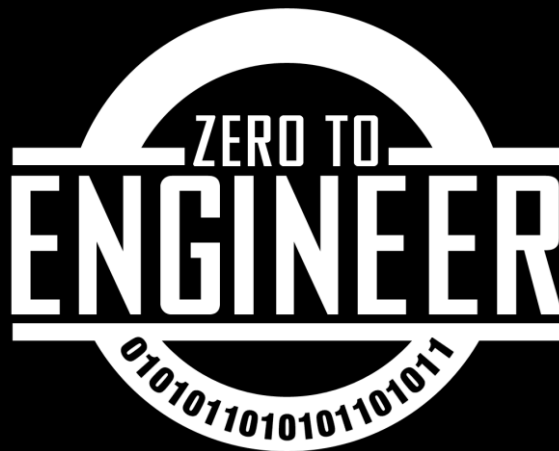




# FULL STACK NETWORK ENGINEER

TECH DEGREE PROGRAM

POWERED BY





# FULL STACK NETWORK ENGINEER TECH DEGREE PROGRAM

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The Full Stack Network Engineer Tech Degree online program is designed to help you master the most in-demand IT networking skills - learn routing, switching, voice over IP, wireless and security! Our hands-on approach and live coaching & mentorship will enable you to truly understand the big picture of the IT industry and provide you with what you need to succeed in your career. We take you from zero to Full Stack Network Engineer in record time with this proven step by step blueprint system.

The program begins by providing you with an overview of the IT industry, technical architectures, and career path options. We then move into foundational learning and technical labs which culminate in a completely hands-on full stack networking project where you will learn what it's like to roll out an IT project from start to finish. After completing the project you are then ready to begin working on your industry certifications before beginning your job hunting activities.



After completing the main program modules you will work to obtain two of the top associate-level certifications recognized in the industry - the Network+ and CCNA Routing & Switching. To prepare for these certifications each student has access to robust training courses, amazing lab environments and bi-weekly coaching.

## REQUIREMENTS

- ✓ The training is completely online and accessed through any modern web browser.
- ✓ To get started all you need is a computer with an internet connection and PDF viewer.
- ✓ Labs are performed using local software and also web-based lab environments.



# FULL STACK NETWORK ENGINEER TECH DEGREE PROGRAM



*"We've been fortunate to have worked at some of the best tech companies in the industry and have trained over 1,000 IT engineers for the US Military"*

Terry Kim & Jacob Hess

## INSTRUCTORS

NexGenT instructors are rockstar engineers who have vast experience in the field and a true passion for teaching. Terry and Jacob, the instructors for the FSNE Tech Degree program, have 30+ years of combined experience and have worked all across the Information Technology industry for amazing companies including Cisco Systems and Arista Networks.





# FULL STACK NETWORK ENGINEER TECH DEGREE PROGRAM

## NexGenT Online Learning Portal

<https://learn.nexgent.com>







# FULL STACK NETWORK ENGINEER TECH DEGREE PROGRAM



## Full Stack Network Engineer Tech Degree

Master the most in-demand networking skills that every enterprise company needs. Become job ready and certified within 6-12 months. No previous experience or degree required. Your career in I.T. starts here with our step-by-step blueprint program.

### Step 1 Gain Real World Skills

Discover and map out your career path, lay down a rock solid network foundation, learn how to think like an engineer, build your own labs, and plan, design, and configure a full stack networking project from ground up!

### Step 2 Obtain Industry Certifications

Unlock access to our premium CompTIA Network+ and Cisco CCNA certification courses! In addition to these amazing courses you will also have access to our Practice Labs area so you can practice your skills on real equipment while pursuing your certifications!

### Step 3 Land Your Dream IT Job

Take the 7 week course to transform your life. Learn the tactics, strategies, and tips to help you with your job search and beyond! This a proven step by step blueprint our students and mentors have used to get HUGE promotions to obtain financial freedom.



## [Module 1: Getting Started](#)

In this module you will gain industry insights into becoming a Network or Systems Engineer! By the end, you will know what it takes to break into IT and understand your career path options.

Lessons (3.5 hrs)

- Intro and Platform Tour
- Program Overview
- Become a Full Stack Network Engineer
- Step by Step Career Blueprint
- The World of Certifications

## [Module 2: IT Architectures and Trends](#)

In this module you will learn all about today's IT architectures and trends. You will also learn about Cisco systems and other industry leader product portfolios, trends that are shaping the future of our industry, and various use cases around core architectures and trends.

Lessons (8 hrs)

- Enterprise Networks
- Security
- Data Center and Virtualization
- Collaboration
- IT Trends in 2017 and beyond

## [Module 3: IT and Network Essentials](#)

In this module you'll learn the most essential concepts related to IT and networking. By the end, you'll understand what computer networks are all about and all the important protocols, standards, and technologies used in IT, which will give you the strongest IT foundation.

Lessons (30 hrs)

- |                                   |                       |                            |
|-----------------------------------|-----------------------|----------------------------|
| • What is a Network?              | • Address Resolution  | • Network Devices          |
| • Bits, Bytes and Ethernet Frames | • TCP, UDP & Ports    | • IP Addressing            |
| • MAC, Hubs & Switches            | • The OSI Model       | • Subnetting - Class C     |
| • Broadcast Domains               | • Network Topologies  | • Subnetting - Class B     |
| • Ethernet                        | • Cables & Connectors | • Intro to IP Access Lists |
| • Intro to IP and Routing         | • Cable Making        | • How Routers Route        |
| • VLANs                           | • Device Components   |                            |



## Module 4: How to Build Your Own Labs

Get ready for labs! In this module you'll be introduced to the world of personal labs and you'll get insights into the best methods to get up and running with your own labs.

Lessons (6.5 hrs)

- How to Build a Home Lab
- Cisco Packet Tracer Installation
- Packet Tracer Lab - Intro to Cisco CLI
- Packet Tracer Lab – DHCP
- Packet Tracer Lab - NAT with IOS Firewall
- Packet Tracer Lab - Spanning-Tree Protocol
- Packet Tracer Lab - Host Tracking
- How to Install GNS3
- How to Connect to a Console Port

## Module 5: Real World Engineer Skills

This module is all about giving you insights directly from the field. You'll learn about the top systems engineer (SE) skills to master, important tools, and how to think like an engineer.

Lessons (9hrs)

- Top SE Skills to Master
- Engineer Software Tools
- Network Management
- Think Like and Engineer

## Module 6: Full Stack Networking Project

By the end of this module you will understand HQ/Branch networks and the project build-out process. You will learn how to plan, design, and implement your own Full Stack Network with its own headquarters (HQ) location and two branch offices.

Lessons (40 hrs)

### Introduction

- Project Methodology

### Planning Phase

- Gathering Requirements
- Diagramming
- BoM & SoW
- Presenting

### Execution Phase

- Packet Tracer Installation

- Technical Overview
- Basic Device Configuration
- HQ Core Switching
- HQ Access Switching
- HQ Internet Router
- HQ WAN Router
- HQ Voice Router
- HQ Server, Phones & Hosts
- HQ Wireless
- Branch 1 Route/Switch
- Branch 1 Phones, Hosts & WiFi

- Branch 2 Route/Switch
- Branch 2 Phones & Hosts

### Controlling Phase

- Testing
- Support

### Closing Phase

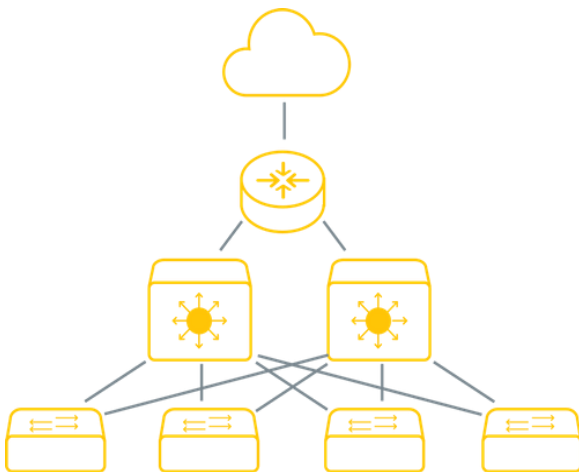
- Closing Phase
- Close the Project





## Full Stack Networking Project

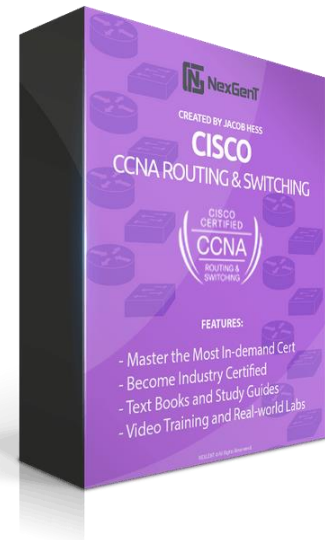
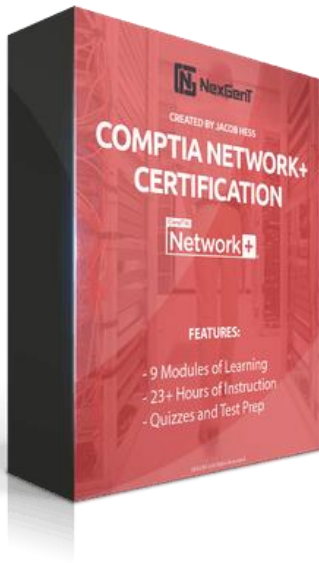
The Full Stack Networking Project is designed to provide an understanding of a complete HQ/Branch network and the project build-out process. Students will learn how to plan, design, and implement their own Full Stack Network with a headquarters location and two branch offices. This project is performed locally on the student's computer and all configurations are completed using the Cisco Packet Tracer network simulation software. Cisco Packet Tracer is available for free from the Cisco Networking Academy.



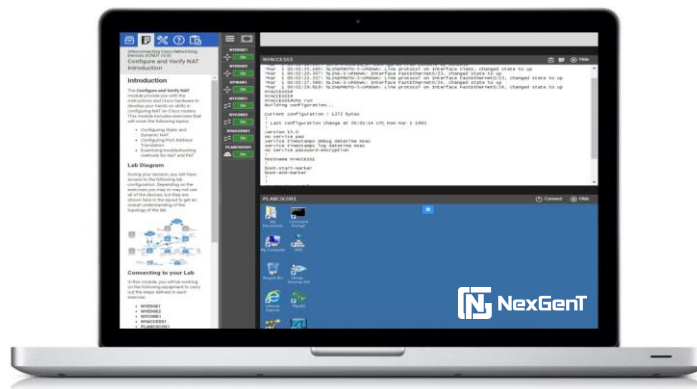
- ✓ Obtain project requirements
- ✓ Design and build the network diagram
- ✓ Present the technology solution
- ✓ Implement the full stack network
- ✓ Support and formally close out the project



## Certification Training



Access two of the most comprehensive certification training courses in the market. Master your skills and learn everything you need to know to obtain the CompTIA Network+ and Cisco Certified Network Associate Routing & Switching certifications!



In addition, gain access to our web-based practice labs environment where you will have access to over 1000+ labs all on real equipment that will help you prepare for the Network+, CCNA, and any other certifications you wish to obtain.





## FSNA Bootcamp

(optional and in-person)



The Full Stack Network Associate (FSNA) 5-Day Bootcamp is an optional intensive, in-person, hands-on workshop that is designed to familiarize students with a real-world full stack network and help them to become certified as a NexGenT Full Stack Network Associate (FSNA). Students work on dedicated high quality Cisco networking equipment to build out their labs - Limited seating!

We get right into hands-on labs where you will use your FSNA Handbook as a field guide to reference your configurations. Working alone or in teams of two you will set up and configure a complete branch network with routing, switching, security, voice over IP, and cloud controlled wireless. The student Branch pods connect back to a Headquarters network over a private Wide Area Network with redundancy over an internet-based Virtual Private Network. The Headquarters lab location provides network services to the Branch pods such as domain services, network management, Voice over IP Call Control and voice gateway services.

After successfully completing the SQC students are awarded the Full Stack Network Associate (FSNA) certification.



**FSNA**



## FSNA Bootcamp

(optional and in-person)

### Day 1

- How to Become a Full Stack Network Engineer
- Discover Your Dream Job
- Lab Orientation & Basic Cisco IOS Configuration
- Set up the Branch switched Infrastructure
- Observing the Functions of an Ethernet Switch
- Making Cables with Cat 5e and Connecting Hosts

### Day 2

- Branch Router & Inter-VLAN Routing
- Dynamic Host Configuration Protocol
- Securing the Management Plane
- More Switches!
- VLAN Trunking Protocol
- Spanning-Tree Protocol

### Day 3

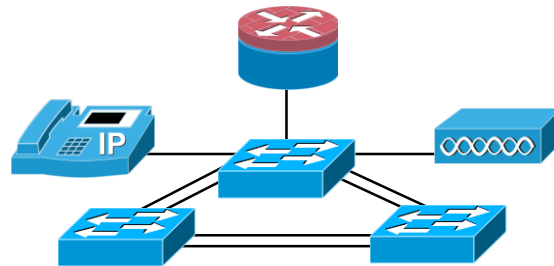
- Private WAN & BGP
- Voice over IP Phone Installs
- VoIP Quality of Service
- Internet Access & NAT

### Day 4

- Cloud Controlled Wireless
- IPsec VPN
- Automated WAN Failover
- Network Monitoring & Management

### Day 5

- Lab Review and Practice
- FSNA Skills Check
- Certification Awarding





## Career Training

This course is designed to help you accelerate your career in Information Technology and help you land your dream IT job in record time! It gives you all the insights, strategies, tips and more that you can execute on step by step to achieve your career goals. Use this course to guide you through job hunting as you work to break into IT or land a promotion!

- **Module 1** - Self Assessment and Growth
- **Module 2** - Shortcut to Six Figures
- **Module 3** - Discover Your Dream Job
- **Module 4** - Preparation and Networking
- **Module 5** - Acing the Interview
- **Module 6** - Job Offer and Negotiation
- **Module 7** - How to Become a Rockstar Engineer







## A Phased Approach



The program is comprised of the following phases

**Phase 1** is 90 days in length and the goal of this phase is to complete the 7 core learning modules of the Full Stack Network Engineer program.

**Phase 2** is 95 days in length and is all about obtaining two industry recognized certifications: The CompTIA Network+ and the Cisco CCNA Routing & Switching. To accomplish this feat you are provided with access to robust courses and labs to help you prepare for your certification exams.

**Phase 3** is when the job search begins! To assist you in this phase you have access to the Land Your Dream IT Job course to learn the strategies and tactics to land the job you want. Throughout this phase will apply to jobs weekly (up to 180 days) until you break into IT or land a promotion!





And even more...



## Facebook VIP Community

An exclusive invitation to our private Facebook mastermind group where you will have access to our community of alumni and fellow students.

## Coaching and Mentorship

6 months of bi-weekly group coaching calls with NexGenT instructors to help you level up even faster.

To your success!

