

# Introduction to Home Networking

<b>Course Length</b>	3 days
<b>Course Code</b>	NFSHN1
<b>Prerequisites</b>	None, however an Introduction to Data technologies course is extremely helpful.
<b>Course Overview:</b>	This course introduces the student to Home Networking concepts. The majority of the course is hands-on working with both common hardware and software used in small businesses and residential environments.

\*This course can be customized or combined to meet specific system requirements

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## Course Outline

### Networking Overview

- What is a Network?
- Why Home Networks
- Network Architecture
- Physical Hardware
- Logical Network/Protocols

### Benefits of Networking

- Sharing Resources
- Centralized Network Management

### Sharing Data between Computers

- Logical Topologies
- Ethernet
- Network Types
- Client/Server
- Peer-to-Peer

### Cabling

- CAT 3,5,5e,6
- Cross-over
- Straight-Thru
- Cable Length Requirements



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## **Wireless Networking Overview**

Wi-Fi/802-11

## **PowerLine Networking Overview**

## **OSI Model Review**

## **Networking Hardware**

Cabling/Wireless

PCs/NIC cards

Hubs

Switches

Routers

Servers

Switches

## **Network Protocols**

TCP/IP

IP Basics

Addressing (Static, Dynamic)

## **Setting up the Network**

Installing the Hardware

Cabling

Configuring the Software

## **PC Operating Systems Overview**

Windows 98

Windows NT

Windows 2000

Windows ME

Windows XP

## **Network Administration**

Administering the Network

Network Security

Firewall Basics

## **Network Troubleshooting and Maintenance**

## **Wireless Networking**

How it works

Benefits

Technologies in the LAN

## **Router Overview**

How Routers work



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Routers and the Internet  
Routing Tables

## **Configuring a Router**

## **Communicating with a Router**

Console Port  
Auxiliary Port  
Telnet  
HTTP Server User Interface

## **Router Security**

NAT, Firewalls, ect



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