

## Course Specifications

### Linux Professional: Network Administration

**Course number:** 077806

**Course length:** 5 days

**Software:**  
Redhat\_Linux 7.1

## Registration:

Micro Market Business Centre  
700 Progress Avenue  
Kingston, Ontario, K7M 4W9

**Toll Free:** 1-877-996-6622  
Local: (613) 634-8125 Kingston  
Fax: (613) 634-8130  
Email: [info@micromarket.on.ca](mailto:info@micromarket.on.ca)

**Register online:**  
[www.micromarket.on.ca](http://www.micromarket.on.ca)



## Linux Professional: Network Administration

### Course Description

*Linux Professional: Network Administration* is a hands-on instruction book. It will introduce students to the basics of configuring Linux servers for networking services. We organized each lesson into explanatory topics and step-by-step activities. Topics provide the theory you need to master the Linux operating system; activities allow you to apply this theory to practical hands-on examples.

**Prerequisites:** To ensure students' success with this course, we recommend that they first take the following Element K courses or have equivalent knowledge:

- *Linux+ Certification*
- *Network+ Certification*
- *Linux Professional Series: Linux System Administration*

**Delivery Method:** Instructor led, group-paced, classroom-delivery learning model with structured hands-on activities.

### Hardware/Software Requirements

You will need:

- One computer per student plus two computers for the instructor. Each machine should meet the following minimum requirements: Pentium processor at 233 MHz, 64 MB RAM, 4.0 GB hard disk, CD-ROM drive, network interface card, mouse, keyboard, and color monitor. Hardware manuals with specifications should be available for students.
- Windows NT or 2000 Server software on CD-ROM.
- Red Hat Linux 7.1 software on CD-ROM for both the instructor and the students. The first two installation CD-ROMs are necessary for certain tasks throughout the book.
- Each student will require one 3.5" disk.

### Performance-Based Objectives

- Identify fundamental Linux and TCP/IP Internetworking concepts.
- Setup and configure the Dynamic Host Configuration Protocol.
- Setup and configure the Domain Name System (DNS).
- Discuss and configure the Network File System (NFS).
- Identify and use some basic remote administration services and tools.
- Configure and setup basic jobs using the cron daemon.
- Build and use a basic Samba server in a mixed environment.
- Explore and configure the Network Information Service (NIS) in an enterprise.
- Comprehend basic troubleshooting tools and techniques.

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## Course Content

### Lesson 1: Networking and TCP/IP on Linux

Topic 1A: Fundamentals of Linux Networking  
Topic 1B: Fundamentals of TCP/IP on the Linux Operating System  
Topic 1C: Advanced Linux TCP/IP Concepts  
Topic 1D: Introduction to Dial-up Technologies

### Lesson 2: Dynamic Host Configuration Protocol

Topic 2A: Introduction to BOOTP and DHCP  
Topic 2B: Installing and Examining a Linux DHCP Server  
Topic 2C: Examining Additional DHCP Options and Configurations

### Lesson 3: Domain Name System

Topic 3A: Introduction to the Domain Name System  
Topic 3B: Installing and Configuring DNS

### Lesson 4: The Network File System

Topic 4A: Introduction to the Network File System  
Topic 4B: Configuring NFS

### Lesson 5: Linux Remote Administration

Topic 5A: Introduction to Remote Administration  
Topic 5B: The Telnet Protocol  
Topic 5C: The Berkeley r Series of Commands  
Topic 5D: The Open Secure Shell Protocol

### Lesson 6: The Cron Daemon

Topic 6A: Introduction to Automation  
Topic 6B: Configuring the Cron Daemon

### Lesson 7: Samba

Topic 7A: Introduction to Samba  
Topic 7B: Cross-platform Connectivity  
Topic 7C: Installing and Configuring Samba

### Lesson 8: Linux System-wide Logging

Topic 8A: Introduction to System-wide Logging  
Topic 8B: Configuring System Logging

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## Lesson 9: The Network Information Service

Topic 9A: Introduction to NIS

Topic 9B: Setting Up and Configuring an NIS Server

## Lesson 10: Common Network Troubleshooting on Linux

Topic 10A: Troubleshooting Concepts and Techniques

Topic 10B: Network Boot Disks and Single-User Mode Linux

Topic 10C: Linux TCP/IP Troubleshooting

Topic 10D: Troubleshooting Server Problems

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