

Data Communications and Networking Fundamentals Using Novell NetWare (3.12)



Emilio Ramos Al Schroeder Ann Beheler



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**Emilio Ramos
Al Schroeder
Ann Beheler**

Richland College



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Preface

During the past decade, businesses have experienced unprecedented growth in the use of computer workstations by their employees. Although data communications and networking previously had been an integral part of data processing systems, this new growth area has brought these topics to the forefront in both the business and personal-use sectors.

While communications has been taught at the college level for many years, courses in networking only recently have become part of the core curriculum. This change has caused a shift in course structure for computer students. Some colleges have developed a networking course, while others have modified their data communications course to place a greater emphasis on networking. Whatever the approach, colleges and universities are trying to provide a strong introduction to both communications and networking for the computer literate student.

This book was written to serve both needs. The first half of the book serves as an orientation to communications and networking. The second half focuses on the use of networks. It features Novell's NetWare version 3.12 to illustrate local area network applications, and it provides hands-on tutorials for the student to implement NetWare 3.12.

NetWare 3.12 was chosen as the software to use because NetWare currently has the largest share of the market. Therefore, it is likely that a student not only would want to study it, but would see it again in business use.

Objectives of This Text

1. To teach the fundamental terminology of communications.
2. To present the components needed to establish communications and the options available in applying each component.
3. To show the uses of both wide area and local area networks.
4. To teach the fundamental terminology relating to networks.
5. To illustrate the components required to configure a local area network and the options available in applying each of them.
6. To present fully the characteristics of NetWare 3.12.
7. To show the student how to install and operate NetWare 3.12.

Organization of the Text

The book is written in two parts, which provides the flexibility of using either or both of them, depending on the situation. The first half is an introduction to communications and networking. It provides the essential terminology and concepts for an introductory course in communications and networking. The second half of the book provides an introduction to the use of NetWare, including installing, managing, and using the software. This provides the student with a how-to look at applying the knowledge gained in the first half of the book, and it reinforces the concepts and terminology from the first half, particularly with respect to LANs.

The organization of the book assumes a level of computer literacy usually attained in college level Introduction to Computer Science courses or an equivalent continuing education course. This book provides a foundation in the concepts and terminology of communications and networking; it follows that with the study of a specific LAN product and the opportunity for hands-on use of that product. Exercises in the first part of the book focus on grasping communications terminology and studying specific network components. Hands-on tutorials in the second half of the book focus on installing, managing, and operating a specific local area network.

A degree of flexibility is inherent in the book's organization, which allows use of either the first or the second half or both parts, as need warrants. Chapters 1 through 7 can be used to teach a course in communications and networking through a variety of scenarios. Chapters 8 through 15 can be used to teach an introductory course in Novell NetWare to persons who already have a knowledge of networking concepts. The entire book provides an introduction to both communications and networking, with hands-on use of the most popular LAN product.

An appendix contains several lists of vendors for a variety of network products. You should review this material for familiarity, and use it as needed to identify vendors in any area of communications and networking.

Supplements

For the instructor there is a comprehensive instructor's guide that includes

1. Suggestions on how to organize the course, depending on the desired emphasis and focus
2. Answers to all end of chapter questions
3. Solutions to projects
4. Transparency masters of the art in the book and the chapter outlines

5. Hints for the presentation of material in the classroom
6. Test bank questions for examinations

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