Overview of the Cisco 200

This chapter provides an overview of the Cisco 200 for DOS, Windows 3.1, and Windows for Workgroups 3.11 and contains the following sections:

- Introduction to the Cisco 200

- Features

- System Requirements

- Before You Start

Introduction to the Cisco 200

The Cisco 200 contains two main components:

- An Integrated Services Digital Network (ISDN) Adapter. See the manual *Cisco 200 ISDN Adapter Hardware Installation and Configuration Guide.*

- Cisco 200 software (one disk). See the chapter "Installing the Cisco 200 Software."

The Cisco 200 is a remote-node product for ISDN. It features an Open Data-Link Interface (ODI) workstation driver that supports Novell NetWare and Internet network protocols—Internetwork Packet Exchange/Sequenced Packet Exchange (IPX/SPX) and Transport Control Protocol/Internet Protocol (TCP/IP).

The Cisco 200 connects to routers that support the Point-to-Point Protocol (PPP) and can also be used in a peer-to-peer Microsoft Windows for Workgroups 3.11 environment.

The Cisco 200 consists of two models: the Cisco 201 and the Cisco 202. Both Cisco 200 models contain an Industry-Standard Architecture (ISA) adapter, but have different ISDN interfaces. Figure 1-1 illustrates a Cisco 201 and a Cisco 202 in an ISDN network configuration.

Figure 1-1   Different ISDN Interfaces for the Cisco 201 and Cisco 202
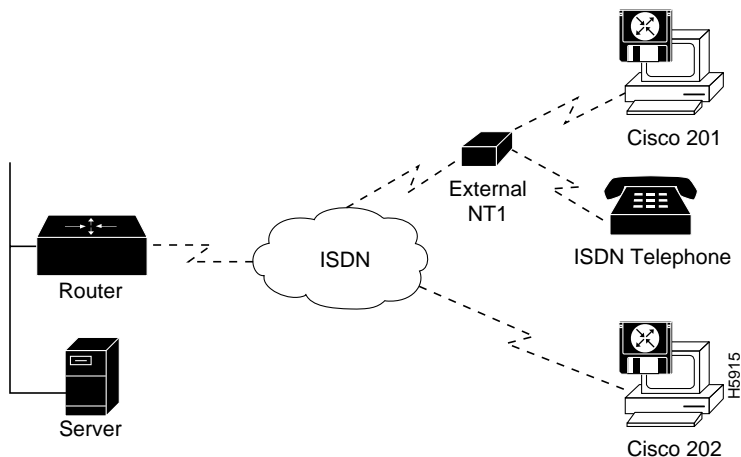
The Cisco 201 requires an external NT1 and is used primarily outside North America. The Cisco 201 can be used in North America when another ISDN device, such as an ISDN telephone, shares the ISDN connection with the Cisco 201. Outside North America, the NT1 is often included with the ISDN service by the ISDN carrier.

The Cisco 202 includes an integrated NT1 and is sold only in North America. In North America, the NT1 is not provided by the ISDN carrier and has to be purchased separately.

Features

The Cisco 200 includes the following features:

- Hardware and software for ISDN connectivity

- Dial-on-demand communications to help control costs when connecting to the WAN

- PPP support for compatibility with the Internet and other networks

- PPP multilink support that allows for additional WAN bandwidth on demand

- PPP callback support to control access and toll costs

- Optional built-in NT1 interface that eliminates the need for a separate NT1 device and power supply

- Support for major ISDN switch protocols and security features for compatibility with ISDN services

- Integration with ISA/Extended Industry-Standard Architecture (EISA) PC platform and operating systems

- One ISDN Basic Rate Interface (BRI) port using an S/T or U interface

- Full compliance with International Telecommunication Union Standardization Sector (ITU-T) recommendations Q.921 and Q.931

The Cisco 200 supports the following ISDN D-channel protocols:

- DSS1, an international standard ISDN protocol, also called Euro-ISDN, E-DSS1, NET-3, or ETSI

- National ISDN-1 (NT1) in North America

- 5ESS (Point-to-Point and Multipoint) AT&T Custom in North America

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Note   The ITU-T carries out the functions of the former Consultative Committee for International Telegraph and Telephone (CCITT).

PPP

The Cisco 200 supports PPP, making it compatible with PPP-compliant networks, such as the Internet.

PPP Callback

PPP callback provides the capability to allocate the bulk of the connection costs to the central router instead of the Cisco 200 workstation. This centralizes the billing and can create cost savings.

PPP callback also provides increased security. The central router will only call back a verified user at the telephone number for which that user has been configured.

High-Speed Links

The Cisco 200 uses an ISDN network to deliver a single B channel that can carry information using high-speed telecommunication links at speeds up to 64 kbps or, using the PPP multilink feature, 128 kbps.

ISDN Security Features

The Cisco 200 includes caller ID and supports the PPP Challenge Handshake Authentication Protocol (CHAP) to ensure a secure network connection.

Using caller ID, the Cisco 200 checks the ISDN number of the calling device to determine whether it is authorized. If the number is not on a list of configured authorized numbers, the call is rejected. This security feature can be used alone or with CHAP.

Dial-on-Demand

The Cisco 200 employs dial-on-demand routing. When there is data to send, the connection is enabled; when there is no data to send, the connection is temporarily suspended. The Cisco 200 and the connecting router achieve dial-on-demand by performing intelligent "spoofing" and filtering to ensure that periodic maintenance packets, such as network broadcasts, do not cause the ISDN line to become active. See Figure 1-2.

Figure 1-2   Dial-on-Demand Feature of the Cisco 200
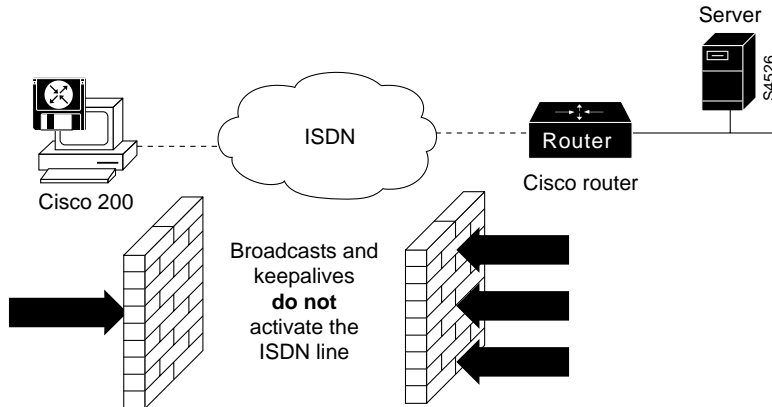
System Requirements

The Cisco 200 requires the hardware and software described in the sections below.

Hardware Requirements

The hardware requirements are as follows:

- An Intel-based or compatible PC with 80386 or later processor

- 1 MB of RAM minimum for DOS; Windows 3.1 and Windows for Workgroups 3.11 require more RAM

- One available half-length 16-bit ISA slot

Note You do not need a separate terminal adapter; the Cisco 200 ISDN Adapter has a built-in terminal adapter.

Software Requirements

The software requirements are as follows:

- Microsoft DOS 5.0 or later.

- Novell's NetWare Client software, ODI or virtual loadable module (VLM).

- Optionally, Microsoft Windows 3.1 or Windows for Workgroups 3.11. (Windows for Workgroups 3.11 must be installed **without** network support.)

- An Internet Protocol (IP) stack, if you are using TCP/IP.

Before You Start

Before you install the Cisco 200, make sure you have the following:

- An ISDN connection.

- Knowledge of which operating system you will be using to run the Cisco 200 software. This Cisco 200 software runs in DOS, Windows 3.1, and Windows for Workgroups 3.11.

- The Cisco 200 Software Installation Worksheet completed by your system administrator. The worksheet is in the chapter "Installing the Cisco 200 Software." In addition, the *Cisco 200 for DOS, Windows 3.1, and Windows for Workgroups 3.11 Read Me First* quick reference card contains a listing of the required information.

  The worksheet (completed by your system administrator) includes the following information:

  — Local Site—The name and node Media Access Control (MAC) address of your computer.

  — ISDN Protocol—This information on protocol type and service profile identifiers (SPIDs) and Directories (if applicable) is supplied by your ISDN service provider.

  — Connecting Router(s)—Connecting router name, complete telephone number, and ISDN connection rate.

  — Network Protocol(s)—One or more of the following: Internet Protocol (IP), Internet Packet Exchange (IPX) from Novell, and bridging.

— CHAP Authentication—If you are using Challenge Handshake Authentication Protocol (CHAP), your system administrator should supply a CHAP password.

— PPP Multilink and PPP Callback—You need to know if you will be using these features.

— ISDN.CFG and NET.CFG File Modifications—You need to know if your configuration requires modification of these files. If so, your system administrator should provide the necessary changes to the files.