CD-ROM Networking

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CD-ROM Networking : Outline

- Introduction
- Components
- Architectures
- Demo.
- Q & A

CD-ROM Networking

- Offer CD-ROM drives as an additional network resource
- Afford multiple network users access to the same disc simultaneously
- Let individuals conveniently select and read the particular disc they want

CD-ROM Network : Strengths

- Higher user productivity
- Higher performance
- Easier management
- Better security
- Lower cost

CD-ROM Networking:Limitations
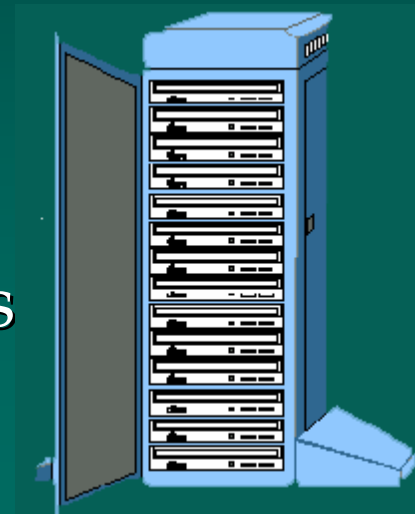
- Performance
- Compatibility
- Capacity
- Complexity

CD-ROM Network: Components

- CD-ROM discs
- Retrieval software
- Computer workstations

- CD-ROM drive(s)
- Network : H/W + S/W

CD-ROM Reader

- CD-ROM drives
- CD-ROM minichanger
- CD-ROM tower
- CD-ROM jukebox
  - DRM-5004X : 4 drives, 500 discs
  - Discs are not used very often
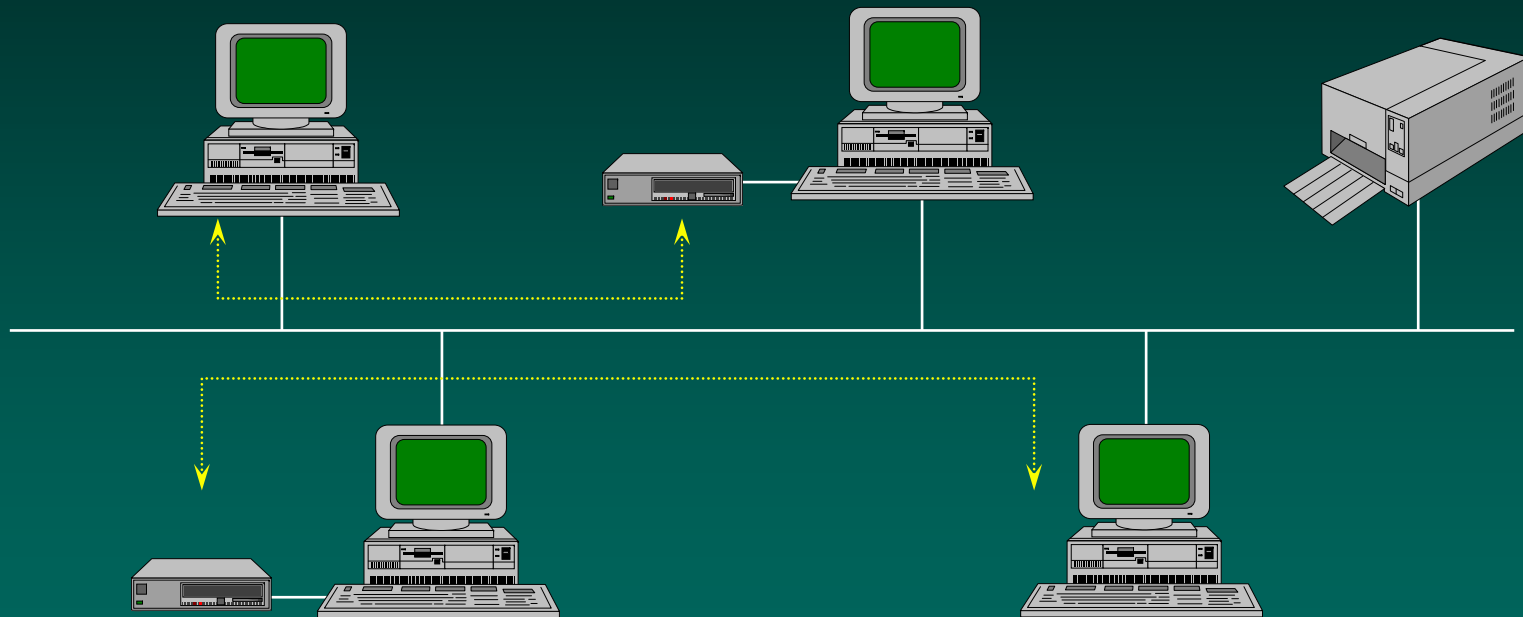 - Small number of simultaneous us
  - Index is located on the hard disk

CD-ROM Network: Architectures

- Peer-to-peer access
- Fileserver extensions
- Plug'n Play CD-ROM mini servers
- Dedicated CD-ROM servers

Peer-to-Peer Access

Share locally attached CD-ROMs

Peer-to-Peer Access

- Advantages
  - Each user has control over their CD-ROM
  - Low cost and ease of installation
- Disadvantages
  - Host's CD-ROM use is limited
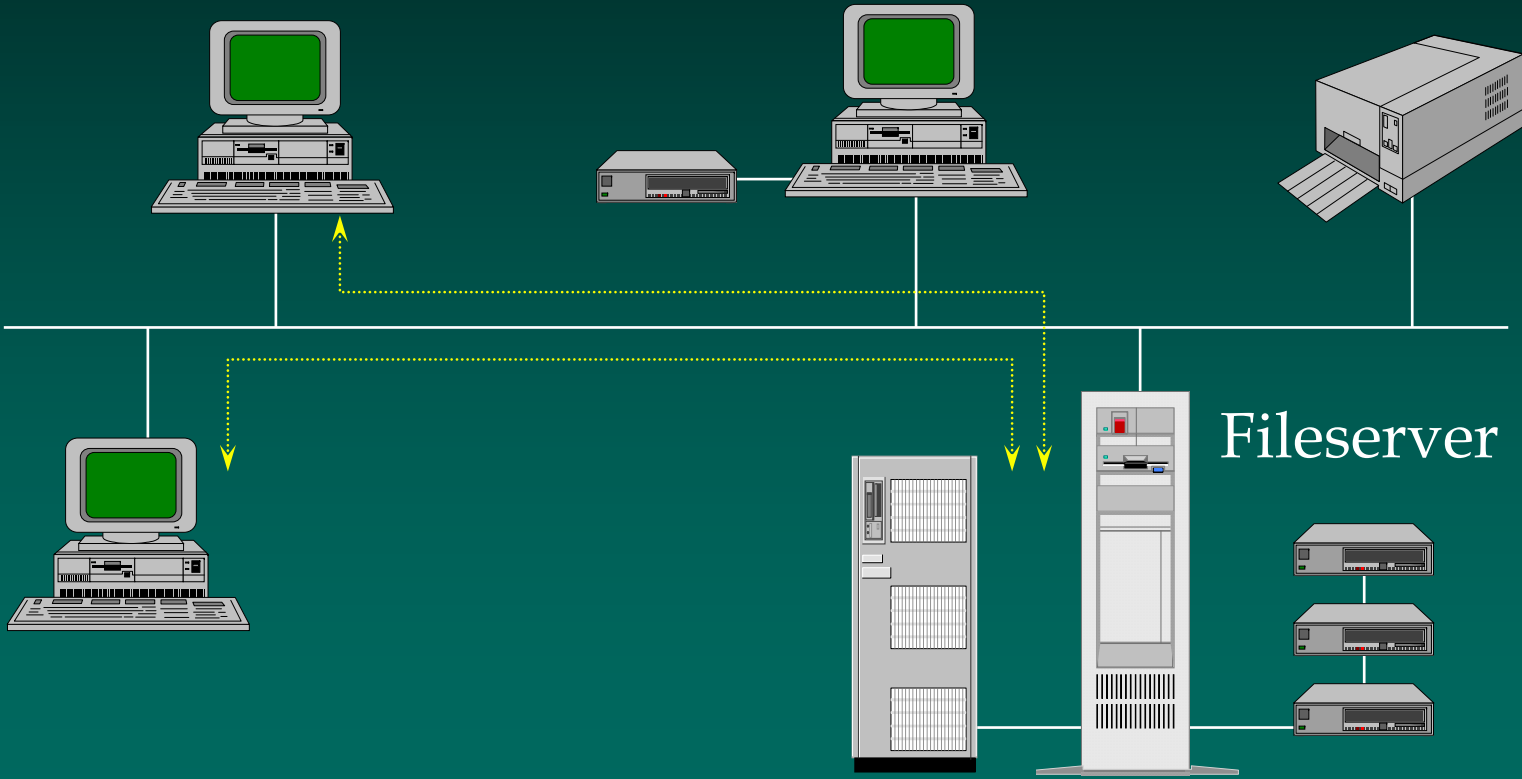 - Lack of standard management and control
  - May experience long delays

Peer-to-Peer Access : NOS

- Microsoft WFW, Windows 95, NT Workstation
- IBM OS/2 Warp
- Macintosh OS
- LANtastic
- POWERLan

Fileserver Extensions

Fileserver

CD-ROM Tower,
Minichanger

Fileserver Extensions

- Attached CD-ROM drives are viewed as if they were hard disk drives
- View the attached CD-ROM drives as one big volume
- Performance file and directory caching

Novell Netware
Windows NT server

Fileserver Extension

- Advantages
  - Leverages existing fileserver H/W & S/W
  - Offers high performance CD-ROM access
  - Provide common, centralized management
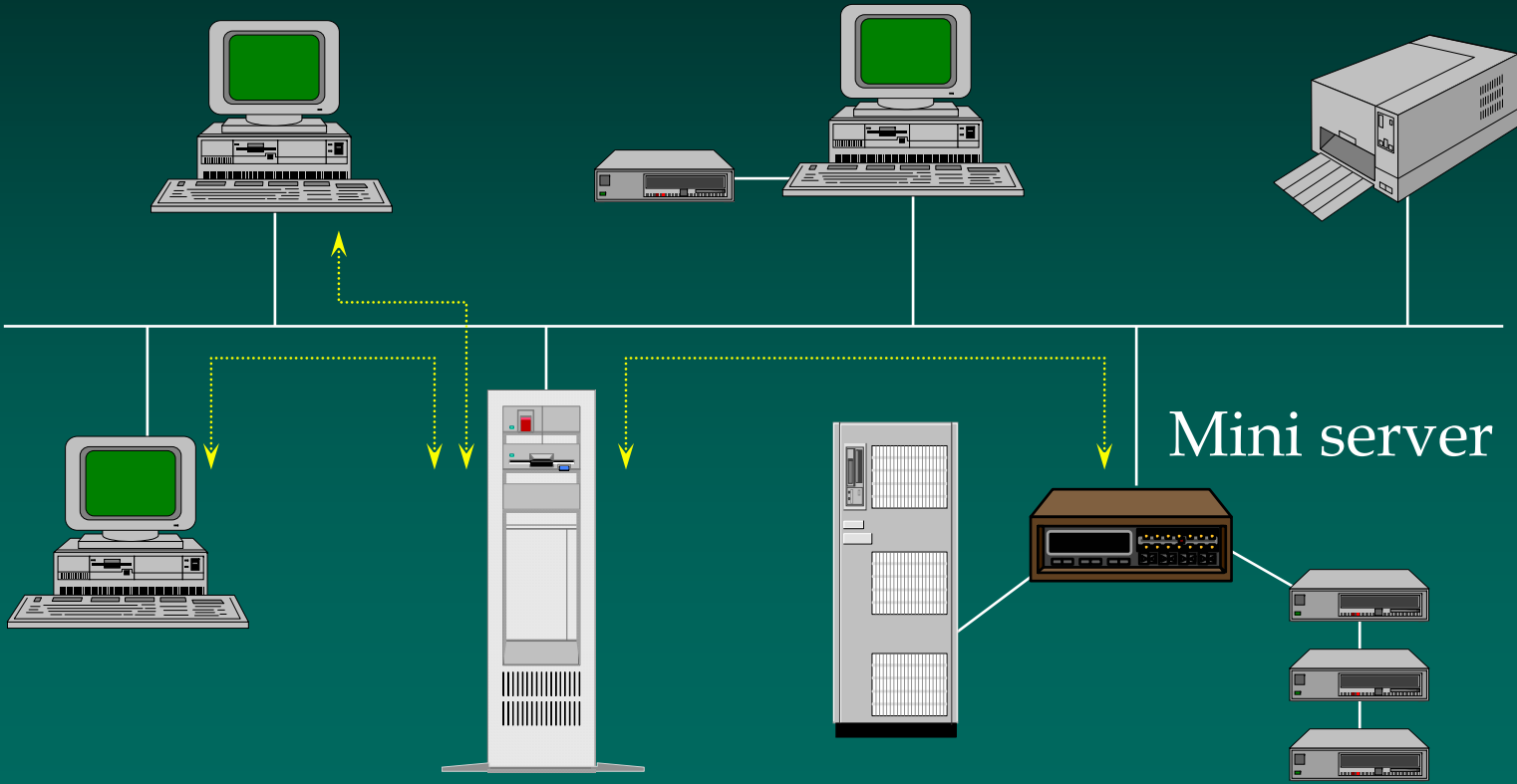 - Maximum physical security
- Disadvantages
  - Burdens the fileserver
  - Limits access for user to change discs

Fileserver Extensions : Software

- Meridian Data's CD Net
- Micro Design's SCSI Express
- Microtest's CD-NOW!
- Smart Storage's Smart CD
- etc.

CD-ROM Mini Servers

Mini server

Fileserver

CD-ROM Tower,
Minichanger

CD-ROM Mini Servers

- **Advantages**
  - Easiest to install and access
  - Can be placed anywhere, allow workgroups to admin. their own needs
  - Highly scalable and expandable
  - Offers mid-range CD-ROM performance
- **Disadvantages**
  - Need additional fileserver's resources
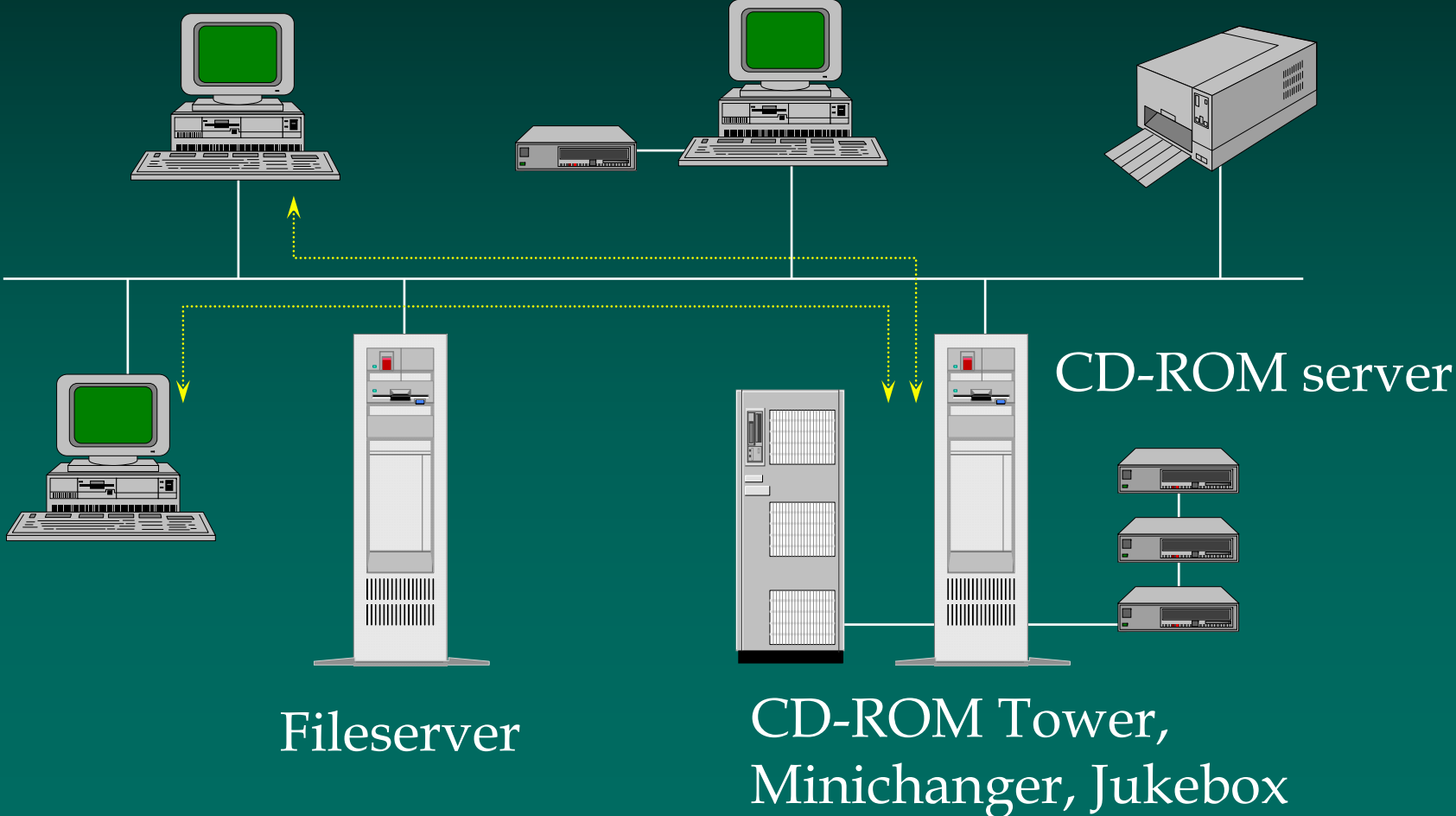 - Less secure, if allow physical access

CD-ROM Mini Servers

- Microtest's DiscPort
- Meridian's CD Net Link
- Micro Design's CD-Express Connect
- Axis StorPoint
- etc.

Dedicated CD-ROM Servers

CD-ROM server

Fileserver

CD-ROM Tower,
Minichanger, Jukebox

Dedicated CD-ROM Servers

- DOS-based optical server / redirector
- Netware NLM / redirector
- Netware volume emulation
- Windows NT services

Dedicated CD-ROM Servers

- Advantages
  - Provides highest performance
  - Allows a large number of CD-ROM drives
  - Supports higher capacity CD-ROM jukeboxes
  - Does not burden existing production servers
  - Offers common, centralized management
- Disadvantages
  - Generally more expensive

Wider Access
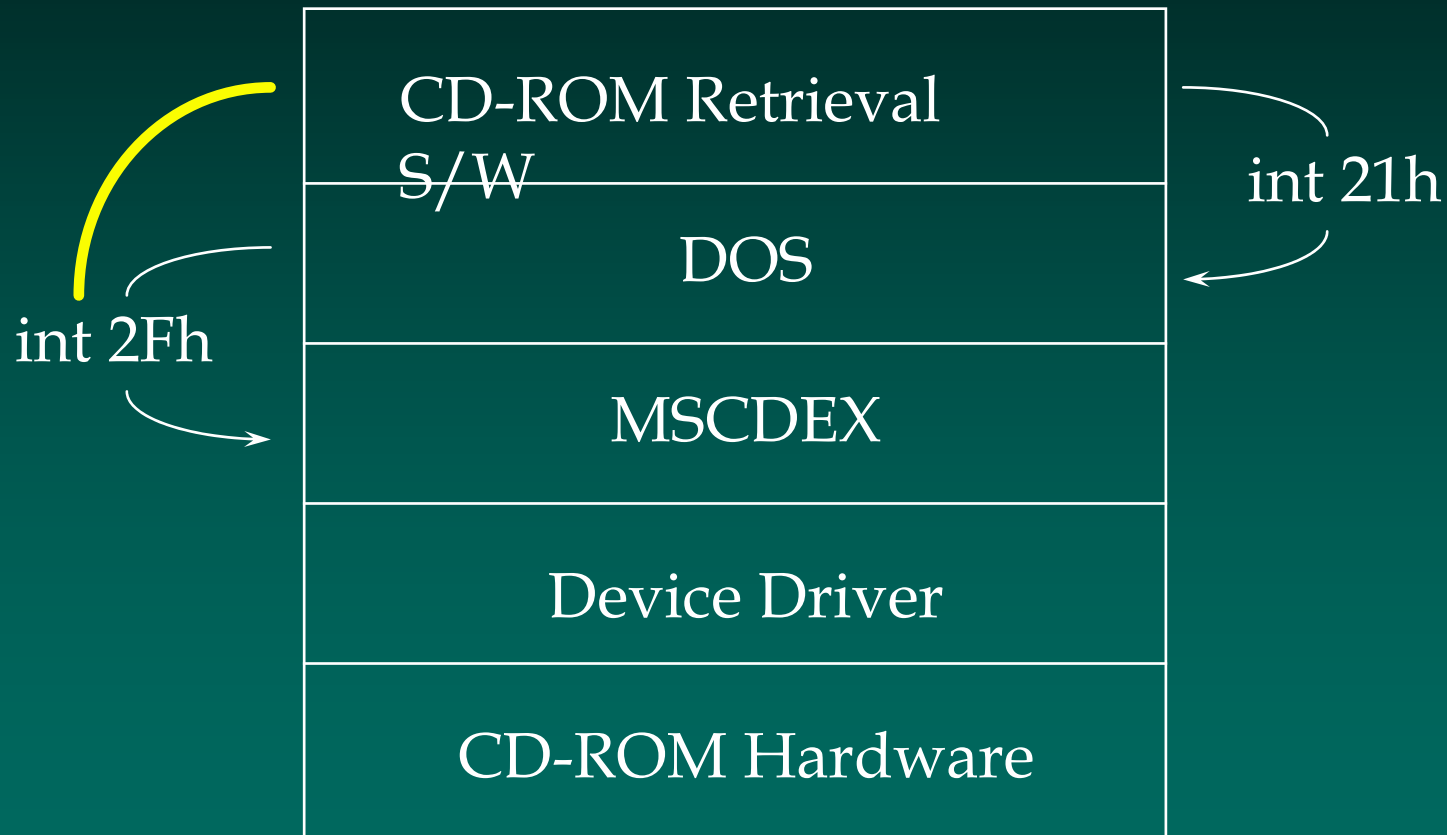
- Remote access via modem
  - pcANYWHERE
  - Stac's ReachOut
  - NT's RAS, Novell's NAS, Terminal server,...
- Internet access
  - Supro's Everywhere Access for DOS, OS/2
  - NT's Telnetd
  - NetBIOS over TCP/IP
  - Web + CD-ROM server

Faster Access

- Caching CD-ROM images to hard disk
  - Logiccraft's FastCD
  - Stac's CD-Quickshare
  - NT's compressed NTFS
- High use discs in a Tower
- Low use discs in a Jukebox

MSCDEX

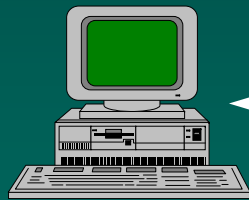| |
|---|
| CD-ROM Retrieval S/W |
| DOS |
| MSCDEX |
| Device Driver |
| CD-ROM Hardware |

int 2Fh

int 21h

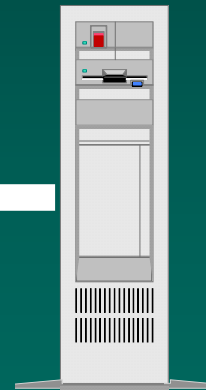Some CD-ROM applications may not run off of the server

Client-Server Architectures

- Map CD-ROM drives as shared network disk drives
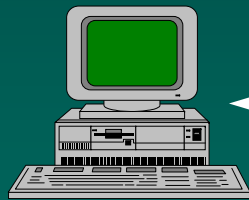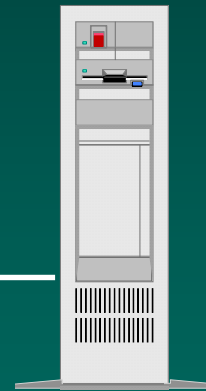 - Your network cable acts like a data bus

Retrieval Interface
+
Search Engine

Client-Server Architectures

✦ Putting the search engine in your server lessens the network traffic

Retrieval Interface   Search Engine

• SilverPlatter's ERL
• Telnet session

Demonstrations

Questions & Answers

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