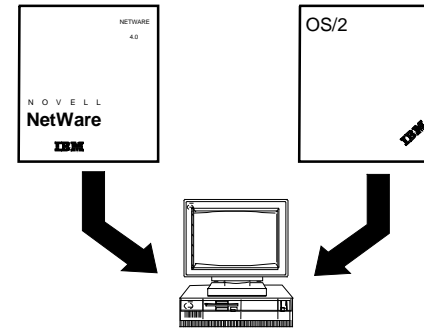


NetWare® 4.0 Server for OS/2

Kyle Bigler
IBM - Austin



What Is It?



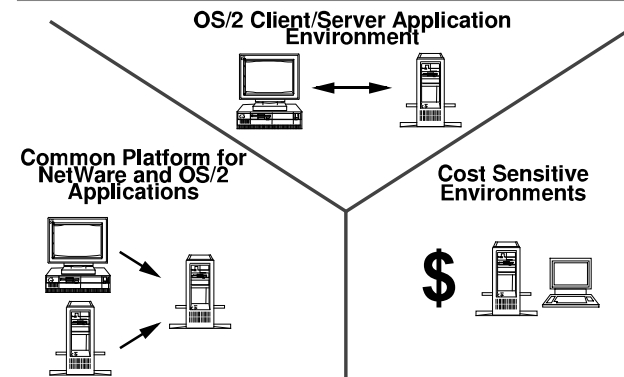
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NetWare History

Version	Non-Dedicated ?
NetWare 2.2	YES (DOS)
NetWare 3.11	NO
NetWare 4.0	YES (OS/2)

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Implementation Environments



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Features - NetWare 4.0

- Provides all Features of NetWare 4.0 - Including Directory Services
 - Same SERVER.EXE as NetWare 4.0
 - Runs NetWare 4.0 NLMs Unmodified
 - Runs NetWare 4.0 Device Drivers Unmodified
- Accessible from all Clients

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Features - Concurrent OS/2

- Preemptive Multitasking of OS/2
 - NetWare and OS/2 Applications to Run Concurrently
- OS/2 Applications can Share Devices with NetWare
- OS/2 Applications can Use Files Stored on the NetWare Server

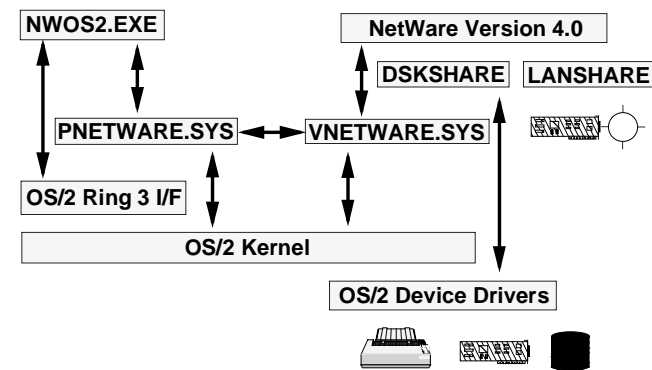
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Features - Performance

- Up to 92 % of native NetWare Performance
- Dynamically Adjustable Performance Tuning

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System Structure



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VNETWARE.SYS

- OS/2 Virtual Device Driver (VDD)
- Supports SERVER.EXE
- Provides Server Interface to the Machine
 - Interrupt Support
 - Memory Support
 - Screen Management
 - Keyboard Functionality
 - Timer Support

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PNETWARE.SYS

- OS/2 Physical Device Driver (PDD)
- Communicates with and Controls Physical Devices
 - Register/Unregister Interrupts
 - End of Interrupt Notification
 - Timer Ticks
 - Memory Allocation

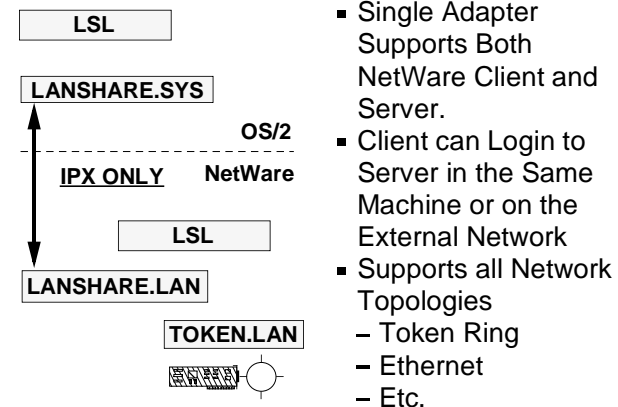
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NWOS2.EXE

- 32-bit Ring 3 OS/2 Application
- 4 Threads of Execution
 - Main Thread (Server)
 - DOS File I/O
 - Screen Handling
 - Keyboard

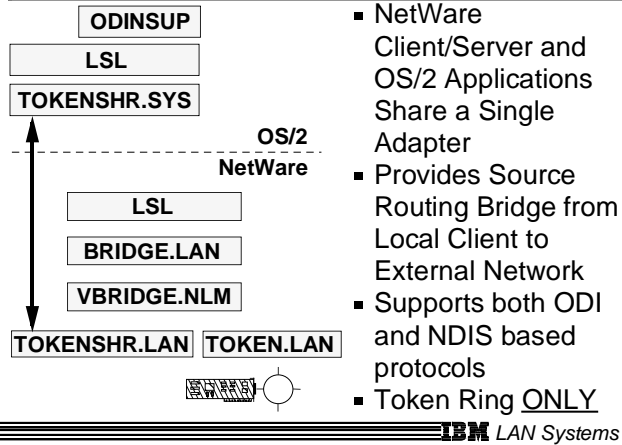
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Adapter Sharing - IPX Routing

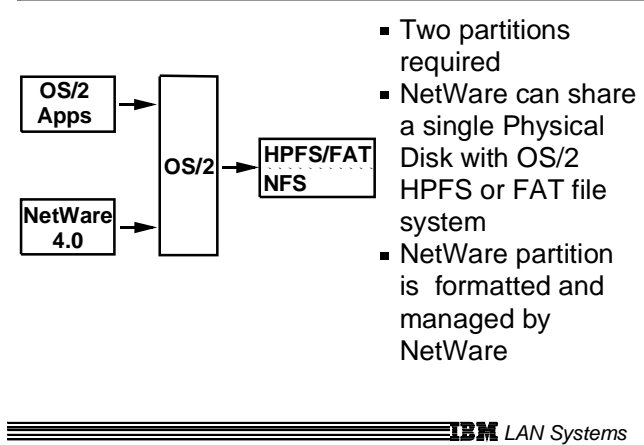


- Single Adapter Supports Both NetWare Client and Server.
- Client can Login to Server in the Same Machine or on the External Network
- Supports all Network Topologies
 - Token Ring
 - Ethernet
 - Etc.

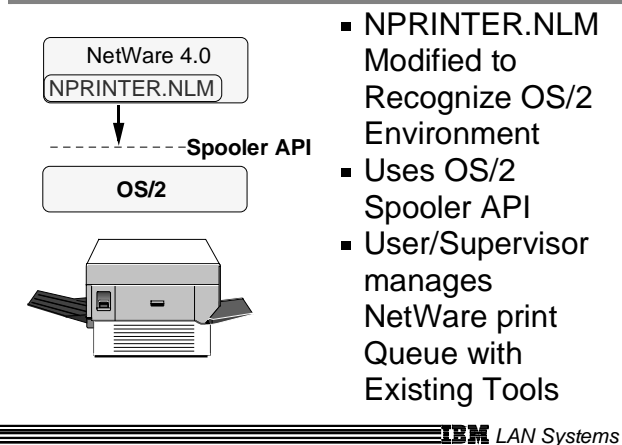
Adapter Sharing - Bridging



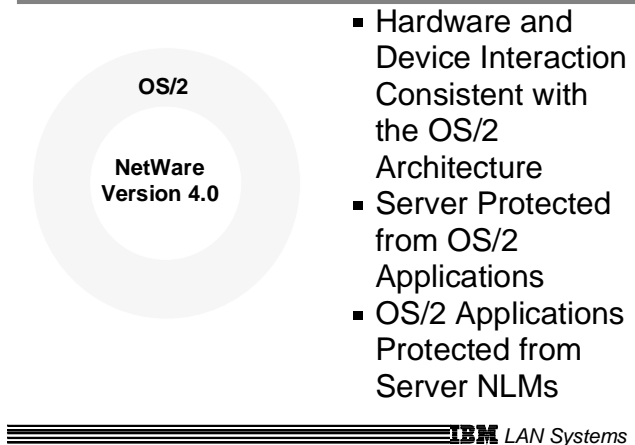
Disk Sharing



Printer Sharing



Application Protection



Product Packaging

- Packaged as an "Add-on" for NetWare Version 4.0
- Contains Updated LAN Device Drivers and NPRINT.NLM
- Contains all OS/2 Support Modules
 - NWOS2.EXE
 - VNETWARE.SYS
 - PNETWARE.SYS
 - DSKSHARE
 - LANSHARE/TOKENSHR

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Installation

- 1) Install OS/2
 - Determine Hard Drive Requirements for NetWare
 - Reserve "Free Space" or Add an Additional Hard Drive
- 2) Install NetWare for OS/2
 - Set NetWare RAM Requirement in NET.CFG
 - Install NetWare Client W/Adapter Sharing if only 1 Adapter is Installed

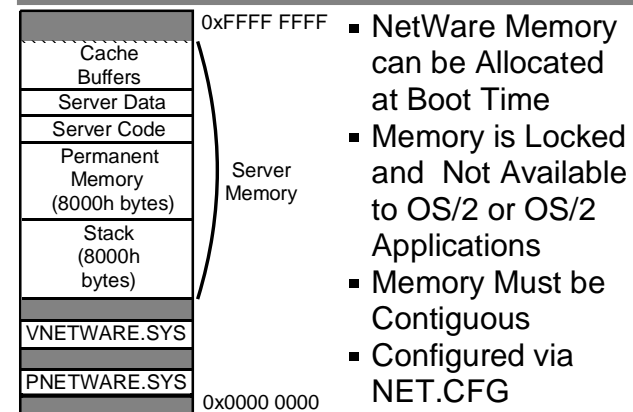
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Installation

- 3) Install NetWare V4.0
 - Follow Instructions for NetWare V4.0 Native
 - Use DSKSHARE to Share Hard Drive with OS/2

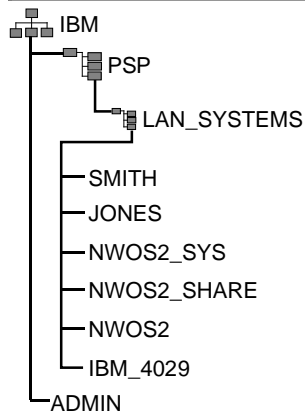
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Memory Model



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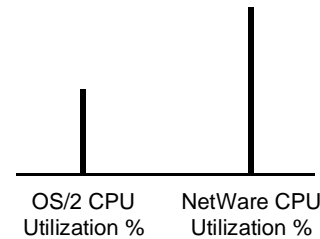
Utilities - NetWare Administrator



- View and Manage Distributed Directory Tree
 - Users
 - Servers/Volumes
 - Printers
- Presentation Manager Based
 - Drag and Drop Operation
- Provides Same Function as NetWare 3.11 Character Based Utilities
 - SYSCON
 - FILER

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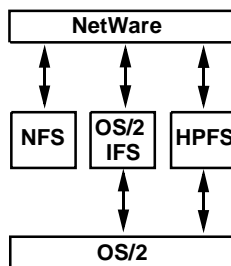
UTILITIES - NetWare Monitor



- Presentation Manager Based
- View OS/2 and NetWare CPU Utilization
- Dynamically Adjust the NetWare Tuning Parameter

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Direction - OS/2 IFS Support



- OS/2 IFS "Mountable" by NetWare
- Data on HPFS Partitions visible to NetWare clients
- IPC mechanism for NetWare NLM's and OS/2 Applications

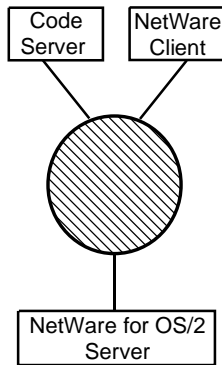
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Direction - Disk Defragmentation

- Utility to create Free Space Partition on a Disk formatted entirely for HPFS
- Migration Tool for Systems with OS/2 already Installed

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Direction - Remote Installation



- Allow Remote Installation of NetWare for OS/2 and OS/2 Clients
 - Response File Driven
 - NetWare Server for OS/2 can act as a C/I/D Code Server
- NOW

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Summary

- Single Hardware Platform for all LAN Applications
 - Full OS/2 Function
 - Full NetWare 4.0 Function
- Concurrent Use of OS/2
 - Preemptive Multitasking
 - Supports Multiple Concurrent LAN Protocols
- High Performance

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