Commuting in reverse—bringing the office to mobile workers

IBM 8235 Dial-In Access to LANs (DIALs) Software Release 4.5

Highlights

- ***One management facility with expanded features for all 8235 models***
- ***Support for ISDN V.120 rate adaption***
- ***Improved IP management and security options***
- ***RADIUS management and accounting available for all 8235 models***
- ***Support for a variety of security applications***
- ***Function added for network managers and service providers to ease their tasks***
- ***Enhanced DIALs client features***
- ***New Dial-Out clients for Windows® 95 and Windows NT® LAN workstations***
- ***Support for OS/2® Warp dial-out using IP***
- ***CD-ROM upgrade includes all DIALs software and documentation***
- ***Powerburst option speeds up NetWare file system activities***

New capabilities and simpler, less expensive operation

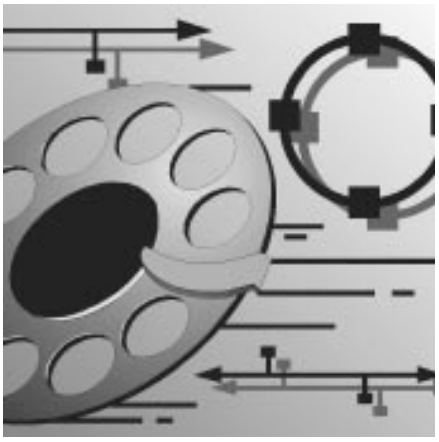
With the IBM 8235 Dial-In Access to LANs (DIALs) server or switch, remote users can get to their office network from any location that has dial-up phone service.

Employees who travel or work from home or remote offices can get to any of the information they need, just as if they were using the workstation in the office. Mobile workers—sales and service representatives, agents and others—can get to product data, inventory, prices and work schedules from home, a customer location or while they're traveling.

This new release builds upon the reliability and features of the existing DIALs software with improved performance and more function, including extended multiprotocol support, ISDN BRI support, additional client support and enhanced management and security options.

Multiuser, multiprotocol, multifunction

With routing and bridging support for multiple protocols such as NetBIOS for LAN servers, IPX for NetWare, 802.2 LLC



for the 3270 Information Display System and 5250 Display System, IP for TCP/IP applications on both Token-Ring and Ethernet models and AppleTalk on Ethernet with ARA 2.0 clients, users can remotely access a variety of applications. And the 8235 supports dial-up LAN-to-LAN routing and dial-out modem- and line-pooling.

All of the ports or channels on an 8235 can operate simultaneously. Special filtering and compression techniques reduce the amount of network traffic. Speeds up to 115.2 Kbps or dial-in speeds up to 128 Kbps are supported through the 2 ISDN B-channels. Aggregating up to 8 channels in LAN-to-LAN routing gives speeds up to 512 Kbps, which also contributes to optimum remote-access performance.

IBM 8235 DIALs Server Release 4.5 upgrade (no charge) at a glance

Part numbers	*Hardware and software** • 42H4560: 8235 Server Model 021 with R 4.5 software • 42H4570: 8235 Server Model 022 with R 4.5 software • 42H4590: 8235 Server Model 031 with R 4.5 software • 42H4600: 8235 Server Model 032 with R 4.5 software • 55H8540: 8235 Server Model 051 with R 4.5 software • 55H8570: 8235 Server Model 052 with R 4.5 software • 85H4026: 8235 Switch Model I40 with Ethernet feature and R 4.5 software • 85H5656: 8235 Switch Model I40 with Token-Ring feature and R4.5 software *Software only* (no charge)* 85H8995: R 4.5 CD-ROM, LANConnect for Macintosh Diskette, and all publications for all models Software only (chargeable) 00K5017: 5017 Software Key for Powerburst Option for 2-port servers 00K5018: 5018 Software Key for Powerburst Option for 8-port servers 00K5019: 5019 Software Key for Powerburst Option for Model I40 *Memory upgrade* 85H8997: 8235 Models 011, 012, 021 and 022 85H6164: 8235 Model 001 85H6165: 8235 Model 002 *ROM upgrade* 85H8996: 8235 Models 011, 012, 031 and 032
New functions	• DIALs Clients: Includes IBM DIALs Clients R 4.5 for OS/2, DOS and Windows, license and right to copy license. • AppleTalk: Support for AppleTalk ARA 2.0 dial-in functions to Models 002, 012, 022, 032, 052 and I40. • Dial-Out: OS/2 IP Dial-Out, Windows 95 and Windows NT. • LAN-to-LAN: LAN-to-LAN routing of TCP/IP, IPX and AppleTalk. Calls can be established manually by the administrator or automatically at Time-of-Day. • Supported protocols: NetBIOS, IPX, TCP/IP, 802.2 (LLC) and AppleTalk ARA 2.0 (Models 002, 012, 022, 032, 052 and I40 Ethernet).
Publications	• *IBM 8235 DIAL-In Access to LANs Servers for Token Ring and Ethernet Installation Guide*, GA27-4018 • *IBM 8235 Model I40 Dial-In Access to LANs (DIALs) Switch Installation Map*, GX27-4030 • *IBM 8235 DIAL-In Access to LANs Servers and Switches Administrator's Guide*, SC30-3629
Hardware requirements	• 8235 Server: Models 021, 022, 031, 032, 051, 052 or I40 with R 4.5 software. DIALs Server Models 001, 002, 011, 012, 021, 022, 031, 032 and DIALs Switch Model I40 presently at R 4.0 or higher with additional memory installed can be upgraded with R 4.5 software. Models 001, 002, 011, 012, 021 and 022 at release levels before 3.5 can be upgraded with R 4.5 software but require additional memory. • DIALs Client: Any PC or PS/2® computer with a 386 or higher processor and OS/2 2.11 or higher or a 286 or higher processor and DOS 3.3 or Windows 3.1 or higher. (For remote networking the 16550 serial port UART on the client PC is recommended.)

Note: If you are upgrading from Release 2.0 or earlier software, additional memory is required. If you plan to install an ISDN BRI module in your 8235 you must also upgrade the ROM on the unit.

**The software and publications are also available on the Web at http://www.networking.ibm.com/nes/neshome.html*

Integrated ISDN—faster access for the remote user

The existing DIALs Server software supports asynchronous data transmission speeds of 115.2 Kbps with serial cards or V.34bis modems. With the ISDN support offered by the 8235 software, digital data transmission speeds of 64 Kbps per B-channel can be achieved. The ISDN environment has been extended by the addition of V.120 rate adaption support. When combined with the increased reliability of digital data transmission, the faster transmission speeds give remote users a definite improvement in performance and productivity. And ISDN support for the DIALs software doesn't end with increased data transmission rates. It also includes channel aggregation and virtual connections with spoofing for IP and IPX applications, providing performance and line-cost management improvement. The V.34bis modems can be upgraded with flash ROM speed upgrade to 33.6 Kbps.

Dial-in and dial-out—improved DIALs client support

Along with additional support for ISDN, the DIALs software incorporates several client enhancements, including NetWare 32-bit client support, dial-out clients for Windows 95 and Windows NT operating systems and enhancements for OS/2 Warp users. Included also are support for the WaveRunner ISDN adapter, a non-standard port driver and application program interface (API), and a shuttle feature for OS/2 Dial-In that changes your workstation's PROTOCOL.INI and CONFIG.SYS files so that they're correct, no matter where you connect your PC the next time you start up. There is also an easy-to-install feature for Windows 3.1 and a virtual device driver (VDD) that offers improved memory requirements for Windows 3.1 or 3.11.

IBM 8235 DIALs Server Release 4.5 upgrade (no charge) at a glance, continued

Remote clients	Supported dialers: OS/2, DOS, Windows, Windows 95 RAS Client, Windows NT RAS Client, UNIX® and AppleTalk ARA 2.0 (Models 002, 012, 022, 032, 052 and I40 with Ethernet).
DIALs security	• Call-back: Call-back can be to a specified number or a roaming number. • Passwords: ID and encrypted passwords in the 8235 are date-timed and user-upgradable. • Third party: SecurID-ready, Novell NetWare 3.0 Bindery Services, AssureNet Pathways Defender, Blockade Systems, RADIUS authentication and accounting. A number of third-party hardware devices (for example AssureNet Pathways and SecurID) are supported.
Management	• 8235 Management Facility: The Management Facility is a Windows-based, graphical application that runs in a WIN-OS/2 window using the IP option or in Windows 3. Compatible with other 8235 models. • Nways: Nways Manager for Windows or Nways™ Campus Manager LAN • SNMP: MIB II can be managed from an SNMP manager. BootP server support provided. • Telnet: Telnet command shell. • Media: One CD-ROM with books and application software and one 3.5-inch diskette for LANConnect for Macintosh

The 8235 also supports a wide variety of dial-in client applications, enabling a single 8235 to cover more remote users. The supported dial-in clients include Windows 95 RAS Client, Windows NT RAS Client 3.5, other PPP protocol clients and some SLIP clients. DIALs client dial-out support is now provided for Windows 95 and Windows NT. Windows users can now use CAPI 2.0 for ISDN dial-in connections. OS/2 Warp users can now use IP for dial-out.

Other functions include dial-out support for workstations on the LAN using asynchronous applications, which establish the 8235 as a modem- and line-pooling device, fax-out support for LAN fax users and online, dial-in and dial-out user's guides with hypertext links and indexing for improved usability.

Dial-in performance can be improved for IPX file-system-based activities and applications through the use of Powerburst acceleration support, an optional feature on all 8235 models.

Transparent access to network resources—anytime, anywhere

The 8235 DIALs Server or 8235 DIALs Switch in the office works with IBM DIALs Client software in OS/2, DOS and Windows PCs outside the office and with 8235s in other offices, or it accesses remote services from an office workstation.

For remote access authorized remote users simply call an 8235 using ordinary telephone lines or digital networks and get connected to the office network. They can transfer files, print documents, use e-mail and other client or server applications and access databases. There are no new commands or complicated procedures to learn.

New shell support features for customization of the shell login process, and support for Domain Naming Services (DNS), ease the network manager's load.

Network managers can also use the 8235 as a dial-up, LAN-to-LAN router between locations for LANs connected by IP and IPX protocols, and as a modem-pooling, dial-out or fax-out device for access to services like CompuServe and the Internet. Having remote access, dial-up routing and modem-pooling in a single device is simpler and costs less than having multiple devices.

In addition to Virtual Connections for IP and IPX applications, spoofing the DIALs software supports IP address filtering and use of Dynamic Host Configuration Protocol (DHCP) for dynamic assignment of IP addresses, a change in IP address assignment, where the per-port IP address assignment has been replaced with a pool of IP addresses per server. Static route support for TCP/IP has also been added.

Network security—protecting your information

The 8235 DIALs software now has several enhancements to its security features. 8235 Servers and Switches are SecurID-ready. Support includes Assurenet Pathways Security Server, Blockade Systems (RACF) and enhanced RADIUS management and accounting support for all models.

Existing security features include support for centralized 8235 user lists, password-aging, callback with roaming included, users' ability to change passwords, an API for TTY-based authentication and a user-defined, dial-in banner. Additional protocol support includes IP filtering, Terminal Access Controller Access Control System (TACACS and TACACS+), Challenge Handshake Authentication Protocol (CHAP) support for PPP connections for dial-in and LAN-to-LAN, and dial-back with SecurID.

Comprehensive management

The 8235 includes Windows software that lets you configure, monitor and upgrade any number of an 8235 units from a single, local or remote workstation. You can also manage your 8235s using the Nways Manager for Windows, the Nways Campus Manger LAN or SNMP manager. The management software can provide complete status information on all 8235s on your network. RADIUS enhancements provide better interoperability with other RADIUS environments and improved information for management and accounting.

The 8235 Management Facility provides the option to use IP as the LAN transport protocol, thus reducing the protocols used on an IP network. Also included is image download using IP, as well as continued support for the IPX transport protocol and a graphical interface for LAN-to-LAN setup.

What you get

Included with each 8235 DIALs Server Release 4.5 package are the following features:

8235 Management Facility

Dial-in Client software with rights to copy for:

- OS/2
- DOS
- Windows 3.1 or higher
- Security Pack for Windows 95

Dial-out Client software with rights to copy for:

- OS/2
- DOS
- Windows 3.1 or higher
- Windows 95 and Windows NT

LAN-to-LAN Connect software with rights to copy for Windows 3.1 or higher

An online user's guide for each client software package

An electronic version of the 8235 Dial-In Access to LANs Servers Concepts and Implementation

For more information

To find out more about the IBM 8235 Servers and Switches and other high-performance IBM communications and networking products, contact your IBM representative or call IBM Direct at 1 800 IBM-CALL (1 800 426-2255). You can also access the IBM Networking Home Page at http://www.networking.ibm.com.

Copies of this and other related product specification sheets can be obtained from the IBM FAX Information Service by dialing 1 800 IBM-4-FAX (1 800 426-4329) in the U.S. or Canada or by dialing (415) 855-4329 outside the U.S. and Canada and requesting the following document numbers:

5953: *IBM 8235 Model I40 Dial-In Access to LANs Switch*

6210: *IBM 8235 Dial-In Access to LANs Server Software Release*

5697: *IBM 8235 Dial-In Access to LANs Server Models 031 and 032*

6218: *IBM 8235 Dial-In Access to LANs Server Models 021 and 022*

5952: *IBM 8235 Dial-In Access to LANs Server Models 051 and 052*

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