

# ATTACHMATE® RLN

Remote Lan Node® and RLN Access Server

version 4.2

## Access the LAN from anywhere.

Now you can access LAN- and host-based applications quickly, easily, and securely from just about anywhere with RLN (Remote LAN Node) from Attachmate. RLN provides remote users with secure, reliable, transparent access to Ethernet and token ring LANs from remote PCs. The RLN Server extends network environments by allowing PC users to function as complete "nodes" on the network, exactly like a locally connected user. With RLN, remote users can run applications, send or receive e-mail messages, use network printers, access host systems, and perform other tasks as if they were located in the office. RLN can extend the network to remote users over modems, cellular, switched 56Kbps, X.25, or ISDN. The RLN Server also functions as a modem pool server permitting LAN-attached users to send faxes and dial out to public information services.

### Maximize flexibility with an open solution.

RLN provides an open solution based on industry standards, totally independent of LAN operating systems and protocols. You can provide remote access to any LAN or simultaneous access to any interconnected network combination. Compatibility with all LAN topologies and network protocols protects your investment in LAN technology and offers room for growth.

### Gain LAN access easily and transparently.

Even occasional and non-technical users will find RLN easy to use. RLN provides transparent LAN access — it looks and feels just like the LAN connection in the local office. The LAN Administrator can customize remote clients, removing the technical complexity for the remote user and streamlining the remote dial-up process for maximum ease-of-use.

### Choose a custom configuration.

A single RLN Server simultaneously connects up to 64 remote RLN clients. The RLN Server is available either as software (including the necessary communications cards) or pre-configured on a Pentium® hardware platform. Choose RLN software if you wish to convert your own Pentium PC into a high-performance remote access server.

Choose the Pentium-based RLN Access Server for the fastest way to set up remote access for



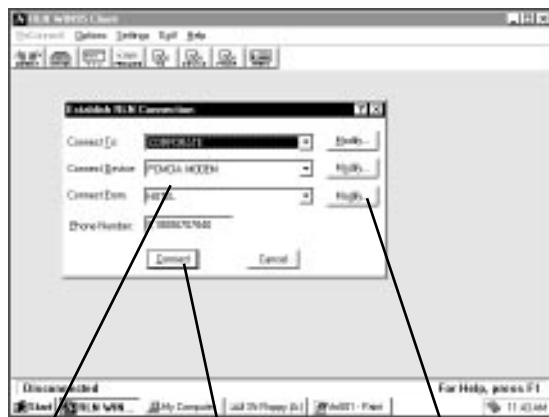
*The RLN Access Server is a pre-configured alternative to RLN software.*

your users. The RLN Access Server includes RLN software pre-installed in configurations from 2 to 64 remote access ports. Plug it in and you're ready to extend the reach of your LAN to all your remote users, everywhere.

# PRODUCT PROFILE

### Flexible Interface Options.

Whether you select our software or hardware solution, with RLN you'll have the ultimate in configuration flexibility. On the LAN side, the Ethernet or token ring adapters support up to 16Mbps networks and any cabling scheme. On the WAN side, RLN provides simultaneous support for asynchronous, ISDN, X.25, and Switched 56 remote access connections. The RLN Server software and RLN Access Server hardware are available with high-speed, internal multi-port modems supporting up to V.34 connections. They are also available with high-speed intelligent ports for asynchronous access using standard external modems. You can set up X.25 wide area network support using internal X.25 cards that allow the RLN Server to become DTE in an X.25 WAN network. Additionally, ISDN Basic Rate or Primary Rate cards can be used to provide 64Kbps, end-to-end digital connections for lightning-fast remote access. We even offer ISDN Kits with the necessary client and server adapter cards to completely streamline your ISDN implementation. Best of all, these flexible WAN configurations can be mixed and matched to configure a server that exactly suits your needs.



*To establish an RLN connection, select the desired site from the directory listing.*

*Then use the easy single-click dial connection.*

*Easily modify the phone number with dial prefixes, credit card numbers, etc.*

### Get optimized performance for all applications.

RLN not only provides your remote connections to all corporate resources, it can also ensure that the performance of each application is optimized over the remote link. To take advantage of remote node and application server technologies in a single integrated solution, choose the RLN Suite. It consists of the RLN remote node server, used to extend the network environment to remote users and provide a consolidated remote access entry point facilitating security and management needs; and the RLN Application Server which is employed when access to high-bandwidth applications is needed. When the RLN Application Server is part of your remote configuration, performance improves for high-bandwidth applications because data remains local to the LAN. Only keyboard, screen, and mouse commands are transmitted over the WAN, greatly reducing the bandwidth requirement. This can result in performance gains of 300% or more compared to standard dial-up connections.

The RLN Suite offers optimized performance and ease-of-access across a broad variety of applications and tasks. According to testing performed by The Tolly Group ... "the RLN Server and Application Server combination consistently and dramatically outperforms the other remote LAN access devices across a wide variety of applications and tasks." And, because the RLN Application Server can be integrated with RLN, its use is transparent to remote users — they simply click on icons just like in the office. RLN can be preconfigured by the LAN Administrator to use the Application Server when needed for high performance. (See the RLN Application Server Product Profile for details.)

**Choose from abundant security functions.**

RLN offers an unmatched selection of security features. All are optional, allowing them to be layered to fit your specific requirements. RLN supports industry standard authentication methods such as PAP, CHAP, and EAP. Small, physical “security keys” called Remote Security Adapters can be added to provide a simple yet powerful form of two-factor authentication. RLN also supports the TACACS and TACACS+ open standard for using powerful LAN-based security such as ACE Server® from Security Dynamics.

Also available is ARCryptoLAN for RLN for the rigorous security requirements of financial and government organizations. This optional add-on module combines two powerful security technologies: DES (Data Encryption Standard) protocol for data encryption/decryption and RSA, a reversible public-key cryptosystem for user and key authentication. (See the ARCryptoLAN for RLN Product Profile for details.)

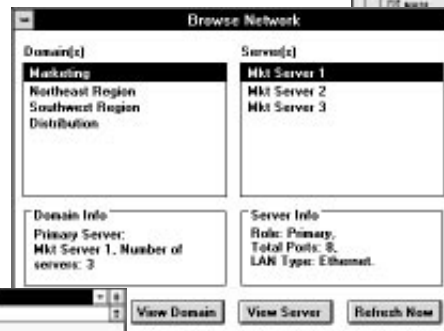
**Use superior management features.**

The LAN Administrator can manage the RLN environment using the Windows-based RLN Manager or other familiar SNMP management facilities. The RLN Manager will auto-discover all RLN Servers on the network using IPX™ or TCP/IP, and it can dynamically configure RLN Server protocols and services such as IPCP, IPXCP, RLNCP, IPX, dial-out, and Apple® Remote Access (ARA). With our unique Distributed Authentication Services (DAS), multiple servers can be managed as a single mega-server. In addition, our unique Domain Management scheme supports fault tolerant redundancy with servers designated as primary, secondary, or hot backups

*Configure RLN with graphical dialog screens.*



*Browse the network anytime for domain and server information.*



*Easily report and analyze user session activity and port demand with the RLN Call Accounting utility.*



RLN Call Accounting provides reporting for all user session and port utilization information. Departmental charge-backs, load balancing, and capacity versus demand can be tracked and reported with this Microsoft Access® -based utility.



"...the RLN Server and Application Server combination consistently and dramatically outperforms the other remote LAN access devices across a wide variety of applications and tasks."

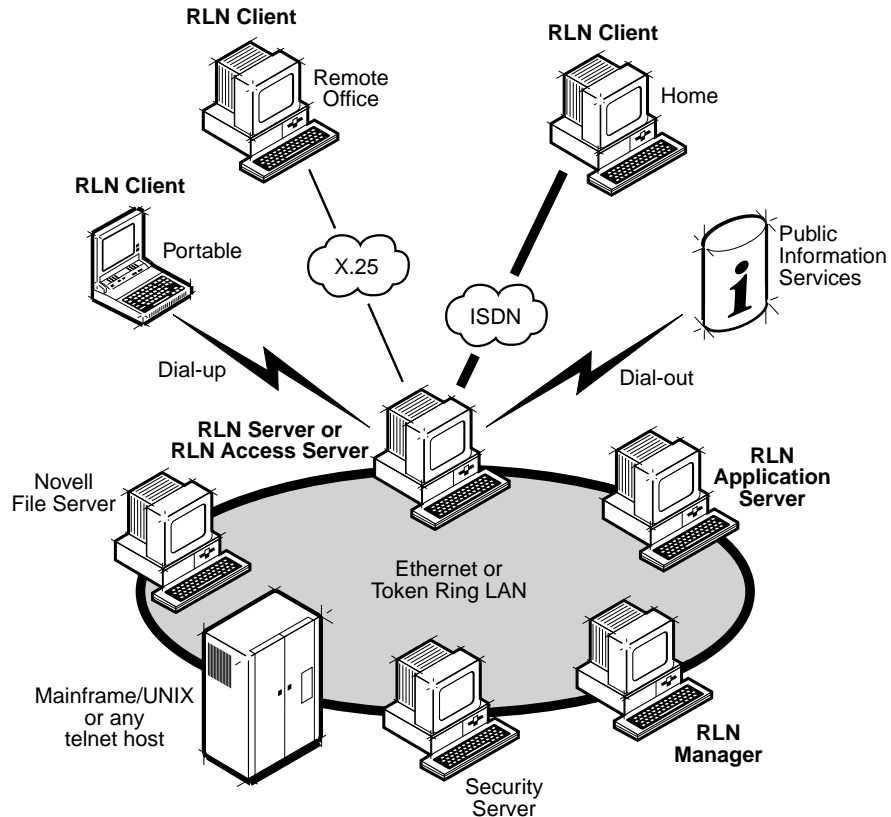
Tolly Group  
Test Summary

### Employ a truly scalable solution.

The combination of Distributed Authentication Services and Domain Management results in a scalable solution for great flexibility in balancing port density on the servers and physical connections to the LAN. The system can grow and change easily as the remote access needs of an organization change.

### Take full advantage of ISDN.

RLN takes advantage of the increased bandwidth of ISDN. The RLN Server supports ISDN BRI (Basic Rate Interface) and PRI (Primary Rate Interface) cards supporting the CAPI 2.0 standard. The RLN Client supports ISDN BRI cards — ISA compatible or even PCMCIA. With the choice of both Basic Rate and Primary Rate service, you can maximize flexibility and minimize cost by scaling the service to match demand.



### Connectivity Guide

*RLN offers simultaneous remote communications for up to 64 dial-in or dial-out users.*

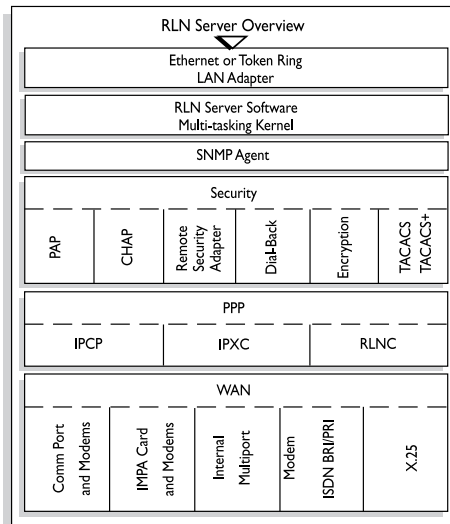
## RLN v 4.2 Features at a Glance

### Open Standards Based

- Support for multiple client platforms
- Support for multiple Wide Area Network connections
- Support for all popular NOSs and protocols
- Support for SNMP management protocol over IP and IPX
- Support for PPP connection protocol
- Support for ODI, NDIS, and Packet Driver MAC APIs
- Support for PAP, CHAP, and EAP authentication
- Support for TACACS and TACACS+ authentication
- Support for NASITM dial-out standard
- Support for CAPI 2.0 compliant ISDN cards

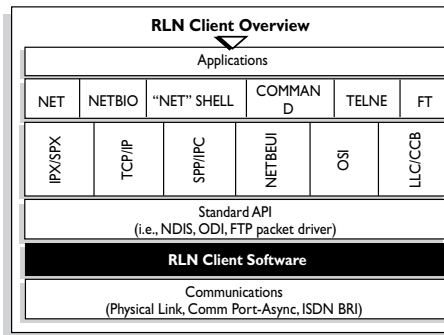
### RLN Server and RLN Access Server

- Provides full LAN extension via remote node connections
- Support for Windows® 95 and other PPP clients
- Routes IP, IPX, and ARA over PPP connections
- Intelligent bridging of all other LAN protocols
- Dynamic IP addressing via BOOTP, RARP, and DHCP
- Provides asynchronous dial-out via NASI interface
- Server software runs on Pentium PC or dedicated processor
- Scalable to 64 ports per server
- Includes Ethernet or token ring card
- Optional internal multi-port modems
- Optional Asynchronous Adapters for external modem connections
- Optional ISDN kits include ISDN PRI or BRI card(s)
- Supports multiple WAN interface types in a single server (asynchronous, Switched 56, X.25, ISDN)



### RLN Client

- RLN Dial-in Client available for Windows 95, Windows 3.1, WFW, DOS, OS/2,® and support for Apple Remote Access
- Transparent interface — looks and feels like in-office access
- Provides seamless NetWare® login
- Provides dial scripting for “single-click” access
- API for transparent integration with applications in Windows 95, Windows, DOS, and OS/2
- Quick install for most environments
- ISDN kits include ISDN BRI cards (ISA or PCMCIA)



### RLN Manager

- SNMP support for use with common network managers
- Windows-based management environment provided
- Managed from local or remote PCs
- Multiple servers are managed as one unit via Distributed Authentication Services (DAS)
- Fault-tolerant hot backups supported by Domain Management
- Auto-discovery of all RLN Servers
- Add and remove users easily
- Monitor and manage all RLN Servers and individual ports
- Dynamically configure all server protocols and services
- Monitor and retrieve security and audit logs

### Dial-out

- Modem pool server for LAN-attached users
- Advanced comm port redirector for DOS and Windows
- Supports dial-out and fax-out over IPX
- RLN ports can be configured for dial-in, dial-out, or both
- Utilizes standard RLN security

### Call Accounting

- Monitor all user sessions and port utilization
- Report and graph all information in Microsoft Access
- Balance capacity to peak demand
- Provide departmental charge-back reports

### WAN Support

- Phone lines and modems up to V.34 (115.2Kbps)
- Switched 56Kbps circuits via CSUs and DSUs
- X.25 managed networks
- ISDN via digital server and client cards.

### Security

- Security definitions at the user, group, or global levels
- User ID and password authentication
- Password aging
- Time, date, and group access restrictions
- Support for PAP, CHAP and EAP authentication
- Proprietary data and password encryption
- Optional ARCryptoLAN module providing DES encryption
- Dialback and roaming-dialback
- Remote Security Adapters — physical security keys
- TACACS and TACACS+ support for security servers such as Security Dynamics ACE/Server® and Enigma Logics SafeWord®

### Performance

- RLN Application Server for optimized performance of high-bandwidth applications
- Header compression, protocol length compression, run-length compression
- Short hold mode (dial on demand) and IPX protocol spoofing
- Intelligent frame filtering

## Technical Specifications

### RLN Server Hardware Minimum Requirements

- Dedicated Pentium 100MHz class PC
- 8MB RAM
- 200MB hard drive

### RLN Access Server Specifications

- Intel® 100Mhz Pentium Processor
- 8MB RAM
- One Ethernet or token ring adapter

### Supported Operating Systems

- RLN Server: MS-DOS,® 5.0 or newer
- RLN Client: MS Windows 95  
MS Windows 3.1  
MS Windows for Workgroups 3.11  
MS-DOS, 3.3 or newer  
OS/2 2.11 (Except Native ISDN)  
MacOS (ARA 1.0 and 2.0)

### Supported Network Topologies

- Ethernet, token ring

### Supported Network Communication Protocols

- IPX/SPX,™ TCP/IP, NCP, NetBEUI, NetBIOS, UDP/IP, ICMP, ARP/RARP, DLC, LLC/CCB, VINES-IP, IPC, SPP, ICP, Named Pipes, DECnet, DEC® LAT, DEC LAST, XNS, OSI, ARA 1.0, and ARA 2.0

### Supported Network Operating Systems

- Novell® NetWare, Microsoft® LAN Manager, Microsoft Windows® for Workgroups, Microsoft Windows NT,® Banyan® VINES,® IBM® LAN Server, DEC PATHWORKS,™ NFS,® AppleTalk,® LANtastic®

### Supported Network Management Protocol

- SNMP MIB II via IPX or IP

### Supported MAC APIs

- ODI, NDIS, and Packet Driver

### Network Interface Card (NIC) – Ethernet

- Cable types: Thin, Thick, and 10BaseT
- Data rate: 10Mbps
- 16 available I/O addresses (X'200' – X'3E0')
- Interrupt levels: 2, 3, 4, 5, 7, 10, 11, or 15

### Network Interface Card (NIC) — token ring

- Cable types: STP or UTP
- Data rate: 4Mbps or 16Mbps
- I/O Addresses: X'0A00', X'0A20', X'0A40', X'0A60', X'1A00', X'1A20', X'1A40', X'1A60'
- Interrupt levels: (software-configurable) 2, 3, 4, 5, 6, 7, 10, or 11
- DMA channels: (software-configurable) 3, 5, 6, or 7

### WAN Scalability

- Configurable with 2, 4, 8, 16, 24, 32, 64 concurrent wide area communications ports (32 ports maximum if server configuration is not all asynchronous interfaces.)

### Asynchronous

- Serial port interface supports external modems and ISDN terminal adapters up to 230.4kbps (V.34)
- Internal multiport modems support connections up to V.34

### X.25

- Server: Becomes DTE on the X.25 network using card(s) that provide NABIOS compatibility
- Client: Supports X.25 modems connected to an external X.25 PAD

### ISDN

- Server: Supports CAPI 2.0 compatible ISDN BRI or PRI adapters
- Client: Supports CAPI 2.0 compatible ISDN BRI adapters
- ISDN kits provide all components needed for a variety of configurations

### Warranty

- RLN Access Server CPU warranty from Dell: 3-year, 1-year on-site
- 4 Port Asynchronous Adapter warranty from Attachmate: 1-year
- 8 Port Asynchronous Adapter warranty from Attachmate: 4-year
- 64 Port Asynchronous Adapter warranty from Attachmate: 4-year
- Internal multi-port modems: 5-year

## RLN 4.2 Solution Component Guide

Description		Async	X.25	ISDN
Server	RLN Server Software	●	●	●
	RLN Server Hardware	●*	●*	●*
	RLN Manager Software	●	●	●
	Network Interface Card (NIC)	●	●	●
	Asynchronous Adapters	●**		
	Internal Modems	●		
	External Modems	○†		
	NABIOS compatible X.25 Card(s)		○	
ISDN BRI or PRI Cards			●	
Client	RLN Client Software	●	●	●
	RLN Client Customization Utilities	●	●	●
	Modems	○	○	
	X.25 Modems		○	
	X.25 PAD		††	
ISDN BRI Cards			●	

● Provided with RLN

\* Provided by RLN Access Server

○ Necessary for connection but not provided

\*\* Only required for greater than 2 ports

† Provided only with IMPA™ cards (greater than 2 ports). (Typical asynchronous solutions include phone line or cellular connections with modems, ISDN asynchronous terminal adapters, or switched 56Kbps circuits.)

†† Provided by your X.25 service provider

#### **4 Port Asynchronous Adapter**

- Asynchronous server interface with external modems or terminal adapter
- Port interface through 4 port fan out cable with DB-25 connector
- Server interface ISA-compatible
- Port Speeds up to 115.2Kbps per port
- Modem Control Signals - TXD, RXD, RTS, CTS, DTR, DSR, CD, and RI

#### **8 Port Asynchronous Adapter**

- Asynchronous server interface with external modems or terminal adapter
- Port interface through 4 port fan out cable with DB-25 connector (RJ45 fan-out cable optional)
- Server interface ISA or PCI compatible. Up to 4 cards per server.
- Port Speeds up to 115.2Kbps per port
- Modem Control Signals - TXD, RXD, RTS, CTS, DTR, DSR, CD, and RI

#### **64 Port Asynchronous Adapter**

- Asynchronous server interface with external modems or terminal adapter
- Port interface through 8 or 16 port external port modules
- Server interface ISA or PCI compatible.
- Port Speeds up to 115.2Kbps per port - up to 64 ports - 230.4Kbps per port - up to 32 ports

#### **Asynchronous Port Modules**

- Port modules provide DB-25 or RJ45 port termination for the 64 Port Asynchronous Host Controller.
- Port modules are available with either 8 or 16 ports per module with either DB-25 or RJ 45 connectors.
- Maximum of 4 modules can be connected together to terminate the 64 Port Asynchronous Host Controller
- Port Speeds up to 115.2Kbps per port - up to 64 ports - 230.4Kbps per port - up to 32 ports
- Modem Control Signals - TXD, RXD, RTS, CTS, DTR, DSR, CD, and RI

#### **Internal Multi-Port Modems**

- ISA card supporting 4 or 8 simultaneous connections.
- WAN Interface RJ-II connectors (4 or 8 per card) processor
- Server interface ISA compatible
- Port Speeds up to v. 34 (115.2Kbps)

#### **ISDN Server and Client cards**

- A wide variety of server and client cards are available to support your ISDN requirements. These include intelligent Basic Rate (BRI) and Primary Rate (PRI) cards for the server, and intelligent and passive Basic Rate (BRI) cards for the client in ISA and PCMCIA configurations. For adherence to international standards and complete compatibility with RLN, these ISDN cards fully comply with the CAPI 2.0 standard.

#### **B-Channel Protocols Supported**

- B-channel layer 2: X.75 (LAPB), LAPD, SDLC (SNA), transparent. B-channel layer 3: X.25 PLP, T.90NL, T.70NL, transparent.

#### **D-Channel Protocols Supported**

- ITR6, DSSI, international

#### **PC Interface**

- All cards are ISA/AT and Micro Channel® compatible (unless otherwise noted)

#### **ISDN Intelligent Server and Client Card (Basic Rate)**

- An active (intelligent) adapter supporting 2B+D channels and access over 2 separate ISDN connections. Multiple cards can be used in a server to support up to 32 ISDN connections.
- NEC V.25 Processor
- 1MB RAM on Board Memory

#### **ISDN Intelligent Quad Server Card (Basic Rate)**

- An active (intelligent) adapter supporting 4x2B+D channels and supporting access over 8 separate ISDN connections. Multiple cards can be used in a server to support up to 32 ISDN connections.
- NEC V.25 Processor
- 1MB RAM on Board Memory

#### **ISDN Intelligent Server Card (Primary Rate)**

- An active (intelligent) adapter with a Primary Rate Interface (PRI) supporting 23 channels in the USA and 30 in Europe.
- 80486 running at 33MHz Processor
- 4MB DRAM on Board Memory

#### **ISDN Intelligent Client Card (Basic Rate)**

- A non-active (unintelligent) adapter supporting 2B+D channels and providing high-speed digital access from a remote workstation.
- DSP with 40MHz clock internal, 16 MIPS® Processor
- 96KB on Board Memory

#### **ISDN Non-Intelligent Client Card (Basic Rate — PCMCIA)**

- A PCMCIA adapter supporting 2B+D channels, providing high-speed digital access from a remote workstation.
- DSP with 40MHz clock internal, 16 MIPS Processor
- 96KB on Board Memory
- PCMCIA Type II PC Interface
- Configuration - Plug-and-play via card and socket services

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### **Call on dedicated customer support.**

RLN's Technical Support Group, rated "excellent" by InfoWorld, is experienced in both technical issues and end user requests. They can assist with LAN and WAN connections and help tune application performance.

### **Protecting your investment.**

All Attachmate software includes SUPPORTWARE!,<sup>®</sup> a complimentary 60-day support service which helps you get up and running and keeps you up-to-date. For information on extended SUPPORTWARE! services, call your Attachmate representative.

### **Unequaled response to crucial issues.**

Attachmate responds as no other organization in the industry with 72-hour critical problem code fixes. We guarantee to resolve crucial issues within three business days. This extraordinary level of support is included with SUPPORTWARE! Elite, Strategic, and Global Plans.

### **About Attachmate.**

Attachmate is a leading provider of high quality universal information access software and services that help organizations safely link enterprise systems, Internet systems and people. As the largest independent Unisys<sup>®</sup> software company in the world, Attachmate has 14 years of experience backing systems and services in more than 30 countries around the world.

For more information about Attachmate's products, contact any Attachmate representative. Or visit Attachmate on the World Wide Web, at <http://www.attachmate.com>



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