Introducing Citrix WinFrame Enterprise 1.7.
The Power Behind Thin-Client/Server Computing.

Citrix
WinFrame
enterprise

The thin-client/server software that delivers a high-performance, low-cost way to deploy and manage business-critical applications throughout the enterprise.

inFrame® Enterprise is the only thin-client/server software that provides access to virtually any Windows® application, across any type of network connection to any type of client. Its robust features give you centralized management, exceptional performance and improved security for all your business-critical applications and data.

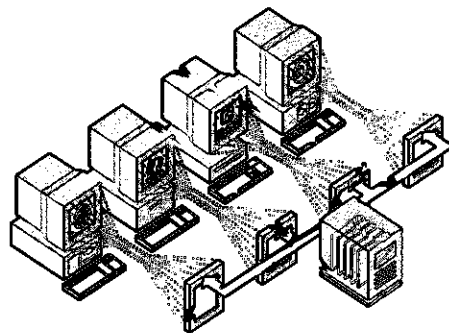WinFrame's powerful capabilities come from two innovative thin-client/server technologies:

Citrix ICA. Our Independent Computing Architecture (ICA®) technology provides the foundation for turning any client device—thin or fat—into the ultimate thin client. That's why ICA has become a *de facto* industry standard for delivering corporate applications across the broadest variety of desktop platforms and networks. ICA licensees and strategic partners include Microsoft, IBM, Sun Microsystems, Wyse Technology, NCD, Boundless Technologies, Tektronix, and a rapidly growing number of other companies.

On the server, ICA has the unique ability to separate application logic from the user interface. On the client, users see and work with the application's interface, but 100% of the application executes on the server. And with ICA, applications consume as little as one-tenth of their normal network bandwidth. This server-based execution and low-bandwidth consumption enable the latest, most powerful 32-bit applications to be accessed with exceptional performance from existing PCs, Windows terminals, network computers and a new generation of business and personal information appliances.
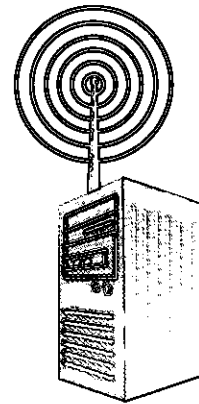
Citrix MultiWin. MultiWin,® another Citrix technology, is an authorized multi-user extension to Windows NT® Server under license from Microsoft. It allows multiple, concurrent users to log on and run applications in separate, protected Windows sessions on the server. As a result, even a single-processor Pentium® Pro server can meet the business-critical application needs of dozens of simultaneous users, with excellent performance.

ICA enables any Windows-based application to be accessed by virtually any type of client. And with MultiWin, dozens of simultaneous users can run concurrently on a single server with excellent performance.

Single-Point Control Keeps You in Command of Your Enterprise.

Traditional corporate application deployment has always been time-consuming, expensive and risky. Not only do you have to "touch" every client, but you have to deal with version-control issues, remote support, multiple system configurations, data replication and much more. With thousands of users, this drives the cost of application ownership to the limit. WinFrame, however, offers a better solution.

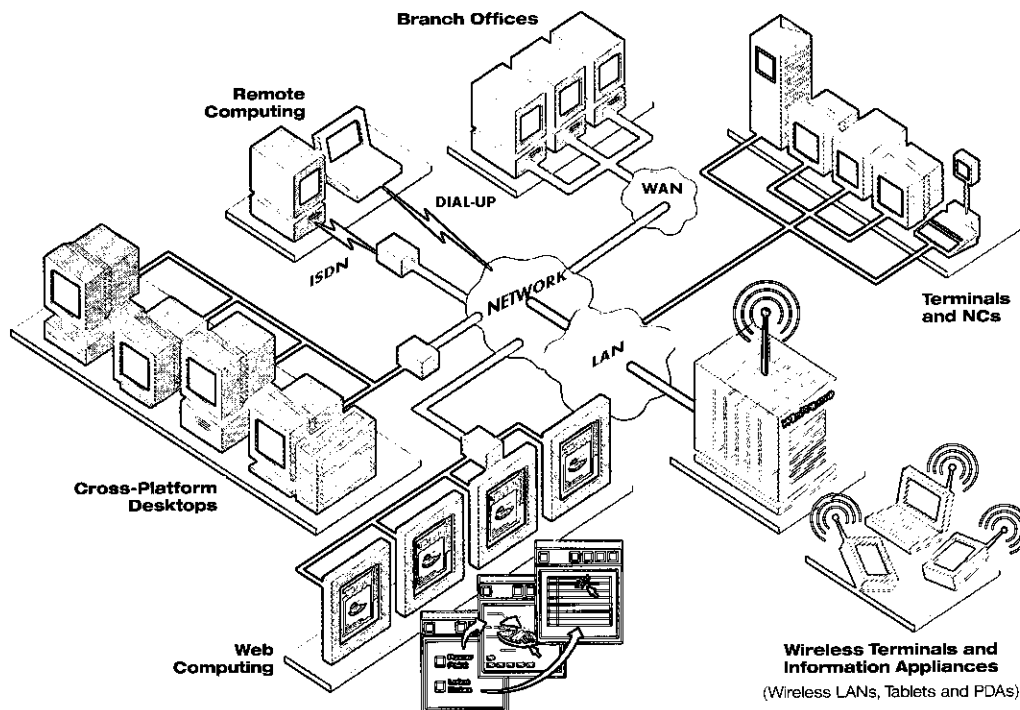**Deploy, manage and support applications in minutes, not months.**

Sounds unbelievable, but it's true. With WinFrame, plugging hundreds or even thousands of users into corporate applications is as simple as a point and click from a single machine. WinFrame enables

From one location, administrators can manage applications and provide support for branch offices around the world.

application installations, updates and additions to be made once—on the server—and then be instantly available to users anywhere. And if that's not enough, WinFrame includes its own extensive set of administrative utilities for user configuration, troubleshooting, real-time monitoring and system reports. All of which help you lower the costs of application ownership—now that's power!

The power to scale from dozens to thousands of users.

WinFrame's support for symmetrical multiprocessor (SMP) servers enables it to easily handle the business-critical applications of any large enterprise. WinFrame allows the latest four-way Pentium Pro servers to support up to 100 concurrent users* And with its optional load-balancing feature, you can group multiple WinFrame servers into a scalable application-server "farm" to serve the needs of thousands of users.

Branch Offices

Remote Computing

DIAL-UP

WAN

ISDN

NETWORK

LAN

Terminals and NCs

Cross-Platform Desktops

Web Computing

Wireless Terminals and Information Appliances
(Wireless LANs, Tablets and PDAs)

WinFrame gives I/S administrators single-point control over all applications deployed throughout the enterprise, regardless of the location, connection or client device being used.
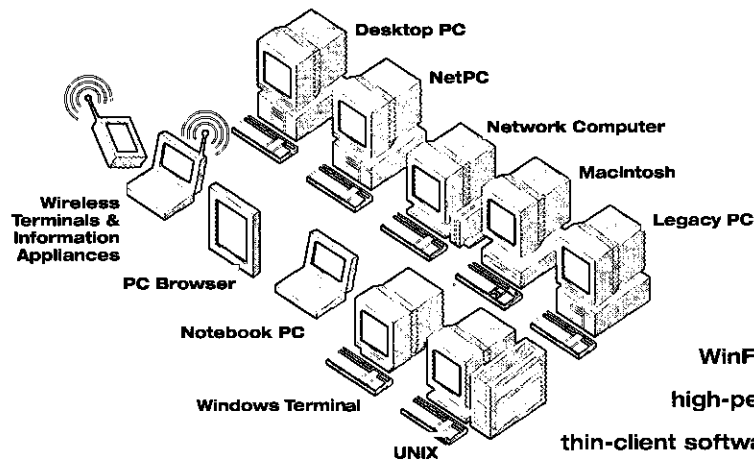
Universal Access to Virtually Any Application from Any Client.

Today's computing environments are a heterogeneous mix of desktop devices, network connectivity and operating systems. Access to vital Windows-based applications in these environments is difficult and often involves costly upgrades, problematic emulation software and complete application rewrites.

Business-critical applications— no rewrites. Run anywhere.

With a WinFrame solution, you can use any client in your enterprise to access vital applications. All without rewriting a single line of code. It also means that you don't have to change client hardware, adjust client system configurations or add special emulation software. Plus, WinFrame can be used over your Intranet or Internet to access corporate applications from anywhere in the world, simply and easily.

WinFrame easily allows you to extend 16- and 32-bit Windows-based applications to everything from the latest Pentium-based PCs,

NetPCs, Windows terminals and network computers to legacy DOS PCs, Macintosh® systems, UNIX® machines and OS/2® desktops. With WinFrame, every corporate application—Windows, client/server, mainframe, and even Java™—can be accessed from any platform immediately, saving you lots of administrative costs, hardware expense and development time.
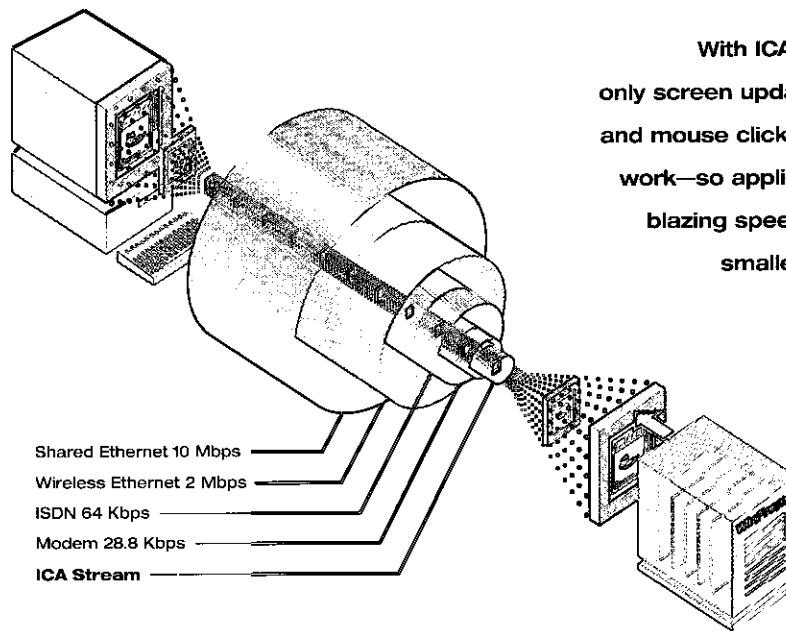
Local/remote application transparency.

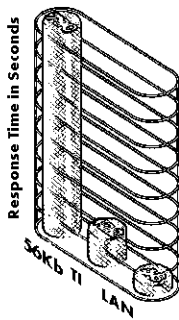Starting a WinFrame-delivered application is as easy as starting a

local application—users just double-click on a familiar desktop icon and they're up and running. Plus, users can enjoy the unique WinFrame benefits of true local/remote transparency, including local printing, local file access, and cut/copy/paste between local and remote applications.

**Corporate applications on your Intranet. No coding. No kidding.**

WinFrame's innovative Application Launching and Embedding (ALE) feature allows you to easily embed corporate applications into any HTML Web page, without writing a single line of application code. This means you can provide instant online access to any existing application— order entry, catalogs, accounting, groupware and client databases— from anywhere with a Web browser.

WinFrame is the high-performance, thin-client software solution that allows access to 32-bit applications from any client.

Desktop PC
NetPC
Network Computer
Macintosh
Legacy PC
Wireless Terminals & Information Appliances
PC Browser
Notebook PC
Windows Terminal
UNIX

Shared Ethernet 10 Mbps
Wireless Ethernet 2 Mbps
ISDN 64 Kbps
Modem 28.8 Kbps
ICA Stream

Bandwidth-Independent Performance for Everyone. Everywhere.

Without ICA, third-party tests have shown inconsistent and unacceptable application response times over both T1 and 56Kb connections.
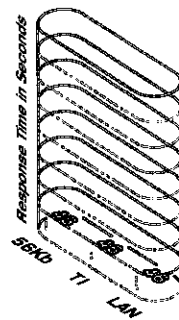
With ICA, application response times reached consistent LAN-like speeds over all connections.

Today's enterprises need to extend bandwidth-hungry applications to users everywhere—regardless of connection type or bandwidth. This includes corporate-headquarters personnel, branch-office workers, telecommuters and mobile professionals. However, most corporate applications are designed for high-bandwidth networks and powerful desktop computers—a combination that puts tremendous strain on congested corporate networks and one that yields extremely poor performance over narrow, remote connections.

Relief for network congestion on corporate LANs.

WinFrame's thin-client/server architecture keeps network-intensive application activity on the corporate backbone. Only screen updates, keystrokes and mouse clicks travel the network, so
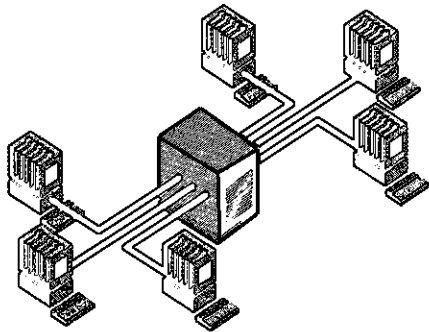
just a fraction of the normal bandwidth is required to run corporate applications. As a result, local users get blazing speed over your existing LAN and you avoid costly and time-consuming forklift upgrades of your network.

### The speed users need over WAN and dial-up connections.

Our unique ICA-based thin-client technology is optimized for network connections as low as 14.4 Kbps. As a result, every remote user can get LAN-like performance, even with 32-bit applications, over analog or ISDN modems, WANs, wireless LANs and even the Internet—any location where bandwidth is scarce or network traffic is heavy. In fact, WinFrame systems can make applications run up to 10 times faster over existing remote-node servers and branch-office routers.

Eyes-Only Security Across Your Entire Enterprise.

WinFrame also improves the security of your applications by keeping vital information on the network, where it can be seen and used without having to be downloaded to the end-user device—we call this "eyes-only" security. And it means users worldwide can access the same centralized information, and you can avoid the security, cost, reliability

and management issues of widely dispersed databases. Plus, it enables you to reduce the amount of data recovery and the rewriting of lost or stolen information that can occur. And to help control access to registered users, WinFrame incorporates Windows NT enterprise security, multi-level passwords and privileges, roving callback, encrypted login and data, and file-level security.

Without WinFrame, your vital files and applications are spread throughout the enterprise, making security a serious problem.
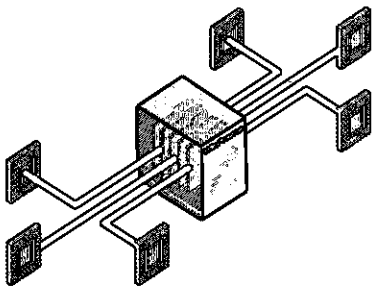
With WinFrame, you get eyes-only security since business-critical data and applications can be seen and used without being downloaded to the end user.

Get a Handle on Corporate Applications. Get WinFrame.

Deploying, managing and supporting business-critical applications throughout your enterprise is an increasingly expensive and complex task. That's why many growing enterprises including Bell Mobility, AT&T Wireless, Chevron, GE Capital Services, Sears and thousands more are choosing the only cost-effective solution: WinFrame. It's the only thin-client/server approach that gives you single-point control, universal access, bandwidth-independent performance and eyes-only security for every business-critical application—today. So give us a call right now at 1-800-437-7503 to speak to a sales representative. Or access our website at http://www.citrix.com to download a free demo and test drive of WinFrame. We guarantee it'll take your computing even further.

WinFrame is the award-winning product being selected by thousands of companies wanting the high-performance, cost-effective benefits of thin-client/server computing.

System Requirements

	Server Software	Windows Clients	DOS Clients
Pentium or above	O		
386 or higher		O	
286 or higher			O
16 MB RAM for system	O		
4/8 MB RAM per concurrent user	O		
4 MB RAM		O	
640K RAM (2 MB recommended)			O
Windows 3.x, Windows 95 or Windows NT		O	
DOS v3.3 or higher			O
VGA/SVGA	O	O	O
SCSI CD Drive	O		
3.5" Diskette	O	O	O
Mouse or Pointing Device	O	O	O
Serial Port or LAN Adapter	O	O	O

WinFrame Server Architecture

WinFrame employs the industry's most advanced thin-client/server architecture.

Based on Windows NT Server

Adds MultiWin multi-user extensions

Includes Citrix ICA remote-presentation protocol

Runs off-the-shelf Windows 16- and 32-bit applications

Supports MS-DOS* and OS/2 character-based applications

High Performance

WinFrame gives LAN, WAN and dial-up users the highest-performance solution.

ICA protocol optimized for low-bandwidth connections

Network traffic minimized by sending only screen updates, keystrokes and mouse clicks

Persistent object caching reduces re-transmissions

Specialized "bad app" detection prevents CPU lockup

Memory management tuned for concurrent Windows users

Optimized data compression reduces bandwidth requirements

Scalability

WinFrame's robust scalability makes it suitable as an enterprise-wide platform.

Single processor scales to 15 or more concurrent users (depending upon application)

SMP support for two, four or more processors scales to hundreds of users

Server groups with optional dynamic load balancing scale to thousands of users

Multiserver administration tools manage multiple server groups

Multiport serial board support facilitates large dial-in networks

Management Tools

WinFrame provides essential management tools for enterprise computing, supporting:

Session shadowing

System performance monitoring

Event logging

Port configuration and administration

Simple Network Mgmt. Protocol (SNMP)

Systems Management Server (SMS)

Console, dial-up or LAN administration

Security

WinFrame's robust security features rival any other solution.

Internal user list (name/password)

Data encryption

Required or roaming callback

Logon attempt limits

Connection duration limits

Inactivity timeout

Time-of-day access restrictions

Master application execution list

User groups

Server/drive access restrictions by drive, directory, file, user, day and time

Integrates with NetWare® Bindery, NDS and Windows NT Domain services

Supports third-party authentication/encryption solutions

WinFrame Client Support

WinFrame provides client-side support for a broad base of client devices including:

Windows NT, 95, 3.x, WfW 3.x

MS-DOS

Java

Netscape Navigator™ (Plug-in)

Microsoft Internet Explorer (ActiveX™ control)

Windows Terminals, e.g., Wyse WinTerm, Boundless TC

Macintosh (third-party product)

UNIX workstations (third-party product)

X-terminals (third-party product)

Client/Server Integration

WinFrame allows applications running locally and remotely to be completely integrated.

One-click dial-in support makes it easy to connect to server

Client drive mapping allows local drive to be accessed from server application

Cut and paste between local and remote application sessions

Print to local or remotely attached printers

Automatic reconnection/session resume

Background file transfer

Connectivity Options

WinFrame supports a full range of dial-up, LAN and WAN connectivity options including:

Direct Asynch. (up to 230 Kbps)

High-speed analog modems (more than 400 makes and models)

ISDN, Frame Relay, X.25, T1, T3, E1

10/100 Ethernet, Token Ring, ATM, FDDI

Network Interoperability

WinFrame integrates with most popular networks and network protocols including:

Windows NT domains and workgroups

Novell® NetWare 3.x and 4.x LANs

IBM® LAN Server

TCP/IP, IPX, SPX and NetBEUI protocols

Hardware and software-based remote-node servers

CITRIX®