

Thin Client

Thin Client Terminal for Windows NT
Software User's Guide

Federal Communications Commission (FCC) Statement

This Equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning:

Use only shielded cables to connect I/O devices to this equipment.

You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

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Document Conventions

The following are the typographic conventions used in this guide.

Type Face	Meaning	Example
AaBbCc123	Indicates main menu description	Pull down the Entry menu.
AaBbCc123	Indicates the sub menus & titles of dialog boxes	Select Properties in the Entry menu
<i>AaBbCc123</i>	Indicates the boxes, radio buttons & fields of the dialog boxes	Select <i>Settings</i> field.
"AaBbCc123"	Indicates the text to be entered by user & the type contrasted with on-screen computer	Enter text "Direct Connection".
<AaBbCc123>	Indicates the entries that are listed on the screen	Set the field as <Standard COM port>
[AaBbCc123]	Indicates keystrokes or mouse operations	Press [Enter] to continue or click [OK] button

This guide uses the term ICA server or server while describing a feature, procedure common to the servers that are equipped with Citrix™ MetaFrame™ Enterprise, Citrix™ MetaFrame™ Terminals, Citrix™ WinFrame™ Enterprise, Citrix™ WinFrame™ Terminals, Insignia™ Solutions NTrigue™, NCD WinCenter Pro, Tektronix™ WinDD™, Windows NT 4.0 Terminal Server with MetaFrame or any other server supporting the ICA 3™ protocol.

Chapter-1

QUICK TOUR

INTRODUCTION

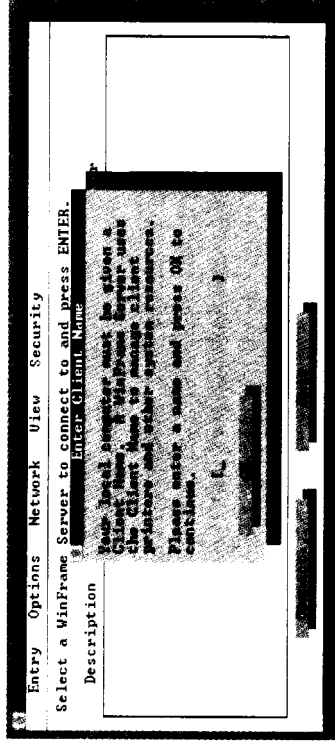
Welcome to the Thin Client.

The smart and robust solution for the transaction market. The Thin Client based solutions offer :

- user friendly Windows desktop
- negligible maintenance
- low total cost of ownership
- many other attractive features

INITIAL START-UP

On powering up the Thin Client for the first time, the Enter Client Name dialog box is displayed.



Each Thin Client must have a unique client name. The ICA server identifies the Thin Client on the network by this name. Enter a <name> and click the [OK] button or press the [Enter] key.

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In order to proceed and connect to a server you will have to create a new server entry. The settings described below are guidance for a Quick Start. Once a working connection is established, the settings may be altered to suit a particular environment. The Thin Client can create and support following type of connections.

Connection type	Details
TCP/IP	For connecting the Thin Client to a server through LAN.
Direct	For connecting the Thin Client to a server through RS232C.
Dial In Remote Server	For connecting the Thin Client to a server through a Dial-up modem.
User Specific	For connecting the Thin Client to a specific user account on a server.
Application Specific	For connecting the Thin Client to a specific application on a server.

TCP/IP Connection

- Pull down **Entry** menu. Select **New**. The **Entry Properties** dialog appears.
 - Enter text "LAN Connection" in the *Description* field.
 - Set the *Transport* field as <TCPIP-FTP>.
 - Click on **Enumerate** button. A prompt <Enumerating Servers> appears for few moments. The ICA servers & Published applications in the network are listed. Select the required *Server* or *Published Application* name from the list using the [arrow] button.
- NOTE :** Ensure proper connection to the server.
- Click [OK]. **Main Screen** appears.

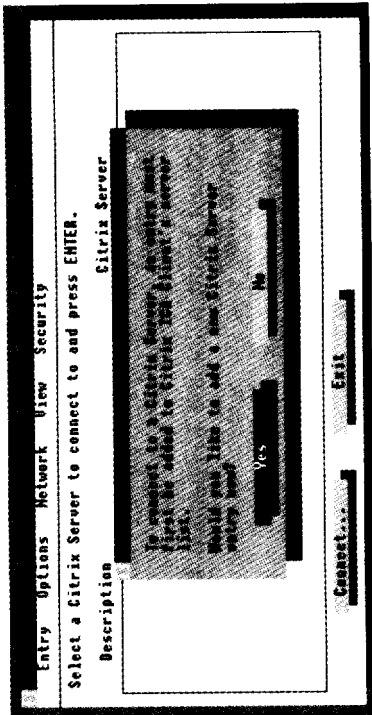
You would find the text "LAN Connection" below the title *Description* and the server IP address (or name) below *Server*.

Direct Connection

- Pull down **Entry** menu. Select **New**. The **Entry Properties** dialog appears.

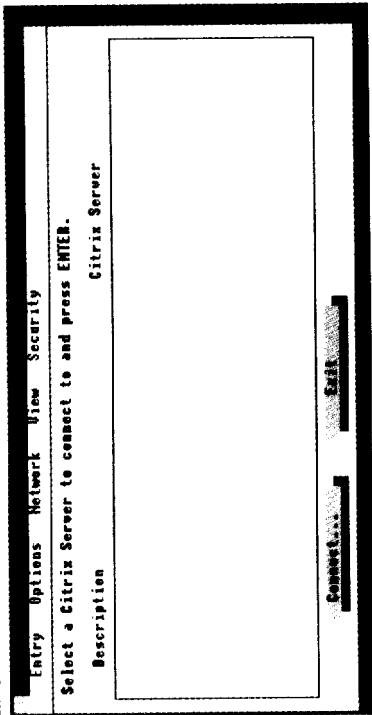
The client name can be changed later using **Terminal** dialog box available in the **Options** menu.

The Thin Client prompts for a Server Entry as shown below:



If you click on [Yes] button, the client goes to **Entry properties** dialog described in section Thin Client Setup. If you are not familiar with the Thin Client setup, select [No].

The client will now display the **Main Screen** as shown in the figure below and wait for user selection.



Main Screen

The **Main Screen** consists of defined server entries and several pull down menus. The Thin Client connects to the server through one of the defined server entries.

- Enter text "Direct Connection" at the *Description* field.
- Set *Transport* field as <Standard COM Port>.
- Select *Settings* option. **Device Settings** dialog appears. Select appropriate baud rate (same as host).
- Click [arrow] button associated with the *Name of Modem* field.
- Select *Direct Connect*. Click the [OK] button.
- **Entry Properties** dialog appears.
- Now you find the text "Direct Connection" in the *Device* field. Click the [OK] button. **Main Screen** appears.

You would find the text "Direct Connection" below the title *Description* and the text (*Direct connect*) below *Server*.

Dial-In Remote Server Connection

- Pull down **Entry** menu. Select **New**. The **Entry Properties** dialog appears.
- Enter text "Dial In Remote Connection" in the *Description* field.
- Set *Transport* field as <Standard COM Port>.
- Select *Settings* option. **Device Settings** dialog appears.
- Select desired baud rate, COM1/COM2 port.
- Click [arrow] button associated with the *Name of Modem* field.
- Select your <Modem> description (if the modem is not connected at present select a modem description). Click the [OK] button. **Entry Properties** dialog appears.
- Now you would see the modem description you selected at the *Device* field. Enter your remote server's modem connection number in the *Phone* field. Click the [OK] button. **Main Screen** appears.

You would find the text "Dial In Remote Connection" below the title *Description*, and the modem description below *Server*.

User Specific Connection

- Highlight any functional connection.
- Pull down **Entry** menu. Select **Copy**. *Copy Server* dialog appears. Enter "Guest-User Specific Connection" in the *Copy to* field. Here guest is user's full name for illustration. Click [OK].
- Now you will find a server entry with the user's name in the server entry table. Highlight the entry.
- Pull down **Entry** menu. Select **Properties**. You would find the text Guest-User Specific Connection at *Description* field. Fill in the *Username* (guest), *Domain* and *Password* fields appropriately. Click the [OK] button. **Main Screen** appears.

You would find the "Guest-User Specific Connection" below the title *Description*, and the server address (or name) below *Server*.

Application Specific Connection

- Highlight the <User Specific Connection>.
- Pull down **Entry** menu. Select **Copy**. *Copy Server* dialog appears. Enter "Notepad-Application Specific Connection" in the *Copy to* field. Here notepad is an application program for illustration. Click [OK].
- Now you will find a server entry with Application program's name in the server entry table. Highlight the entry.
- Pull down **Entry** menu. Select **Properties**. You would find the text Notepad-Application Specific Connection in *Description* field. Fill in the *Command Line* (notepad.exe) and *Working Directory* (path) fields appropriately. Click [OK]. **Main Screen** appears.

You would find the "Notepad-Application Specific Connection" below the title *Description*, and the server address (or name) below *Server*.

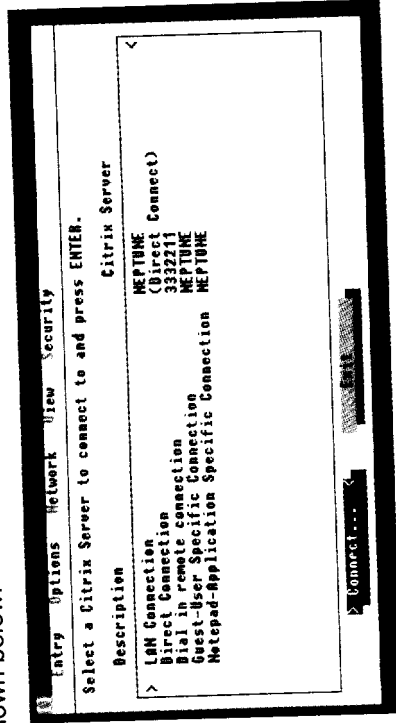
Using Pull Down Menus

Most of the setup and operational features are accessed through pull down menus. You can use standard Windows NT keystrokes and mouse operations to select a menu command, option button or a field in a dialog box.

Pull Down Menu	Application
Entry	• Create, Copy, Delete, Edit server entry • Connect to a server (through a server entry) • Exit setup and go to the Thin Client login prompt (Functional only when security enabled)
Options	• Set Terminal preferences • Create a list of pre-configured serial device entries through Device Setup • Search published applications residing in WAN through Server Location • Select the keyboard layout and type through Keyboard
Network	• Edit TCP / IP configuration • Create / Edit local host table
View	• Display the version and copyright information of the Thin Client.
Security	• Customize, manage user accounts and provide privilege to particular users.

When you log-out of the ICA server, you are returned to the **Main Screen** if the *Security* feature is disabled, else you would get the Thin Client login prompt.

After all the connection types are created, the **Main Screen** appears as shown below:



Main screen with different connection types

Double click on your *Server* entry, or place the cursor bar on the *Server* entry and press [ENTER] to connect to the server.

MENU DESCRIPTION

Main Screen

The **Main Screen** consists of a list of server entries, and several pull down menus as shown in the above figure.

You would establish connection to the server through any one of the server entries. To connect to a defined ICA server;

- Double click on the desired server entry, or place the cursor bar on the desired server entry and press [ENTER]. If the server entry contains a valid *username* and *password*, the Thin Client will log in using that *username*. If no *username* is present in the server entry, you will get the standard log-in prompt. Log-on to the server as usual by entering a valid *username* and *password*.

Chapter-2

THIN CLIENT SETUP

ENTRY MENU

The **Entry Menu** is used to create, copy, modify, delete a server entry or connect to any of the server entries or to exit from the Thin Client **Main Screen**. The options of **Entry Menu** are described below.

New - To create a new server entry

- Select the **New** option from the **Entry** menu. The **Entry Properties** dialog box will be displayed. Fill in the fields as described in the section **Entry Properties** in the following page.

Copy - To copy a selected server entry

- Highlight the server entry you wish to copy. Select **Copy** from the **Entry** menu. The **Copy Server Entry** dialog box is displayed.
- Fill in the name to be used for the new server entry and click [OK].

Properties - To modify a server entry

- Highlight the server you want to edit. Select **Properties** from **Entry** menu. The **Entry Properties** dialog is displayed. Make the desired changes to server entry and select [OK] to save the changes. Refer to section **Entry Properties** in the following page for detailed information.

Delete - To delete a selected server entry

- Highlight the server entry you want to delete. Select **Delete** from the **Entry** menu. You will get a prompt to confirm the deletion. Click [OK].

Connect - To log into a server

- Highlight the corresponding server entry. Click the button marked **Connect** or press [Enter]. After a short interval, you

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will be logged into the server as per the properties in the server entry.

Exit – To exit from the setup program.

You will get the Thin Client login prompt. This command is functional only when *Security* option is enabled.

Entry Properties

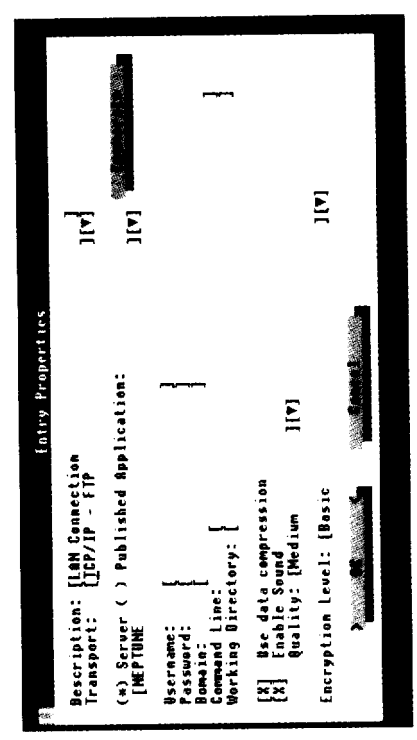
In order to connect onto a server, first you have to create a server entry in the **Main Screen** of the Thin Client. Each server entry has a series of properties including method of connection, user name and server IP address. These properties are entered via the **Entry Properties** dialog.

You can access this dialog through **Entry** menu and select **New** to create a server entry or through **Entry Properties** to modify an existing entry.

There are two data entry formats used within the **Entry Properties** dialog. The type of format is dependent on the transport type selected. The two transport types supported are **TCP/IP** & **Standard COM Port**.

TCP/IP-FTP

Select this if you are connecting to LAN through 10/100BaseT. This uses the TCP/IP stack for remote control connections. Set the *Transport* type as <TCP/IP>, the **Entry Properties** dialog appears as shown below.



Entry Properties Dialog Box for TCP/IP Transport

The **TCP/IP** dialog box contains the following fields.

- **Description.** A descriptive name for the server entry that will appear in the server list on the **Main Screen**.
- **Emulation.** This is the emulation type which supports text and the graphic applications. It is set to ICA 3.0 and cannot be changed.
- **Encryption.** The server must be configured to allow the selected encryption level. It is set Basic and cannot be changed.
- **Enumerate.** This option automatically searches for the servers and published applications in the network and lists the available descriptive name in the server entry.
- **Server.** The available descriptive names of servers are listed here after selecting Enumerate button.
- **Published Application.** The available descriptive names of Published Applications are listed here after selecting Enumerate button.
NOTE: If no entry is listed, select the *Server* radio button & type in the server <IP address> or <name>.
If you choose to enter the name, this should be present in the Thin Client's local host table or it should be specified in the DNS entries of your DNS server.
- **User Name, Domain, Password.** These fields can be used to automatically logon to the server once a connection is established. If these fields are not specified, the login screen appears when the connection to the server is established.
- **Command Line, Working Directory.** These fields can be used to automatically start the specified program, once the logon to the server is successful. Specify the command line that is required to invoke the program (with any required options and parameters) together with the working directory required to execute the program once the connection to server is established.
If no program information is specified, the program specified in the Windows NT user profile starts. If no program has been specified in the user profile, the **Program Manager** starts.
- **Use Data Compression.** If you enable this option, the data is transmitted in compressed format. Data Compression reduces the amount of data sent but consumes small amount of processor time to perform compression and decompression.

- **Enable Sound.** The Thin Client supports 16 Bit stereo output. You can enable the sound, by selecting the radio button on this field. The quality of the stereo sound output can be set to either *Medium* or *High* level.

Standard COM Port

Select this if you are connecting to a server through a COM port either directly or through a modem. Set the *Transport* as <Standard COM Port>, the **Entry Properties** dialog appears as shown below.

The screenshot shows the 'Entry Properties' dialog box with the 'Transport' set to 'Standard COM Port'. The 'Device' is '(Direct Connect)'. The 'Phone Number' is empty. The 'Username' and 'Password' fields are empty. The 'Domain' is empty. The 'Command Line' is empty. The 'Working Directory' is empty. The 'Use data compression' checkbox is checked. The 'Enable Sound' checkbox is checked. The 'Encryption Level' is set to 'Basic'. The 'OK' button is highlighted.

Entry Properties Dialog Box for the Standard COM Port Transport

The dialog box contains the following components.

- **Device.** Set this field to
 1. <Direct Connect>, if you are directly connecting to a server (through RS232C).
 2. your <modem type>, if you are connecting to server by Dial In remote control. Select *New Device* to add a modem from the list of preset modem entries. The **Device Settings** dialog is now displayed. Refer to **Device Settings Dialog** for further information.
- **Settings.** Click this button to edit currently chosen device entry. **Device Settings** dialog is displayed.
- **Phone Number.** Enter the telephone number of your server's modem.

Device Settings

Depending on the serial transport type you specify, you may need to supply additional information about the device and the Modem attached to the device, if any. The **Device Settings** dialog box is used to setup port and modem information for the dial-in server entries.

The screenshot shows the 'Device Settings' dialog box for 'Direct Connect'. The 'Name' is '(Direct Connect)'. The 'Baud Rate' is '38400'. The 'COM Port' is 'COM1'. The 'Flow Control' is set to 'Hardware (RTS/CTS)'. The 'Modem' is '(Direct Connect)'. The 'Options' are: 'Error Correction' (unchecked), 'Speaker On' (unchecked), 'Compression' (unchecked), and 'Pulse Dial' (unchecked). The 'OK' button is highlighted.

Device Settings for Direct Connection

The screenshot shows the 'Device Settings' dialog box for 'Multitech MultiModem'. The 'Name' is 'Multitech MultiModem'. The 'Baud Rate' is '38400'. The 'COM Port' is 'COM1'. The 'Flow Control' is set to 'Hardware (RTS/CTS)'. The 'Modem' is 'Multitech MultiModem'. The 'Options' are: 'Error Correction' (checked), 'Speaker On' (checked), 'Compression' (checked), and 'Pulse Dial' (checked). The 'OK' button is highlighted.

Device Settings Dialog for Modem Connection

The **Device Settings** dialog box contains following fields:

- **Name**

This is the name assigned to the device. This name is assigned at the factory and cannot be changed. The name details the modem type selected for use (Direct Connect is selected by default if no modem is specified).

- **Baud Rate**

You can choose a baud rate from the selection list (or type in a baud rate). The baud rate of the serial port can be selected up to 115 KB. For best results, use the highest baud rate compatible with your server and modem.

- **COM Port**

This allows you to select which of the serial ports the device will use. The Thin Client has two serial ports, COM1 and COM2.

- **User Modem Setup**

This option allows you to configure the modem by entering its initializing strings and dial commands.

- **Flow control**

You can choose the flow control method to be used. The options available are:

Hardware (RTS / CTS). Uses the hardware modem control signals specified in the Advanced Settings dialog box for flow control.

Software (XON / XOFF). Uses Software (XON/XOFF) flow control.

None. No flow control. This setting is not recommended at high baud rates as it may cause overrun errors.

- **Modem Window**

This window contains the modem configuration fields. These are :

Name. The modem name. A selection of <NONE> indicates that no modem is currently selected. Use the [PgDn], [PgUp], [UP] or [DOWN] keys to scroll through the list of supported modems. Press the [ENTER] key to select one of the highlighted modems, or [ESC] to exit the selection list. If a modem type is specified, you must specify a telephone number. The default setting is <Direct Connect>.

Detect Button. Click on the *Detect* button to auto-detect your modem type. This may take several minutes.

Options. These options let you enable or disable the modem speaker, error correction, data compression, and hardware flow control features of the modem, if such features are present.

Advanced. This button displays the **Advanced Device Settings** dialog box, which allows additional parameters that can be configured for the device.

Advanced Device Settings

The screenshot shows the 'Multitech MultiModem' dialog box. It contains the following fields and options:

- Data Bits:** 8
- Parity:** None
- Stop Bits:** 1
- Base I/O Port Address:** 117
- Interrupt Request Line (IRQ):** 117
- Default IIRQ:** 117
- DTR State:** Always On
- RTS State:** Always On
- Hardware Flow Control:** Turn off [RTS] when receive buffer is full. Transmit data when [CTS] is on.

Buttons: OK, Cancel

Advanced Device Settings Dialog

The **Advanced Device Settings** dialog box is used to configure additional parameters for a serial device used with direct dial-in. Access this dialog box by selecting the *Advanced* option at the bottom of the **Device Settings** dialog.

The **Advanced Device Settings** dialog box contains following fields

- **Data Bits.** This is the number of data bits per transmitted character. Use *8 data bits* whenever it is possible.
- **Parity.** This is the parity value transmitted with each character and is used for error detection. Since the ICA protocol contains its own error detection and error correction, use *None* whenever possible.
- **Stop Bits.** This is the number of stop bits transmitted with each character. Use *1 stop bit* whenever possible.
- **Base I/O Port Address.** This option sets the base I/O address for the serial port. If you are using a standard COM port (COM1 or COM2), select *Default* to use the default value for that port. You may also enter the I/O address directly. Enter a decimal number directly (e.g. "1016"); a hexadecimal I/O address must be preceded with 0x; for e.g. "0x3F8". It is recommended to set this option to *Default* value.

- **Interrupt Request Line (IRQ).** This is used to set the interrupt level for the port. If you are using a standard COM port (COM1 or COM2), select *Default* to use the default value for that port. You may also enter the value directly. It is recommended to set this option to *Default* value.

- **DTR state.** This defines the state of the DTR modem control signal. Select *Always On* to turn the DTR signal on; select *Always Off* to turn off the DTR signal. The DTR value required depends on your hardware configuration. The default value of DTR state is *Always On*. This value is ignored if DTR hardware flow control is used.

- **RTS state.** This defines the state of the RTS modem control signal. Select *Always On* to turn on the RTS signal; select *Always Off* to turn off the RTS signal. The RTS value required depends on your hardware configuration.

The default value of RTS state is *Always Off*. This value is ignored if RTS hardware flow control is used.

- **Hardware flow control.** These fields define the type of hardware flow control used when hardware flow control is selected within the **Device Setup** dialog. The options are;

- **Turn off RTS (or DTR) when receive buffer is full.** Specifies the signal to turn off when the receive buffer is full. The default value is *RTS*. If *RTS* is selected, the *RTS State* group box is ignored. If *DTR* is selected, the *DTR State* group box is ignored.
- **Transmit data when CTS (or DSR) is on.** Specifies the signal used by the modem to control when the Thin Client is allowed to transmit data. The default value is *CTS*.

OPTIONS MENU

The **Options** menu is used to:

- configure the Thin Client Terminal for display, set refresh rate, map COM ports, printer port etc.
- create or configure serial device entries
- configure Server Location
- set the keyboard type, layout or modify the client name

Terminal

To define or alter the settings of the Thin Client terminal, select **Terminal** from the **Options** menu. The **Terminal** dialog box appears as shown below.

The screenshot shows the 'Terminal' dialog box with the following settings:

- Connection Video Resolution:** 640 x 480 (VGA) (selected), 800 x 600 (SXGA), 1024 x 768.
- Client Information:** Name: [NEPTUNE], Serial#: [1].
- Color:** 16 (selected), 256, 32768.
- Keyboard Layout:** [User Profile] (selected).
- Refresh Rate:** 60 (selected), 72, 75.

Buttons: OK, Cancel.

Desired Video Resolution

This option specifies the video resolution of the client and the maximum colors that can be selected with your existing video resolution when connected to the server. You may select *VGA (640x480)*, *SVGA (800x600)* or *XGA (1024x768)* screen resolutions with 16 or 256 colors.

This option is effective only when connected to the server and does not apply to the Thin Client setup.

Note: The screen resolution, which you select, must be compatible with the display monitor you are using with your Thin Client. If you should accidentally select an incompatible screen resolution your display will not be rendered correctly on-screen. It may also blank out when connection to the server is established. Do not panic if this happens. You can either reset the power to the Thin Client or press the [escape] key to return to the **Main Screen**.

Refresh Rate

In order to accommodate as many monitors as possible, the Thin Client is equipped with the facility to change the refresh rate of the video output.

Choose a refresh rate that is compatible with your particular monitor. Try starting with a rate of 72Hz and work upwards. LCD panels all operate at a rate of 60Hz and generally will not accept anything higher. Should the display function incorrectly simply press the [ESC] key and change the rate to try again.

The rate by default is set to 60Hz. For a flicker free display the rate should be changed if your monitor is capable of handling it.

Note : This option is effective only when connected to the server and does not apply to the Thin Client setup.

Client Options

This group of settings allows you to selectively load the Thin Client services.

- Allow COM port mapping

This option allows devices connected to the Thin Client COM ports to be shared over the network for applications like serial printing, barcode reading etc.

- Allow printer mapping

This option allows users to access the printer connected to the Thin Client printer port to be shared over the network. When the server is configured to allow client printer mapping, applications running remotely on the ICA server can print to local printers.

- Queue mouse movements and keystrokes

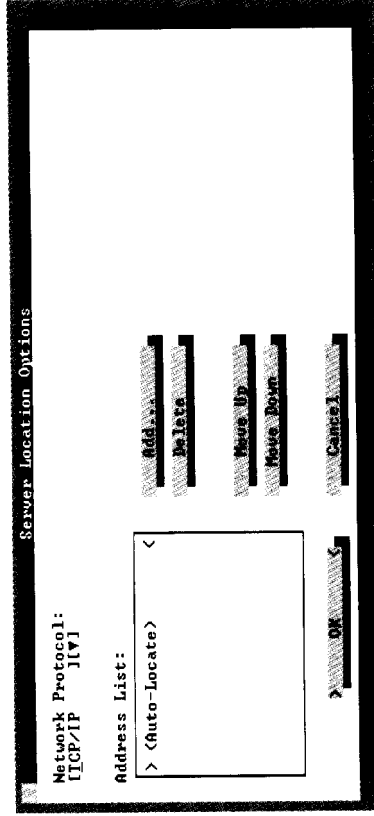
Queueing causes the client to send mouse and keyboard updates less frequently to the ICA server. Enable this option to reduce the number of network packets sent from the client to the server. This may improve performance if you are using a low-speed remote node and remote control connection. When you disable this option, the session is more responsive to keyboard and mouse movements.

Device Setup

Access the **Device Setup** option from the **Options** menu. This displays the **Device Settings** dialog box, and allows you to view or modify the device settings for the selected device entry. The **Device Settings** is already described in detail in the section **Entry Properties** for Standard COM Port transport type for more details.

Server Location

This option provides a method for a user to view a list of all ICA servers on the network and a list of published applications.



The **Server Location** process is as follows:

- If *Auto-Locate* is specified in the *Address List* box for the network type, the client broadcasts a <Get Nearest Server> packet. The address of the first server to respond is then used in the next step.
- The client sends a request for the server and published applications lists to the specified server address.

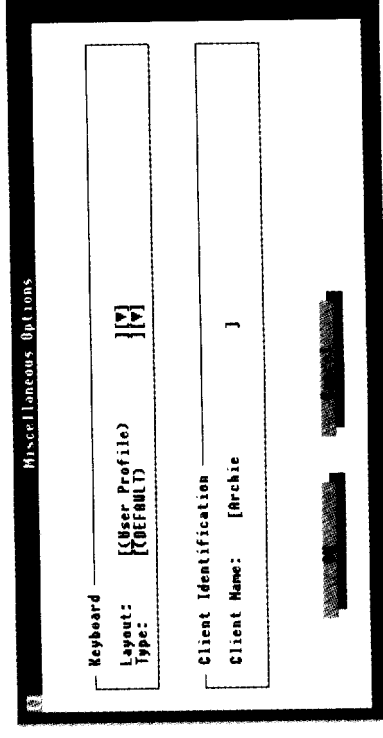
The **Server Location Options** are :

- **Add.** You can add the IP address of the server (dotted decimal notation) in which published application resides.
- **Delete.** You can delete the existing IP address of the server.
- **Move Up/Move Down.** The browse order can be interchanged by *Move Up / Move Down* buttons.

When you click on the *Enumerate* button in the **Entry Property** dialog, this *Address List* is used for browsing the servers for published applications.

Keyboard

This dialog box is used to set the keyboard layout, keyboard type or to modify the client name.



The **Keyboard** dialog box contains following fields.

Keyboard Layout

This field allows you to specify the local language of your keyboard. The client and server use the keyboard layout information specified here for both local and on-line use. If you select a local keyboard layout, please ensure that you restart the client by selecting *EXIT* from the **Main Screen**.

If you set this field to *User Profile* the keyboard layout used on connection will be that specified in your *User Profile*. To override the user profile setting and use a local layout, select the layout that matches your keyboard.

Keyboard Type

This field allows you to specify the type of keyboard used by the client. Select any one of the keyboard type using [down arrow]. The server uses the *Keyboard Type* information to configure the session for your keyboard type. Select <Default> for most of the English and European keyboards. When used with a Japanese keyboard, <Default> automatically detects the keyboard type.

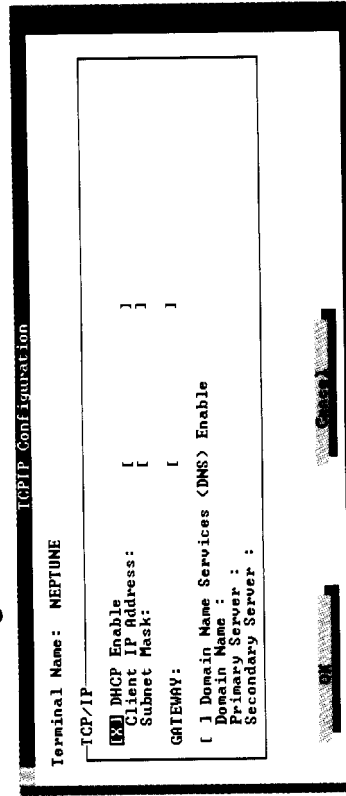
Client Identification

- **Client Name.** This allows you to modify the client name of your Thin Client. The server uses the client name to uniquely identify resources (such as mapped printers and disk drives) associated with a given client. The client name should be unique in your network domain.

NETWORK MENU

The **Network** menu is used for TCP/IP configuration or Host configuration.

TCP/IP Configuration



The **TCP/IP Configuration** dialog box contains following fields.

Terminal Name. This field displays the name you earlier assigned to your Thin Client. The name can be modified, if required through the **Terminal** dialog box.

TCP/IP. This group is used to configure the DHCP/Fixed IP and DNS features.

- **DHCP Enable.** Check this box if you have a DHCP server configured on the network. The Thin Client depends on the DHCP server to resolve the terminal's IP address and subnet mask.

- **Client IP Address.** This field is used to enter the IP Address that you wish to assign to the Thin Client. Please ensure that you enter an IP address that is unique on your network. Failure to do this will not only result in errors being generated on the server but you may also see warning bars on the client. When the DHCP is enabled, this field is disabled.
- **Subnet Mask.** This field is used to enter the Subnet mask. When the DHCP is enabled, this field is disabled.
- **Gateway.** This field is used to enter the network's gateway address. You will be required to enter information into this field if you wish to communicate with a server on a different network.

Domain Name Services (DNS)

Your network may be configured in such a way that the entry of server IP addresses is not required, but rather the simpler entry of host names. If this is the case, there is almost certainly a Domain Name Server running within your network that resolves host names into the relevant IP addresses.

You can enter details of your network's Domain Name, and Primary and Secondary Server after enabling the DNS feature.

- **Domain Name.** You may enter the domain name of your network in this field, for example, <citrix.com>. This field is disabled when DNS is disabled.
- **Primary Server.** This field should contain the IP address of the primary domain name server (for example <89.0.0.146>) within your network. This field is disabled when DNS is disabled.
- **Secondary Server.** The secondary server address is optional. Enter IP address of the Secondary (or Backup) domain name server. This field is disabled when DNS is disabled.

SECURITY MENU

You can customize user access to the Thin Client setup and server login by enabling and editing the **Security** menu in the Thin Client setup.

The Thin Client **Security** menu has two kinds of accounts: *Administrator* and *User*.

Administrator

- is the one and only account that has access to the **Configuration** menu and all parts of the setup (after security option is enabled)
- can create user accounts
- can provide administrator privilege to user

User

- have option only to change his/her Thin Client password & is not allowed to access any other part of the Thin Client setup.
- can either be customized to a connection entry or given access to the whole connection entry list (connection entry editing is not allowed).
- can be customized to a server user account.
- can be customized to a server application program.

Creating User Accounts

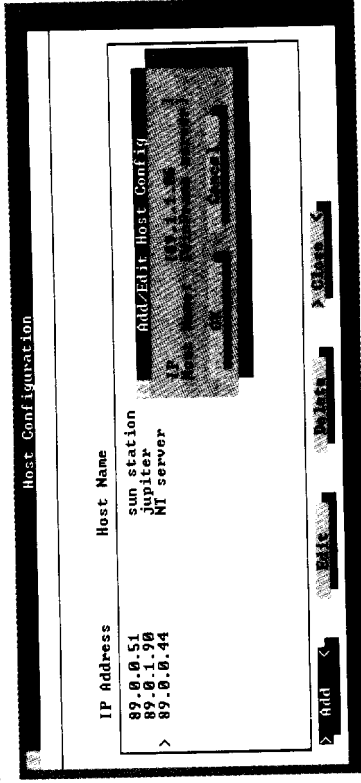
If you like to customize a user to a user account, you should have a User Specific Server Entry, a server entry with username parameter filled in its **Entry Properties** dialog.

If you like to customize a user to an application, you should have a Application Specific Server Entry, a User Specific Server Entry with *Command line* and *Working directory* fields filled in its **Entry Properties** dialog.

If the server entry that fulfill your requirement does not exist, refer to Chapter Quick Tour for creating various connection types.

Host Configuration

The **Host Configuration** dialog allows you to examine and edit the *Local Host* table within the Thin Client. You can add, delete and modify entries within this table. You can resolve IP addresses with server names and save addresses to the Thin Client hosts table. Use of this table is optional. You can of course choose to use direct IP addresses or make use of a DNS.



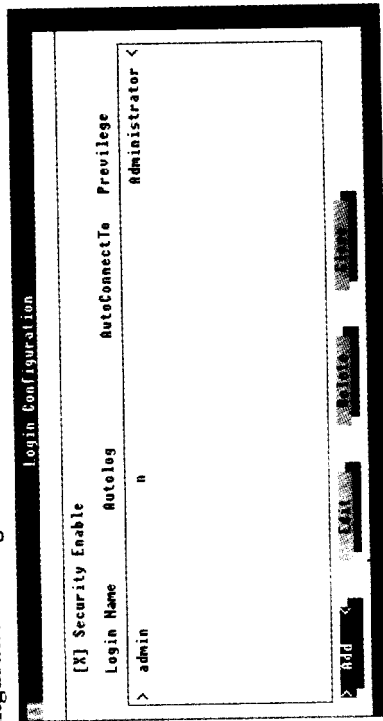
The **Host Configuration** dialog box contains the following fields.

- **IP Address.** This column displays the configured IP addresses.
- **Host Name.** This displays the host name matched to the corresponding IP addresses.
- **Add.** Click the *Add* button to add a new IP address and host name to the terminal's *Host Table*.
A maximum of eight host names can be entered in the *Host Table*.
- **Edit.** Select the host name and IP address from the *Host Table* and click on the *Edit* button to edit the host entry.
- **Delete.** Select the host name and IP address from the *Host Table* and click on the [Delete] button. You will be asked for a confirmation. Click [OK] to delete the entry.

VIEW MENU

- This menu displays the version and copyright information of the Thin Client.

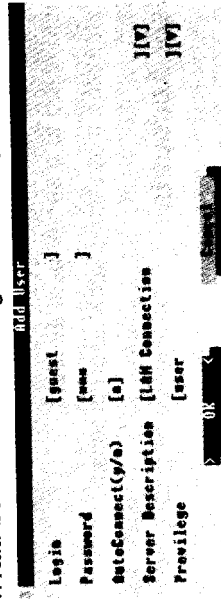
Pull down **Security** menu & select **Accounts**. You will get the **Login Configuration** dialog as shown below.



The option box at the left of the *Security Enable* option would be marked as [X]; if not marked, click the box.

Adding accounts

Click on **Add** button. You would get the dialog box as shown below.



- Enter the user's name and a unique password for the user in the *Login* and *Password* fields.
- The *AutoConnect(y/n)* field when enabled connects the user to the specified *Login Name* with *Password* and the server selected in the *Server Description* field.
- Select the appropriate connection type in *Server Description* field. Click the [down arrow], you would find a list of configured Server entries. Select one of the entries.
- *Privilege* field is a security feature used to provide access to user to have privilege of an administrator.

Editing accounts

When you are in need of modifying an existing account, position cursor over that account and click the *Edit* button. You would get the following dialog box.



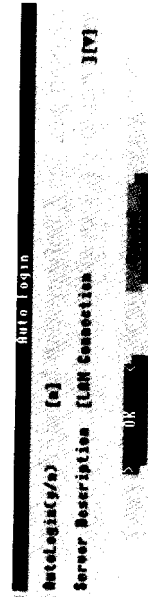
- Modify the parameters like *Login*, *Password*, *AutoConnect*, *Server Description* and *Privilege* as desired.
- After making the changes, click the [OK] button.

Incase you want to delete an existing account, click the *Delete* button.

Auto Login

The *AutoLogin* option logs on to a predefined server directly when the client is powered on.

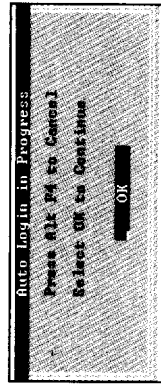
Pull down the **Security** menu. Select the **AutoLogin** option. You would get the dialog as shown below.



Set *AutoLogin(y/n)* field to [Y]. Select a predefined server entry in the *Server Description* field using [down arrow]. Press [OK]. During the next power on, the client logs on to the predefined server.

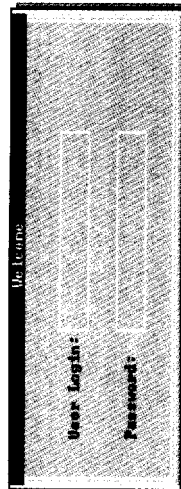
Testing the Security

To confirm whether the **Security** option is properly set, go to **Main Screen**, then click on [Exit] button. You would get the **Auto Login in Progress** prompt as shown below.



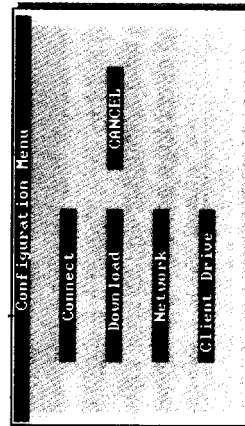
If [OK] is pressed, you will be taken to the server specified in the **AutoLogin** dialog box.

If [Alt-F4] is pressed within few seconds, you would get the Thin Client login prompt as shown below.

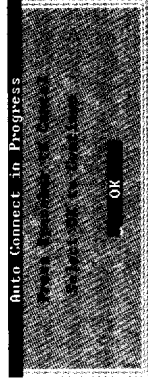


You can login as an admin or as a user, based on the login, the client displays the required dialog boxes as discussed below.

1. If you login as admin,
 - you would see the **Configuration Menu** (if AutoConnect for the account set to [N]) as shown below.

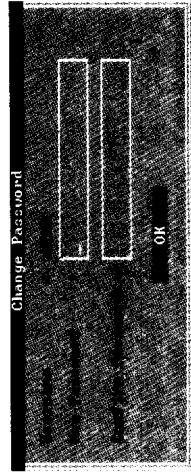


- you would see the **AutoConnect** prompt (if AutoConnect for the account set to [Y]) as shown below.



Press [spacebar] if you want to go to the **Main Screen** of Thin Client, or click [OK] to login to the server.

2. If you login as a user,
 - **customized to a user account**, you would get **Auto Connect** prompt. If you press spacebar at the prompt, you will get the prompt <change password> as shown below, or you will get the server login prompt.



If **AutoConnect** is disabled you are taken to the **Main Screen**. In the menu you have access only to the *Server Entry list*, *Exit* and *Connection* options; and your account in the **Security**, **Account** option. You can edit only your account. All other options are dimmed and not accessible.

- **customized to an application**, you would get **Auto Connect** prompt. If you press [spacebar] at the prompt, you would see **Change Password** screen, else you are taken to the defined application program on the server.

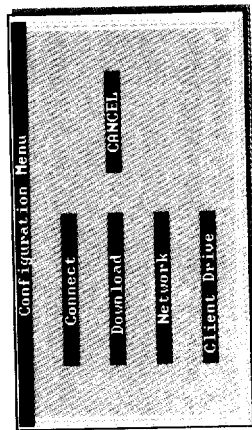
If you type wrong name or password, you will get the error message as shown below.



Press [OK]. Re-enter your login name and password.

Configuration Menu

If you login as admin you would see the **Configuration Menu** (if AutoConnect for the account set to [N]) as shown below.



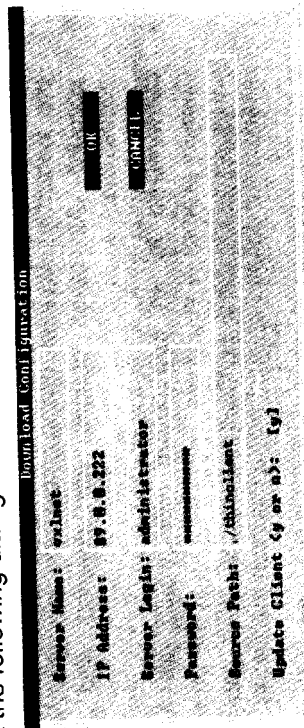
The Configuration Menu consists of following buttons.

Connect

Click this button to enter the **Main Screen** of the Thin Client program.

Down load configuration

Click *Download* button, when you upgrade this setup software. You will get the following dialog box.

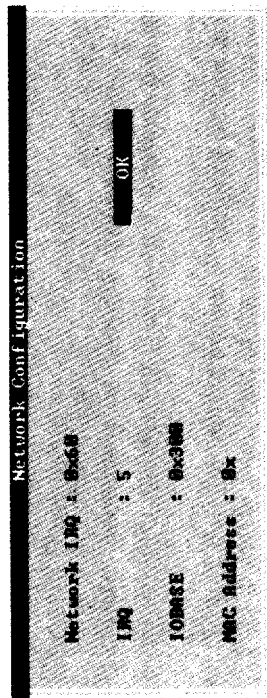


In an endeavor to give better product to you, the customer, our Company pursues continuous development of software and hardware features. As a result the product you received may have more features than what this guide reflect.

Thin Client setup software upgrade will be provided on a floppy. You should create separate directory for the Thin Client setup software on the server's hard-disk and then copy the setup software to the directory; and then enter the access information of the software files in this down load configuration dialog box.

Whenever the user gets latest version of the Thin Client setup software, it should be copied to this directory, and update client option in the dialog box should be set to 'y' to update the existing setup software by the revised one. The update option may be enabled even when, by any chance the setup software in the Thin Client malfunctions.

Network Configuration



Click *Network* button, when you need to know the Thin Client's interface parameters with your network. You will get the display as shown below.

Client Drive

The Client Drive is accessible for the user when this option is enabled.



Chapter-3

TROUBLESHOOTING

This section gives you general guidelines to overcome the problems that may occur while installing the Thin Client on a network. The following is a list of general problems and their solutions.

General Problems and Solutions

- 1) When attempting a network connection to a Windows NT application server, the Thin Client displays the error message <Unknown Host>
 - Ensure that the correct server IP address or host name is entered in the server *Name* field of the **Entry Properties** dialog box.
 - If *DNS* is disabled, ensure that the application server's host name and IP address reside in the Thin Client host table.
 - If *DNS* is enabled, ensure that the DNS server is available, and the correct Domain Name together with primary and secondary server IP addresses are entered in the appropriate fields in the **Entry Properties** dialog box for TCP/IP.
 - Ensure that the DNS servers are ON and running, and your Windows NT application server's host name and IP address are listed in the DNS server's host table.
- 2) When attempting a network connection to an application server, the Thin Client displays the error message <Host unreachable>
 - Ensure that the application server is functioning.
 - Ensure that the hardware and cabling between the Thin Client and application server are properly connected.
 - Ensure that the correct application server IP address is entered in the server *Name* field in the connection **Entry Properties** dialog box. If the host name is used in the server *Name* field, then the IP address associated with that host name may be incorrect.
 - If *DNS* is disabled, ensure that the correct IP address is associated with the application server's host name in the host table.

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- If *DNS* is enabled, ensure that correct IP address is associated with the application server's host name in the DNS server's host table.
- 3) When making a network connection with an application server, the Thin Client shows the error message: `<Time out>` before the connection is completed.
- Ensure that the application server is functioning properly.
 - Ensure that the hardware and cabling between the Thin Client and the application server is properly connected; and the hardware is functioning properly.
 - Ensure that the correct application server IP address is entered in the server *Name* field in the **Entry Properties** dialog Box
 - If *DHCP* is disabled, ensure that a valid IP address is entered in the IP address field in the **Entry Properties** for TCP/IP dialog box.
 - If *DHCP* is enabled, ensure that the DHCP server is properly configured and running.
 - If the problem persists, there may be excessive traffic on the network.
- 4) When attempting a network connection to a Windows NT application server, the Thin Client displays the error message `<Connection reset>`
- This may indicate that the application server is booting up and is not able to complete the connection.
 - Try the connection again after a short time.
 - At times, a reset of a Thin Client by the system administrator can cause this error message to be displayed. If this is the case, power OFF and restart the client.
- 5) When the Thin Client is connected to a application server, the Thin Client displays the error message `<Connection reset>`
- This may indicate that the application server was turned off, then turned on, without performing a clean system shutdown (due to a power outage or an unintentional power off).

- This may also indicate that the connection between the Thin Client and the application server was disconnected (or reset) from the server's Thin Client administration utility for some time.
 1. Ensure that the server is working properly, and connected to a stable power source.
 2. Ensure that all the hardware and cabling between the Thin Client and the server is properly connected. Then log back, on to the server to continue your session.
- 6) When the Thin Client is connected to an application server, the Thin Client screen freezes, but the mouse is still active.
- This may indicate that the connection between the Thin Client and the application server has been disconnected, or that the server is down.
 1. Ensure that the application server is functioning properly.
 2. Ensure that all the Hardware and cabling between the Thin Client and server is properly connected. Then log back, on to the server to continue your session.
- 7) When attempting a serial line connection,
1. the screen goes blank and the client hangs indefinitely
 2. The text `△ICA △ICA` etc. are continuously displayed.
 3. The error message `<connection dropped because of communication errors>` is displayed.
- Ensure that the serial cable is connected to the proper COM port.
 - Ensure that the cabling requirements are met.
 - This may also indicate that the ICA server has marked the ports to which this Thin Client is to be connected as DISCONNECTED. Check with your system administrator and ask him to reset the port.
 - Ensure that the serial port parameters match at both ends of the connection.

8) When attempting a serial line connection through modems,

1. No response from Modem
 2. Error response from Modem
 3. Busy signal detected on phone line
- Ensure that the correct cable (RS 232 Straight) is used to connect the Thin Client serial port to modem and the modem is powered ON.
 - Check whether the modem connected matches the Device Entry for this connection.

If the problem still persists, contact your nearest Service Center.

SALES AND SERVICE CENTRES

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NOTES
