Terminal Configuration

Terminal Configuration Wizard

The Terminal Configuration Wizard is used to configure terminals for use with ThinManager.

If a terminal is a member of a terminal group that has a group setting in use then the terminal will have that setting grayed out and deactivated. The setting will need to be changed at the group level in the Group Configuration Wizard and not the Terminal Configuration Wizard.

Launch the Terminal Creation Wizard by:

- Selecting the ThinManager Server in the ThinManager tree and selecting Edit > Add Terminal from the menu bar, or
- Selecting the Terminals branch in the ThinManager tree, right-clicking on the Terminals icon, and selecting the Add Terminal option, or
- Selecting a Group in the ThinManager tree, right-clicking on the Group icon, and selecting the Add Terminal option. This puts the terminal in that group.
**Terminal Name Page**

**Importance of Page:** Names the terminal and allows it to be added to a group.

**Settings:**
- **Terminal Name** – Required field for unique terminal name. Keep it under 15 characters.
- **Terminal Group** – Adds the terminal to a group of terminals by using the **Change Group** button.
- **Copy Settings** – Allows the terminal to be created quickly by copying configuration from an existing terminal.

**Buttons:**
- **Change Group** – Launches tree to select group for the terminal to join. See Changing a Terminal’s Group for details.
- **Copy From** – Launches tree that allows an existing terminal configuration to be applied to the new terminal. Only active when checkbox is selected.
- **Permissions** – Applies TermSecure permissions to the terminal. See Permissions for details.

**Why Change from Default Settings:**
Terminal needs a unique name. It can have setting from another terminal applied to speed configuration. Adding to a group will speed configuration and management.
Joining a Group

The Change group button launches the Select Group window to allow the terminal to join a group of terminals.

Expand the Terminals tree to show the created groups. Highlight the desired group and select OK to join. This will close the window.

To remove a terminal from a group highlight Terminals and select the OK button. Cancel will close without changes.

Copy Settings

Terminal configuration can be sped up by copying the settings from an established terminal.

Select the Copy Settings from another Terminal checkbox and then select the Copy From button: This will launch the Select Terminal window that allows the terminal to copy settings from another terminal.
The **Select Terminal** window will show a tree of the configured Terminal Groups and terminals. Highlight the terminal that you wish to copy and select the **OK** button to load the settings and return to the Terminal Configuration Wizard.

The **Cancel** button will close the **Select Terminal** window without making changes.
**Terminal Hardware Page**

**Importance of Page:** Defines the hardware used for the terminal.

**Settings:**

- **Make/OEM:** This dropdown allows the make of the hardware to be selected.
- **Model:** This dropdown allows the model of the hardware to be selected.
- **OEM Model:** This displays the actual model used once the terminal connects to ThinManager.
- **Video Chipset:** This displays the video chipset used once the terminal connects to ThinManager.
- **Touch Type:** This displays the touch screen controller used if the ThinManager Ready thin client has an integrated touch screen.
- **Terminal ID –** This displays the MAC address of a connected terminal. We use it to identify the thin client. On WinTMC c clients this will be the terminal name.

**Buttons:**

- **Clear:** This will remove the Terminal ID identifier from the configuration of an inactive terminal. The MAC address of a terminal is used for the Terminal ID. Clearing the Terminal ID will free hardware that has already been tied to a configuration and allow the terminal to be tied to a different
configuration, without deleting its original configuration. It will also allow the make and model of the hardware to be changed.

- **Edit:** Selecting this button will launch the **Edit Terminal ID** window that allows you to manually change the MAC address of the configuration. This allows you to replace an old terminal by entering the MAC address of the replacement. Entering the new MAC address allows the new terminal to boot and retrieve its configuration without selecting the terminal from the list.

![Edit Terminal ID Window]

**Why Change from Default Settings:** Using the correct make & model of the hardware during configuration allows the wizard to display only settings that are appropriate for that specific model, making configuration more accurate.

If you add a different model than you used in configuration then ThinManager will adjust the configuration to match the new hardware. This is done with help from the TermCap database. See TermCap Database for details.

A WinTMC connection needs to be configured as **Generic/Personal Computer**. See WinTMC Overview for details.

**Note:** The default **Make** and **OEM Model** is set to the oldest unit, the ACP DC-30-100 because all following units exceed its capabilities. If you configure your units as a DC-30-100 you will want to adjust the video setting once the actual hardware is attached, as the DC-30-100 video is limited to 800x600, 256-color resolution.

Select **Next** to continue, **Finish** to save and close, or **Cancel** to close without saving.
**Terminal Options**

Importance of Page: Provides configuration of a few terminal functions.

Settings:

- **Allow replacement at terminal if offline** – This allows the terminal to show up in the replacement list during a new terminal connection.
- **Set Schedule** – This will allow the Schedule button to become active. See Scheduling for details.
- **Enable Terminal Effects** - This allows the desktops in MultiSession to slide smoothly into the desktop instead of appearing instantaneously.
- **Show terminal status messages** - This allows the terminal to display status messages in the upper left corner of the screen.
- **Allow terminal to be shadowed** – This dropdown sets the Shadowing setting allowing the configuration of Shadowing Options.
- **Allow Interactive Shadow** – This allows users with Shadowing permission to interactively shadow the terminal. See Interactive Shadow for details.

Buttons:

**Schedule** – This launches the Event Schedule window for the terminal. See Scheduling for details.
Why Change from Default Settings:

- **Allow replacement at terminal if offline** – This prevents an offline terminal from being selected when adding a new terminal. Turning this off prevents a critical configuration from being transferred. If this is turned off then an administrator will need to turn it back on if this terminal needs replaced.

- **Show terminal status messages** – Suppressing incidental messages like Display Client switching and TermSecure logins can keep an operator from worrying about non-essential messages.

- **Allow terminal to be shadowed** – Changing the setting controls connection settings:
  - **No** – This will prevent the terminal from being shadowed by anyone.
  - **Ask** – This will ask the user to allow shadowing. The user will need to say **Yes** on a message window before the shadowing is allowed.
  - **Warn** – Will display a message window alerting the terminal that it is to be shadowed, but doesn’t require user input before the shadowing is allowed.
  - **Yes** – Will allow shadowing to occur without warning or user input.

**Allow Interactive Shadow** – Unselecting will prevent the observer from controlling the session. This “Look but don’t touch” mode prevents an observer from clicking the wrong buttons.

Select **Next** to continue, **Finish** to save and close, or **Cancel** to close without saving.

**Terminal Mode Selection Page**
Importance of Page: This page has the settings that allow the use of Display Clients, TermSecure, and MultiMonitor.

Settings:

Method of Terminal Server Selection

- **Use Display Clients** - This setting is required to use most features and functions like SmartSession load balancing, MultiSession, and Terminal-to-Terminal shadowing.

- **Select Individual Terminal Servers** - This is a legacy setting from earlier versions of ThinManager. Using this setting will limit the features available.

If **Use Display Clients** is selected, two other settings may become available:

- **Enable TermSecure** – This checkbox enables TermSecure on the terminal. This checkbox will only be displayed if the ThinManager Server has a TermSecure license installed. See TermSecure for details on this function.

- **Enable MultiMonitor** checkbox will be displayed if the hardware selected on the **Terminal Hardware** page is a MultiMonitor-capable ThinManager Ready thin client. Selecting this will allow the terminal to be configured for MultiMonitor. See MultiMonitor for details.

Why Change from Default Settings:

We recommend using Display Clients because that expands the features and functions available.

Select **Next** to continue, **Finish** to save and close, or **Cancel** to close without saving.

**Terminals Using Individual Terminal Servers**

Terminals may connect to a series of individual terminal servers by selecting the **Select Individual Terminal Servers** on the **Terminal Mode Selection** page. Although this is **not the recommended method** this is covered here.
**Terminal Mode Selection**
Select the operating modes for this terminal

**Method of Terminal Server Selection**
- Use Display Clients
- Select Individual Terminal Servers

Selecting Display Clients is recommended.

### Importance of Page
Used to select the legacy individual terminal server method.

**Note:** We strongly recommend using Display Clients because that expands the features and functions available.

### Settings:
- **Select Individual Terminal Servers** - This is a legacy setting from earlier versions of ThinManager. Using this setting will limit the features available. Selecting this enables use of the individual terminal server method.

  Select Next to continue, Finish to save and close, or Cancel to close without saving.

The **Terminal Connection Type** page is displayed next to allow the selection of the desired Client Communication Protocol.
Importance of Page: Selects the client/server communication protocol.

Settings:

- **Citrix ICA** – This allows the use of the Citrix© ICA protocol in client to server communications.
- **Citrix Device Services** – This is a legacy version of the ICA protocol used on Windows NT and Windows 2000 terminal servers.
- **Remote Desktop Protocol (RDP)** – This is the default protocol from Microsoft©. It is automatically installed on Microsoft© terminal servers.

Why Change from Default Settings: This is where the terminal is configured to use the Citrix© ICA protocol if the Citrix© ICA protocol is going to be used instead of the default RDP.

Select Next to continue, Finish to save and close, or Cancel to close without saving.

Selecting the Citrix ICA setting will change the path of the Terminal Configuration Wizard to display additional configuration pages. See Citrix for details.
**Importance of Page:** This allows the selection of the terminal servers that the terminal will use. Adding multiple terminal servers to the *Selected Terminal Server* list will establish failover.

**List Box:**

- **Available Terminal Servers** – This is the list of the terminals configured in the Terminal Server Configuration Wizard and available to the terminal.
  
  If the Available Terminal Server list box is empty the Terminal Server Configuration Wizard can be launched with the *Edit Server List* button to define the terminal servers.

- **Selected Terminal Servers** – This is the list of terminal servers that the terminal will connect to, in the order that they will connect. Move the terminal servers to this list with the left and right arrow or by double clicking on the name.
  
  Listing two or more terminal servers configures Failover. The terminal will connect to the first in the list. If it fails than the terminal will try the next in the list.

**Buttons:**

- **Arrows** – The left and right arrows move the terminal servers between list boxes. The up and down arrow change the order that the terminal servers are used. The top terminal server is considered the primary terminal server.

- **Edit Server List** – This launches the Terminal Server Configuration Wizard that allows terminal servers to be defined within ThinManager. Selecting *Manage > Terminal Server List* from the ThinManager menu will also launch the Terminal Server Configuration Wizard.
• **Override** – This is not used with individual terminal servers.

**Settings:**

• **Enforce Primary Terminal Server Connection** – This will cause a terminal that failed over to a backup terminal server to return to the primary terminal server whenever that server becomes available.

**Why Change from Default Settings:** It is critical to list the terminal servers that the terminal will use. The wizard will not advance without a terminal server selected.

If the **Available Terminal Servers** column is empty, the **Terminal Server List Wizard** needs to be run to define the terminal servers. Select the **Edit Server List** to launch the Terminal Server Configuration Wizard and define the terminal servers.

This is an example of a terminal with the terminal servers selected.

Select **Next** to continue, **Finish** to save and close, or **Cancel** to close without saving.

**Terminals Using Display Clients**

Terminals may be configured to use Display Clients by selecting the **Use Display Clients** on the **Terminal Mode Selection** page instead of using the **Select Individual Terminal Servers** setting.
If the **Use Display Clients** is selected, two other settings may become available:

- **Enable TermSecure**, when checked, will enable TermSecure functionality. This checkbox will only be displayed if the ThinManager Server has a TermSecure license installed. See TermSecure for details on this function.

- The **Enable MultiMonitor** checkbox will be displayed if the hardware selected on the **Terminal Hardware** page is a MultiMonitor-capable ThinManager Ready thin client. Selecting this will allow the terminal to be configured for MultiMonitor. See MultiMonitor for details.

Select **Next** to continue configuration.
Display Client Selection

The *Display Client Selection* page is displayed next to allow the selection of the desired Display Clients.

**Importance of Page:** This allows the selection of the Display Clients that the terminal will use. Adding multiple Display Clients to the *Selected Display Clients* list will establish MultiSession.

**List Box:**

- **Available Display Clients** – This is the list of the Display Clients configured in the Display Client Configuration Wizard and available to the terminal. If the Available Display Client list box is empty the Display Client Configuration Wizard can be launched with the *Edit Display Clients* button to define the Display Clients.

- **Selected Display Clients** – This is the list of the Display Clients that the terminal will connect to, in the order that they will connect. Move the Display Clients to this list with the left and right arrow or by double clicking on the name. Listing two or more the Display Clients configures MultiSession. The terminal will display the first in the list and cascade the others.
Buttons:

- **Arrows** – The left and right arrows move the Display Clients between list boxes. The up and down arrow change the order that the Display Clients are used. The top Display Clients is displayed on top at startup.

- **Edit Display Clients** – This launches the Display Client Configuration Wizard that allows Display Clients to be defined within ThinManager.

- **Override** – This allows a highlighted Display Client to use a different login or screen resolution than the terminal. See Display Client Override for details.

**Why Change from Default Settings:** It is critical to list the Display Clients that the terminal will use. The wizard will not advance without a Display Client selected.

If the **Available Display Clients** column is empty, the Display Clients List Wizard needs to be run to configure Display Clients. Select the **Edit Display Clients** button to launch the Display Client List Wizard as shown in Display Client List.

![Terminal Configuration Wizard – Display Client Selection](image)

This is an example of a terminal with the Display Clients selected.
Display Client Override

ThinManager has an **Override** button that will allow any Display Client to be configured to login with a different user account than the terminal. The **Override** button becomes active when two or more Display Client are added to the **Selected Display Client** column.

**Override Settings Window**

**Importance of Page:** Allows a Display Client to use a different login or screen resolution than the terminal.

**Settings:**

- **Override - Login Settings**– This needs checked to use this setting.
  - **Username** – Field for the username of the Windows© user account you want to use.
  - **Password** – Field for the password for the username.
  - **Verify Password** – Field to confirm the password.

- **Override - Domain**– This needs checked to use this setting.
  - **Domain** – Field for the domain of the user account.

- **Override - Video Settings**– This needs checked to use this setting.
  - **Resolution** – Dropdown for the video resolution to use for the Display Client.
  - **Color Depth** – Dropdown for the color depth to use for the Display Client.

**Buttons:**

- **OK** – Accepts changes and closes window.
- **Cancel** – Closes window without changes.

**Why Change from Default Settings:** The defaults are blank and will not override anything until changed.

Select **Next** to continue, **Finish** to save and close, or **Cancel** to close without saving.
Virtual Workstations

If you choose a Workstation Display Client you will need to associate it to an available workstation. This is done on the Complete the Workstation Display Client Configuration page.

Importance of Page: Allows a workstation to be associated with a Workstation Display Client so that the terminal can display a workstation.

Buttons:
- **Add Workstation** – Accepts changes and closes window.
- **Add Virtual Workstation** – Closes window without changes.
- **Remove** – This removes a highlighted workstation.
- **Edit** – This allows a highlighted workstation to be changed.
- **Arrows** – The up and down arrow change the order that multiple workstations are used.

Why Change from Default Settings: The default is blank and will not deploy a workstation until a workstation is added.

Selecting the **Add Workstation** button will launch the **Add Workstation** window.
Enter the Workstation name and IP address in the Workstation Display Name and Workstation IP Address fields.

Selecting the Add Virtual Workstation button will launch the Add Virtual Workstation window.

The Add Virtual Workstation window will show the configured VCenter Servers. Expand the tree and select the desired virtual workstation. Select the Add button to apply that virtual workstation.

Each virtual machine can only be used once since workstations have a one-to-one relationship with the accessing terminal. If you try to apply a workstation twice you will receive an error message.
Once a workstation has been applied for that display client it will be listed in the \textit{Selected Workstations} textbox. 
Select \texttt{Next} to continue, \texttt{Finish} to save and close, or \texttt{Cancel} to close without saving.
Terminal Interface Options

Importance of Page: This page contains the setting that allows navigation between sessions when using MultiSession.

Settings:

- **Show Group Selector on Terminal** - This checkbox, if selected, will display an on-screen drop-down menu that can be activated by mouse.

- **Enable Tiling** – This checkbox, when selected, allows the Display Clients to be tiled on the monitor to provide an overview of all the sessions at once. See Session Tiling Options for details.

- **Screen Edge Group Selection** - This checkbox, if selected, will activate a feature that will switch windows if the mouse is moved off screen.

Buttons:

- **Selector Options** – This button launches the Group Selector Options window that has the settings for switching between sessions when using MultiSession. See Terminal Interface Options Hotkeys for details.

- **Tiling Options** – This button launches the Tile Options window that has the settings for tiling sessions when using MultiSession. See Terminal Interface Options Hotkeys for details.

- **Main Menu Options** – This allows configuration of the TermSecure Main Menu. See TermSecure Menu for details.
Why Change from Default Settings: These settings allow you to control how MultiSession is displayed and navigated.

Select **Next** to continue, **Finish** to save and close, or **Cancel** to close without saving.

**Hotkey Configuration Page**

Importance of Page: Used to configure hotkeys to make it easier to access sessions and functions.

Settings:

- **Enable Instant Failover Hotkeys** - This checkbox, if selected, allows the hot key switching between the two active sessions of an Terminal Services Display Client that is using Instant Failover.
- **Enable Group Hotkeys** - This checkbox, if selected, allows the hot key switching between different sessions of a terminal using MultiSession.
- **Enable Tiling Hotkey** – This checkbox, if selected, allows SessionTiling to be activated by a hotkey combination.
- **Enable Main Menu Hotkey** – This checkbox, if selected, allows the TermSecure Main Menu to be activated by a hotkey combination.

Buttons:
- **Change Hotkeys (Enable Instant Failover Hotkeys)**– This button launches the Select Hotkeys window that has the settings for hotkeys when using Instant Failover. See Hotkey Configuration for details.

- **Change Hotkeys (Enable Group Hotkeys)**– This button launches the Select Hotkeys window that has the settings for hotkeys when using MultiSession. See Hotkey Configuration for details.

- **Change Hotkeys (Enable Tiling Hotkeys)**– This button launches the Select Hotkeys window that has the settings for hotkeys when using Tiling. See Hotkey Configuration for details.

- **Change Hotkeys (Enable Main Menu Hotkeys)**– This button launches the Select Hotkeys window that has the settings for hotkeys when using TermSecure. See Hotkey Configuration for details.

**Why Change from Default Settings:** These settings allow you to control sessions with hotkeys.

Select **Next** to continue, **Finish** to save and close, or **Cancel** to close without saving.

**Continuation of the Terminal Configuration**

The configuration paths (Independent Terminal Servers vs. Display Clients, ICA vs. Device Services and RDP) unite at the Login Configuration. However, the Log In Information page varies depending on if the terminal is using individual Terminal Servers or Display Clients.

**Login for Display Client Users**

![Login for Display Client Users](image)
Login Information - Use Display Clients

Importance of Page: This page allows a terminal to automatically login without user action.

Settings:

- **Username** – Enter a valid Windows user account.
- **Password** – Enter the password.
- **Verify Password** – Re-enter the password for confirmation.
- **Domain** - Enter the domain, if Domain accounts are being used.
- **Path** - Enter the path to the desired application in the field. This will be the only program to run and the desktop, icons, and start menu will be hidden.
- **Command Line Options** – This field provides a space for command line options and switches. This field may not be required.
- **Initial Folder** - This field is provided in case you need to specify the working directory for the program when using a relative path for the initial program. This field may not be required.
Buttons:

- **Verify** - The **Verify** button will contact the domain controller to validate the accuracy of the domain user account.

Select the **Verify** button to check the user.

![Validate Users Window](image)

A Validate Users window will be displayed with the status of the user. If the user account is a valid domain account, the results will show valid. If the results show invalid, try another account.

**Why Change from Default Settings:** Using the auto-login feature allows a terminal to connect and load sessions without requiring user input. It also hides the login account so the user doesn't know the account and can't use it for unauthorized access to the network.

Select **Next** to continue, **Finish** to save and close, or **Cancel** to close without saving.
Importance of Page: This page sets the video resolution that the terminal will use.

Settings:

- **Resolution** – Select the desired screen size. The list will contain the sizes available for the hardware that was chosen on the Terminal Hardware page. WinTMC configurations show a Full Screen option.

- **Color Depth** – Select the desired color depth. The list will contain the values available for the hardware that was chosen on the Terminal Hardware page.

- **Refresh Rate** – Select the desired refresh rate for the monitor. The list will contain the values available for the hardware that was chosen on the Terminal Hardware page.

Why Change from Default Settings: The monitor that is used may have a different resolution than the default value. A Windows© 2003 or 2008 terminal server can display 16K colors but a Windows© 2000 terminal servers can only display 256 colors.

A terminal that is using MultiMonitor can have the screen resolution of each monitor set. See MultiMonitor for more details.
MultiMonitor Video Settings

Select the number of monitors and a video mode for each monitor.

Importance of Page: Configures the video resolution of each monitor for a MultiMonitor terminal.

Settings:

- **Number of Monitors** – These radio buttons allow you to define how many monitors the terminal will use.
- **Color Depth** – Select the desired color depth. The color depth will be used for all monitors.
- **Resolution** – Select the desired screen size for each monitor used.
- **Color Depth** – Select the desired color depth for each monitor used.
- **Refresh Rate** – Select the desired refresh rate for each monitor used.

Buttons:

Why Change from Default Settings: MultiMonitor allows you to use different sized monitors instead of requiring that all are the same. This page allows you to adjust the settings to match your configuration.

Select **Next** to continue, **Finish** to save and close, or **Cancel** to close without saving.
WinTMC Settings Page

A terminal that is set for use as a WinTMC PC client by using Generic/PersonalComputer in the Make and Model field of on the Terminal Hardware page will display a page for WinTMC settings. It is not shown for normal terminals.

Importance of Page: Used to configure the WinTMC client that converts a PC into a terminal services client that is controlled and managed through ThinManager.

Settings:

- Redirect Local Resources:
  - Redirect Serial Ports – Enable this setting to make local serial ports available in a session. Serial Port redirection does not work when you connect to a terminal server running Windows 2000 or earlier.
  - Redirect Drives – Enable this setting to make local drives available in a session. Drive redirection does not work when you connect to a terminal server running Windows 2000 or earlier.
  - Redirect Printers – Enable this setting to make your local printer available in a session.
- **Redirect Sound** – Enable this setting to allow audio played in your session to play locally. Sound redirection does not work when you connect to a terminal server running Windows 2000 or earlier.
- **Redirect Smart Cards** – Enable this setting to make your smart card available in a session. Smart card redirection does not work when you connect to a terminal server running Windows 2000 or earlier.

**Client Control Settings:**
- **Allow client to be closed** – Enable this setting if you want your user to be able to close the client.
- **Allow client to be sized** – Enable this setting if you want your user to be able to resize the client.
- **Always maintain monitor connection** – Enable this setting to keep the monitoring connection active when WinTMC is closed to allow shadowing. Unselecting this checkbox will release the WinTMC license when the WinTMC program is closed but will deny shadow access.
- **Show groups in separate windows** – This checkbox, if selected, will display multiple Display Clients as separate windows rather than in one window shell.

**Experience Settings:**
- **Show Desktop Background** – Enable this setting if you want your user to be able to select a Windows Desktop Background. If not set, the background will be a solid color.
- **Show window contents while dragging** – Enable this setting if you want the window contents of a window to be shown while the window is being dragged.
- **Show menu/window animations** – Enable this setting if you want menu/window animations to be enabled on the client.
- **Show Themes** – Enable this setting if you want your user to be able to select a Windows Theme.

**Note:** These functions may be denied by user policies or terminal server configuration. Check the Microsoft© Local Policy, Group Policy, and Terminal Services Configuration. See Non-ThinManager Components for details.

**Why Change from Default Settings:** The Redirect Local Resources settings allow the user to access the resources on the PC.

The Client Control Settings can be set to prevent the WinTMC from being closed. If you want to convert a floor PC to a dedicated terminal you can install WinTMC on the PC and have it launch automatically by placing it in the Startup folder (C:\Documents and Settings\%username%\Start Menu\Programs\Startup). The user can't close WinTMC if the Allow client to be closed and the Allow client to be sized settings are unchecked.

The Experience Settings give a PC-like desktop experience but use more resources.

Select Next to continue, Finish to save and close, or Cancel to close without saving.
**Terminal Module Selection Page**

Importance of Page: This page attaches modules to a terminal so that it can use touch screens, sound, USB drives, etc.

Settings:
- **Installed Modules** – This list box displays the modules that are added to the terminal. Modules added to a group will show a group icon.

Buttons:
- **Move Up & Move Down** – These buttons changes the order that the modules load during boot up by rearranging the module list. They are rarely used.
- **Add…** – This opens the **Attach Module to Terminal** window to allow a module to be added to the terminal.
- **Configure…** – Open the Modules Properties window by highlighting the module in the **Module** list box and clicking the **Configure** button.
- **Remove** – Remove a module by highlighting it in the **Module** list box and clicking the **Remove** button.

Why Change from Default Settings: Certain features and functions are activated by use of modules.
Select **Next** to continue, **Finish** to save and close, or **Cancel** to close without saving.

### Attaching a Module

A **Module** is a component of the firmware that is not needed for the basic functionality but may be desired for advanced functionality. These features include Touch Screen drivers, serial mouse drivers, High Speed Serial drivers, Shared Keyboard and Mouse, USB Memory Card Reader, and Instant Failover. See Module Overview for details.

To attach a Module to a Terminal, select the **Add...** button to launch the **Attach Module to Terminal** window.

![Attach Module to Terminal Window](image)

The **Attach Module to Terminal** window will show the modules that are available to the terminal. The **Module Type** drop-down box sorts the modules by categories to make the modules easier to find.

Highlight the desired module and select the **OK** button to add the module to the configuration.
Terminals that are members of a Group may show icons to represent the properties of added modules.

- The Group icon represents modules assigned to a parent Group.
- No icon indicates that the module was added to that particular Group or Terminal and not a parent Group.
Highlighting a module and selecting the **Configure** button will open the **Module Properties** window and allow changes to the module configuration.
On the Modules Properties window, select the parameter to change, select the new value in the drop-down list, and click the Set button. This will change the setting.

The Set to Default button will restore the module to the default settings.

Select the Done button to close the Module Properties window and to return to the Terminal Configuration Wizard.

Select Next to continue, Finish to save and close, or Cancel to close without saving.
ThinManager Server Monitor List Page

This page is not displayed when Auto-synchronization is used. See Auto-synchronization.

Importance of Page: If you are using two ThinManager Servers without automatic synchronization them the terminal will normally only send its connection status (green light) to the ThinManager Server that it booted from. This page allows you to list multiple ThinManager Servers so that the terminal will send its status information to all the ThinManager Servers.

Settings:

- **Available ThinManager Servers** – This is the list of defined ThinManager Servers. Selecting the **Edit Server List** button will launch the ThinManager Server List Wizard to add new ThinManager Servers.

- **Selected ThinManager Server** – This is the list of ThinManager Servers that the terminal will send its connection status to. Move ThinManager Servers from the **Available** list to **Selected** list by double clicking or using the arrow buttons while highlighted.

Buttons:

- **Arrows** – These buttons move highlighted ThinManager Servers from one list to the other or rearrange the order listed.
- **Edit Server List** – This launches the ThinManager Server List Wizard that allows the defining of ThinManager Servers.

**Why Change from Default Settings**: Adding ThinManager Servers to the **Selected ThinManager Server** allows control, configuration, shadowing, and rebooting of a terminal from a backup ThinManager Server if the primary ThinManager Server fails.

Select **Next** to continue, **Finish** to save and close, or **Cancel** to close without saving.

### Monitoring Configuration Page

**Importance of Page**: This page sets the speed that failover is detected and initiated. A ThinManager Ready thin client creates a socket connection to the terminal server. If the socket is disconnected the terminal will try to reconnect and failover based on these settings.

**Settings**:

- **Monitor Interval**
  - **Monitor Interval (Fast/Medium/Slow)** – These settings have a set rate for the frequency that the terminal server status is checked.
  - **Monitor Interval (Custom)** – This setting allows the administrator to change the settings from the defaults.
• **Monitor Interval** – This is the period of time the terminal will wait after losing the socket connection before it tries to reconnect.

• **Monitor Timeout** – This is the period of time the terminal will wait between tries.

• **Monitor Retry** - This is the number of times the terminal will try to reestablish a connection before failing over.

• **Primary Up Delay Multiplier** - This is a constant used to generate the Primary Up Delay time.

Field:

• **Primary Up Delay** - This is a delay added (usually set to 30 or 60 seconds) to allow a Terminal Server to get fully booted before the terminal will try to login. This time period is equal to the Monitoring Interval times the Primary Up Delay Multiplier. This prevents a terminal using Enforce Primary from switching back to its primary terminal server before it is ready.

Why Change from Default Settings: Faster rates will cause a quicker failover but will check on terminal server status more often, causing more network traffic. Slowing down the rate will cause less traffic but will slow the failover speed a little.

Select **Finish** to save and close, or **Cancel** to close without saving.
Terminal Group Configuration Wizard

Using **Terminal Groups** allows a configuration to be defined for a group of terminals. Terminals added to a group will inherit the group properties to speed the configuration process. Using Groups can also aid in management because many tasks can be done on the group level instead of repeating them for multiple terminals.

- Groups can be nested within groups, providing deeper levels of organization.
- All Group Settings use a forced inheritance because of the use of nested Groups. Once a setting has been selected as a group property, every terminal group and terminal beneath it will use that setting.
- Group Settings will be designated on the Configuration and Modules tabs with the Group icon of two blue monitors.

**Group Settings Checkbox**

The Terminal Group Configuration Wizard establishes the terminal settings for a group of terminals, while the Terminal Configuration Wizard establishes the terminal settings for the individual terminal. The Terminal Configuration Wizard and the Group Configuration Wizard use the same forms so they are very similar, with a few different settings.

**Note:** This Help document will only show the differences between the **Group Configuration Wizard** and the **Terminal Configuration Wizard**. See Terminal Configuration Wizard for details.

The Group wizard will have **Group Setting** checkboxes for each setting. Selecting this checkbox will force that setting to be inherited by nested sub-groups and member terminals. The Group Settings of any sub-group or terminal will be grayed out to prevent changes if the group setting is selected on the parent. Changes need to be made at the Group level.
This example shows variations in the use of four **Group Settings** on the **Terminal Group Options** page of a nested group.

**Terminal Replacement** (1) and **Terminal Schedule** (2) were configured in the parent group and cannot be changed in this child group. **Terminal Replacement** (1) was set as checked, while **Terminal Schedule** (2) was set as unchecked.

The **Terminal Effects** (3) Group Setting is selected for this Group. It will be grayed out in child groups and member terminals.

The **Shadowing** (4) Group Setting is unselected, making it available to be set for child groups and member terminals.
Group Name Page

The **Group Configuration Wizard** can be launched by selecting **Edit > Add Terminal Group** or by or right clicking on the Terminals branch in the tree and selecting **Add Group**.

**Fields:**
- **Group Name** – This is the name given to the group. Keep it under 15 characters.
- **Terminal Group** – This is the name of a parent group if this group is a sub-group.

**Buttons:**
- **Change Group** – This launches a window that allows the group to be added as a sub-group to another group.
- **Permissions** – This allows the Terminal Group to be assigned Access Groups for security. This is a function of TermSecure. See Permissions for details.

**Checkbox:**
- **Group Setting** – This will make the Permission a group setting that is inherited by all members.

**Importance of Page:** This page allows the Group to be named.

**Fields:**
- Group Name – This is the name given to the group. Keep it under 15 characters.
- Terminal Group – This is the name of a parent group if this group is a sub-group.

**Buttons:**
- Change Group – This launches a window that allows the group to be added as a sub-group to another group.
- Permissions – This allows the Terminal Group to be assigned Access Groups for security. This is a function of TermSecure. See Permissions for details.

**Checkbox:**
- Group Setting – This will make the Permission a group setting that is inherited by all members.
**Why Change from Default Settings:** A group needs a name at creation. The group can be added to another group using the *Change Group* button.

![Duplicate Name Warning](image)

*Duplicate Name Warning*

If an existing name is selected, a **Duplicate Name Warning** popup will be displayed when the *Next* button is selected.

Terminal Groups can be added to other Terminal Groups, creating a multi-level hierarchy. This is done with the *Change Group* button that launches the *Select Group* window.

![Select Terminal Group Window](image)

*Select Terminal Group Window*

The *Select Group* window will show a tree displaying the group hierarchy. Highlight the Terminal Group that you want to join and select the *OK* button to join or select the *Cancel* button to quit without joining.
The parent Terminal Group you joined will be displayed in the Group field. Select the Next button to continue or select the Cancel button to close the configuration wizard without saving.

**Changing a Terminal’s Group**

A terminal is added to a group from the Terminal Name page of the Terminal Configuration Wizard. Open the Terminal Configuration Wizard by either:

- Highlighting the terminal in the ThinManager tree pane by clicking on the terminal name or icon and select *Edit >Modify* from the ThinManager menu bar.
- Right clicking on the terminal icon in the ThinManager tree pane and select *Modify*.
- Double clicking on a terminal icon in the ThinManager tree pane.

This will launch the Terminal Configuration Wizard.
The first page of the wizard, **Terminal Name**, has a **Change Group** button. Select the **Change Group** button to launch the **Select Terminal Group** window.
The **Select Terminal Group** window has a tree of the Terminal Groups. Highlight the desired Terminal Group and select the **OK** button. Selecting **Terminals** will remove the terminal from group membership.

The **Cancel** button will close the **Select Group** window without making changes.
Terminal Group Display

Once a group is selected for the terminal the group will be displayed in the *Terminal Group* field.

**Note:** The terminal will need to be restarted for the changes to take effect.
Unique Group Configurations

Several pages of the Group Configuration Wizard are different than the Terminal Configuration Wizard. These include the Log In Information page, the Group Video Resolution, and Module pages.

Group Login Information Page

The Log In Information page is different in the Group Configuration Wizard than the Terminal Configuration Wizard.

It is recommended that each terminal login to a Terminal Server with a unique profile. For this reason, the Group Username, Password, and Domain are inactive in the Terminal Group Configuration. These need to be set individually during the Terminal Configuration.
The **Group Video Resolution** page has a drop-down box that allows the video resolution to be set for all members of the Group.

The Windows 2000 terminal connection uses a 256-color depth. The 64K-color depth is available by using RDP connected to a Windows 2003 or 2008 Terminal Server.

The **Group Setting** checkbox will lock the settings for the group and all member terminals.

**Note:** It is not recommended to set the Video Resolution as a Group Setting because of the variety of monitor sizes and the ease at which they are changed. These settings are better set as an individual terminal setting to provide the flexibility to switch monitors.
A Module is a component of the firmware that is not needed for the basic functionality but may be desired for advanced functionality. These features include Touch Screen drivers, serial mouse drivers, High Speed Serial drivers, Shared Keyboard and Mouse, USB Memory Card Reader, and Instant Failover. See Module Overview for details.

Terminals that are members of a Group may show icons to represent the properties of added modules.

- The Group icon represents modules assigned to a parent Group.
- The Group icon with yellow plus sign represents properties that are changed on the terminal from the Group settings. This is limited to touch screen calibration.
- No icon indicates that the module was added to that particular Group or Terminal and not a parent Group.

If you add a module to a group it will display the group icon and any configuration will need to be made at the group level.
If you add a module to a terminal it will not display an icon and any configuration will need to be made at the terminal level.

See Modules for Details.

The rest of the Group Configuration Wizard pages follow the Terminal Configuration Wizard pages.
Display Servers

Display Servers are devices that provide content that can be displayed on the client. Examples include the traditional terminal server and IP cameras.


Terminal Services Display Servers

The Terminal Server List Wizard can be launched by:

- Right clicking on the Display Servers Terminal Servers branch and choosing the Add Terminal Server command
- Right clicking on the Display Servers Terminal Servers branch and choosing the Edit Terminal Server command.

<table>
<thead>
<tr>
<th>Terminal Server List Wizard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serene (192.168.1.34)</td>
</tr>
<tr>
<td>Black (192.168.1.35)</td>
</tr>
<tr>
<td>Blue (192.168.1.36)</td>
</tr>
<tr>
<td>Purple (192.168.1.33)</td>
</tr>
</tbody>
</table>

Importance of Page: This allows you to define the terminal servers that will be used within ThinManager.
Fields:
- {Unnamed} – The list box will contain the names and IP addresses of defined terminal servers.

Buttons:
- **Edit Server** – This will open the properties for a highlighted terminal server in the list.
- **Add Server** - This will launch the Terminal Server Configuration Wizard to allow a new terminal server to be defined. See
- **Remove Server** – This will remove a highlighted terminal server from the list.
- **Find Servers** - This will launch the Available Terminal Servers window for automated terminal server addition.
- **Cancel** - This will close the wizard without action.
- **OK** – This will close the wizard after accepting changes.

**Why Change from Default Settings:** The terminals require terminal servers to connect and run sessions on.

**Available Terminal Servers Search**

The Available Terminal Servers window will display any Microsoft© terminal servers that are a member of the same domain or workgroup as ThinManager. Select the Find button to display the member servers.
The **Domain or WorkGroup to Search** field will allow ThinManager to search a different domain or workgroup. Enter the domain of workgroup to search and select the **Find** button to display the member servers.

Once the terminal servers are listed, highlight one and select the **OK** button to add it to the Terminal Server Configuration Wizard. This will launch the Introduction page of the **Terminal Server Wizard**.

![Available Terminal Servers Window](image)
Terminal Server Wizard Introduction Page

**Importance of Page:** This displays introductory information.

Select **Next** to continue or **Cancel** to close without saving.
**Terminal Server Name Page**

Importance of Page: This page defines the terminal server and allows the addition of an administrative user account for increased management.

Fields:

- **Terminal Server Name** - Enter the computer name as found in the Microsoft® System Properties (NetBIOS name). The name will already be entered if the Find function on the Available Terminal Servers window was used.

- **Terminal Server IP** – Entered the IP address of the terminal server.

Login Information – Enter a Windows user account with administrative rights for the terminal server if you wish to display data from the terminal server within ThinManager. This is required to populate the User, Sessions, and Process tabs of the details pane. See Details Pane for details.

- **Domain** - Enter the domain for the computer, if it is a member of a domain.

- **User Name** – Enter the user name of the administrative account here.

- **Password** - Enter the password for the administrative account used in the User Name field.

- **Verify Password** – Re-enter the password for the administrative account used in the user name field. Passwords that do not match will be indicated by a warning message on the page.

Buttons:
• **Discover** – The **Discover** button will automatically fill in the IP address for a terminal server listed in the **Terminal Server Name** field.

• **Schedule** – The **Schedule** button will launch the Event Schedule for the terminal server. This allows the scheduling of repeated functions like rebooting and disabling. See Scheduling for details.

**Why Change from Default Settings:** ThinManager uses a connection to the terminal server to pull the process, user, and session information for the detail pane tabs and to determine the load for SmartSession load balancing. Entering a username and password in the **User Name** and **Password** fields allows ThinServer to connect to the server for this data.

Select **Next** to continue, **Finish** to save and close, or **Cancel** to close without saving.

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**Terminal Server Capabilities Page**

**Importance of Page:** This allows a terminal server to be used for SmartSession. It also defines what communication protocols the server can use.

**Settings:**

• **Supported Connections** – This is a list of client/server communication protocols that the terminal server can use.
  
  o **Citrix ICA** – Check this checkbox if a Citrix server-side program is installed on the terminal server to provide the ICA protocol.
- **Citrix Device Services** - Check this checkbox if Citrix Device Services is installed and licensed on the terminal server. Citrix Device Services is a legacy deployment of the ICA client but is no longer supported by Citrix. ThinManager Ready thin clients can still connect to terminal servers with Device Services, but no new Device Services terminal servers can be licensed.

- **Microsoft Remote Desktop Protocol** - RDP is installed by default on Windows Terminal Servers. Uncheck the Microsoft Remote Desktop Protocol checkbox if you don’t want to access to the terminal server with the protocol.

- **Available for Smart Session Server** – This checkbox makes the terminal server available for Application Groups that use SmartSession to provide load balancing. See Display Client SmartSession Settings Page for more details.

**Why Change from Default Settings:** Add SmartSession if you want to use SmartSession. Add Citrix ICA if that is being used.

**Note:** Configuring a terminal server to use SmartSession uses a SmartSession license.

Select **Next** to continue, **Finish** to save and close, or **Cancel** to close without saving.

**Data Gathering Page**

![Data Gathering Page](image)
Importance of Page: This page sets the frequency that ThinManager polls the terminal servers for user, session, and process information.

Settings:

- **Data Gathering Intervals (Fast/Medium/Slow)** - These settings set the rate of the frequency that ThinManager polls the terminal server for data.

- **Data Gathering Intervals (Custom)** - This setting allows the polling speeds to be set.
  - **Smart Session Data Update Interval** is the amount of time between the retrieval of SmartSession data, CPU usage, memory usage, and session count, from the terminal server. This setting affects the update speed of the Server Rankings used in SmartSession load balancing.
  - **Process Update Interval** is the amount of time between the retrieval of the process information on the terminal server. This setting affects the speed of the update of the process information on the Processes tab for the terminal server.
  - **Session Update Interval** is the amount of time between the retrieval of session data from the terminal server. This setting affects the speed of the update of the user information for the sessions on the Users and Sessions tabs for the terminal server.

Why Change from Default Settings: Faster rates will lead to quicker updates but will add more network traffic. Slowing down the rate will cause less traffic but will slow the update rate a little.

Select **Next** to continue, **Finish** to save and close, or **Cancel** to close without saving.

If this terminal server is used as a SmartSession server, the **Next** button will go to a SmartSession Configuration page. If this terminal server is not configured as a SmartSession server, the **Next** button will be grayed out and the **Finish** button will close the wizard.
SmartSession Configuration Page

Importance of Page: This allows SmartSession data to be tweaked.

ThinManager uses the **CPU utilization**, **Memory utilization**, and **number of sessions** on the terminal server to define the SmartSession terminal server’s available resources. ThinManager uses these resource values to rank the load of the SmartSession servers. ThinManager supplies this load data to the terminals to allow the terminals to connect to the terminal server with the lightest load and greatest available resources.

The **SmartSession Configuration** page allows the configuration of the three parameters that ThinManager uses to determine availability for SmartSession. ThinManager will scale the range between the Minimum field and Maximum field as 100%.

Settings - The three values used in SmartSession are:

- **CPU Utilization** – The percentage of CPU usage on the terminal server.
- **Memory Utilization** - The percentage of CPU usage on the terminal server.
- **Sessions** – The number of sessions on a terminal server.

Fields:

- **Minimum** – the value that ThinManager will use as the starting point of the load. A value below the Minimum is considered to be unused.
- **Maximum** – the value that ThinManager will consider the parameter as reaching 100% utilized and is unavailable.
**Why Change from Default Settings:** Changing the Minimum and Maximum values will change the range used to calculate SmartSession loads and can influence SmartSession behavior.

Select *Finish* to save and close or *Cancel* to close without saving.

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**Camera Configuration Wizard**

The **Camera Configuration Wizard** allows an IP Camera to be configured as a Display Server within ThinManager.

Launch the **Camera Configuration Wizard** by right clicking on **Cameras** in the Display Servers branch and selecting **Add Camera**.

**Camera Name Page**

![Camera Configuration Wizard](image)

**Importance of Page:** This page names and addresses the IP Camera.

**Fields and Settings:**

- **Camera Name and Group**
  - **Camera Name** – Enter a name for the camera.
- **Change Group** – This button allows the camera to be added to a Camera Group.

- **Camera Model**
  - **Make** – Use the drop-down to select a manufacturer.
  - **Model** – Use the drop-down to select a model.

- **Camera Network Setup**
  - **IP Address** – Enter the IP address of the IP camera.
  - **Port** – Enter the port used.

**Why Change from Default Settings:** Each camera needs to be defined.

The first page of the camera configuration wizard requires that a camera name be entered. Select the make and model of the camera you are configuring and the IP address and Port that has been previously assigned to the camera. The IP address and port are set by using the camera manufacturers configuration software or through the use of the camera’s web browser interface.

**Camera Authentication Page**

**Importance of Page:** This page provides authentication, if needed.

**Fields:**
- **Username** – Enter a username, if needed.
- **Password** – Enter a password, if needed
- **Verify Password** – Re-enter the password for accuracy.

**Why Change from Default Settings:** If your camera requires authentication enter it on this page. If the camera has been configured to allow anonymous connections, leave the information blank.

The terminal uses the authentication information when connecting to the camera. Authentication information is setup in the camera by using the camera manufacturers configuration software or through the use of the camera’s web browser interface.

**Camera Model Options**

![Camera Model Options](image)

**Importance of Page:** This page allows additional camera configuration.

**Fields:**
- **Include Camera Options** – This checkbox shows addition options when checked.
- **Options** – The options shown vary by make and model of the camera hardware. Please see camera documentation for their help.

**Why Change from Default Settings:** The camera can controlled in finer detail.
Some cameras support additional configuration options. These options can be configured on this page. If you wish to use the default options then leave the **Include Camera Options** unchecked. The newly created camera will appear in the ThinManager tree as follows.
**IP Camera Group Configuration**

The camera group configuration wizard can be launched by right clicking on the **Cameras** branch of the ThinManager tree and selecting the **Add Camera Group** option.

![Add Camera Group Wizard](image_url)

Enter the Camera Group Name and select **Finish**. The Camera group will be shown in the ThinManager tree as follows.
Camera Group Tree View
IP Camera Administration

Once a camera is configured in ThinManager, the **Connect** tab can be used to connect to the camera and perform camera administration from ThinManager.

Camera Connect Tab

Camera log in information may be requested when using the connect tab. The authentication information entered during the camera configuration is not used when using the connect tab.