THINMANAGER®

LEARNING SERIES:

101 Problems that ThinManager Solves

ThinManager solutions to common pain-points in a high-tech industrial environment.

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Contents

High Availability

We need a cost effective yet straight forward solution for high availability.	ThinManager Redundancy: ThinManager offers mirrored and full redundancy licensing to ensure terminals can boot when one ThinManager server is unavailable. All editions of ThinManager support terminal server failover, which can be accomplished with as few as 2 terminal servers. No need for more complicated and expensive solutions.
We are worried about moving to remote desktop services because a server failure will impact many users.	Failover: ThinManager is designed to use multiple interchangeable servers so the terminals will switch to a backup if a server goes down. Use of multiple terminal servers/ remote desktop servers means that server failure doesn't cause production stops.
We want the applications to always be available. We don't want to lose production time from server failure.	Instant Failover: Instant Failover allows a terminal to run two sessions of the application so that the failure of one server will trigger an automatic hot swap to the backup.
PCs take several hours to replace when they fail.	Quick Replacement: ThinManager thin clients can be replaced in moments instead of hours. We provide a quick replacement without configuration changes
Remote Desktop Servers can become overloaded when a lot of users login at the same time.	Queuing: SmartSession load balancing uses Queuing to control the rate of connections to the server to prevent overwhelming the server. Queuing prevents a boot storm when new terminals load applications.
We need to use multiple Ethernet routes to prevent connectivity loss when a router fails.	Dual Ethernet Ports: The Redundant Ethernet module provides fault tolerant networking for thin clients with dual network ports.
We invested in Stratus hardware, therefore we do not need ThinManager Redundancy or terminal server failover.	Operating System Failure: Stratus provides great hardware availability but doesn't provide operating system availability. Using Stratus as a host for virtual machines is the ideal solution. ThinManager Redundancy and terminal server failover are still highly recommended with fault tolerant solutions like Stratus because these solutions do not protect against software failure. There will also be times when the ThinManager and/or terminal server will need to rebooted for maintenance.

Application Deployment

It is hard to control what applications the operator is running from the desktop.	AppLink: AppLink limits each session to a single application, giving the administrator an easy method to deploy applications.
We want to run several applications but don't want to give the user a desktop.	MultiSession: MultiSession allows you to run multiple applications for the thin client, each in their own session. They can be on the same server or a different server.
We don't want the operators to close applications and run other programs.	AppLink: AppLink is designed to re-spawn the application if is closed. The Key Block Module can prevent ALT+F4 from closing the application or from using CTRL+ALT+DEL to get the security window.
We need to deploy applications from different servers.	MultiSession: MultiSession lets you run applications from different servers or multiple applications from the same server, each in their own controlled session.
We need to increase visibility in our control room.	MultiMonitor: ThinManager supports thin clients with up to 5 monitors. These can be run as individual sessions or merged into larger sessions.
We have applications that use Citrix and applications that use Remote Desktop Services.	Protocols: Use either the RDP protocol, the ICA protocol, or both
We have virtualized our workstations and need a way to run them.	Virtual Workstations: ThinManager allows the virtual workstation to run on a managed thin client easing deployment and increasing control.
We are using to different HMIs that aren't compatible.	MultiSession: You can have specialized servers with different applications installed on different servers. These apps can be viewable on the same thin client.
We're worried about over loading a server when clients attach to them.	ThinManager SmartSession provides load balancing so the terminal starts a session on the server with the lightest load.
We need content to follow users, regardless of device being utilized.	TermSecure allows content to be delivered to a user irrespective of the device (PC, Thin Client, iOS and soon Android devices). The content will follow the user.
I want to prevent a "boot storm" when my thin clients are simultaneously booting after a power failure.	SmartSession performs queuing so terminals reconnect to terminal servers serially as opposed to in parallel.

When reverting to a VMWare snapshot of a terminal server, I would like my terminals to automatically reconnect once the snapshot is fully restored.	ThinManager's integration with the VMWare API allows ThinManager managed terminals to automatically reconnect to terminal servers once their snapshot has been restored.
Customer environment has a mixed set of sources that need sent to the thin client. IE, RDS, VMWare, Citrix, Workstations, etc.	ThinManager is able to bring in sessions from Workstations (Virtual or Physical), Remote Desktop Servers (Virtual or Physical), IP Cameras, and other Thin Client Terminals. No matter what virtualization technology is used, ThinManager can connect to the source and display sessions.
Customer needs to use Touch Screens at their thin client.	ThinManager provides the most robust and complete support for Touch Screens, all while still not requiring any storage media, OS, or other software installed at the thin client.
What happens if an application locks up?	Watchdog: You can launch the app with a Watchdog to kill locked up applications. ThinManager will automatically re-launch the program.

Security

It is hard to change group policies to control who has access to applications.	TermSecure: TermSecure makes it easy to grant or deny access to an application based on a group membership.
We want to give the user several programs without a desktop.	MultiSession: Use MultiSession to launch several sessions each with their own application or use batch file to launch multiple programs without a desktop.
We are worried about employees bringing viruses in on USB drives from home.	USB ports are inactive unless enabled by an administrator.
I need to block certain Windows keystrokes easily without complicated Group Policy.	Modules: The Key Block module lets you block common key combinations. The Single Key Block module lets you block any combination.
We want to limit access to applications based on job description.	TermSecure: TermSecure limits access to application to those with permission. Applications can be hidden unless the user has membership in group with the right permissions. It is easy to manage permissions and membership in the centralized ThinManager interface.

We want people to use ThinManager but not have all the features.	ThinManager can give different levels of administrative functions to different Windows groups with ThinManager Security Groups.
We'd like to use our HID ID cards for user credentials.	TermSecure: HID card readers can be incorporated into ThinManager to provide secure logins.
We want some users to be able to access their applications on the floor.	TermSecure: TermSecure allows a user to access their personal applications from anywhere on the network.
We want to use a biometric device for security.	TermSecure: ThinManager supports the DigitalPersona UareU Fingerprint reader.
We would like to use HID protocol badges or biometrics to deliver content.	TermSecure: ThinManager supports PC Prox readers from RFIdeas as well as finger print scanners from Digital Persona enabling HID protocol cards and/or fingerprints to be associated with TermSecure users.

System Control

It would be nice to control the terminals from a central location.	Central Control: ThinManager controls the terminal's configuration from a central location. Once a terminal is running an administrator shouldn't have to touch the hardware again.
It would be nice to see what all of the operator stations are doing.	Shadowing: You can shadow terminals from ThinManager. This is the output from the terminal hardware, not the image running on the server.
We want operators to shadow other operators.	Shadowing: You can shadow a terminal from a terminal with a ThinManager terminal display client.
We want to limit what terminals are shadowed.	Shadowing: You can create a list of terminals to shadow, shadow a group of terminals, or turn shadowing off for a terminal.
It would be nice to know when a server goes down, the configuration changes, or updates are applied.	Alerts: ThinManager can send event-based email alerts or messages to specific terminals.
It would be nice to be able to stop a terminal for a period of time.	Disable: Terminals can be disabled from a central location with ThinManager.
It would be nice to manage terminals in groups instead of individually.	Terminal Groups: Terminals can be put into nested groups for organization and configuration.

We don't want a remote user to press buttons on a shadowed terminal.	Shadowing: Shadowing can be set to interactive or view-only.
It would be nice to see all our remote sites from one location.	Remote Access: Deploy to war room with a thin client for each remote location connecting over the WAN to remote terminal servers. This allows headquarters to have a real time view of each remote location.
It would be nice to manage ThinManager from a remote server.	Remote Access: You can connect a local ThinManager to a remote ThinManager if you have the network connections and the right permissions. This allows an administrator at the headquarters to view, shadow, and configure the remote thin clients.
We'd like to centrally monitor all of the HMIs.	Shadowing: Terminal to Terminal shadowing makes it easy to shadow any terminal in your environment from another terminal – interactively, or non-interactively.
We would like to use the same HID protocol badges and/or biometrics to login to our HMI platform.	Using the ThinManager ActiveX Control, user login events can be fired in the HMI natively, allowing an associated HMI login to programmatically take place.
We want to reduce the amount of re-validation required in our regulated environment when performing upgrades.	Firmware: ThinManager provides the ability to lock in the firmware level at the terminals even after ThinManager has been upgraded.
We'd like to see what all the terminals on the plant floor are doing.	Shadowing: You can shadow any terminal from ThinManager allowing you to see anywhere in your system. You can also set up Terminal to Terminal shadowing.

System Maintenance

We want an easy method to deploy the system.	Wizards: Wizards provide script-less configuration.
We want to use virtual servers.	Virtualization: ThinManager supports virtualization of terminal servers.
We want a minimal amount of upkeep on the terminals.	Hardware: ThinManager uses diskless thin clients without embedded OS.
We don't like flashing the embedded chips to update the thin client.	Updates: ThinManager Ready thin clients don't require flashing for firmware updates, just install new firmware in ThinManager. The new firmware will load when the thin client is rebooted.

We want a quick replacement of terminals.	Replacement: Replacement takes moments, not hours.
We are worried that losing a server will stop production.	Failover: Multiple terminal servers/remote desktop servers and failover allows you to take servers off line one at a time without stopping production.
We are worried about patching a server will interfere with production.	Failover: Use of multiple terminal servers/ remote desktop servers means that servers can be taken off line one at a time for patching and updating without causing production stops.
We want to use virtual desktops in our system.	Virtualization: Deploy virtual desktops to thin clients with centralize control and/or industrial hardware.
We want to use VMware ESXi servers for virtualization.	Virtualization: ThinManager has VMware vSphere integration to allow power options and snapshots from ThinManager.
We want to back up our configuration.	Backups: Automated backup of configuration database.
We want an easy management console.	Centralization: At-a-glance management using the ThinManager tree.
We want an easy-to-use program.	Installation: ThinManager has simple installation and a light overhead.
We want regular status reports.	ThinManager has automated report generation.
We want easy methods to make mass changes.	Terminal Groups: Terminal Groups allow quicker configuration by using group settings.
We want to minimize the handling of terminals.	Simplification: Once a piece of hardware is associated with a configuration the administrator doesn't have to touch that hardware again but can make all changes in the centralized ThinManager console.
We don't want our hardware to become out dated or obsolete.	Firmware: Older thin clients can run the legacy firmware while newer terminals can run the latest firmware.

I want to reduce the number of operating systems that require support.	Simplification: Each deployment of a thin client eliminates an operating system requiring support (unlike VDI solutions).
I want to reduce the amount of expensive disk storage required by virtual desktops.	Simplification: Eliminating or reducing the number of operating systems running on expensive SAN storage can be easily accomplished with ThinManager.
We are commissioning a new line with parts from different OEMs. Each OEM is delivering not only a unique HMI, but using a different HMI platform. We would like to see all of the HMI applications from anywhere on the line.	Shadowing: MultiSession and/or Terminal to Terminal Shadowing simplify increasing your visualization on the plant floor without changing the original HMI application(s).
Our Control Room is a mess. We have countless keyboards and mice to control numerous PCs.	MultiMonitor: MultiMonitor and the Shared Keyboard and Mouse module can greatly simplify control room deployments enabling a single keyboard and mouse to control a wall of displays.
Hard drives fail on operator stations and require hours for replacement	Replacement: ThinManager uses thin client technology that runs the operator stations on diskless hardware. Replacement takes minutes, not hours

Hardware

We want to have options for different brands of thin clients.	Hardware: ThinManager supports both ThinManager Ready thin clients with a ThinManager BIOS and PXE Boot generic thin clients.
We have PCs we'd like to control and manage.	Simplification: Use WinTMC to convert a PC to a managed client.
We want the control room to have two or more monitors.	MultiMonitor: ThinManager supports hardware with up to 5 video ports for multiple monitor thin clients.
We would like to convert single monitor thin clients to MultiMonitor thin clients.	MultiMonitor: ThinManager supports a number of USB-to-VGA/DVI cards.
We want to have long lasting hardware.	Hardware: ThinManager thin clients have a long life cycle because they have a limited function of displaying the session graphics. You update the server and not the thin client to increase performance.

We want easy control of access to applications on PCs.	Simplification: WinTMC can be used to lock down a PC and limit user changes to those made by an administrator in ThinManager.
We want versatility in running multiple monitors.	MultiMonitor: MultiMonitor can be run with each monitor is a single desktop or several monitors can be merged to larger desktops.
We have a critical process that requires redundant Ethernet.	Hardware: The Redundant Ethernet Module allows terminals to connect to 2 different Ethernet ports. If one fails, the terminal will automatically failover to the 2nd port.
Our company is in the midst of a green initiative, reducing power requirements across the board.	Energy: Thin clients operate at a fraction of the power required by a workstation (less than 15W compared to 85W). This translates into real savings each year, while reducing the carbon footprint of each site. In addition, this clients emit far less heat and therefore require less cooling.
We understand the benefits of thin client technology, but are not ready to replace all of the PCs in our environment yet.	Hardware: ThinManager is very much a transitional technology, offering solutions to mixed environments. Some PCs can be PXE booted and therefore treated as any other thin client. In this case, the hard drive can be removed to reduce the number of OSs to support. Otherwise, the WinTMC Windows based application can provide terminal emulation within Windows.
Facility environment requires the use of industrial hardware.	ThinManager is able to provide connectivity to fan-less, industrial hardware, and STILL have no storage media, OS, or other software installed on the device.
Customer needs to allow multiple users on one thin client, at the same time.	ThinManager MultiStation: A multimonitor thin client be converted to a multi-user unit by adding keyboards and mice to the hardware and checking a MultiStation checkbox.

ThinManager Features

We are planning on using a non-US keyboard layout.	Keyboard Module: ThinManager International keyboard module has international keyboard support.
We would like to add cameras to the operator's view.	IP camera: ThinManager provides easy IP camera integration.
We need to run servers in different time zones than the clients.	Time zone redirection allows clients to display local time when servers are in a different time zone.

We want to use PXE boot terminals but don't want to configure individual IP addresses.	Simplification: The ThinManager PXE server can use an existing DHCP server or be configured to pass out the IP addresses.
I want to alternate between the 2 presentations every 5 minutes – without having the operator manually have to switch between the sessions, or enter into Tile mode.	MultiSession: MultiSession screen saver allows the automatic cycling of sessions at set intervals.
I want the operator to be able to see all of their sessions at once	Tiling: Tiling allows a terminal to display a thumbnail of each session.
I need to use 12 monitors	Hardware: Share Keyboard allows an operator to tie thin clients together with a single keyboard and mouse. Use three 4-monitor MultiMonitor thin clients and Share Keyboard and Mouse to give 12 monitors.
We would like to take advantage of the second network port.	Hardware: The Second Network Module allows dual network cards to be used with different subnets once the terminal is booted.
We want to use USB devices.	Hardware: Although USB ports aren't mounted by default, hardware that uses the USB keyboard wedge method works without additional configuration.
We would like to monitor a number of terminals at the same time.	Tiling: Multiple shadows can be applied to a single terminal and tiled.
We would like to display an IP camera overlay when an alarm in our HMI occurs.	Cameras: ThinManager supports Motion JPEG and RTSP IP Cameras. Camera images can be overlaid atop any DisplayClient. The visibility of that overlay can be controlled programmatically using the TermMon ActiveX control.
We have a control room and would like to be able to easily move content from one screen to another	MultiMonitor: MultiMonitor makes it easy to apply content to multiple monitors. Content can be moved from one monitor to another, anchored so it cannot be moved, or protected so nothing can be moved atop it.

Industrial Components

The computer enclosures on the plant floor vibrate and are hot.	Hardware: ThinManager supports industrial hardware that can handle high temperatures (60 C) and don't have a hard drive that is sensitive to vibration.

We have a variety of touch screen makes, not just one brand.	Touch Screens: Many touch screen are supported, it is easy to swap touch screen drivers, and support for multiple touch screens when using multiple monitors.
We can't clean our touch screens because the screen is active when wiping.	Touch Screens: ThinManager has a touch screen clean time that temporarily disables the touch screen to allow cleaning.
We need to initiate calibration of our touch screen from the control room.	Touch Screens: ThinManager has six ways to initiate calibration including from the centralized ThinManager, from the terminal, or at a regularly scheduled time.
We have an RS232 instrument whose data we would like to display within our HMI.	Hardware: The RDP Serial Port Redirection module will map the client ports to the session, making them available to your applications.
We have touchscreens in our environment and need a simple way to switch between multiple DisplayClients. The screen selector is not an option because it overlays the alarm banner in our HMIs.	Tiling: Tiling mode can be configured on right click. Several of our touchscreen drivers support a configurable touch and hold simulated right click.
Facility environment requires the use of thin clients rated for explosive environment.	Simplification: ThinManager is able to provide connectivity to rated thin client hardware, and still have no storage media, OS, or other software installed on the device.

Mobility & ThinManager Relevance

Foremen need to access the HMI from anywhere.	iTMC: The iTMC client allows you to use an iPad as a Windows terminal. You can port any Windows app to the iPad and control it through ThinManager. Android TMC: (2015) Use an Android device as a Windows terminal.
We have Windows apps we want to be mobile.	iTMC: ThinManager allows you to deploy Windows apps to iPads with iTMC.
Our maintenance staff needs to provide support from anywhere in the plant.	iTMC: The iTMC iOS application can be used to login manually to any location and perform an interactive or non-interactive shadow to provide remote support from an IOS device.

We would like to deliver HMI content on the plant floor but have safety concerns.	Relevance: ThinManager Relevance delivers location-based content, enabling HMI applications to be mobile but only while in-sight of the process.
When we resolve to a process location using Relevance, we not only want to deliver the associated HMI application, we also want to open up the screen within the HMI that corresponds to the location.	ActiveX: The TermMon ActiveX control can be used to detect when a ThinManager location has changed and automatically open the correct HMI screen.
Our maintenance staff needs access to relevant applications and documentation throughout the day.	Relevance: ThinManager Relevance makes it simple to associate Quick Response Codes with content to be delivered to iOS devices. The QR Codes can then be located on control panels, instrumentation, etc. Upon scanning the QR Codes, relevant content is delivered to the iOS device.
Our maintenance staff requires mobile access to content while being inside hazardous locations.	iTMC: The iTMC application can be used with ThinManager Relevance and an intrinsically safe iPad case.
Our maintenance staff needs to support hardware that resides in control panels. With our stringent electrical safety regulations, they are unable to open the panel door with the power on.	Relevance: ThinManager Relevance can deliver content to a mobile device based on the scan of a QR code located on the electrical panel. Scanning a QR Code could automatically deliver the PLC Programming software to an iPad without having to open the panel. The same QR Code can deliver different content to different users (i.e., maybe one user gets a fully functional version of the PLC Code, while the other gets a read only version).
We would like to minimize the cost of expensive tethered terminals which includes an enclosure, terminal, touchscreen, and labor to run power and Ethernet.	Relevance: ThinManager Relevance can reduce the number of tethered terminals by delivering location based content to a mobile device in a safe and secure manner.
We would prefer not to deliver a desktop to our terminals.	This is the primary role of VDI to deliver virtualized desktops in the simplest way possible. VMWare View and Citrix are both excellent tools for delivering desktops – but desktop management still exists. With ThinManager and terminal services, the number of desktops and Operating Systems is greatly reduced, if not eliminated entirely. Application Link makes it simple to deliver a single application to a terminal without opening up the Pandora's Box of a desktop.

Simple troubleshooting efforts require multiple people on the plant floor – typically an operator at the HMI and a maintenance member at the process equipment to perform visual inspection.	Relevance: ThinManager Relevance enables maintenance staff to transfer applications from tethered HMIs, thereby reducing the number of personnel required for troubleshooting process equipment.
Mobile security needs to recognize the device location.	Relevance: ThinManager Relevance allows you to control content delivered to the device based on location. Additionally, it allows you to control security by sending that location information to the running application.
Mobile operators need to be able to drive location specific data to their device.	Relevance: ThinManager Relevance provides a system to organize and deliver your content to mobile devices based on the specific location of that device.
Mobile operators need an easy way to drive their HMI application screens based on specific location or equipment.	Relevance: ThinManager Relevance provides a method to send location information into an HMI application, where customers are then able to use scripting to drive the navigation of the application.