WHITE PAPER

February 2002

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Rapport Administrative Software for Compaq Thin Clients, v3.01

Abstract: Historically, network administrators managed clients by physically visiting users and their computers to reconfigure or update existing software—undermining the inherent advantages of the network. Using *Rapport*TM Administrative Software for Compaq Thin Clients, v3.01, administrators can now centrally manage a complete Compaq Thin Client network from one management server using the familiar Microsoft Windows Explorer interface.

This paper discusses the features and benefits of the Rapport Administrative Software for Compaq Thin Clients, v3.01.

This paper also identifies the hardware, software, and knowledge base required for the successful installation of Rapport as well as guidelines to ensure proper installation of the application.

Appendix B highlights the updates and enhancements for Rapport v3.01.

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Rapport Administrative Software for Compaq Thin Clients, v3.01

First Edition (February 2002) Document Part Number 157P-1201C-WWEN

INTRODUCTION

Rapport Administrative Software for Compaq Thin Clients, v3.01, is an intuitive graphic management tool that enables network administrators to control and upgrade Compaq Thin Clients with minimum time and effort.

Features

Features of the software include:

- IP-based discovery
- Deletion of old license keys through License Key Wizard
- Improved typical and custom installs
- Centralized control over all Compaq Thin Clients
- Scaling up to tens of thousands of devices
- Configuration and update of Thin Client settings
- Distribution of software and firmware
- Simultaneous scheduling of software and client configuration updates
- Flexible grouping of Thin Clients
- Software, hardware, and usage tracking through asset management and reporting
- Intuitive graphical user interface (GUI) through Microsoft Management console (MMC)
- Integration Virtual Network Computing (VNC) for remote shadowing (available for Microsoft Windows NT Embedded (NTe) devices only)

Benefits

Benefits of the software include:

- The computer support team never needs to touch a Thin Client again to add, delete, or change software and configuration.
- The administrator can manage thousands of Thin Clients across multiple, geographically disparate networks.
- The network administrator can remotely detect and reset client network settings.
- The administrator can install new versions of client software from a central site.
- The administrator can schedule software and configuration updates to occur at any time to avoid disturbing users.
- The administrator can control device configurations according to departmental responsibilities through grouping.
- The management team can track hardware, software, and device usage through logging and reporting features.
- Administrators can learn to use Thin Client management quickly with the simple GUI.
- The support team can remotely view users' desktops, enabling simplified training and support.

Rapport Versions

Rapport is offered in two versions:

- Workgroup—This version allows customer access to basic management and total cost of ownership (TCO) benefits on up to 1500 Compaq Thin Clients.
- Enterprise—Enterprise is available in two versions: Seat and Site. Enterprise Seat is
 recommended for large environments with between 1,500 and 8,000 users. Enterprise Site
 is recommended for environments with greater than 8,000 users. You can upgrade from the
 Workgroup Edition to either an Enterprise Seat or Enterprise Site license.

Table 1 provides a comparison between the Workgroup and Enterprise versions.

Table 1. Workgroup and Enterprise Comparison
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Primary Feature Differences	Rapport Workgroup	Rapport Enterprise		
Hierarchy groupings	3	3		
Clients that can be reflashed or updated simultaneously	5	20		
Ability to schedule updates at various times	Limited	Advanced		
Ability to automatically confirm image and update clients as necessary	Limited	Advanced		
Reporting and database management of clients, their images, and updates	Limited	Advanced		

Maintenance/upgrade packages are available that provide support and entitle you to software enhancements and bug fixes. Maintenance/upgrade packages must be purchased at the same time as the purchase of Enterprise licenses and within 90 days of acquiring a copy of Workgroup.

Power Functionality

Updating a client's software configuration can be accomplished by dragging and dropping configuration features. The Rapport Windows Explorer Interface enables powerful client management functionality with just a few clicks of the mouse.

Rapport empowers administrators to:

- Manage clients on any number of subnets from any Microsoft Windows NT- or Microsoft Windows 2000-equipped workstation on the network.
- Achieve immediate or scheduled software distribution.
- Distribute complete client images through built-in client utilities.
- Group clients according to the organizational structure, such as geographic location, department, and so on.
- Customize client software and settings using the Rapport innovative scripting language.

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Familiar Windows Explorer Interface

The Rapport user interface is an MMC snap-in that provides the look and feel of Windows Explorer. Managing one or more client networks is as easy as file management on a PC. Administrators can transfer complete applications, configuration settings, or even entire client images using the familiar Windows Explorer tree control while maintaining a comprehensive view of each client on the network.

Rapport allows administrators to organize clients into a user-configurable hierarchy of groups. For example, the hierarchy can be defined such that all clients in the Sales department on the second floor of the Houston office running Windows NT Embedded are grouped together. Grouping greatly simplifies tasks and report generation. Also, Rapport is easy to learn because wizards quickly and easily guide administrators through device management tasks.

Complete Device Manageability

Rapport provides administrators with:

- **Complete Client Reconfiguration**—Rapport guarantees fast and reliable reconfiguration of a client's entire flash file system. With the powerful yet easy-to-use Rapport scripting language, administrators can simply re-image software from a central location on the network.
- Fast Operating Systems Deployment—Rapport allows immediate operating system deployment.
- Centralized Device Management—Rapport provides access to local and remote client information through one or more SQL databases. Rapport uses distributed software repositories, thus reducing network traffic.
- Extensible Tool-building Capabilities through MMC—By integrating Rapport with other snap-ins, administrators can create MMC tools that enhance device management functionality (such as individual Rapport managers, anti-virus software, asset management, fault and performance tools, and so forth).

DEVICE MANAGEMENT USING RAPPORT

Rapport delegates client management tools among five information managers. Each Rapport manager allows administrators to accomplish various management tasks, access specific client information, and track client update activities.

Client Manager

An administrator uses the Client Manager to organize, manage, and control clients. Client Manager functionality includes:

- Organizing clients automatically
- Organizing clients into groups and hierarchies
- Creating different views of client groups and hierarchies
- Retrieving client information, such as:
 - Hardware and software configuration
 - Configuration history
 - Log history
 - Diagnostics
- Using Quick Commands, such as:
 - Refreshing client information
 - Remotely shadowing clients with VNC
 - Changing client information (such as the computer name)
 - Rebooting a client
 - Shutting down a client
 - Waking a client (Wake-On-LAN)

Software Manager

An administrator uses the Software Manager to create, organize, store, and distribute software to clients. Software Manager functionality includes:

- Adding software packages to the Master Software Repository
- Distributing a drag-and-drop software package to multiple clients
- Distributing immediate or scheduled software

Update Manager

An administrator uses the Update Manager to track client updates that are scheduled for distribution. Through Update Manager the administrator can reschedule or delete pending updates.

Report Manager

An administrator uses Report Manager to easily create, save, and print the following types of reports:

- Client listings
- Log reports

Configuration Manager

The administrator uses Configuration Manager to:

- Organize and edit client group types.
- Create new and edit existing client views.
- Set up default client software settings.
- Manage Rapport licenses.
- Configure Rapport preferences.
- Define remote software repository locations and assign them to subnets (Enterprise Edition only).
- Create and edit subnets.
- Configure permissions for Rapport users.

KNOWLEDGE BASE AND NETWORK ACCESS REQUIREMENTS

The following technical knowledge and network privileges are needed to properly install the Rapport Administrative Software:

- A working knowledge of computer networks, database administration, network maintenance, and support
- A firm understanding of TCP/IP and DHCP
- Domain administrator access (for example, you should be able to set up and configure user accounts on the network)

HARDWARE REQUIREMENTS

Rapport and related software packages require a minimum of 200 MB of server hard disk space. If MSDE or SQL Server and an FTP Server are not installed, an additional 100 MB of disk space is needed.

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SOFTWARE REQUIREMENTS

- Rapport is supported on the following operating systems:
 - Windows NT 4.0 Server with Service Pack 5 or later
 - Windows NT 4.0 Terminal Server with Service Pack 5 or later
 - Windows NT 4.0 Workstation with Service Pack 5 or later
 - Windows 2000 Advanced Server with Service Pack 1 or later
 - Windows 2000 Server with Service Pack 1 or later
 - Windows 2000 Professional with Service Pack 1 or later

NOTE: Windows 2000 Datacenter Server is not supported.

- Rapport must be installed on an NTFS drive.
- The following applications must be installed before installing Rapport:
 - The SNMP Service must be installed and running. Microsoft recommends updating your service pack after installing any services.
 - For Windows NT 4.0 Terminal Server, either Microsoft-SQL Server or Microsoft Data Engine (MSDE) must be installed. MSDE is not installed as part of Rapport, but MSDE 7 is provided on the Rapport Administrative Software for Compaq Thin Clients CD in the *Applications* folder. For all other supported operating systems, Rapport installs MSDE 2000, which is also available on the Rapport Administrative Software for Compaq Thin Clients CD in the *Applications* folder.

NOTE: MSDE 2000 does not work on Windows NT 4.0 Terminal Server.

 An FTP Server such as Microsoft Internet Information Services (IIS) must be installed. If you do not have IIS installed, Rapport prompts you for your operating system CD during the installation process, except when running Windows NT 4.0 Workstation.

NOTE: Do not install Rapport where a TFTP service or PXE/Proxy service is already installed.

INSTALLATION METHODS

Rapport offers two installation methods: Typical and Custom. A Custom installation allows for more flexibility in configuring the installation of Rapport. To determine which install method best fits your business needs, see Table 2.

Table 2. Typical and Custom Install Comparison

	Typical Install	Custom Install		
Rapport installation	All components are installed on the same system.	For the Workgroup Edition, all components are installed on the same system. For the Enterprise Edition, all components can be installed on the same system or individual components can be installed on separate systems.		
Rapport components	 Rapport GUI 	 Rapport GUI 		
	Shared Software RepositoryRapport Service	 Shared Software Repository 		
	 Import Local Database 	 Rapport Service 		
		 Import Local Database 		
Rapport user account	The user account is created automatically.	The user account is created automatically or you can manually create your own.		
FTP Server	Rapport detects whether IIS FTP Server is installed.	Rapport detects whether IIS FTP Server is installed.		
	If IIS FTP Server is installed, Rapport automatically configures the FTP Server.	If IIS is installed, Rapport gives you the option to select IIS FTP Server or select a different existing FTP Server.		
	If IIS is not installed, Rapport prompts you to install IIS and restart the Rapport installation.	If IIS is not installed, Rapport prompts you to install IIS or use another existing FTP Server.		
		NOTE: Rapport configures IIS only.		

:

	Typical Install	Custom Install		
SQL Server	Rapport determines if SQL Server is installed.	Rapport determines if SQL Server is installed.		
	If SQL Server is installed, Rapport prompts you to select SQL Server or SQL Server 2000 and installs your selection and a Rapport instance of SQL Server 2000 called "RapportDB."	If SQL Server is installed, Rapport prompts you to install a Rapport instance of SQL Server 2000 called "RapportDB" or use an existing SQL Server instance.		
	If SQL Server is not installed, Rapport automatically installs a Rapport instance of SQL Server 2000 called "RapportDB."	NOTE: The SQL Server Administrator's user name and password is required. If SQL Server is not installed,		
	NOTE: To use an existing SQL Server instance, you must use Custom Install.	Rapport automatically installs a Rapport instance of SQL Server 2000 called "RapportDB."		

Table 2. Typical and Custom Install Comparison (Continued)

THIRD-PARTY SOFTWARE CONFIGURATION

During the installation of Rapport, third-party software must be installed and configured for Rapport to function properly. Tables 3 and 4 identify the third-party software that Rapport automatically configures during a Typical or Custom install.

Typical Install — Configuration								
		F	TP	MDAC	MS SQL Database			
	IIS		Personal Web Server		2.6	MSDE 2000		
	Install	Config	Install	Config	Install	Install	Config	
Windows NT 4.0 Workstation	No	No	Yes	Yes	Yes	Yes	Yes	
Windows NT 4.0 Server	No	Yes	No	No	Yes	Yes	Yes	
Windows NT 4.0 Terminal Server	No	No	No	No	No	No	No	
Windows 2000 Professional Server, and Advanced Server	Yes*	Yes	No	No	Yes	Yes	Yes	

Table 3. Typical Install—Configuration

* **Note:** When installing on Windows 2000 platforms, Rapport prompts you to install IIS if it is not detected. After installing IIS, you must restart the Rapport installation.

NOTE: A Typical install on Windows NT 4.0 Terminal Server is not allowed.

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Table 4. Custom Install—Configuration

	Custo	m Inst	all — C	onfigu	ration			
FTP			MDAC	Database				
IIS		Personal Web Server		2.6	MSDE 2000		SQL Server	
Install	Config	Install	Config	Install	Install	Config	Install	Config
No	No	Yes	Yes	Yes	Yes	Yes	No	Yes
No	Yes	No	No	Yes	Yes	Yes	No	Yes
No	Yes	No	No	No	No	No	No	Yes
Yes*	Yes	No	No	Yes	Yes	Yes	No	Yes
	Install No No No	F IIS Install Config No No No Yes No Yes	FTP IIS Person Install Config Install No No Yes No Yes No No Yes No	FTP IIS Personal Web Server Install Config Install Config No No Yes Yes No Yes No No No Yes No No No Yes No No	FTP MDAC IIS Personal Web Install Config Install Config No No Yes Yes No Yes	IIS Personal Web Server 2.6 MSDE Install Config Install Config Install No No Yes Yes Yes No Yes No No Yes No Yes No No Yes No Yes No No No No Yes No No No	FTP MDAC Data IIS Personal Web 2.6 MSDE 2000 Install Config Install Config Install Config No No Yes Yes Yes Yes No Yes No No No No	FTP MDAC Database IIS Personal Web 2.6 MSDE 2000 SQL Install Config Install Config Install Config Install No No Yes Yes Yes Yes Yes No No Yes No No Yes Yes Yes No No Yes No No Yes Yes Yes No No Yes No No Yes Yes No No

* **Note:** When installing on Windows 2000 platforms, Rapport prompts you to install IIS if it is not detected. After installing IIS, you must restart the Rapport installation.

INSTALLATION GUIDELINES

After you have met the previous requirements, make sure you meet the following guidelines before beginning the installation of Rapport:

- Close all persistent drive mappings to the system on which Rapport will be installed and reboot the system. This action allows Rapport to use the proper security tokens and prevents any credential conflicts during the Rapport installation process.
- Have the following information available:
 - The user name and password Rapport will use to log on to the FTP Server
 - The FTP root folder that the Rapport user logs on to
 - The FTP Server name you are using for Rapport
 - The SQL Server user name and password
 - The SQL Server *Data* folder location
 - The computer name of the system Rapport will be installed on

CAUTION: The Rapport installation program must REBOOT the system to successfully complete the installation process. If this is a production server, be sure that no other applications or users will be affected by the reboot.

Installation notes:

- If you are installing Rapport on Windows NT Workstation 4.0 or Windows 2000 Professional, you are limited to 10 connections (for example, re-imaging clients simultaneously, using multiple Rapport GUIs, and so on). If you exceed this limit you will receive a share connection error. To obtain a maximum of 254 concurrent connections, you must install Rapport on Windows NT Server 4.0 or Windows 2000 Server.
- If you are installing Rapport on Windows NT Terminal Server 4.0, you must have Microsoft Data Access Components (MDAC) version 2.6 or later installed.
 MDAC 2.6 is provided in the *Applications* folder on the Rapport Administrative Software for Compaq Thin Clients CD. Alternatively, you can download it from <u>http://www.microsoft.com/Data</u>. For all other operating systems, Rapport installs MDAC 2.6 if it does not find an existing MDAC installation or an earlier version.
- Log on to the target domain as administrator and then install Rapport on that domain. For security reasons, Rapport must be installed on a domain.

NOTE: Do **not** install Rapport on a primary domain controller (PDC). If a domain is not available, install Rapport and then contact technical support for information on how to properly configure Rapport.

- Enter the Rapport Sale Key when prompted; otherwise, use the default Workgroup Sale Key. The Rapport Sale Key is provided with your Rapport software.
- Install the Visual Basic Scripting Host (Windows Script Host) provided on the Rapport Administrative Software for Compaq Thin Clients CD in the *Applications* folder. Some systems may already have this application installed as a standard component of Internet Explorer.

INSTALLATION

To install the Rapport Administrative Software for Compaq Thin Clients:

- 1. Verify you have read the previously stated installation guidelines.
- 2. Insert the Rapport Administrative Software for Compaq Thin Clients CD.
- 3. Select Start, then Run.
- 4. In the available field, type X:\Setup.exe, where X is the letter of the CD-ROM drive.
- 5. Click OK.
- 6. Follow the on-screen instructions.

POST-INSTALLATION

After Rapport is successfully installed, if you have Windows NTe-based clients, you might need to upgrade each Windows NTe client with the latest Rapport agent (5.0.0.12 or later). Visit <u>http://www.compaq.com/support</u> to check the availability of the latest agent.

If a newer agent is available, then use Rapport to register the agent software package and distribute it to each client.

Windows NTe Agent Compatibility

Windows NTe Agents prior to the Rapport v3.01 agent (5.0.0.12) have limited functionality when used with Rapport v3.01. There is enough functionality present on the earlier agents, however, to upgrade them to the latest 5.0.0.12 agent.

Agents prior to any 5.0.x.x version use a different file transfer scheme than the new agent and they do not implement the **XCopy (XC)** command, only **Send File (SF)**. Agents using the old **Send File** transfer scheme send files incredibly slowly. Moreover, the old file transfer system will not work with remote repositories.

Rapport v3.00 agents (5.0.0.x) use FTP; however, the **XCopy** functionality does **not** work. This problem is fixed with the Rapport v3.01 release of the agent (5.0.0.12).

When using Rapport v3.01 with embedded Windows NT agents, you should upgrade any earlier agents to version 5.0.0.12 or later.

License Activation

To properly license Rapport, you must activate the Rapport license after installation. During the installation process, Rapport uses the entered Sale Key to generate an Unactivated Key.

To obtain an activation code, visit

<u>http://www.compaq.com/products/thinclients/rapportactivation.html</u> and enter your contact information, the Sale Key, and the Unactivated Key generated by Rapport. The Activation Code will be sent to you via email. Use the Licensing Wizard to enter the Activation Code to properly license Rapport.

SUMMARY

The combination of Rapport Administrative Software for Compaq Thin Clients, v3.01, Compaq servers, and Compaq Thin Clients provides administrators with a powerful, complete Thin Client solution.

The ability to centrally manage your end users is vital to reducing TCO. Offering a feature-rich Thin Client management tool such as Rapport adds additional value to the Compaq Thin Client solution.

APPENDIX A: UNDERSTANDING RAPPORT SQL DATABASES

All of the information Rapport manages (client information, software packages, subnet locations, logs, and so on) is located in an SQL-compliant database. Each database included in the Rapport snap-in tree control contains the five Rapport image managers: Client Manager, Software Manager, Update Manager, Report Manager, and Configuration Manager.

Rapport Database Facts

- The Rapport database is an ODBC-compliant database.
- You must have either Microsoft SQL Server or MSDE installed before installing Rapport. MSDE is not installed as part of Rapport but is provided on the Rapport Administrative Software for Compaq Thin Clients CD.
- Multiple databases are only available with Rapport Enterprise Edition. You can configure
 multiple Rapport databases in a variety of ways to suit your company's needs. To configure
 multiple databases, you must first install the database with its Rapport components on one or
 more computers located on the network.
- The number of allowable Rapport databases is determined by the Rapport edition installed:
 - Rapport Workgroup Edition allows one local SQL database (either MS-SQL Server or MSDE). This database is configured during the Rapport install and resides on the same system as the Rapport MMC GUI.
 - Rapport Enterprise Edition allows multiple remote SQL databases. Using the Rapport Administrative Software for Compaq Thin Clients CD, databases may be imported on one or more remote computers separate from the Rapport MMC GUI.

APPENDIX B: RAPPORT V3.01 UPDATES AND ENHANCEMENTS

This appendix contains a description of the Rapport updates from v3.00 to v3.01.

Update Service Fixes

Site License Support

The Rapport Update Service now supports license keys that allow an unlimited number of clients because the Rapport License Key Generator now generates site licenses.

Rapport Update Win2K Service Description

When trying to view service information using Rapport Update Service, the following message is no longer displayed: "Configuration Manager: the specified device instance handle does not correspond to a present device."

Management Type not Present in CLIENTS Table

If MGMTTYPE is blank in the CLIENTS table, the Rapport Update Service now assumes the type "AGENT." Previously the service reported an error and would not manage the client.

Changing a Client's IP Address Breaks Communication with the Client

The Rapport Update Service attempts communications with a client through its IP address. If this fails, the service attempts to reconcile the client's MAC address to an IP address and tries again.

Previously, if a client's IP address changed, Rapport would no longer communicate with the client.

Service Reports "Success" with Invalid Scripts

Previously, the Rapport **Update Service** was reporting "success" in a number of areas where it was actually failing because of an invalid script. The service received notification of these failures; however, it reported the script as successfully completing. Script failures are now reported properly by Rapport.

XC/SF Command

The XC command previously did not report a failure when trying to overwrite a file that was in use even though it had failed. It now reports this failure. XC/SF previously failed with "out of disk space" when there was plenty of room on the flash memory. This problem has also been resolved.

Default Client Configuration

The Rapport Update Service now restores default client configurations to clients in groups with default configurations when the user selects **Find New Clients** or **Find All Clients**.

Log History Tab Does Not Contain Failures

Previously, when an update failed, the **Log History** tab in a client's **Properties** did not have an error message or line number associated with the error. The field was simply blank. The **Log History** tab now contains update errors with a script line number to indicate where the update script failed.

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Elimination of Memory Leaks

The Rapport v3.00 Update Service contained memory leaks, which have been closed in Rapport v3.01 Update Service.

MGT Fixes

Wake-On-LAN

Rapport now always attempts to wake Windows CE clients before communicating with them. Windows CE units, when powered off, will release their IP address, and other units might take that IP address through DHCP. When these units are powered on again, they might have a different IP address that Rapport does not recognize. This situation causes problems in finding the Windows CE unit when attempting to run a script. The Wake-On-LAN (WOL) routine provides Rapport with the proper IP address to manage the Windows CE terminal.

Manually Adding Windows CE Clients

Previously when adding a Windows CE client manually, the Rapport Update Service could not communicate with the client. The Rapport Update Service can now communicate and manage a Windows CE client that has been manually added.

GUI Fixes

Quick GUI—Right-click Menu

Refresh Client Info has now been added to the right-click context menu of a client to prevent confusion with the **MMC** refresh menu item, which is next to **cut/copy/paste** items.

Logging Problem

When moving clients from one group to another the logging service no longer puts blanks in the log (e.g., "").

Change View—Right-click Menu

There is now a right-click context menu item on View nodes for Set current view.

Import Polling—Radio Buttons

Rapport now uses radio buttons instead of check boxes for Import Polling in Preferences.

Allows Reports to be Refreshed

Rapport log reports are no longer "cached" in the MMC console. Previously, when log items were archived and the user clicked **Refresh**, the items still remained even though they had been deleted out of the database. Now, when the user clicks **Refresh**, the log items do not remain, because they are no longer in the database.

Minimize Button for "Client Info"

You can now minimize and maximize a client **Property** window from that client's **Property** window. Previously, this was only possible from the Windows task bar and the Windows task manager.

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Deleting an Update DB Error

When trying to delete a scheduled update, whose status reports "Error," the following error message is displayed:

DELETE statement conflicted with column reference constraint 'FK_PENDING_SWPKGS.' The conflict occurred in database 'Rapport,' table 'PENDING,' column 'SW...

SQL error messages have been improved to provide a clearer meaning to the user.

Error Node for SW Repositories

Previously, when there was a problem connecting to a software repository (local or remote) the Rapport Update Service stopped and no mechanism was available in the GUI to allow correction of the software repository information. In Rapport v3.01, an error node displays in the MMC scope pane. The user can open this error node and correct the software repository information. The service is then refreshed.

Reboot Optional on Change Computer Information

When changing a client's information, the user is now prompted about whether they want to reboot the client. The client must reboot for the changes to take effect; however, the administrator might not want to interrupt the client user. Previously, the temporary script sent to the client contained an "RB" verb to reboot the client. Rapport now prompts the user before adding this line to the script.

Client Information Diagnostics Timeout Preference

Rapport now allows the timeout for gathering client information from a client to be set using the Rapport **Preferences** node. The timeout was previously fixed at 60 seconds (the current default setting).

Remote SW Repository—Continue Option

Rapport now allows users to continue if the Update Wizard is unable to synchronize the remote repository with the MASTER repository. The user is informed, however, that they will need to manually copy the files to the remote location for the update to be successful.

Preventing Invalid Sale Keys

The Rapport GUI now verifies the license key length and now also checks to make sure that the Sale Key is valid before asking the Rapport Update Service to generate an Unactivated License Key.

Set Software Package and Related Files to "Writable" After Register

Rapport now sets packages as "writable" when registering software packages from a CD. Previously, the packages were copied with the "read-only" flag set. This situation caused problems when the original package was copied and modified and for files which were sent down to a client and modified.

New Features

IP Range Walking

Many users do not want to open up UDP broadcast ports on their routers, but Rapport uses UDP broadcasts to discover clients. As an alternative, Rapport now introduces a way to "walk" a defined range of IP addresses and communicate with the clients directly. Using IP Range Walking eliminates the need to open UDP ports on the router. This fix applies to communications with both Windows CE devices and Windows NTe devices.

Automatic Deletion of Conflicting Licenses

The License Key Wizard now offers the user the option of automatically deleting conflicting licenses rather than forcing the user to do this manually before entering a new license. If, for example, Rapport has one Workgroup license and the user wants to enter an Enterprise license, the wizard offers to automatically delete the Workgroup licenses for them.

Rapport v3.01 Release Notes

Upgrading the Rapport Windows NTe Agent

Rapport v3.01 requires that the Windows NTe agent be updated to version 5.0.0.12 or later. Older agents can be updated with the *CompaqAgentUpdate* Rapport Software Package included on the Rapport Administrative Software for Compaq Thin Clients CD in the *Software Packages\New Agents* directory.

MGT Compatibility Issues with Compaq T1010 Thin Client Units with build289_32_3

Compaq T1010 Thin Client units should be upgraded to an image supported by Rapport. Note that the image name must correspond to the DOS 8.3 naming convention and end in *.img.* T1010 Thin Client units do not respond to WOL requests properly, so they must be powered up before sending scripts or Rapport will stop functioning.

Installing on FAT Drives

Rapport relies on the security model of NTFS to operate properly and should not be installed on drives formatted as FAT16 or FAT32. The installation will handle this scenario with non-IIS FTP servers; however, when installing on a FAT drive and using IIS, the Rapport user must manually be added to the shared *Software Repository* directory.

Rapport Software Packages—Naming and Headers

The following are rules required by Rapport software packages:

- All images need to have the Category field in the .rsp file Version header set equal to "CE Images" for Windows CE clients, "NTe Images" for Windows NTe clients, and "Xpe Images" for Windows XPe clients.
 - Windows CE images should have an additional header field called Use_PXE and it should be set equal to "no."

```
[Version]
Number=CE123456
Description=16Mb CE Image
OS=CE
Category= CE Images
ImageSize=16
Use_PXE=No
```

- All Rapport scripts should adhere to the following naming conventions:
 - The .rsp file name must match the corresponding script folder name.
 - For images, the script filename and folder names must not exceed eight characters in length and must match the ".*img*" file name for Windows XPe clients and ".*bin*" or ".*CPQ*" for Windows CE clients.



• For images, the **Number** field in the *.rsp* file header must match the Image Number reported by the client. If this is not done, then Default Client Configurations will work.

NOTE: The Image Number reported by the client is not modifiable and may be more than eight characters. Even though the **Number** field in the *.rsp* file header must match the Image Number reported by the client, these two do not have to match the *.img* file name. For example, the *N2010100* image shown may report back the Image Number shown. This Image Number then must match the **Number** field in the header for Default Client Configuration to work properly.

Rapport Software Packages—Xcopy (XC) Script Command

Currently there are two differing Xcopy (XC) implementations between v3.01 and v3.00 of Rapport. Rapport v3.01 introduces a change in the functionality of the XC command.

Rapport v3.00

This version introduces FTP for file transfers. In this version, the Rapport Update Service passes the file name, FTP address, user name, and password to the agent. The agent is then responsible for connecting to the FTP server and downloading the file. Although the responsibility for file transfer was removed from the Rapport Update Service, the service is still responsible for collecting the file names and paths for all the files to be transferred and transmitting them one at a time to the specific agent. Again, this version implemented XC as a set of multiple SF commands, because the Rapport Update Service must "know" which and how many files are to be transferred.

Rapport v3.01

This version introduces wildcards for the FTP transfer. The Rapport Update Service now has to pass only a single command to a specific agent. The agent then uses a tree copy method to download the files that match the wildcard mask. The responsibility of file transfers is completely removed from the Rapport Update Service, because the service no longer needs to verify the existence of any file.

Because only one defined message is available for transferring a file, whether by SF or XC, then the method for parsing the XC command line had to change. Rapport v3.00 implemented XC as a set of SF commands. Without creating a new message type, which would destroy all backward compatibility with the XC command, the only way the agent could differentiate between a tree copy and a file copy was by the presence of one or more of the wildcard characters ("*" and "?").

For example, in the Rapport Update Service before v3.00, in the command:

XC "<RegRoot>\program files" "c:\program files"

the first argument "<RegRoot>\program files" is assumed to be a directory.

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In v3.01, because the same message is used to indicate SF and XC commands, the first argument is interpreted as a file; therefore, the XC will fail. The proper syntax for the XC command is now:

XC "<RegRoot>\program files*" "c:\program files"

Although this is a deviation from the previously used syntax, it does allow for the full use of wildcards. An XC command can now be written as:

XC "<RegRoot>\Files\ABC?12??.D*" "c:\files"

Finally, the use of zero-byte files as directory placeholders is no longer needed, because the XC command in Rapport v3.01 creates an empty directory tree.

Rapport Software Packages—Quotes Around Arguments

Although Rapport v3.00 required quotes around script arguments, it did not enforce this requirement. Rapport v3.01 does enforce the use of quotes. Therefore, scripts that do not have quotes around arguments will fail if they are used with Rapport v3.01.

Rapport Software Packages—Line Numbers

When the Rapport Update Service reports an error on a specific script line, only lines with commands are counted. Blank lines and commented lines are no longer counted.

Rapport Configuration—Credentials Conflicts

Multiple connections to the same machine using different user names causes credentials conflicts in Windows, a limitation imposed by Windows. Rapport alerts you to this conflict and recommends closing multiple connections with the net use command. There may be cases, however, where one machine connects to another (using the existing login name) and the alert does not show up when typing "net use" in the command prompt window. In these cases, it might be necessary to reboot the machine before the connection is completely removed by Windows.

Rapport Configuration—Multiple Rapport Services

You cannot run multiple Rapport Update Services on the same network when managing Windows CE clients. Although it is possible to manage Windows NTe clients with multiple Rapport Update Services, as long as they manage different subnets, avoid running multiple Rapport Update Services on the same network.

Rapport Configuration—IIS FTP Setup

In some cases, clients cannot log in to the Rapport Software Repository (FTP site). Make sure the following conditions are met:

- IIS must not be set to Allow only anonymous connections under the Security Accounts tab, which is the default. Allowing only anonymous connections prevents clients from logging in to the FTP site. The Rapport install program offers to correct this and does not continue to install until it is corrected.
- By default the home directory for IIS FTP is set to *c:\inetpub\ftproot* (where *c* is the install drive). Windows CE clients cannot log in to the FTP site unless either:
 - The Local Path is changed under the IIS Properties, Home Directory tab to c:\inetpub\ftproot\Rapport, or
 - The Mgt.ini file in the Rapport Software Repository (c:\inetpub\ftproot\Rapport) is modified so that the following section reads as follows:

[FTP]

Path=\Rapport

In some cases Windows CE clients cannot log in to the FTP site unless they are made members of the Domain Users group in the Windows Security Account Manager.

Rapport Configuration—Subnets

To be able to manage clients, the subnets in which those clients reside must be defined in the Configuration Manager under the subnets node. IP ranges have been added to Rapport v3.01, but they do not preclude the need to define the subnets.

Rapport Licensing—Licensing Rule Changes

- Enterprise and Workgroup licenses cannot be mixed together.
- The last license in the License Manager cannot be deleted.