

# NEOWARE IMAGE MANAGER™

STREAMS OPERATING SYSTEMS AND APPLICATIONS TO BOTH PCS AND THIN CLIENTS WHILE IMPROVING MANAGEABILITY, ENHANCING SECURITY, AND LOWERING COSTS

With Neoware Image Manager, enterprises smoothly implement centralized on-demand computing and management for heterogeneous desktops.

Neoware Image Manager improves the security and management of enterprises' desktops by delivering applications and operating systems on-demand from your server to PCs or thin clients. Neoware Image Manager lowers the cost of both thin clients and PCs, while improving device and image management. By leveraging Neoware Image Manager's groundbreaking architecture, enterprises, large and small, can realize the benefits of server-based computing by achieving greater security, reliability, affordability, and manageability while extending the life of the desktop and lowering cost.

## NEXT GENERATION IMAGE MANAGEMENT

Get all of the software functionality of the latest operating systems from your older PCs, and from your thin clients by running full applications and OSs locally while using your server as a virtual disk drive. Enterprises gain the benefits of centralized operating system and application image management while receiving local on-demand access to Windows 2000, XP, XPe or XP Professional based configurations. The hard disk drives typically associated with PCs and flash memories associated with thin clients become unnecessary.

**Neoware Image Manager allows enterprises to solve image manageability issues and desktop upgradeability challenges such as thin client flash size constraints.**

## SOLVING YOUR MANAGEABILITY ISSUES

Neoware Image Manager solves expensive and time-consuming desktop manageability issues by enabling personal computers and thin clients to use shared, centralized storage, which eliminates the need for any local storage device such as a hard drive or flash memory. This ensures that data is centrally backed up and eliminates the need to perform on-site updates or software patches at individual desktops. With Neoware Image Manager, one single software image that contains the operating system, applications, and hardware drivers for multiple hardware platforms can be streamed on-demand to any personal computer or thin client – regardless of the device's hardware configuration – eliminating the need to manage dozens or hundreds of images as is required with other operating system deployment methods.

## FURTHER ENHANCE YOUR SECURITY

Neoware Image Manager enhances security by providing on-demand delivery of locked-down operating systems and application components from a server. Neoware Image Manager enables operating systems to be centrally managed, so that unauthorized local desktop changes can be eliminated. Personal computer and thin client users keep their personal configurations and settings, and their data remains unique and secure on the server.

## REDUCE TOTAL COST OF OWNERSHIP

Run Windows XP Embedded or Windows XP Professional on a thin client without any flash storage, eliminating one of the most costly hardware components of a thin client. This substantially reduces the cost of a thin client with Windows XP Embedded and eliminates future obsolescence, since the device can access unlimited storage on a server. In addition, being able to run a secured version of Windows XP on a diskless personal computer extends the life of PCs, which in turn reduces the total cost of ownership. Server-based image management virtually eliminates the ongoing administrative expenses of maintaining desktop software. As a result, Neoware Image Manager delivers substantial cost benefits, both up-front and on an ongoing basis.

## OPTIMIZE YOUR DESKTOPS

Centralization and virtualization of an image is optimal since one single image (containing hardware drivers, operating system and applications) is able to serve a host of desktops – PCs or thin clients – with heterogeneous hardware configurations! You have maximum flexibility and choice.

- Any application and operating system can be accessed on-demand on any thin client or PC
- Users maintain personal configuration: their data remains unique
- More graphic intensive applications like 3D, gaming, video and true multimedia are natively supported
- Storage processes can be consolidated
- Desktops and applications are highly secure and productive



## AMAZING NEW CAPABILITIES FOR THIN CLIENTS

Don't be limited by your thin client. You can run a robust image of Windows XPe or Windows XP Professional on a thin client without the limits imposed by flash size – a major advantage that further extends the useful life of thin clients. With Neoware Image Manager, thin clients can run flashless, which significantly reduces the cost.

- Thin clients can run Windows XPe without size limits
- Thin clients can also run Windows XP Professional
- The cost of thin clients is reduced

## SERVER-BASED COMPUTING BENEFITS EXTEND TO NETWORKED PCS

The ability to run a Windows XP Professional on an older PC extends the life of PCs. PC deployment and management still account for the major portion of IT infrastructure budgets. Neoware Image Manager addresses this major issue by providing the benefits of server-based computing to the PC desktop:

- By centrally managing your PCs, you install each OS image only one time for the entire network.
- Patches, upgrades and viruses are no longer daunting challenges; PCs can be re-purposed just by rebooting
- PCs run diskless while keeping their local computing power
- The diskless feature allows you to lower power consumption, heat generation and noise
- PCs without disks are more stable and secure

With Neoware Image Manager, PCs are more secure, reliable and manageable.

**With Neoware Image Manager older PCs and TCs become powerful desktops that extend the benefits of server-based computing**

**Secure, Reliable, Affordable, Manageable and Obsolete-free!**

**NEOWARE. WOULDN'T IT BE GREAT?**



# NEOWARE IMAGE MANAGER

## HOW DOES IT WORK?

With the server acting as a virtual hard disk drive, drivers, operating system and application become a single image on a server. Just turn on your PC or thin client and you immediately receive a complete preinstalled configuration.

**The image can be hosted on virtually any type of server. Multiple hardware configurations can boot from a single image, making management easy!**

**Additionally, desktops can run with different modes of operation (locked down unmodifiable mode versus user configurable mode for instance) while also sharing the same image on the server.**

## EASY TO USE

**Neoware Image Manager maximizes productivity by enabling advanced centralization features for all management tasks.**

With Neoware Image Manager you can easily manage multiple images from a graphical interface representing client desktops, groups of desktops and their related hard disk drive images ("volumes").

You may boot, manage and shut down your Neoware Image Manager locally, or remotely (from a station on your network for instance).

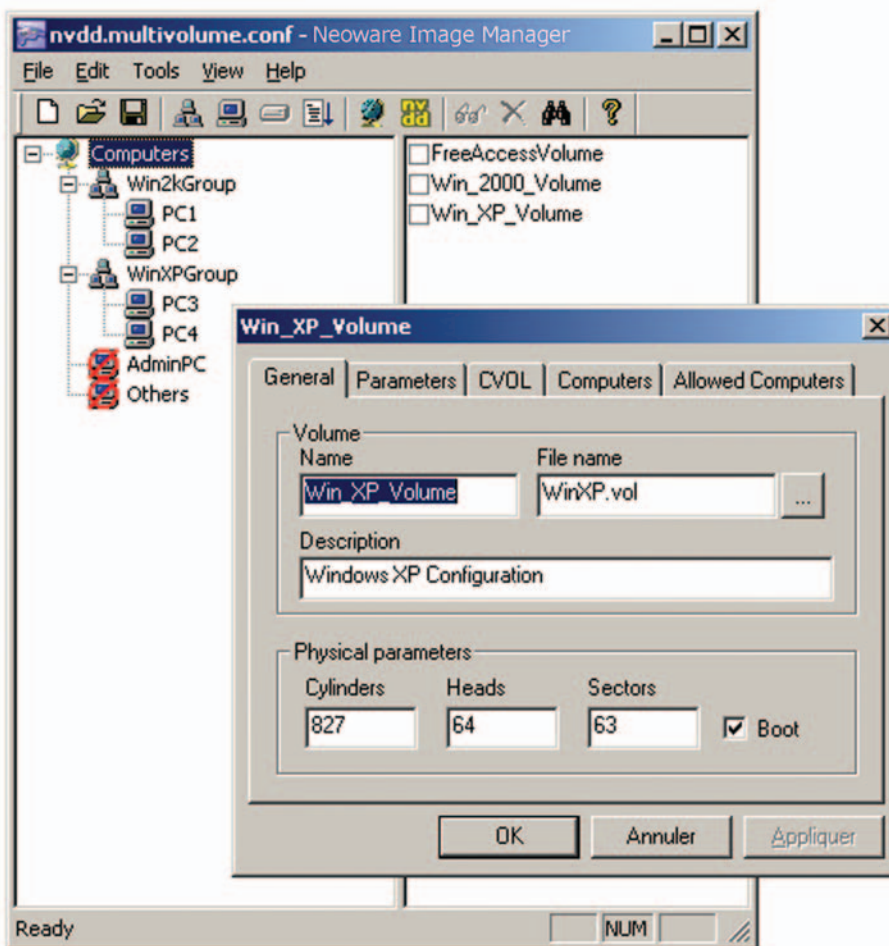
**You centrally manage images and define each station profile in just a few mouse clicks.**

Quickly deploy new desktops with plug-and-play replacement. Configuration is fast and reliable.

- Changes are made to a single image on a server
- Applications can be deployed instantly
- Images can be swapped in and out quickly
- Desktops can be re-purposed just by rebooting
- Software failure gets repaired by a simple reboot

You may decide to define several different images for update, training, call-center, accounting, shipping, diagnostic, point-of-sale, CRM, administrator hard disk drive images, etc.

- **You can centrally manage thousands of desktops**
- **You benefit from fast initial deployment with no set-up related risks**
- **The solution smoothly integrates into your existing environment and architecture**
- **Even non-technical people can easily and securely undertake administration tasks**
- **Reduces costs of thin clients and extends life of older PCs**



Neoware Image Manager console shows desktops, groups and hard disk drive images graphically, allowing administrators to configure them rapidly and instinctively.

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**LEVERAGE VARIOUS MODES OF OPERATION**

Neoware Image Manager supports various modes of operations and meets the most demanding requirements for enterprises offices, points-of-sale, classrooms, call centers and kiosk environments, etc.

**User personalization versus desktop personalization**

In protected mode, users always boot from the originally defined configuration. User profiles (desktop, shortcuts, favorites, bookmarks, application settings etc.) may be stored on a remote server and presented according to which user logs into the desktop device. This enables user personalization based on Windows user profiles while desktops are not dedicated to any one user. However, desktop "personalization" is also possible so that you can enable product activation and effectively manage licenses.

**CUSTOMER-OBSERVED BENEFITS**

**Neoware Image Manager improves the reliability of my system architecture.**

In a network, the risk of desktop downtime is significant. This is primarily due to user operating errors, unwanted software installations, the propagation of viruses, workstation disk failures, etc. With Neoware Image Manager, users access a highly reliable platform. Recovery from software failure is no longer an issue, since repairs only require a reboot! Moreover, hardware failures are particularly limited since desktops run in diskless and flashless mode.

**Neoware Image Manager is more secure than other architectures.**

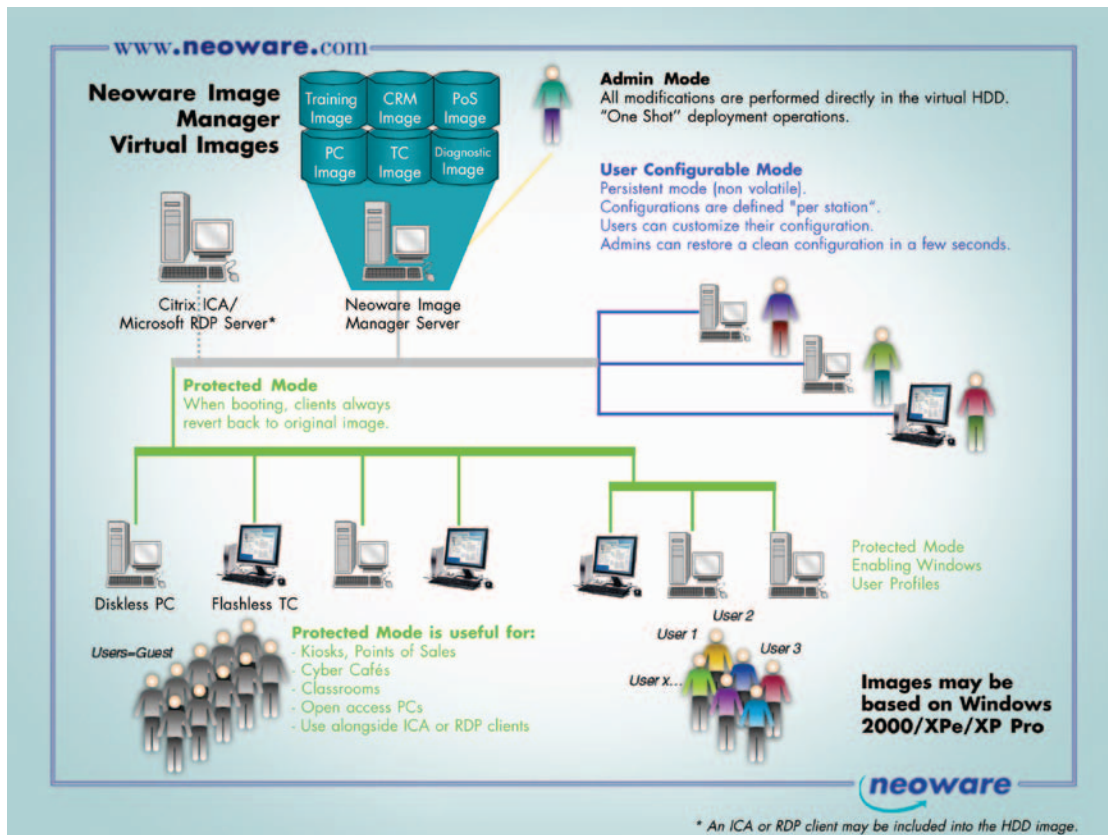
Neoware Image Manager enables better protection from viruses since it locks down the operating systems— making them read only — virtually eliminating viruses. Additionally, users cannot install applications unless they are allowed to by the administrator. The absence of a hard drive, floppy, or CD-ROM eliminates data storage on the desktop. Corporate data resides on the server where back-ups are easier. Sensitive data is more secure from physical theft. Moreover, without a server, the device is useless and unlikely to be a target of theft.

**Neoware Image Manager significantly reduces my IT costs.**

Neoware Image Manager greatly reduces costs by dramatically lowering on-going administrative costs through central management and the virtualization of images. Moreover, Neoware Image Manager frees your organization from investment in costly local storage – hard disk and flash Memory – while enabling you to leverage more affordable server storage and future-proof desktops. While being powerful and fully functional, desktops benefit from unequalled security, reliability and availability, they are always on and highly productive, which increases your overall IT system return on investment.

**Neoware Image Manager extends the life of my desktops.**

Neoware Image Manager protects investments in PCs, thin clients and older architectures because enterprises no longer need to be concerned about uncontrolled growth of applications, operating systems, and hard disk drive/flash images. Administrators never have to open a desktop to increase flash size since desktop systems run in a diskless PC or flashless thin client mode. Desktop upgradeability and obsolescence are no longer an issue!



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# NEOWARE IMAGE MANAGER

## OPTIONS

PART NUMBER	S600-300-04000	S600-400-04000
Operating System	Windows XPe	Windows XP Pro

## SOFTWARE SUITE KEY COMPONENTS

NEOWARE IMAGE MANAGER	
Provides Remote Boot of Windows 2000, XP, XPe diskless stations	•
Boot from Windows or Linux Servers	•
Centrally configure virtual hard disk drive servers	•
Allocate configurations and operating modes	•
NEOWARE UBIBOOT	
Build a single Windows® 2000 and XP-based hard disk image	•
Distribute image across a wide variety of PC hardware configurations	•
NEOWARE IMAGE MANAGER ACTIVE CLONER	
Clones the current system partition to another partition	•
Functions while Windows is working	•

## INTEROPERABILITY

Runs on Neoware thin clients	•
Runs on other thin client brands	•
Runs on PCs	•
Uses standard management tools to update images	•
Supports all current architectures	•
Supports potential future architectures	•

## TECHNICAL REQUIREMENTS

SERVER SIDE	
Operating system	MS-Windows NT (3.51 or 4), MS-Windows 2000, MS-Windows XP, MS Windows 2003, *BSD, Linux/Unix servers.
Main memory	Minimum 128MB. 512MB or more recommended.
Processor	Any CPU with performance equivalent to Pentium III 800. Pentium 4, Itanium, Xeon processors, etc. Global system performance depends on server.
Hard drive capacity	1.5GB dedicated to Neoware Image Manager - ATA 100 or better SATA, SCSI, RAID recommended
CLIENT SIDE	
PCs:	
PXE-enabled device	Needed
Processor	Any CPU supported by the operating system to be downloaded from the Image Manager server.
Main memory	Minimum 128MB. 192MB or more recommended
Operating system (to be delivered by Image Manager server)	Windows 2000, XP, XPe, XP Pro
Network card	100Mb recommended
Hard disk needed	None
Thin Clients:	
PXE-enabled device	Needed
Main memory	Minimum 128MB. 192MB or more recommended
Processor	Any CPU supported by the operating system to be downloaded from the Image Manager server.
Network card	100Mb recommended
Flash needed	None
Network	
Ethernet	100 Mb/s (or better) recommended
Ethernet switches	Needed

## BUNDLED SOLUTION WITH FLASHLESS THIN CLIENTS

Neoware Image Manager is included with Neoware e100 thin clients with no flash and 256K or 512K RAM. Neoware Image Manager is also sold separately to be used with existing thin clients or with PCs.

## HARDWARE OPTIONS

PART NUMBER	BL-Q3-0D	BL-Q3-0E	BL-Q0-0D	BL-Q0-0E
Flash/RAM Configurations (in MB)	0/256	0/512	0/256	0/512
Operating System Included	Windows XPe	Windows XPe	None*	None*
Hardware	Neoware e100	Neoware e100	Neoware e100	Neoware e100
Includes Neoware Image Manager	•	•	•	•

\* To be used with customer provided operating systems.

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