

PUSH TO WORK!

One button, many benefits: secure productivity and cost savings with HP Client Virtualisation solutions.

The 6 business challenges you'll address with client virtualisation

- Ⓞ Compliance and security
- Ⓞ Agility and time to market
- Ⓞ Business continuity and disaster recovery
- Ⓞ Manageability
- Ⓞ Operating costs and resource consumption
- Ⓞ Flexibility and mobility



Rethink your architecture and recalculate your ROI.
For customised results visit hp.com/go/clientvirtualization

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THE
COMPUTER
IS
PERSONAL
AGAIN.



BETTER CONNECTED, BETTER PROTECTED WITH VIRTUALISATION

Virtualisation removes the link between data and a physical piece of hardware. In a virtualised desktop environment, data is stored in the data centre, not on a physical hard drive. The advantages are clear: data is accessible throughout the infrastructure, and secure if a device fails, is lost, or stolen. In addition to reduced risk, compliance and backups are simplified as well.

Thin clients in a virtualised infrastructure improve productivity, too. Even if a device fails, a new client can easily be replaced and installed in minutes. The user can be up and running again in minutes, with no files lost. This significantly improves cost reductions across the organisation, especially for offshore and branch offices.

HP's Virtual Desktop Infrastructure (VDI) solution is comprised of servers, storage, software, management and access devices, and is delivered via a combination of HP and partner-delivered services.

With HP VDI, the typical heterogeneous desktop environment is replaced with HP thin clients on the front-end, and HP ProLiant or BladeSystem servers with HP StorageWorks external storage or local storage on the backend. For each desktop, an operating system is virtualised on the server using virtualisation software.

Is it time to rethink your architecture?

Now more than ever, businesses are looking for new ways to tap into cost savings and efficiency. A good place to start is with your IT infrastructure. While PCs, workstations and notebook computers will always have their place in the computing world, they're not always the ideal solution for every situation.

For organisations seeking to enhance efficiency, security and flexibility while reducing costs, thin clients may provide an alternative to a traditional PC-based architecture. Thin clients are computing devices that connect over a network to a server where the bulk of the processing takes place.

Because there's no hard drive, data is stored on the server, where it's safe from the theft or physical damage that can befall a PC or notebook. Support, management and deployment is simplified, as application installation, updates, virus scanning and patches can be executed on the server, and configuration can be done remotely. Users enjoy a familiar Windows-based environment and applications, just like a standard PC, but without the moving parts which can require repair or replacement.

All these factors combined – increased security, reliability and ease of management – contribute to a lower total cost of ownership for your computing devices.

HP'S LATEST THIN CLIENT OFFERINGS PROVIDE A COMPELLING ADDITION TO THE JOINT HP AND VMWARE VDI SOLUTIONS FOR OUR CUSTOMERS WHO LOOK TO SECURE THEIR ENVIRONMENTS, REDUCE COMPUTING-RELATED ENERGY AND MANAGEMENT COSTS, AND IMPROVE PRODUCTIVITY.

Brian Byun, vice president, global partners and solutions, VMware

Streamline your IT environment

While the upfront cost of PCs has decreased in recent years, the ongoing cost of power, support and maintenance can be burdensome. Desktop virtualisation with HP thin clients provides a scalable solution to this issue.

When the Bootham School in York, United Kingdom decided to refresh their IT infrastructure – which included 20 servers and more than 140 desktops and laptop PCs – they turned to a server-based thin client solution. Four virtualised HP ProLiant DL385 servers now do the work of the 20 servers they replaced, while a mixture of HP Thin Clients consumes nearly 90 percent less energy than the PCs.

THE BURSAR IS DELIGHTED
BECAUSE THE TERMINALS COST
ABOUT THE SAME AS PCs BUT
HAVE A FIVE-YEAR RATHER
THAN THREE-YEAR LIFE CYCLE,
AS WELL AS BEING EASIER AND
LESS COSTLY TO MAINTAIN.

Steven Wright, IT Manager, Bootham School



One button. Many benefits.

Ⓞ Compliance and security

HP thin clients are self deploying and self maintaining using images and settings managed from a central management control. Having no electronic media, there is no ability to store data locally, and by applying centralized policy controls to USB ports, it is possible to limit the ability to download to removable media. Companies in compliance-controlled industries like banking or healthcare will appreciate the security which HP Thin Clients can bring.

Ⓞ Agility with manageability

Every HP thin client includes a full license of Altiris Deployment Solution, an industry-leading management tool, and a free download of HP Client Automation Software. These tools mean your HP thin clients can be deployed in minutes, managed remotely and easily managed from a single interface – resulting in real savings as you reduce the frequency of desk-side support and technical visits.

Ⓞ Reduce training costs and setup times

Both the Altiris client software and HP ThinState tools have easy to use, drag-and-drop interfaces. Technicians are up to speed immediately, reducing training costs and setup times. Users enjoy a familiar Windows environment, so there's no need to train them to use a new interface.

Ⓞ Operating costs and resource consumption

In addition to the savings you'll realise through the improved reliability, management and security of thin clients, your energy bills will provide further cost reductions. Because thin clients require less energy than an ordinary desktop PC – up to 80 percent less – your organisation can save substantially on power.

A WORLD OF BENEFITS AT YOUR FINGERTIPS

Pick the right tool for the job

To efficiently build a strong architecture, you need the right tools that ideally match the diverse needs of your workers. In recent years, entirely new categories of workers have emerged. Apart from task-based, there are knowledge workers, as well as workstation users who require high-performance computing. The increase in offshore, outsourced and temporary employees also challenges IT departments to integrate these workers efficiently into the existing infrastructure, while maintaining security.

To ensure your success, HP has a range of tools for the jobs at hand.

Task-oriented employees

Task-oriented employees such as data entry workers need support from server-hosted applications for script-driven tasks, so HP Service Based Computing (SBC) solutions are ideal. For low-cost application delivery coupled with high hardware utilisation, select HP thin clients, HP ProLiant servers or the HP BladeSystem and either Microsoft® or Citrix software.

Basic productivity

Users such as call centre staff, whose tasks require access to basic productivity applications, will find their efficiency increased with HP Virtual Desktop Infrastructure (VDI) solutions. VDI solutions offer a highly secure infrastructure, with increased flexibility for users with large numbers of applications.

Knowledge workers

The tasks of knowledge workers involve working simultaneously in multiple applications that require powerful memory, so they need the abilities of HP Blade PCs. These give users a PC-like experience with the benefit of increased data security. A solution of HP thin clients, HP BladeSystem PCs and the HP Session Allocation Manager will keep your knowledge workers in the know.

Performance users

HP Blade Workstations offer performance users, such as engineers and financial specialists, the advanced compute and graphics capabilities they require. HP Blade Workstations in combination with HP thin clients and supporting management software, such as HP Systems Insight Manager, support high-performance multi-screen environments and superb 3D graphics.

Deskbased end-user segments			
Task oriented	Basic productivity	Knowledge worker	Performance users
<ul style="list-style-type: none"> Data entry type tasks Script driven Server hosted applications Direct application interaction 	<ul style="list-style-type: none"> Process driven e.g. call centre Server driven applications Shared workspaces and licenses Shared databases 	<ul style="list-style-type: none"> Project based Unstructured work Multiple interactions Sophisticated office applications Multiple applications and licenses Flexible and mobile 	<ul style="list-style-type: none"> Project based Creative and innovative user High-quality multi-display graphics and streaming video Performance and availability demanding Highest need for security Sophisticated Flexible and mobile
		HP Blade PC	HP Blade Workstation
SBC	HP VDI		

Manageability

one button deployment, manage from a single central interface

Security

data stays on the data centre, no writable devices, ports are locked down

Flexibility

geographically independent, multiple OS on the fly

Lower Costs

lower energy costs, desk side support, and 5 year lifecycle replacement

Environmentally friendly

uses 80% less power, built to ROHS compliance standards

Reliability

solid state design, replace and setup in minutes

Facing today's security challenges

Data security has been in the news a lot these days. Barely a day goes by without having to read of sensitive data being stolen or going missing through USB keys and laptops. The fact is, the minute you have a writable device or unsecured port, data loss, data theft, viruses and malware become an expensive fact of business life.

The fundamental thinking behind client virtualisation is keeping the data in the data centre, not on the desktop or the laptop. Building on that foundation, an extra layer of thin client features adds even more protection.

The 'stateless' capability:

With client virtualisation, required settings are stored on the server, rather than on the desktop. If a thin client is stolen or lost, the data is still safe.

Smart card reader support:

Combine with the HP Smart Card Keyboard and enjoy two-factor authentication for more secure network access. This ensures that only the people you certify have access.

Remote BIOS configurability:

Lock down data ports and user access from a centralised management console. These are small holes in the armour where data gets lost or stolen through a USB stick, or when a virus attacks a Bios. With these holes plugged there are fewer risks.

Disable Mass storage drivers:

Add another level of security by disabling storage drivers in the BIOS or software image.

Security plus mobility

The new HP mobile thin client ensures you can be connected, protected and ready for business anywhere you go. These notebook-like devices are already proving their worth in a variety of places, including hospitals: nurses and doctors can move around freely and wirelessly pull patient data from a central server. Both the hospital and the patients can be secure in the knowledge that sensitive information is always safe.

For added security, HP equips these devices HP Sygate Security Agent. It's a dynamic firewall of policy-based controls and intrusion prevention that ensures no unauthorised access. Mobile thin clients also come with secure USB compartments that protect USB wireless and flash devices.

The real business benefits of safer data

The ability to move IT resources around means you can shift your resources to fill security gaps. Data stored on the server is far safer than it is on a hard drive. Less revenue is lost because of downtime, and potential service penalties are avoided. The costs of data loss, ranging from lost productivity to criminal suits, can all be avoided.

The facts on data loss

The number of people impacted by data breaches could more than double in 2009 as the credit crunch deepens, according to KPMG's Data Loss Barometer. 190 million people globally may be impacted by data losses this year, compared with 92 million in 2008.

"Data loss trends are set to increase through 2009. With increasing economic pressure creating budget constraints, companies will be more vulnerable to the risk of data loss and its consequences."

Malcolm Marshall, KPMG Partner

HP works with a range of partners including Citrix, VMware, Neoware, and Microsoft®, adding to the comprehensive solution that HP Client Virtualisation represents. Working together they ensure the underlying stability, security and business continuity that is the foundation of the HP complete VDI solution.



A greener approach to your technology

Design and manufacturing

CO2 emissions start when a computer is manufactured and shipped. Thin clients require considerably less energy and resources to build because they contain fewer parts than a regular PC and they weigh about half as much, reducing the cost of distribution.

Operations

Thin clients offer up to 80 percent power savings over traditional desktop PCs with similar capabilities and, because they generate less heat, they require less air conditioning; which, in turn, saves even more power and cost. In operation, thin clients draw between 6 and 20 watts per hour compared with 150 to 350 watts for a typical desktop PC. The result is lower electricity bills and reduced CO2 emissions.

Energy efficiency in the data centre

HP Client Virtualisation shifts processing and storage to the data centre. Even so, there are significant environmental benefits. For example, an HP Blade PC uses far less plastic, sheet metal and paint by mounting all its components on a single circuit board, mounted 20 to an enclosure. HP Blade Workstations use low voltage processors and exploit efficient power distribution in data centre racks to reduce power consumption and keep data centres cool.

Responsible recycling

HP's Advanced Unit Exchange programme refurbishes and recycles retired HP thin clients, while HP offers environmentally conscious recycling incentives to encourage customers to recycle products at end of life. HP's Planet Partners recycling service provides a safe and easy way to recycle computer equipment, guaranteeing that your hardware is recycled responsibly.

THIS HAD MADE A TREMENDOUS DIFFERENCE TO OUR CARBON FOOTPRINT WITH THE THIN CLIENTS ONLY USING 25W OF ENERGY'S OPPOSED TO 240W FOR PCS. WE HAVE SEEN A REDUCTION IN THE AMOUNT OF AIR CONDITIONING NEEDED FOR THE SERVERS WHICH THEMSELVES ARE USING MUCH LESS ELECTRICITY.

Steven Wright, IT Manager, Bootham School

HP is pushing the limits

HP VDI is the most comprehensive approach available to meet a diverse range of needs. With HP Blade PCs, HP Blade Workstations, HP thin client and mobile thin clients, you can create a flexible, unified infrastructure that provides an advanced alternative to desktops and workstations. This applies to works who are in-house, outsourced or offshore.

- Confidently deploy a new client architecture, and rely on decades of ProLiant and BladeSystem, StorageWorks and Thin Clients engineering and integration experience
- Achieve strong data security and move business-critical data into the data center for tighter security and compliance
- Accelerate desktop deployment, maintain fewer desktop images and rapidly deploy virtualisation-ready infrastructure
- Reduce desktop cost of ownership through centralised desktop maintenance and lower energy usage

WE HAVE FOUND HP PRODUCTS MEET OUR REQUIREMENTS TIME AFTER TIME. WE BUY HP HARDWARE BECAUSE IT IS INCREDIBLY RELIABLE AND VERY COST-EFFECTIVE, AND THE HP PARTNERS WE WORK WITH ARE ABLE TO ADVISE VERY WELL ON WHAT WILL FIT OUR NEEDS.

Steven Wright, IT Manager, Bootham School