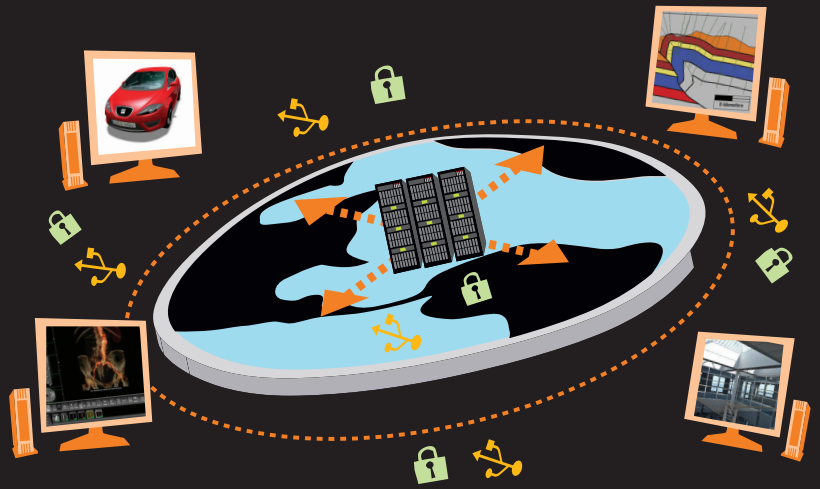


HIGH-PERFORMANCE
REMOTE DESKTOP
ACCESS.
“JUST LIKE LOCAL”
FEEL



HP REMOTE GRAPHICS SOFTWARE

Secure, high-performance, collaborative access to remote desktop resources, rich multimedia applications and data plus broad USB device redirection

Get high-performance remote desktop access to your 2D, 3D, video, and media-rich applications—when and where you need them, on-site or from a remote location through a standard Internet connection. Collaborate with colleagues across geographies, in real-time, using content-rich interactive applications.

Sign-in to your remote desktop and have the video, keyboard, and mouse follow you to the new access location. Connect a local USB device and have it virtually attach to your remote desktop session located in the data center. Now you can with HP Remote Graphics Software.

How it works

A core element of the HP Virtual Client Essentials software portfolio, HP Remote Graphics Software (RGS) is an advanced connection protocol that allows a user to access and share the desktop of a remote computer over a standard network. All applications run natively on the remote computer and take full advantage of the compute and graphics resources of the sending system. RGS Sender software captures the desktop of the remote system and transmits it over a standard network to a window on a local client using advanced image compression technology, specifically designed for text, digital imagery, and high frame-rate video applications. The RGS Receiver then captures input from the user's keyboard, mouse, microphone, and USB devices including Webcams and transmits it back to the sending desktop for processing. This creates a very tight display and input loop that executes up to 60 times a second¹ over a standard network to create a high-performance interactive experience for remote users.

Real-time, more secure collaboration

HP RGS allows the desktop of a computer to be shared with multiple simultaneous users with either view-only or full-interactive access. This allows geographically dispersed professionals to work collaboratively using content-rich 2D and 3D applications and video. The RGS codec-independent architecture automatically supports and accelerates all current and future multimedia codecs and applications, including Adobe Flash and Apple QuickTime.

HP RGS image-based collaboration keeps all application data more securely on the sending system—only encrypted, compressed video is sent to end users on receiving systems. This allows users to communicate and collaborate with partners while keeping sensitive data secure in the data center.

The HP RGS Receiver software is now available as a free download from www.hp.com/go/rgs and is supported on Windows Vista® and Microsoft® Windows® XP-based desktop PCs, mobile PCs, workstations, HP Linux workstations, and HP thin clients—expanding collaborative capabilities to users who do not have the full install of HP RGS in their own environments.

On-demand access to workstation resources

HP RGS also allows users to access one or many multi-display workstations from a network attached client using a single sign-on. The user enters their log-in credentials and HP RGS automatically authenticates the user, logs the user in to all assigned remote systems, unlocks the desktops, redirects the video, keyboard, and mouse to the new access location and disconnects the HP RGS sessions from the previous location. This allows the user's high-performance resources to be always-on and accessible through a standard Internet connection.



HP RGS supports both Microsoft Windows and Linux desktop operating environments so users can enjoy cross-platform access to compute and visualization applications with a single-glass, virtual KVM capability. You can work in an application-transparent manner, driving Linux from a Windows-based local computer or driving Windows from a Linux-based client.

A variety of uses

HP Remote Graphics Software can be deployed across a variety of environments, including:

- **Client virtualization**—consolidate and provision compute resources to users ranging from business desktop knowledge workers to the most demanding workstation user with a “just like local,” high-performance, rich user experience
- **Design review and collaboration**—allow geographically-dispersed design teams to see and interact with large digital prototypes in real time
- **Financial trading**—stream video, market data, and financial trading applications from multiple workstations to a multi-display trading desk, remote office or disaster recovery site
- **Classified research and defense**—enable secure, high-performance access to sensitive data and applications
- **Command and control centers**—enable a secure continuous-operation environment by providing multi-location access to virtual machine, blade PC, and blade workstation resources located in data centers
- **Mobile professionals**—allow professionals to efficiently work locally or remotely so they can live where they choose and work conveniently through an Internet connection
- **Remote design centers and manufacturing floors**—dramatically reduce the load time for engineering assemblies by directly connecting

the workstation resources to the PDM server in the data center

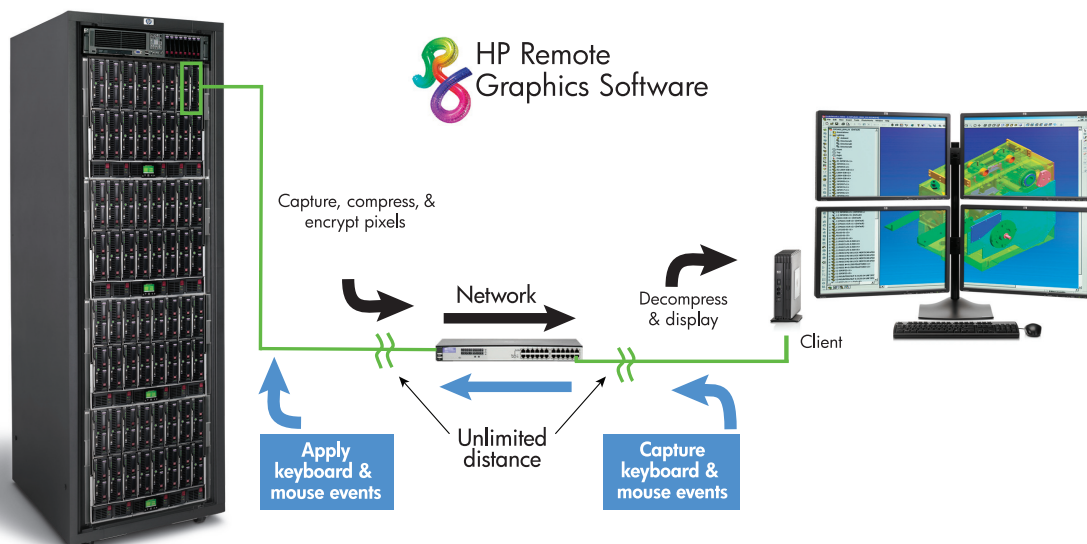
- **Scientific research and visualization**—interact with high-performance compute and visualization simulations from an office and collaborate with colleagues in real-time
- **Support**—provide application support to end users by connecting to existing user sessions with system administrator rights to troubleshoot and resolve issues
- **Classroom/training**—dynamically connect to subject matter-specific resources from a desktop kiosk client and share live session content to one or many students at local or remote campuses

HP RGS benefits

HP RGS offers a variety of benefits to institutions and end users, including:

- **Increased business efficiency**—real-time access to data and resources regardless of physical location
- **Increased data security**—mobile professionals can access resources without proprietary data being transferred to the remote computer
- **Increased business continuity**—end user uptime is increased by enabling users to fail-over to a spare pool of preconfigured resources
- **Reduced management costs**—centralization consolidates workstation resources to a single point-of-management
- **Increased training effectiveness**—enable multiple users to follow application procedures alongside an instructor in real-time.

HP Remote Graphics Software enables professionals to work together in real-time with more secure access to rich multimedia resources, applications, and data—helping to eliminate the distance barriers that can impede global organizations. For more information on HP RGS, please visit www.hp.com/go/rgs.



HP REMOTE GRAPHICS SOFTWARE

Software version	HP Remote Graphics Software Version 5.3.0
Rich remote desktop user experience	High-performance remote desktop access to 2D, 3D, video, and media-rich applications with full support for sending system compute and graphics hardware acceleration
Image compression and decompression (CODEC)	HP3 high-performance image compression and decompression enables real-time remote visualization for graphics intensive desktop applications <ul style="list-style-type: none">• Variable rate, image delta compression algorithm• Visually loss-less with auto text and image detection• Full hardware graphics acceleration support
Application transparent	Graphics-primitive and multimedia codec-independent architecture automatically supports and accelerates all new applications and multimedia content, such as Adobe Flash, Windows Media Video, Apple QuickTime, and others. Non-intrusive, application-transparent architecture requires no modifications to applications.
Real-time collaboration	<ul style="list-style-type: none">• 1-to-1 or 1-to-many real-time desktop sharing• Multi-user keyboard, mouse input with collaboration control indicator• Collaboration connection management and status• View only or full access collaboration connections• Persistent collaboration mode warning• Receiver hardware cursor to enable real-time application interaction
Auto Remote USB²	Enables USB devices to be virtually attached to a remote system with local control and access. USB device class support includes: keyboards, keypads, PDAs, printers, media and storage devices, web-cams, microphone and audio head sets, scanners, human interface devices (HID), and two-factor authentication devices. See RGS User Guide for a complete list of tested and supported USB devices.
Remote audio	Provides smooth, continuous, low-latency, high-quality audio streams from remote systems
Audio follows focus²	Enables remote desktop audio stream for the session with active window focus while muting all other remote audio streams
Multi-display	1 – N display support on the sender and receiver systems (up to the device hardware limits)
Sender resolution and display auto-adjust	Automatically sets sending system resolution and multi-display settings to match the receiving system for full desktop interaction
Multi-session desktop access	Multiple, simultaneous, remote sender system desktops can be transmitted to independent desktop windows on the receiver system with input window session focus for keyboard, mouse, and audio with hot key session minimize and session disconnect support
Multi-session cut, copy, and paste	Multiple simultaneous sender sessions can be accessed from a single receiver with cut, copy, and paste capability between the desktops and applications of multiple systems
Broad access client and remote system support	<p>HP RGS receiver software is integrated on HP thin clients and is available as a free download for Windows Vista and Microsoft Windows XP desktop PCs, mobile PCs, and workstations as well as HP Linux workstations.</p> <p>The RGS sender is supported on a broad range of Client Virtualization platforms and personal desktops, including: Virtual Desktop Infrastructure solutions (VDI), blade PCs, blade workstations, desktop PCs, mobile PCs, and workstations.</p>
Cross-platform visualization	Desktop access to multiple Microsoft Windows and Linux platforms with single glass mouse and keyboard access
Network connection warning	Alerts user when RGS network update rate falls below user defined response time to indicate possible stale display information
Connection client authentication interface	Allows client virtualization brokers to manage user authentication and then connect to the assigned resources using the RGS protocol
Port forwarding	Enables client virtualization brokers to use an external public port or IP address for initial user authentication and then connect to the RGS session on a different broker specified secure port
Security	<ul style="list-style-type: none">• Connections authenticated by Microsoft password authentication protocol NTLM and Kerberos• Linux-to-Microsoft Windows connection authentication via PAM• AES 256-bit communication encryption using Open SSL implementation of anonymous Diffie-Hellman (ADH) cipher suite• All application data remains on sender system; only encrypted, compressed video sent to receiving system(s)• Single primary user enforcement• USB Access Control enables administrators to securely control USB access privileges at the group, user level and location (IP address range)²• Real-time logging of sender connect and disconnect events• Client access device logging• Auto-screen-lock or auto-logout on session disconnect• Sender side display blanking for blade PCs, blade workstations, and personal workstations (requires NVIDIA graphics card)• System Administrator privilege to unlock existing user session or log-in to support existing user session• System Administrator control for RGS user connections and properties
Supported Client Virtualization Brokers	<ul style="list-style-type: none">• HP Session Allocation Manager (SAM)• VMware View (Microsoft Windows receiver platforms only)• Quest vWorkspace• Leostream• VDIworks
3D graphics API support	OpenGL and Microsoft Direct-3D 8.0, 9.0, and 10.0; excludes video overlay and full screen modes

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Receiver support matrix	Windows XPe/WES	Windows XP SP1, SP2, SP3 32-bit, x64	Windows Vista Business and Enterprise 32-bit, 64-bit	Embedded Linux	RHEL V4 (update 5 or later) V5 (update 2 or later) 32-bit, 64-bit
Desktops					
Personal workstations		✓	✓		HP xw and z series
Mobile workstations		✓	✓		
Desktop PCs		✓	✓		
Notebook PCs		✓	✓		
Performance thin clients					
HP gt7725				HP ThinPro GT	
HP gt7720	WES				
HP dc73 Blade WS Client				HP Blade WS Client	
HP dc72 Blade WS Client				HP Blade WS Client	
Mobile thin clients (may not be suitable for 720p and higher multi-media content)					
HP 4410t	WES				
HP 6720t	XPe				
HP 2533t	XPe				
Flexible and mainstream thin clients (may not be suitable for 720p and higher multi-media content)					
HP t5730w	WES				
HP t5630w	WES				
HP t5730	XPe				
HP t5630	XPe				
HP t5720	XPe				

Desktop receiver systems require 1.5 GHz or greater processor with SSE2 multi-media instruction extension, 32-bit color display adapter and 512 MB minimum RAM.

Sender support matrix	Windows XP SP1, SP2, SP3 32-bit, x64	Windows Vista Business and Enterprise 32-bit, 64-bit	RHEL V4 (update 5 or later) V5 (update 2 or later) 64-bit
Blade clients			
HP blade workstations	✓	✓	HP only
HP blade PCs	32-bit only	32-bit, non-aero only	
VDI servers	32-bit hosted desktop	32-bit, non-aero only	
Desktops			
Personal workstations	✓	✓	HP only
Mobile workstations	✓	✓	
Desktop PCs	✓	✓	
Notebook PCs	✓	✓	

Desktop sender systems require 1.5 GHz or greater processor with SSE2 multi-media instruction extension, 32-bit color display adapter and 512 MB minimum RAM. Supported VDI Client Virtualization Software: VMware ESX 3.01, 3.02, 3.02 Update 1, ESX 3.03, ESX 3.5 Update 1, 2, 3, 4, and ESX 4.0

¹ Performance dependent on network latency and image frame content.

² Microsoft Windows XP and Vista support only.

