



Workstation Innovation News



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Fast CAD Performance, Even Over a Slow Network

The latest upgrades to HP Remote Graphics Software extend the power of professional software and workstations to more users than ever before.

Today's geographically dispersed and mobile CAD teams have no reason to worry about file version control, lost files, or slow data transfer: [HP Remote Graphics Software \(RGS\)](#) has been around for nearly a decade to cure the headaches that commonly occur when working with graphics-intensive applications over a wide-area network. But the benefits of HP RGS have been accessible only to those users who have a good network connection — until now.

HP RGS 6.0, introduced in February, is delivering tremendous performance upgrades to users of CAD, rendering, and other demanding applications even under challenging network conditions. That means more users in more organizations than ever before can tap the benefits of their HP Workstations with HP RGS.

What is HP RGS?

Included free on all HP Z Workstations and EliteBook Mobile Workstations powered by Intel® Xeon® processors and Core™ processors, HP RGS is client-server remote desktop software that enables users anywhere to access and share the desktop of a centrally located workstation over a standard network. Applications run natively on the central workstation and take full advantage of the compute and graphics resources of that system, and data is stored on the central system as well.

HP RGS technology transfers pixels, not data, from the central workstation to the end user. Only mouse and keyboard activity is transferred from the end user back to the central system. This means HP RGS works with any software and delivers dramatically faster response over the network, even



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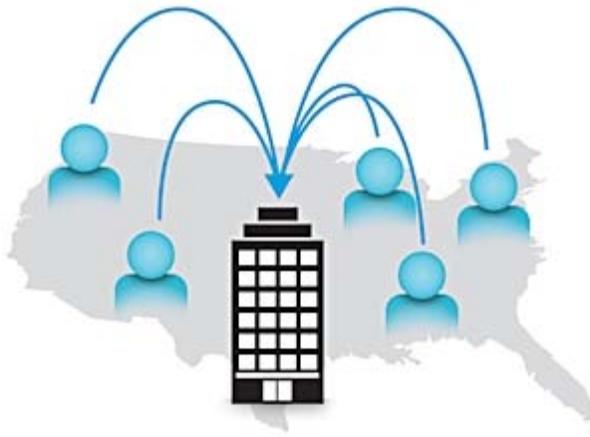
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HP RGS consolidates workstation resources and allows professionals to connect from any computer at any location.

for the most graphics-intensive applications.

End users can connect to remote workstations with HP RGS via professional desktop or mobile workstations, standard PCs, thin clients, and even tablets. The software-only solution can be deployed on existing infrastructure — no extra investment required.

HP RGS for CAD Workflows

As we discussed in the [January 2012 issue of Workstation Innovation News](#), HP RGS has many valuable applications in CAD environments. Here's a quick review:

Overcome bandwidth problems. Sharing large files among geographically dispersed staff is easier and faster. Users benefit from improved system response; IT personnel find that HP RGS helps free up valuable network resources for other uses.

Support mobile staff. Whether workers are traveling with mobile workstations or tablets, they can access and work on the same large files from the road or field as they could from the office. And there's no need for mobile apps or "lite" software versions; with HP RGS, users on the go can work with full-featured software without concern for network performance.

Improve data security. With HP RGS, centrally stored files are available for easy backup — but not for users to download or copy.

Collaborate and train regardless of location. Use HP RGS to present a file to any number of users simultaneously. Participants can take turns controlling the mouse. Or conduct training sessions for users at any number of remote locations. Speedy HP RGS can help reduce design review times and even enable a more creative, spontaneous environment among workers in dispersed locations.



HP RGS supports real-time collaboration: A user can share his or her workstation screen with multiple coworkers simultaneously, granting view-only or fully interactive access.



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Extend your infrastructure investment. Buy a single copy of software for the central workstation to share among staff who only need occasional access to it. Spend your hardware and software dollars to equip one highly powerful workstation accessible to all users rather than spreading those dollars among multiple, lower-powered systems.

Build a private cloud. Tap the benefits of cloud computing without all the concerns of system reliability and data security. With HP RGS, there's no need to pay for software or storage space from a cloud-based service provider, and you maintain full control over your network and data.

HP RGS 6.0: High Performance for All

HP RGS 6.0 is a complete software redesign, enriching remote access to demanding applications and reducing network bandwidth requirements by at least half. It supports Linux, OpenGL, DirectX, and Microsoft Windows, including Windows 8 running on PCs or tablets.

Christian Jones, HP product marketing manager, explains, "Until RGS 6.0, the technology was limited to use over good network connections. With 6.0, we really focused on breaking out of the network performance boundary and opening up that quality experience of HP RGS to more users and more environments."

Expanding accessibility to more users has been made possible by lowering bandwidth usage, improving network performance, and rolling out an easier-to-use interface.

Advanced video compression. This new feature can deliver a 50%–90% reduction of network bandwidth use for HP RGS connections.¹ Jones explains: "Users who were previously unable to get a quality experience because of network bandwidth constraints can now activate this feature [using a slider to control the level], and it can cut their bandwidth usage in half and still give them phenomenal image quality."

The actual level of improvement depends on the content being displayed and the quality slider settings, Jones adds, but it means that the RGS network can accommodate more users as well as improve remote and collaborative work experiences.

Adaptive network analysis. A new technology called HP Velocity has been incorporated into HP RGS 6.0. It improves wide-area network performance by continuously monitoring end-to-end network connections and network congestion and adjusting to maximize the performance of remote connections — thus helping to ensure the best possible user experience.

Software response that lags because of network issues such as data packet loss will improve significantly, thanks to this update. "HP Velocity is a very clever technology that can actually compensate for those lost packets so the system doesn't have to resend them," Jones says. "For any users who have tried HP RGS in their environment and thought the performance just isn't there, this could really turn it around for them. They can start experiencing what people in really high-quality networks have already been experiencing with HP RGS."

Improved user interface. A more user-friendly UI in RGS 6.0 isn't just for looks. The redesigned interface makes the software easier to learn and use for average users as well as IT personnel. "It's a lot easier now to get up to speed, to get the controls and



HP RGS delivers complete remote access to workstation power and professional workstation-class applications even for workers located off site.



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preferences you want, and ultimately access that remote workstation," Jones says.

Maximize Potential

HP RGS 6.0 is about businesses making the most of existing resources. It's about extending the power of a single professional workstation to geographically dispersed personnel who can take advantage of that performance without any extra spending on hardware or software. It's about making a poor network perform like a good network and about making a good network accessible to more people without expanding infrastructure.

But HP RGS 6.0 isn't only about maximizing hardware and software resources; it's about maximizing human resources. Small firms that might have a single staff person who is a project or subject matter expert can base that employee anywhere, and with HP RGS, he or she can work on numerous projects, reviewing designs and data regardless of project location. Travel time and expenses are reduced and the need to transfer large design files from the project location to the expert is eliminated.

On the construction site, remote access to complete building models means contractors can view and update any project data and collaborate with designers or owners right from the job site.

The product-development process also improves thanks to HP RGS 6.0. For example, a designer or engineer needing a design review could instantly collaborate with others in any connected location or could present the design to a room full of coworkers or clients via a docked Windows 8-based HP ElitePad 900 tablet — without having to transfer a single file.

"Collaborating with people sitting at their workstations and sharing their screens or by picking up a mobile device, walking around and sharing it is something that we see being used now," Jones says. "I hope that more people who aren't yet doing that or haven't thought about it would start thinking about it."

With HP RGS 6.0, efficient and reliable performance of graphics-intensive software is a reality over a wide-area network even if that network is subpar. HP RGS 6.0 extends the benefits of professional hardware and software to more CAD users than ever before.

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1. HP RGS Network bandwidth usage varies based on image quality settings and the resolution of the displays.

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