



## HP Blade Workstation Solution

A whole new way to deliver high-security, design-intensive MCAD environments



### Rethink

Time to rethink your MCAD environment. Because the HP Blade Workstation Solution provides engineering design teams with a revolutionary new way to:

- Jointly design products or projects with multiple teams working from different locations using the same database
- Significantly streamline the design process through more effective collaboration
- More securely access centralized MCAD applications working from home or other remote locations
- Assist with meeting the most stringent public and private mandates for lockdown protection of confidential information
- Consolidate databases, and drastically improve data download and upload times

Based on HP BladeSystem infrastructure, the HP Blade Workstation Solution enables quick and seamless user access to MCAD applications such as CATIA, Siemens UGS NX, PTC Pro/ENGINEER, Autodesk AutoCAD, Autodesk Inventor, Autodesk Revit, SolidWorks, and MicroStation—all running with enhanced security on HP Blade Workstations in the data center.

This remote access workstation architecture speeds up the design process by helping to improve worker productivity and collaboration effectiveness through more secure, real-time, interactive, remote access to centrally located 3D CAD applications and data, geographically dispersed WAN and VPN connections.

### Powerful new workstation infrastructure

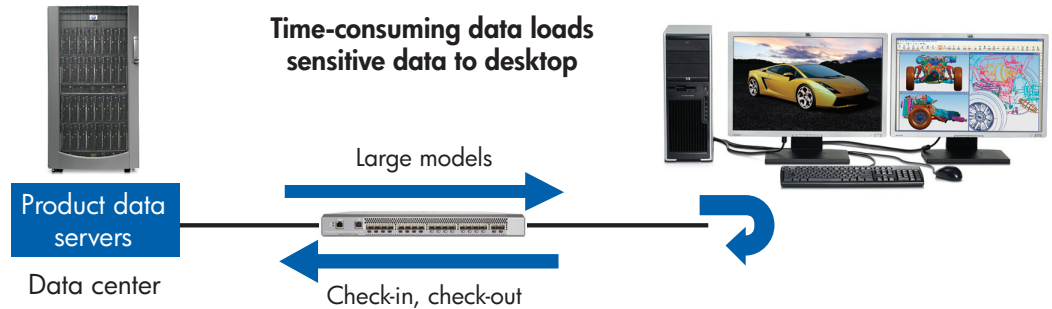
The solution starts with the HP Blade Workstation, which executes the user applications and resides in the data center. This workstation is designed to deliver maximum performance for MCAD applications and can be configured with one or two high-speed Intel® Xeon® dual- or quad-core processors<sup>1</sup> and a dedicated NVIDIA FX 1600M hardware graphics card that computes and renders the interactive desktop image.

A key solution component is HP Remote Graphics Software (RGS). This network utility eliminates the distance barriers that impede your design teams. HP RGS un-tethers engineering professionals from their desks, providing a more secure connection to centralized high-performance workstation resources when and where they need them—whether in the office, conference room, manufacturing floor, field sites, or home office.

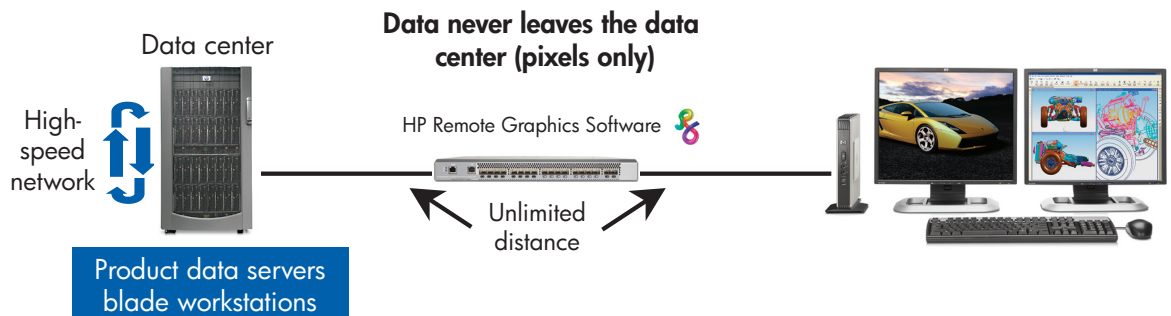
HP RGS transmits the 3D images many times per second from the HP Blade Workstation to the user's desktop, where the experience of running the application is virtually indistinguishable from their current work methods. HP RGS access is fully interactive for all types of applications including 2D design, 3D solid modeling, image rendering, analysis, simulation, and video animation. Since the design engineers no longer need to have the applications or data installed on their local systems, they can use less powerful notebook or desktop computers or high-end thin clients to do the same work they do now.<sup>2</sup>

## More secure, fast data access

### Traditional engineering model



### HP Blade Workstation



### Complete user flexibility and management simplification with HP SAM

HP Session Allocation Manager (HP SAM) enables companies to optimize HP Blade Workstation deployments by providing a single point of management and dashboard view of all blade workstation resources and user connections. HP SAM provides powerful provisioning tools that allows users to be assigned multiple personal and application pool resources that can be accessed through a single log-in from any supported Microsoft® Windows® XP notebook or desktop PC, thin client or workstation.

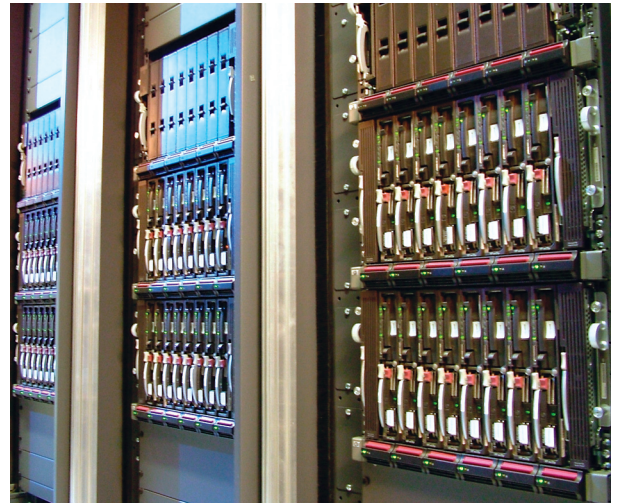
Users simply enter their login (user name and password or Security Card), and HP SAM identifies them, accesses the database, logs them in to each assigned resource, and presents that resource in a resolution that automatically adjusts for the access device. Users can then access additional workstation and application power from their desktop whenever they need it. Uniquely engineered by HP for demanding workstation class users, HP Session Allocation Manager helps you maximize all of the security, manageability, and access benefits of the HP Blade Workstation Solution.

### Locked down data security

This new remote computing model protects your company's intellectual property, ensuring critical data security and business continuity by keeping data locked securely in the data center. Centralizing your company assets means that they can be more easily managed, monitored, backed-up, and protected. This enables your company to more easily implement the kind of security mandates required of both private and public sector organizations.

Since HP RGS software only transfers encrypted, compressed images of models—rather than the data files themselves—once a user disconnects there is nothing left to lose, steal, infect, or corrupt. This eliminates much of the opportunity for intellectual property theft, as well as the threat of malware infections from local hard drives, Internet connections, and USB ports.

And, since the key computing infrastructure is stored securely in the data center, the loss of the desktop client does not jeopardize a project. If the local system goes down, all you have lost is the connection. Simply move to a new system and users can log right back into their applications and projects without skipping a beat.



### Customers choose HP because we provide:

- Exceptional collaboration performance over WAN environments, for unmatched collaborative engineering innovation on a blade workstation.
- Excellent IT management, and blade allocation features with HP SAM, which facilitates cost reduction and simplified IT management.
- Flexibility of client choice, roam anywhere, no new hardware needed, delivers the new paradigm of a flexible engineering environment.
- Home, supplier, and external engineering access are capabilities that are completely unique to HP.
- The user resources are allocated on demand automatically—applications and maximum performance when and where needed—hassle free.
- Shortens the engineering cycle and fully implements remote engineering, complete collaboration, and the lower cost paradigm shift.

### Real-time 3D collaboration

The HP Blade Workstation Solution supports new business work models by eliminating distance barriers, with network-optimized access that allows teams to work and collaborate remotely and reliably over standard network connections. End users can enjoy cross-platform, on-demand access to Microsoft® Windows® XP 32-bit and x64, HP-UX, and RHEL compute and visualization applications—all from a single desktop with single keyboard and mouse interaction.

Geographically dispersed design teams can view and interact with 3D CAD applications and digital prototypes in real time. With HP RGS, the desktop of

one computer can be shared with multiple users who have either view-only or full-interaction access: they all share the same screen and take turns working with it.

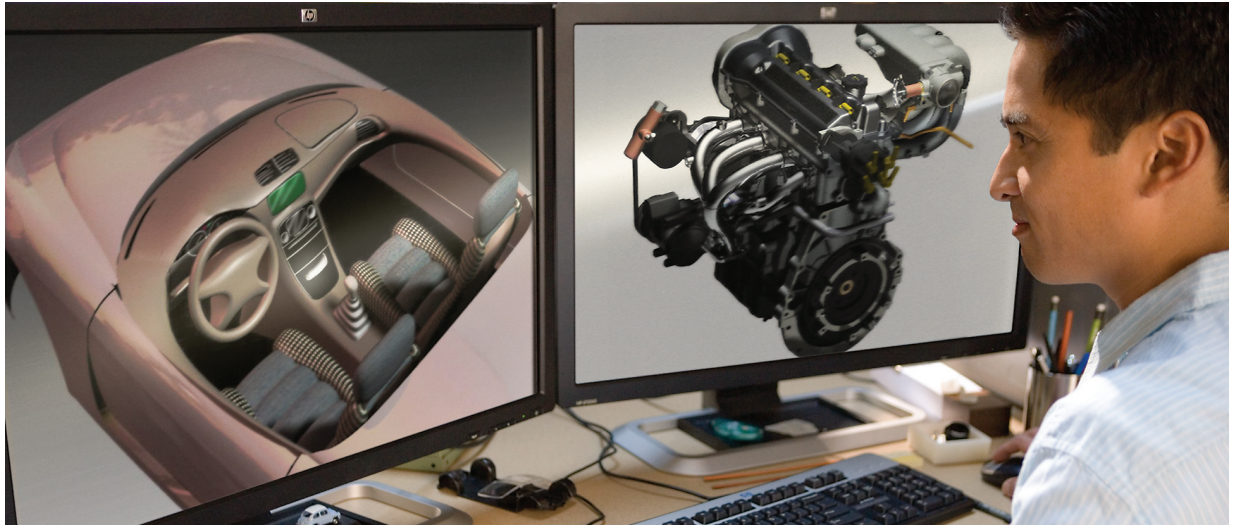
### Dramatically faster access to data

The HP Blade Workstation Solution minimizes data load times. Located in the data center with high bandwidth connections to product data management systems, data loading is inherently faster. This eliminates the time-consuming downloading and uploading of CAD files over lower speed networks to user desktops. Data access at remote sites is dramatically improved because HP RGS is sending encrypted, compressed pixels of the screen image, rather than unsecured much larger 3D data models across the network.

### Simplified IT management

The benefits are not just in the design engineer's cubicle, but extend all the way back to the IT department. The HP Blade Workstation Solution allows IT to define pools of optimally configured blade workstations that can then be allocated and shared across a broader range of users to efficiently manage both application and workstation resources. Resources can be easily moved between pools and re-imaged to balance resource needs across programs.

HP ProLiant Essentials Management Software provides IT staff with efficient, expert control through a single, browser-based interface that allows them to remotely control and troubleshoot blade workstations from anywhere on the network. This tool helps minimize onsite help desk requirements, maximize staff productivity, and drive greater cost of ownership savings.



### Maximum uptime with automated failover

Having multi-blade and multi-site capabilities dramatically improves business continuity by maintaining maximum uptime. If an individual blade workstation or data center goes down, HP SAM can quickly route the user to another blade or data center so that work can continue uninterrupted. Within minutes, the engineer can log back in and continue working, while the IT staff addresses the failure offline. Any downtime is reduced to just minutes from the more disruptive waits that can occur in more traditional computing environments.

Centralizing compute resources also helps workers stay online during power loss or even more disastrous events. If the main office becomes uninhabitable due to power outage, flood, or fire, users can continue to work by logging in from other locations or from home.

### Database consolidation

The solution reduces hardware and software costs at the desktop by allowing access to workstation computing power from thin clients devices as well as Windows-based workstations, PCs, and notebooks. The HP Blade Workstation Solution further reduces management costs by centralizing and consolidating workstation resources to a single-point-of-management within the data center. Multiple remote locations can access the same data center, allowing for database consolidation.

### The result: better innovation

When you add together all the benefits, the HP Blade Workstation solution helps simplify the design process allowing faster, more efficient and more collaborative work processes, with less worker downtime and more flexible remote access. Real-time access, regardless of physical location, helps improve worker productivity and communication effectiveness for better product innovation and better communication of design intent.

In all, the HP Blade Workstation Solution is a next-generation workstation infrastructure that provides data center workstation computing without boundaries—combining the centralized, mission-critical control and security of the data center with a seamless, workstation-class experience and the flexibility to support professionals in multiple work locations—in an innovative new offering that can revolutionize your design environment.

Blade workstations and PCs are at the heart of HP's remote client portfolio of desktop virtualization solutions, which also include HP's industry-leading thin clients, HP Virtual Desktop Infrastructure, and remote deployment and management software and services.

For more information on the HP Blade Workstation Solution, visit [www.hp.com/go/bladeworkstations](http://www.hp.com/go/bladeworkstations).

<sup>1</sup> Quad-/Dual-Core are new technologies designed to improve performance of multithreaded software products and hardware-aware multitasking operating systems and may require appropriate operating system software for full benefits. Not all customers or software applications will necessarily benefit from use of these technologies. 64-bit computing on Intel architecture requires a computer system with a processor, chipset, BIOS, operating system, device drivers and applications enabled for Intel® 64 architecture. Processors will not operate (including 32-bit operation) without an Intel 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations. See [www.intel.com/info/em64t](http://www.intel.com/info/em64t) for more information.

<sup>2</sup> Minimum 1 GHz processor required.

To learn more, visit [www.hp.com](http://www.hp.com)

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