

Brochure

# HP ProLiant Gen8

Transform your data center



## The case for an innovative generation of servers

You know the cloud era is upon us. Your business is likely trying to address the insatiable demand for all things digital. Consider these facts:

- Two billion Internet users conduct 1.6 trillion online searches each year.<sup>1, 2</sup>
- Eight hundred million users are active on Facebook alone.<sup>3</sup>
- Data volume grows at the staggering rate of 50 percent each month.<sup>4</sup>

Now, consider your data center. If you have a typical 10,000 square foot data center, you can expect your storage capacity to grow by 45 percent each year—creating ever-growing management challenges. All of that data has to be stored, protected, and analyzed to create business insights.<sup>5</sup>

The flood of data that washes through your data center creates a ripple effect on your server infrastructure. Every new rack of storage creates the need for an additional seven racks of servers that must be integrated into your environment—managed, powered, cooled, and supported on an ongoing basis.

It all adds up to a total economic impact of \$260 billion for data centers worldwide. What does this do to your costs? For every \$1 spent on storage, you spend an additional \$6.90 on server hardware, management, and energy at a time when up to 70 percent of current IT budgets are consumed by basic operations, leaving only 30 percent for business innovation.<sup>6</sup>

Something has to change.

## Bringing intelligence to converged infrastructure

We believe it's time for a new way forward. For decades, IT systems have been getting incrementally faster, smaller, and more affordable. In the cloud era, they need to become infinitely more intelligent.

This goal is at the heart of Project Voyager, a two-year, \$300 million HP engineering and development initiative focused on reducing many manual tasks across the IT lifecycle. Project Voyager is fundamentally redefining the expectations and economics of the data center by creating systems so intelligent they virtually take care of themselves. The next generation of the HP ProLiant server family is the first step on this far-reaching mission.

## HP ProLiant Gen8—the world's most intelligent servers

HP ProLiant Gen8 servers are built for the new and emerging realities in today's data centers. The range of embedded automation and intelligent management features makes these the world's most advanced servers.

Powered by the HP ProActive Insight architecture, next-generation ProLiant servers continuously analyze thousands of system parameters to enhance application performance and proactively improve uptime. They provide your organization with insight into virtually every aspect of your IT infrastructure.

And we got our ideas from you. More than 150 client-inspired design innovations help you increase application performance, shift staff time to business innovation, extend data center capacity, and improve uptime by preventing data loss and failures.<sup>7</sup>

But that's not all. The advances in the new ProLiant family aren't just about incremental improvements to the components in the server chassis. They transform the entire server experience.

<sup>1</sup> Internet World Stats, March 2011.

<sup>2</sup> McKinsey & Company study, 2010.

<sup>3</sup> Facebook factsheet, September 2011.

<sup>4</sup> Gartner Orlando Symposium, "Analyzing HP's Acquisition of Autonomy," eDiscovery Journal, October 10, 2011

<sup>5</sup> IDC Q3 DSS Storage Market Forecast, 2011.

<sup>6</sup> Gartner, Data Center Demographics and Sizing, 2010.

<sup>7</sup> HP ProLiant Gen8 servers embody more than 150 client-inspired innovations to deliver industry-leading uptime based on design and feature changes documented by HP ProLiant mechanical design teams. HP has filed more than 900 related patents.

## Transforming the server experience

With its unprecedented set of innovations, the new ProLiant family provides the heart and mind of a self-aware and intelligent converged infrastructure. HP ProLiant Gen8 servers are so intelligent that they reduce tedious, time-consuming tasks. They converge storage, compute, and I/O to turbo-charge application performance. They help maximize the use of space, power, and cooling. They redefine the service experience. And, they fit naturally into your environment, because they were inspired by and designed for the way you work.

Let's take a closer look at how the new ProLiant family delivers these benefits.

### Integrated lifecycle automation

*Servers so intelligent they reduce tedious, time-consuming tasks*

Is your workday in the data center a steady stream of error alerts, system events, installation and update issues, and calls to support desks? These are the issues that drive the need for intelligent servers that reduce tedious, time-consuming tasks.

That's the next-generation HP ProLiant family with the HP ProActive Insight architecture. You'll notice the ProLiant difference right out of the box with HP Intelligent Provisioning capabilities that help you bring your systems online and deploy updates three times faster—thanks to a fully-integrated system and OS configuration tool. With the built-in HP Smart Update feature, all your needed firmware, drivers, and tools are pre-loaded and ready to deploy with 93 percent less downtime<sup>8</sup>. No CDs to load. No software to find. No guesswork.

You can prevent issue from becoming problems with HP Active Health technology—your 24x7 mission control for automated monitoring, diagnostics, and alerting. It monitors and securely logs more than 1600 system parameters and 100 percent of configuration changes.

### Dynamic workload acceleration

*Servers so intelligent they converge storage, compute, and I/O to turbo-charge application performance*

To stay ahead of data growth, your IT team needs to remove storage bottlenecks and accelerate data-intensive application performance. These requirements drive the need for smarter servers that converge storage, compute, and I/O to turbo-charge application performance.

That's what you'll find in the next-generation HP ProLiant family with the HP ProActive Insight architecture. You'll be poised to meet the demands of virtualized and data-intensive workloads with a system customized for solid-state disk (SSD) and designed with smart data services that analyze workload data in real time to enhance performance and efficiency. By combining smarter algorithms and analytics with 85 percent faster storage performance and twice the cache capacity, HP ProLiant servers deliver six times faster solid-state storage performance vs. previous generations.<sup>9</sup>

Along with faster performance, the HP ProLiant Gen8 family gives you up to 50 percent more drives per server than previous Generation G7 servers, and the built-in Smart Array Controller can support twice the number of drives in one RAID.

### Automated energy optimization

*Servers and infrastructure so intelligent they help maximize the use of space, power, and cooling*

As data centers grow, power and cooling costs take an ever-larger bite out of the IT budget. We help you bite back with server infrastructure so smart it automatically helps maximize the use of space, power, and cooling. That's the story of the next-generation HP ProLiant servers with the ProActive Insight architecture and its technologies for automated energy optimization.

You'll reduce energy usage and increase compute capacity with HP Thermal Discovery Services. This feature helps you squeeze the most IT out of every bit of data center power and cooling capacity—and reduce energy consumption by 10 percent compared to an HP ProLiant G6 Server.<sup>10</sup>

HP Location Discovery Services self-identify and inventory servers to optimize workload placement—without the need for tedious, error-prone manual asset collection and tracking. And all the while, HP Power Discovery Services with the HP Intelligent Power Distribution Unit (iPDU) automatically track power usage and document configurations to increase system uptime and reduce the risk of outages.

<sup>8</sup> Based on HP testing with a fully online firmware and system software update comparing HP Smart Update Manager (SUM) 5.0 to HP SUM 4.2, update time for a blade enclosure was reduced from six to eight hours to 20 minutes.

<sup>9</sup> According to HP Performance Lab, HP-developed algorithms using solid-state optimized technology result in faster, higher capacity drives in ProLiant Gen8 servers compared to G7.

<sup>10</sup> ProLiant Gen8 servers using HP Thermal Logic technology provide 10 percent more usable power per circuit and 65 percent more performance with same power compared to ProLiant G6 servers according to HP internal testing.

### Intelligent HP ProLiant Gen8 servers provide:

- Integrated lifecycle automation
- Dynamic workload acceleration
- Automated energy optimization
- ProActive Insight experience

Customize your IT lifecycle management, from acquisition of new IT, management of existing assets, and removal of unneeded equipment.

[hp.com/go/hpfinancialservices](http://hp.com/go/hpfinancialservices)

Developing solutions for major social and environmental challenges

[hp.com/hpinfo/globalcitizenship](http://hp.com/hpinfo/globalcitizenship)

### HP ProActive Insight experience

*Servers so intelligent they redefine the service experience*

In today's data centers, valuable staff time is too often lost to IT support issues. Next-generation HP ProLiant servers with the HP ProActive Insight architecture help you reclaim the time of your system administrators with servers so intelligent they redefine the service experience.

HP Insight Online provides the industry's first cloud-based device monitoring and support dashboard, offering one-stop access to the information your team needs to support the devices in your IT environment<sup>11</sup>—from outside the office, anytime. When you enable the HP Insight Remote Support feature, it connects the rich data gathered by HP Insight Online directly to your HP-certified service professional to accelerate your problem resolution time by as much as 66 percent.<sup>12</sup>

To further improve infrastructure uptime, look to HP Proactive Support Services—including a “direct-to-expert” support process that delivers instant access to HP server experts for faster problem resolution. You can also count on more than 2000 HP ServiceOne partners to provide the highest levels of local expertise backed by our global resources.

## System architecture and design

### Servers so intelligent because they were designed for the way you work

When it comes to server maintenance, simple mistakes can trigger big problems. Remove the wrong drive and you might lose data across an entire array. Next-generation HP ProLiant servers with HP ProActive Insight architecture and intelligent system components help you virtually reduce common problems that cause failures, downtime, and data loss.

That's the case with the HP Smart Drive carrier. It proactively warns you not to remove a drive if the action will cause data loss. In another customer-inspired innovation, the HP Smart Socket guide allows you to confidently add or upgrade processors without the fear of bending pins that leads to motherboard failure and replacement.

The ProLiant family makes servicing easier with more than 150 design innovations to increase your productivity and confidence during setup, upgrade, and repair. One example: tool-less access everywhere reduces the time to install or remove components by up to 60 percent.<sup>13</sup>

## Meet the challenges of the cloud era

In today's data centers, small advances in technology won't solve big problems. To respond effectively to exploding demand for applications, data, and digital content, your IT organization needs intelligent technology built for the challenges of the cloud era. That's the next-generation HP ProLiant family.

With an unprecedented set of innovations, the ProLiant family provides the heart and mind of a self-aware and intelligent converged infrastructure. From core to cloud, we are transforming the expectations and economics of the data center with the world's most intelligent servers.

**Learn more at**  
[hp.com/go/proliant](http://hp.com/go/proliant)

<sup>11</sup> According to HP competitive research as compared to other tier-1 vendors.

<sup>12</sup> HP internal call center data from Q4 2011 shows 66 percent faster problem resolution time for cases initiated with HP Insight Remote Support (HW) compared to traditional phone support.

<sup>13</sup> Based on HP Engineering time and motion studies comparing ProLiant DL380 G7 servers and ProLiant DL380 Gen8 servers.

**Sign up for updates**  
[hp.com/go/getupdated](http://hp.com/go/getupdated)



Share with colleagues



Rate this document

