

# HP Integrated Lights-Out Portfolio



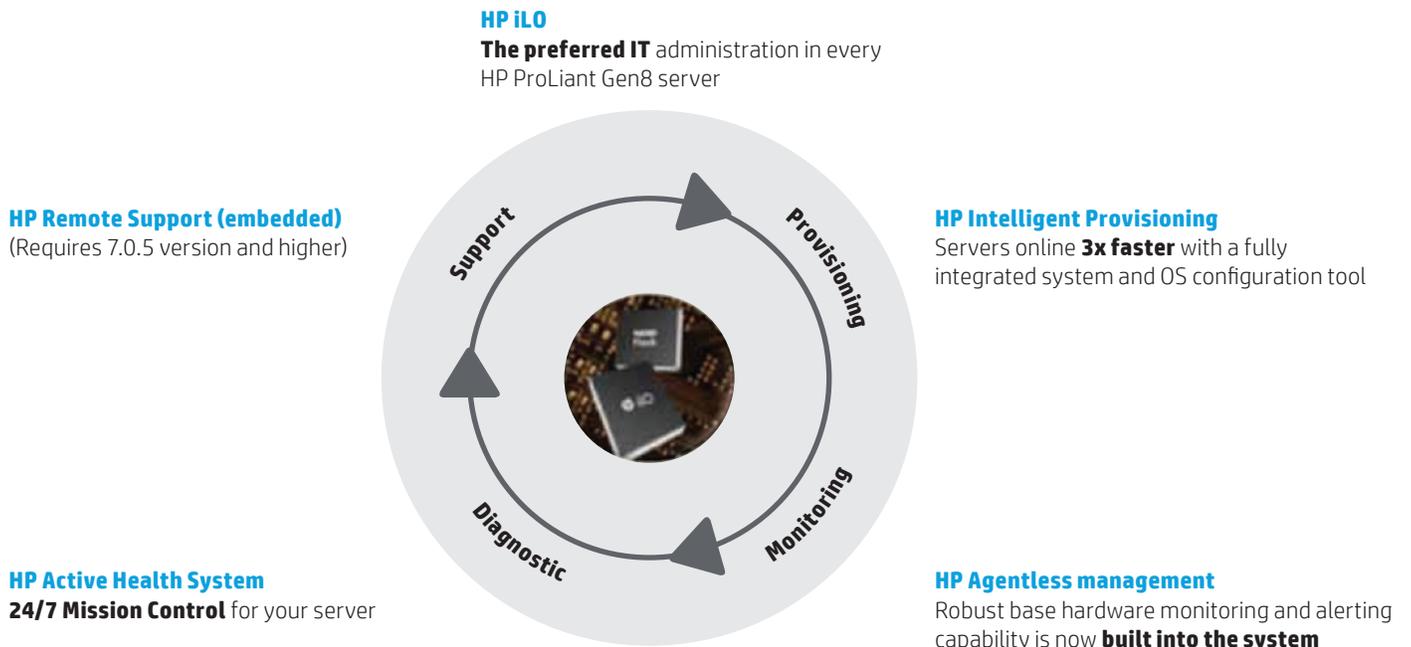
## The preferred IT administrator for every HP ProLiant server

In today's data centers, life is harder than it should be. Server management tasks keep your administrators running from problem to problem. A typical workday may include a stream of error alerts, system events, installation and update tasks, as well as multiple calls to the IT support desk. IT administrators spend a huge amount of time managing physical servers. But, what if you could streamline and execute these tasks from any location, from anywhere in the world, with just a Web browser or via your mobile devices?

You can reduce server administration time and tasks with the HP Integrated Lights-Out (iLO) management processor, which ships standard with every HP ProLiant server. Out of the box, HP iLO simplifies server setup, provides access to server health information, improves server power and thermal control, and enables basic remote administration.

HP ProLiant Gen8 servers and the broad HP iLO portfolio deliver an all-new, simplified IT administration experience, making the servers smart enough to manage themselves. Embedded inside each HP ProLiant Gen8 server, is HP iLO Management which provides a rich set of capabilities that automate and simplify system provisioning, troubleshooting, and firmware and software updates.

**Figure 1.** HP iLO Management—Core lifecycle management functions built in for instant availability



With the HP iLO Management, you can automate your most common tasks during each step of the IT lifecycle, from initial deployment to ongoing management and service alerting. The HP iLO Management delivers comprehensive embedded management through the entire lifecycle of the server, for every server in the environment. This translates to faster time to deployment, higher server and application availability through continuous health monitoring, and significantly quicker time to resolution when issues arise.

## Key features and benefits

The HP iLO Management Engine portfolio includes:

### HP Integrated Lights-Out (iLO)

The HP iLO management processor is the core foundation for the HP iLO portfolio. HP iLO management processors for HP ProLiant servers simplify server setup, engage in health monitoring of power and thermal control, and promote remote administration for every HP ProLiant server. HP iLO is the intelligence that drives and manages all the server components and how they interact with each other.

With the new HP iLO 4, you can now have the same homogeneous server management experience across all HP ProLiant Gen8 servers. Also, with the HP iLO Mobile App, you can access, deploy, and manage your server anytime, anywhere from select smartphones and mobile devices. Check it out at [hp.com/go/ilo/mobileapp](http://hp.com/go/ilo/mobileapp).

### HP Intelligent Provisioning

Server provisioning and maintenance capability is now embedded and standard across all HP ProLiant Gen8 servers. Exceeding its predecessor (HP SmartStart) in features, HP Intelligent Provisioning helps you take your server from an out-of-box state to an in-production state, quickly and easily. The key benefit is that, with this technology embedded in each HP ProLiant server, you no longer have to insert and deal with any physical media.

With HP Intelligent Provisioning, you can deploy servers 3x faster than the previous generation.<sup>1</sup> It helps you overcome the complexity of server maintenance and deployment by:

- Providing step-by-step HP ProLiant server deployment assistance in a simple and consistent manner
- Simplifying system configuration with guided, profile-driven or scripted approaches for seamless integration with standard IT processes
- Recognizing automatically if the system software is out-of-date and downloading the latest update

### **HP Agentless Management**

HP Agentless Management runs on HP iLO—-independent of the OS and the main CPU. It offers robust basic server monitoring without the complexity of OS-based agents. The base hardware monitoring and alerting capabilities are built into the system (running on the HP iLO processor). They start working the moment a power cord and an Ethernet cable are connected to the server.

### **HP Active Health System**

HP Active Health System (AHS)—an essential component of HP iLO—continuously monitors and records changes in the server hardware and system configuration. HP Active Health System provides essential information to speed problem diagnosis and deliver rapid resolution—through the help of services and support—when system failures occur. It also:

- Provides a consolidated diagnostic mechanism, enabling 5x faster problem analysis without impacting performance<sup>1</sup>
- Monitors over 1600 system parameters to help you start problem analysis faster and spend less time with support, reproducing or describing errors<sup>1</sup>
- Raises the bar on quality and customer experience, with easy export and upload of data collected by Active Health to HP Service and Support for accurate and rapid problem resolution

With embedded alerting in HP iLO 4, SNMP alerts can be generated without the need for agents running in the OS. The active management software (AMS) running in the OS environment can be optionally installed to provide HP iLO with additional information from the OS for more accurate problem diagnosis.

### **HP Insight Remote Support (embedded)**

HP Insight Remote Support (Insight RS) monitors your servers 24x7 and proactively alerts you to potential problems. It works in conjunction with HP iLO 4, HP Active Health System, and HP Agentless Management for much easier configuration and setup of remote support for HP ProLiant Gen8 servers. HP Insight RS offers automated event detection, support case creation, notification, and accurate diagnostics, so you can spend less time solving problems and focus on IT value-add to your business. Embedded alerting and embedded remote support are now part of HP iLO 4 in HP ProLiant Gen8 platforms.

With embedded remote support, HP iLO transmits hardware service events via an HP Insight RS secure connection to HP where they are analyzed. A support case is generated if needed. These support cases are then sent to HP support staff or HP Authorized Partners for appropriate action. This is all done automatically without user intervention, saving you time and resources. This requires HP Insight RS 7.0.5 and higher to be on the HP ProLiant Gen8 servers. For more information, visit [hp.com/go/insightremotesupport](http://hp.com/go/insightremotesupport).

### **HP Insight Online**

Beginning with HP Insight RS 7.0.5, the IT infrastructure also supports the new HP Insight Online portal. HP Insight Online helps you monitor, manage, and support your IT environment online. Integrated into HP Insight RS and HP Support Center, it offers secure and personalized access to product and HP support information specific to your environment. You can easily track service events and support cases, view device configurations, and proactively monitor HP contracts and warranties. You also have the option to share device information with HP or HP Authorized Partners, who can then provide service, support, and consultation.

<sup>1</sup> HP proprietary internal test, July 2012.

As part of HP iLO 4, HP Insight Online and HP Insight RS 7.0.5 help you monitor service events and related support case details from anywhere and at any time. Users can view all key event information, such as severity, problem description, date and time generated, event status, and related support case ID. This allows your staff or authorized service provider to be more efficient in supporting and servicing your IT environment. For more information, visit [hp.com/go/insightonline/info](http://hp.com/go/insightonline/info).

## Licensed product offerings

### **HP Integrated Lights-Out Essentials license (new)—Just Right IT for SMB**

HP iLO Essentials is a new license that offers remote server management uniquely designed for small and medium business servers, delivering more value for your investment. Offered on all HP ProLiant Gen8 “e-Series” servers, the license provides full remote management access via the Integrated Remote Console (IRC), virtual media, and e-mail based alerts. HP iLO Essentials is the key to unlocking remote server management that can save you time and money, increase efficiency, and accelerate time to resolution. For more information, visit [hp.com/go/iLO/essentials](http://hp.com/go/iLO/essentials).

### **HP Integrated Lights-Out Scale-Out license (new)—Purpose-built for HPC**

The HP iLO Scale-Out is a new license built for web hosting, cloud service providers, and high performance computing data centers, managing massive scale out environments. HP iLO Scale-Out is offered on the HP ProLiant Gen8 DL160, and all HP ProLiant Gen8 SL and BL servers. This license provides fast remote access via sophisticated scripting tools, lower operational cost with HP Dynamic Power Capping, faster time to resolution with proactive notifications, and an overall increase in data center efficiency. HP iLO Scale-Out is a hassle free, intelligent server management solution for the world’s most extreme data centers. For more information, visit [hp.com/go/iLO/scale-out](http://hp.com/go/iLO/scale-out).

### **HP Integrated Lights-Out Advanced license—Remote Management for All**

HP iLO Advanced and HP iLO Advanced for HP BladeSystem offer smart remote functionality without compromise, for all HP ProLiant servers. The license includes the full integrated remote console, virtual keyboard, video, and mouse (KVM), multi-user collaboration, console record and replay, and GUI-based and scripted virtual media and virtual folders. You can also activate the enhanced security and power management functionality. With this license, your IT managers can perform system administration tasks without physically visiting their servers. For more information on how to purchase, visit [hp.com/buy/iLOADvanced](http://hp.com/buy/iLOADvanced).

### **HP iLO and HP Insight Control—Better Together**

HP Insight Control, an essential part of our server management portfolio, enables management of HP ProLiant Gen8 servers across the server lifecycle. The integration of HP iLO Advanced and HP Insight Control gives you powerful capabilities that deliver the health monitoring, performance, multi-server deployment, energy efficiency, and precise control needed to build a best-run server infrastructure. For more information on how to purchase, visit [hp.com/go/insightcontrol](http://hp.com/go/insightcontrol).

## HP Integrated Lights-Out feature comparison tables

HP iLO licenses can be purchased stand-alone or with your HP ProLiant server order. When ordering a license, please check the HP iLO comparison tables listed below for features specific to the HP iLO version (iLO 3 or iLO 4) within your HP ProLiant server.

### HP iLO 3 Licensed vs. HP iLO 3 Standard

Feature	HP iLO Standard	HP iLO Standard for BladeSystem	HP iLO Advanced	HP iLO Advanced for BladeSystem
<b>Platform support</b>	All (except BL)	BL & WS	All (except BL)	BL & WS
<b>Embedded health system</b>	✓	✓	✓	✓
<b>Virtual power buttons</b>	✓	✓	✓	✓
<b>IPMI over LAN/DCMI</b>	✓	✓	✓	✓
<b>Web-based GUI</b>	✓	✓	✓	✓
<b>SSH command line interface</b>	✓	✓	✓	✓
<b>RIBCL</b>	✓	✓	✓	✓
<b>Virtual serial port (VSP)</b>	✓	✓	✓	✓
<b>IPv6*</b>	✓	✓	✓	✓
<b>Integrated Remote Console (IRC/Virtual KVM, support text, and graphics)</b>	Pre-OS only	✓	✓	✓
<b>Global Team Collaboration via Integrated Remote Console</b>			✓	✓
<b>Integrated Remote Console record and playback</b>			✓	✓
<b>Virtual Media via Integrated Remote Console</b>		✓	✓	✓
<b>Scripted virtual media</b>			✓	✓
<b>Text-based remote console via SSH (TEXTCONS)</b>			✓	✓
<b>Directory Service Authentication</b>			✓	✓
<b>Kerberos authentication</b>			✓	✓
<b>Email-based alerting</b>			✓	✓
<b>Remote syslog</b>			✓	✓
<b>Advanced power management (power history graphs, Dynamic Power Capping)</b>			✓	✓

\* IPv6 Phase 1 Support: Static address assignment (up to 4), router advertised (RA) address assignment (up to 3 plus the link-local address), static routes (up to 3), default gateway (1), enables the following iLO applications/clients: HTTP/HTTPS, SSH, SNMP, DDNS, Remote Console, and Virtual Media through the Remote Console.

Note: When the HP iLO Scale-Out license is applied to blade servers, it does not remove features that are available with the iLO Standard For BladeSystem license.

## HP iLO 4 Licensed vs. HP iLO 4 Standard

Feature	HP iLO Standard	HP iLO Standard for BladeSystem	HP iLO Essentials	HP iLO Scale-Out	HP iLO Advanced	HP iLO Advanced for BladeSystem
<b>Platform support</b>	All (except BL)	BL & WS	ML350e Gen8 ML310e Gen8 DL380e Gen8 DL360e Gen8 DL320e Gen8 MicroServer Gen8	HP ProLiant Gen8 DL160, SL and BL	All (except BL)	BL & WS
<b>Embedded health system</b>	✓	✓	✓	✓	✓	✓
<b>Virtual power buttons</b>	✓	✓	✓	✓	✓	✓
<b>IPMI over LAN/DCMI</b>	✓	✓	✓	✓	✓	✓
<b>Web-based GUI</b>	✓	✓	✓	✓	✓	✓
<b>SSH command line interface</b>	✓	✓	✓	✓	✓	✓
<b>RIBCL</b>	✓	✓	✓	✓	✓	✓
<b>Virtual serial port (VSP)</b>	✓	✓	✓	✓	✓	✓
<b>IPv6*</b>	✓	✓	✓	✓	✓	✓
<b>Active Health System</b>	✓	✓	✓	✓	✓	✓
<b>Embedded remote support</b>	✓	✓	✓	✓	✓	✓
<b>Agentless Management</b>	✓	✓	✓	✓	✓	✓
<b>Integrated Remote Console (IRC/Virtual KVM, support text, and graphics)</b>	Pre-OS only	✓	✓	Pre-OS only	✓	✓
<b>Global Team Collaboration via Integrated Remote Console</b>					✓	✓
<b>Integrated Remote Console record and playback</b>					✓	✓
<b>Virtual Media via Integrated Remote Console</b>		✓	✓		✓	✓
<b>Scripted virtual media</b>					✓	✓
<b>Text-based remote console via SSH (TEXTCONS)</b>				✓	✓	✓
<b>Directory Service Authentication</b>					✓	✓

\* IPv6 Phase 1 Support: Static address assignment (up to 4), router advertised (RA) address assignment (up to 3 plus the link-local address), static routes (up to 3), default gateway (1), enables the following iLO applications/clients: HTTP/HTTPS, SSH, SNMP, DDNS, Remote Console, and Virtual Media through the Remote Console.

Note: When the HP iLO Scale-Out license is applied to blade servers, it does not remove features that are available with the iLO Standard For BladeSystem license.

## HP iLO 4 Licensed vs. HP iLO 4 Standard (continued)

Feature	HP iLO Standard	HP iLO Standard for BladeSystem	HP iLO Essentials	HP iLO Scale-Out	HP iLO Advanced	HP iLO Advanced for BladeSystem
<b>Kerberos authentication</b>					✓	✓
<b>Email-based alerting</b>			✓	✓	✓	✓
<b>Remote syslog</b>				✓	✓	✓
<b>Advanced power management (power history graphs, Dynamic Power Capping)</b>				✓	✓	✓
<b>Virtual serial port record and playback</b>				✓	✓	✓
<b>Discovery services</b>					✓	✓

HP Financial Services provides innovative financing and financial asset management programs to help you acquire, manage, and ultimately retire your HP solutions. For more information visit [hp.com/go/hpfinancialservices](http://hp.com/go/hpfinancialservices).

## HP Services

To make the most out of HP iLO 4, you need a service partner who thoroughly understands your IT environment. HP Services has unique insight and provides a wide range of support services to help you get the most from your technology.

- One- or three-year 24x7 HP Software Technical and SW Update Service is bundled with all HP iLO licenses. With this service, you gain rapid access to the HP call center and backline support, as well as proactive notification and firmware updates.
- If you are running business-critical environments, we offer HP Proactive Care. This service helps you deliver high levels of application availability through proactive service management.

For more information, visit [hp.com/services/insight](http://hp.com/services/insight).

## Learn more

**To learn how you can improve your remote onsite server management and save on time and costs, visit [hp.com/go/iLO](http://hp.com/go/iLO). For ordering information, see QuickSpecs at [h18000.www1.hp.com/products/quickspecs/14276\\_div/14276\\_div.html](http://h18000.www1.hp.com/products/quickspecs/14276_div/14276_div.html).**

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