



HP iLO Management Engine

Core lifecycle management functions built in for instant availability

Data sheet

In today's data centers, life is harder than it should be. Server management tasks keep administrators running from problem to problem and a workday is a stream of error alerts, system events, installation and update tasks, and calls to support desks. IT administrators spend a huge amount of time administrating physical servers.

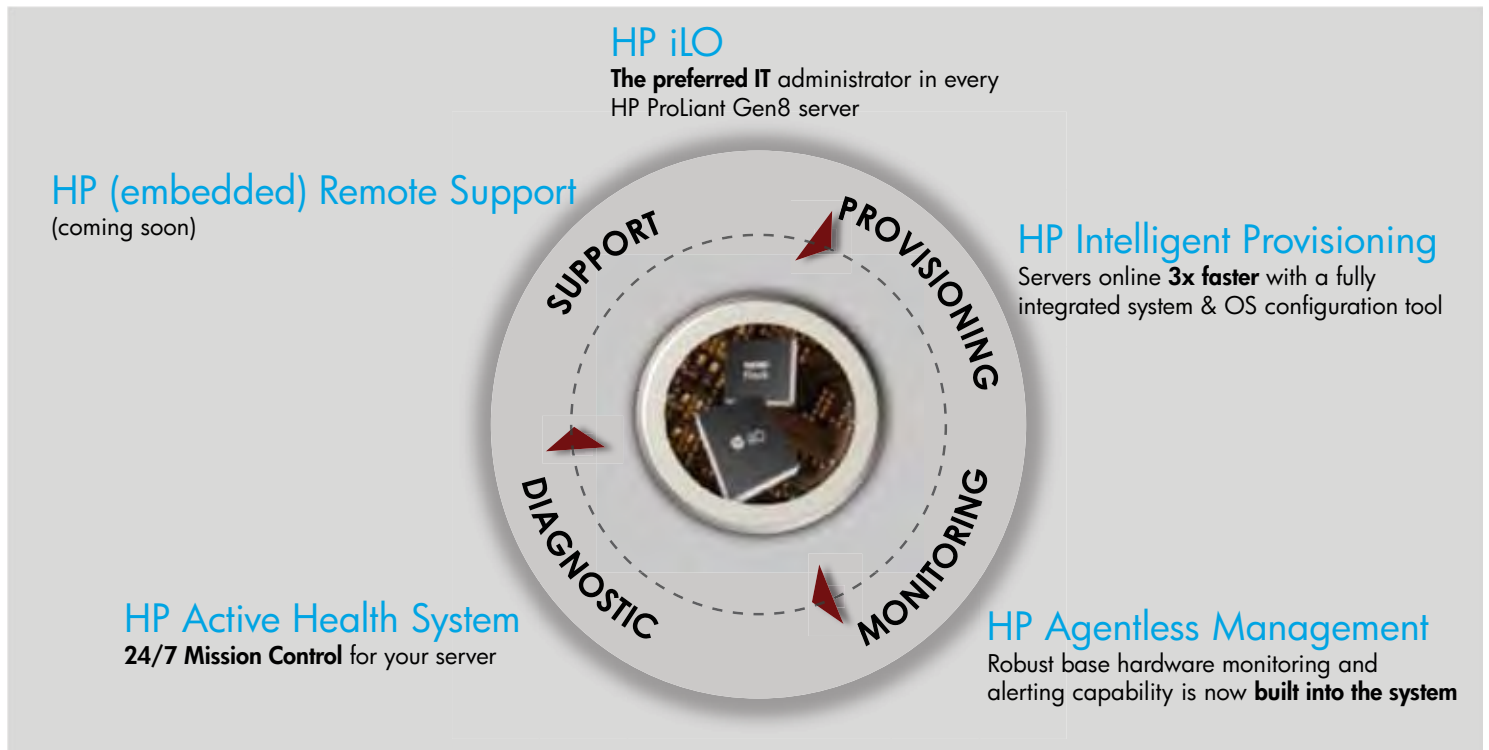
HP ProLiant Gen8 servers are the result of a comprehensive effort by HP to take the IT administration experience to an all-new, simplified level. To achieve this, the goal was to make servers smart enough to manage themselves. The new HP Integrated Lights-Out (iLO) Management Engine—embedded inside each HP ProLiant Gen8 server—offers a rich set of capabilities that automate and simplify system provisioning, troubleshooting, and firmware and software updates.

Taking advantage of all the new features under the HP iLO Management Engine umbrella, HP ProLiant servers use intelligence to automate your most common tasks during each step of the IT lifecycle.

HP iLO Management Engine is a complete set of embedded management features supporting the complete lifecycle of the server, from initial deployment through ongoing management to service alerting. By delivering comprehensive embedded management that covers every step of the server lifecycle for every server in their environment, HP helps customers speed time to deployment, maximize server and application availability through proactive notification, and dramatically accelerate time to resolution when issues do arise.

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Key features and benefits

The HP iLO Management Engine portfolio includes:

HP iLO	<p>The HP iLO (integrated Lights-Out) management processor is the core foundation for the HP iLO Management Engine. 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 HP ProLiant ML, DL, BL, and SL servers. HP iLO is the intelligence that drives and manages all the server components and how they interact together. It provides an outstanding remote console and virtual media. With the new HP iLO 4, customers can now have the same homogeneous server management experience across all HP ProLiant Gen8 servers. Furthermore, with the new “HP iLO Mobile App” you have the ability to access, deploy, and manage your server anytime from anywhere from select smartphones and mobile devices. Check it out at: www.hp.com/go/ilo/mobileapp</p>
HP Intelligent Provisioning	<p>Server provisioning and maintenance capability is now embedded and standard across all HP ProLiant Gen8 servers. Its features far exceed that of its predecessor, SmartStart. With HP Intelligent Provisioning, you can quickly and easily take your server from an out-of-box state to an in-production state with the key benefit of not having to insert and deal with any physical media.</p> <p>HP Intelligent Provisioning addresses the complexity of server maintenance and deployment, which has become a daunting and complicated task for seasoned systems administrators. When industry-standard servers were first introduced there were only a few options to be configured, and at the most one or two viable operating systems and driver sets to load. Today, a new HP ProLiant server has numerous cores, co-processors, and intelligent devices that need to be configured for over 100 possible OS permutations. HP Intelligent Provisioning deploys a server 3x times faster¹ than the previous generation and simplifies this process for you with a step-by-step HP ProLiant server deployment assistance.</p>
HP Agentless Management	<p>HP Agentless Management runs on HP iLO Management Engine, and is independent of the OS and the main CPU. It offers robust basic server monitoring without the complexity of OS-based agents. With the HP iLO Management Engine in every HP ProLiant Gen8 server, the base hardware monitoring and alerting capability are built into the system (running on the HP iLO processor) and starts working the moment a power cord and an Ethernet cable are connected to the server.</p>
HP Active Health System	<p>HP Active Health System—an essential component of the HP iLO Management Engine—monitors and records changes in the server hardware and system configuration. The Active Health System assists in diagnosing problems and delivering rapid resolution when system failures occur.</p> <ul style="list-style-type: none">• Offers Always-on proactive diagnostics rather than reactive• Raises the bar on quality and customer experience with easy export and upload to service and support• Enables faster and accurate problem resolution• Provides a consolidated diagnostic mechanism

¹ Source: HP proprietary internal test.

HP iLO Advanced vs. HP iLO Standard (Comparison)

For HP ProLiant Servers	HP iLO for HP ProLiant Servers								
	iLO 4			iLO 3			iLO 2		
HP iLO Remote Administration	HP iLO 4 Advanced	HP iLO 4 Advanced for BladeSystem	HP iLO 4 Standard	HP iLO 3 Advanced	HP iLO 3 Advanced for BladeSystem	HP iLO 3 Standard	HP iLO 2 Advanced	HP iLO 2 Advanced for BladeSystem	HP iLO 2 Standard
Integrated Remote Console	Full text and graphic modes (pre-OS & OS)	Full text and graphic modes (pre-OS & OS)	Full text and graphic modes (pre-OS)	Full text and graphic modes (pre-OS & OS)	Full text and graphic modes (pre-OS & OS)	Full text and graphic modes (pre-OS)	Full text and graphic modes (pre-OS & OS)	Full text and graphic modes (pre-OS & OS)	Full text and graphic modes (pre-OS)
Global Team Collaboration	Up to 6 Server Administrators	Up to 6 Server Administrators		Up to 6 Server Administrators	Up to 6 Server Administrators		Up to 4 Server Administrators	Up to 4 Server Administrators	
Console Record and Replay	•	•		•	•		•	•	
Virtual Power	•	•	•	•	•	•	•	•	•
Virtual Media	•	•		•	•		•	•	
Virtual Folders	•	•		•	•		•	•	
Terminal Services Pass-Through									
Remote Serial Console	SSH Only	SSH Only	SSH Only	SSH Only	SSH Only	SSH Only	•	•	•
Virtual Unit Indicator Display	•	•	•	•	•	•	•	•	•
HP iLO Mobile App	HP iLO 4 Advanced	HP iLO 4 Advanced for BladeSystem	HP iLO 4 Standard	HP iLO 3 Advanced	HP iLO 3 Advanced for BladeSystem	HP iLO 3 Standard	HP iLO 2 Advanced	HP iLO 2 Advanced for BladeSystem	HP iLO 2 Standard
iOS Application (iPhone, iPad, iPad 2)	•	•	•						
Android Applications	•	•	•						
Remote Console	Full text and graphic modes (pre-OS & OS)	Full text and graphic modes (pre-OS & OS)	IRC available during pre-OS (boot, POST, Intelligent Provisioning)						
Virtual Power Button	•	•	•						
HTTP-based Virtual Media	•	•	•						
HTTP-based XML script execution	•	•	•						
Server Health Indicator/Link with SSO to the HP iLO web UI	•	•	•						
QR code reading of HP iLO information	•	•	•						
Save list of favorite HP iLO addresses/login information	•	•	•						
Diagnostic Information/Support	HP iLO 4 Advanced	HP iLO 4 Advanced for BladeSystem	HP iLO 4 Standard	HP iLO 3 Advanced	HP iLO 3 Advanced for BladeSystem	HP iLO 3 Standard	HP iLO 2 Advanced	HP iLO 2 Advanced for BladeSystem	HP iLO 2 Standard
HP iLO Self-Test reporting	•	•	•						
Manually reset HP iLO	•	•	•						
Virtual System NMI	•	•	•						
Swap Active/Backup System ROM button	•	•	•						
Support for HP Diagnostics Environment	•	•	•						

HP iLO Advanced vs. HP iLO Standard (Comparison)

For HP ProLiant Servers	HP iLO for HP ProLiant Servers								
	iLO 4			iLO 3			iLO 2		
Simplified Server Setup	HP iLO 4 Advanced	HP iLO 4 Advanced for BladeSystem	HP iLO 4 Standard	HP iLO 3 Advanced	HP iLO 3 Advanced for BladeSystem	HP iLO 3 Standard	HP iLO 2 Advanced	HP iLO 2 Advanced for BladeSystem	HP iLO 2 Standard
ROM-Based Setup Utility (RBSU)	•	•	•	•	•	•	•	•	•
HP Intelligent Provisioning	•	•	•					•	
Power Measurement & Control	HP iLO 4 Advanced	HP iLO 4 Advanced for BladeSystem	HP iLO 4 Standard	HP iLO 3 Advanced	HP iLO 3 Advanced for BladeSystem	HP iLO 3 Standard	HP iLO 2 Advanced	HP iLO 2 Advanced for BladeSystem	HP iLO 2 Standard
Present power reading	•	•	•	•	•	•	•	•	•
Power Meter	•	•		•	•		•	•	
Power History Graph	•	•							
Dynamic Power Capping	•	•		•	•		G6 server support with version 1.77 firmware	G6 server support with version 1.77 firmware	
Alert on Power Threshold	•	•	•	•	•	•			
Automatic Power-On after Power loss	•	•	•	•	•	•			
Power-On Delay after Power loss	•	•	•	•	•	•			
Power supply high-efficiency mode	•	•		•	•		G6 server support with version 1.77 firmware	G6 server support with version 1.77 firmware	G6 server support with version 1.77 firmware
Persistent Mouse and Keyboard Setting (power savings or older compatibility setting)	•	•	•	•	•	•			
Sea of Sensors Thermal Management	HP iLO 4 Advanced	HP iLO 4 Advanced for BladeSystem	HP iLO 4 Standard	HP iLO 3 Advanced	HP iLO 3 Advanced for BladeSystem	HP iLO 3 Standard	HP iLO 2 Advanced	HP iLO 2 Advanced for BladeSystem	HP iLO 2 Standard
HP iLO Process Control (PID) Algorithms for Thermal Management	•	•	•	•	•	•			
50+ Temperature Sensors	•	•	•	•	•	•			
Ambient Temperature Reporting	•	•	•	•	•	•			
DIMM Temperature Monitoring	•	•	•	•	•	•			
Hard Drive Temperature Monitoring	•	•	•	•	•	•			
Option Card (PCIe) Sensor Data Monitoring	•	•	•	•	•	•			

HP iLO Advanced vs. HP iLO Standard (Comparison)

For HP ProLiant Servers	HP iLO for HP ProLiant Servers								
	iLO 4			iLO 3			iLO 2		
Embedded System Health	HP iLO 4 Advanced	HP iLO 4 Advanced for BladeSystem	HP iLO 4 Standard	HP iLO 3 Advanced	HP iLO 3 Advanced for BladeSystem	HP iLO 3 Standard	HP iLO 2 Advanced	HP iLO 2 Advanced for BladeSystem	HP iLO 2 Standard
POST and failure sequence replay	•	•		•	•		•	•	
HP iLO Event and Server Integrated Management Log (IML)	•	•	•	•	•	•	•	•	•
Advanced Server Management (ASM)	•	•	•	•	•	•	•	•	•
Alert Administrator (SNMP Pass-through)	•	•	•	•	•	•	•	•	•
Server Health Monitoring (Temperature, Fans, Power Supplies, CPUs, Memory, Smart Array Logical, and Physical Hard Drives)	•	•	•	•	•	•	•	•	•
HP Agentless Management	HP iLO 4 Advanced	HP iLO 4 Advanced for BladeSystem	HP iLO 4 Standard	HP iLO 3 Advanced	HP iLO 3 Advanced for BladeSystem	HP iLO 3 Standard	HP iLO 2 Advanced	HP iLO 2 Advanced for BladeSystem	HP iLO 2 Standard
Server Health Monitoring with Agentless Management Service (In addition to the components listed above: NICs, Firmware, Chipset-connected Storage)	•	•	•						
Agentless SNMP Alerting	•	•	•						
SNMP Data Collection (SNMP GETs)	•	•	•						
HP Active Health System	HP iLO 4 Advanced	HP iLO 4 Advanced for BladeSystem	HP iLO 4 Standard	HP iLO 3 Advanced	HP iLO 3 Advanced for BladeSystem	HP iLO 3 Standard	HP iLO 2 Advanced	HP iLO 2 Advanced for BladeSystem	HP iLO 2 Standard
Boot Configuration/ Hardware Journaling	•	•	•						
Always-on run time telemetry	•	•	•						
Easy data download	•	•	•						
Access Security	HP iLO 4 Advanced	HP iLO 4 Advanced for BladeSystem	HP iLO 4 Standard	HP iLO 3 Advanced	HP iLO 3 Advanced for BladeSystem	HP iLO 3 Standard	HP iLO 2 Advanced	HP iLO 2 Advanced for BladeSystem	HP iLO 2 Standard
Directory Services Authentication	•	•		•	•		•	•	
Kerberos	•	•		v1.20	v1.20				
Two-Factor Authentication									
Locally Stored Accounts									

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For HP ProLiant Servers	HP iLO for HP ProLiant Servers								
	iLO 4			iLO 3			iLO 2		
Interfaces	HP iLO 4 Advanced	HP iLO 4 Advanced for BladeSystem	HP iLO 4 Standard	HP iLO 3 Advanced	HP iLO 3 Advanced for BladeSystem	HP iLO 3 Standard	HP iLO 2 Advanced	HP iLO 2 Advanced for BladeSystem	HP iLO 2 Standard
Browser	•	•	•	•	•	•	•	•	•
Command Line	•	•	•	•	•	•	•	•	•
XML/PERL for scripting	•	•	•	•	•	•	•	•	•
WS Management scripting*							•	•	•
Integrated Remote Console for Windows clients	Improved for iLO 4	Improved for iLO 4		Improved for iLO 3	Improved for iLO 3		•	•	
Java applet client for Windows and Linux clients	Improved for iLO 4 Integrated Remote Console for Java	Improved for iLO 4 Integrated Remote Console for Java		Improved for iLO 3 Integrated Remote Console for Java	Improved for iLO 3 Integrated Remote Console for Java		•	•	
Security Protocols	HP iLO 4 Advanced	HP iLO 4 Advanced for BladeSystem	HP iLO 4 Standard	HP iLO 3 Advanced	HP iLO 3 Advanced for BladeSystem	HP iLO 3 Standard	HP iLO 2 Advanced	HP iLO 2 Advanced for BladeSystem	HP iLO 2 Standard
Secure Socket Layer	•	•	•	•	•	•	•	•	•
Secure Shell	•	•	•	•	•	•	•	•	•
AES for Remote Console	•	•	•	•	•	•	•	•	•
RC4 for Remote Console	•	•	•	•	•	•	•	•	•
Network connectivity	HP iLO 4 Advanced	HP iLO 4 Advanced for BladeSystem	HP iLO 4 Standard	HP iLO 3 Advanced	HP iLO 3 Advanced for BladeSystem	HP iLO 3 Standard	HP iLO 2 Advanced	HP iLO 2 Advanced for BladeSystem	HP iLO 2 Standard
Dedicated Network Port	1 Gbps	1 Gbps	1 Gbps	10/100 Mbps	10/100 Mbps	10/100 Mbps	10/100 Mbps	10/100 Mbps	10/100 Mbps
Shared Network Port	1 Gbps	1 Gbps	1 Gbps	10/100 Mbps	10/100 Mbps	10/100 Mbps	10/100 Mbps	10/100 Mbps	10/100 Mbps

* Limited

HP Financial Services

HP Financial Services provides innovative financing and financial asset management programs to help you cost-effectively acquire, manage, and ultimately retire your HP solutions. For more information on these services, visit: www.hp.com/go/hpfinancialservices

HP Services

To fully capitalize on the iLO Management Engine features integrated in 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.

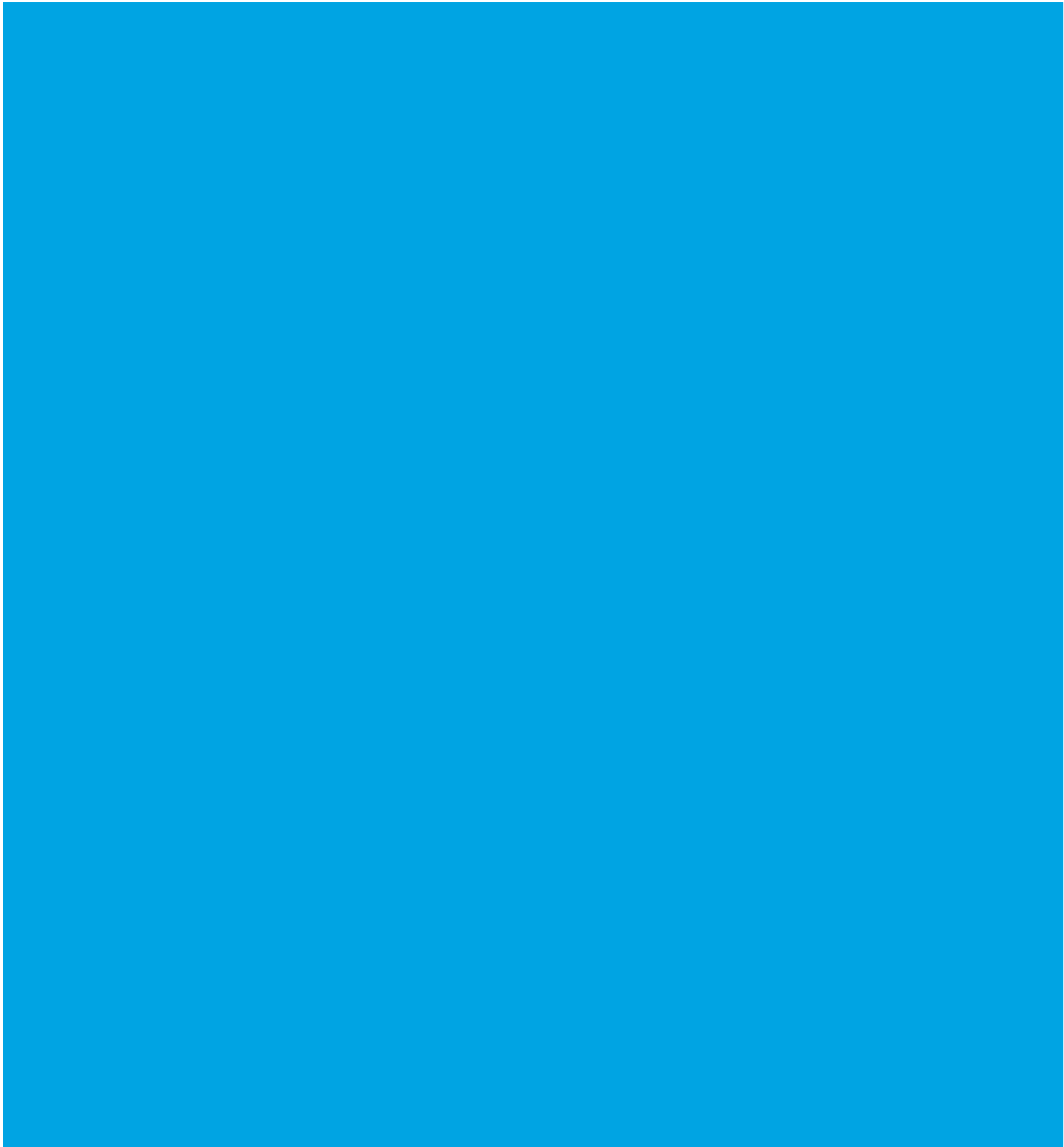
- One year of 24x7 HP Software Technical and SW Update Service is bundled with HP iLO Advanced and iLO Advanced for BladeSystem. With this service, you gain rapid access to the HP call center and backline support, as well as proactive notification and access to firmware updates.
- If you are running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

All service options include HP Insight Remote Support for secure remote monitoring, diagnosis, and problem resolution. Also included, is the HP Support Center that provides access to the information, tools, and experts to support HP business products.

For more information please visit: www.hp.com/services/insight.

To learn how you can improve your remote onsite server management and save on time and costs, visit: www.hp.com/go/iLO

For ordering information, see QuickSpecs at www.hp.com/go/QuickSpecs



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