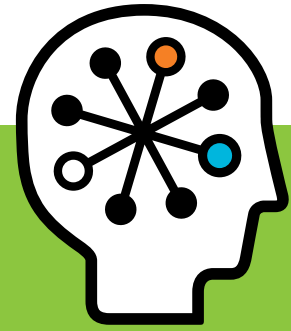




# HP ProLiant DL1000 Multi Node Series

Data sheet



## Bring new levels of flexibility and efficiency to your data center

HP introduces the ProLiant DL1000 Multi Node series—our first multi-node rack solution designed for density and increased power efficiency, yet flexible enough to be suitably configured for varying application requirements. It supports up to four independent HP ProLiant DL170h G6 Servers in a 2U HP ProLiant h1000 G6 Chassis, which provides shared power supplies and thermals across all nodes.

The HP ProLiant DL1000 Multi Node series combines dual processor server nodes with rear cabling, and front-accessible hot-plug hard drives, installed in standard 19" racks, helping you to achieve higher density without having to re-architect your data center. It combines the performance of four servers in a single consolidated infrastructure that fits into industry standard racks.

The DL1000 Multi Node series includes two pre-configured models, the HP ProLiant DL4x170h G6 Server, which offers four server nodes in a single two-unit chassis, and the HP ProLiant DL2x170h G6 Server, which provides two server nodes with expanded I/O capabilities. Using the HP configure to order capability, two, three, and four node systems are available.

Whichever configuration you choose, when you are demanding the same levels of efficiency from your data center infrastructure, from the base design to the distribution of power and cooling, the DL1000 Multi Node series is an ideal choice.

## Key features and benefits

The DL1000 Multi Node series drives the economics of scale-out computing to small businesses and mid-market businesses, enabling server deployment by the rack or across hundreds of racks. Its features and benefits include the following:

### High performance and density

The DL1000 Multi Node series delivers an innovative scale-out infrastructure, in a standard 2U rack-mount footprint. It provides:

- Double the compute density per rack unit (U) over traditional rack-mount servers—bringing new levels of efficiency to your data center.
- Configurations of up to 84 two-processor nodes in a 42U rack, with 672 cores/rack to help you achieve higher price/performance per watt, per square foot.
- 10 terabytes (TB) of memory in a 42U rack for exceptional DIMM density in a 2P 2U server.

When IT planning is done right, you can redefine cost efficiency and gain competitive advantages. Look to the HP ProLiant DL1000 Multi Node series, our first high-density rack solution that provides multi-node flexibility with 4-in-1 efficiency.

#### **Cost-effective compute power**

The HP ProLiant DL1000 Multi Node series brings economical compute power to your organization, making it easy to drive cost-saving initiatives in the data center. It provides streamlined, essential features, so you no longer have to pay for capabilities you do not need. As a result, costs are significantly reduced, even as you benefit from enhanced efficiency and performance.

- The ProLiant DL1000 Multi Node series reduces acquisition costs, making them lower when compared to traditional rack-mount servers.
- Lower power consumption results in reduced operating cost per server.
- No startup investment in infrastructure is required—so you can take advantage of lower total cost of ownership (TCO).

#### **Better utilization of data center space**

With twice the density per unit, the HP ProLiant DL1000 Multi Node series can be deployed in standard data centers and requires no additional floor space. What's more, you do not have to redesign your data center, because the DL1000 Multi Node series:

- Saves valuable data center space and can be used in existing rack-mount infrastructure.
- Fits into existing data centers with standards-based infrastructure, including standard racks (HP and third-party) with traditional rear cabling.
- Enables deployment without modifications to existing hot-aisle/cold-aisle layouts.

#### **High levels of energy efficiency across the entire data center ecosystem**

The 2U HP ProLiant h1000 G6 Chassis is built on a unique design. Its shared power and cooling infrastructure uses highly efficient fans and power supplies, and its modular servers are designed for better air flow and cabling. In addition to the efficiencies afforded by its shared power infrastructure, the DL1000 has advanced power metering and capping capabilities. The embedded Power Interface Controller (PIC) monitors power consumption and can throttle the speed of the processors and memory in each node within the chassis to maintain a pre-set power budget.

- The HP ProLiant DL1000 Multi Node series delivers an 80 percent reduction in thermal components in comparison with traditional rack servers and provides a 50 percent reduction in power supplies\*.
- Lower energy consumption and improved cooling techniques deliver significant power efficiency improvements.
- Dynamic Power Capping allows you to limit the power consumption per system by dynamically setting or “capping” the power drawn by servers, reclaiming lost power capacity.
- The common slot power strategy helps you reduce wasted power by allowing you to choose the right-sized power supply (460W, 750W, or 1200W) to match your specific workload improving power efficiency by up to 15%.
- The DL1000 provides AC redundancy that during power feed failure throttles system performance to the power limit of one supply allowing excellent power efficiency, right-sized PDUs, and enhanced uptime.

#### **Extreme flexibility**

Based on industry standards, the HP ProLiant DL1000 Multi Node series has been designed to provide extreme adaptability, helping you control your compute environment according to your needs. Its flexible modular server and storage configurations can be tailored to your site's unique workload requirements and facility limitations.

- The HP ProLiant DL1000 Multi Node series is highly configurable—with 2-, 3-, and 4-node configurations.
- Choice of up to two hard disk drive cages (8 large form factor SATA/SAS or 16 small form factor SATA/SAS) offers flexibility to meet your unique application requirements.
- Multiple PCIe riser options for full-height nodes enable I/O expansion.

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\* In comparison with HP ProLiant G5 servers

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## Technical specifications

	HP ProLiant DL170h G6 Server	HP ProLiant DL2x170h G6 Server Pre-configured 2 Node Model	HP ProLiant DL4x170h G6 Server Pre-configured 4 Node Model
<b>Number of processors</b>	1–2 per node	1–2 per node	1–2 per node
<b>Maximum number of cores</b>	4 per processor	4 per processor	4 per processor
<b>Processors supported</b>	E5504: 2.00 GHz, 80W E5506: 2.13 GHz, 80W L5506: 2.13 GHz, 60W E5520: 2.26 GHz, 80W L5520: 2.26 GHz, 60W L5530: 2.40 GHz, 60W E5530: 2.40 GHz, 80W E5540: 2.53 GHz, 80W X5550: 2.67 GHz, 95W X5560: 2.80 GHz, 95W X5570: 2.93 GHz, 95W	E5504: 2.00 GHz, 80W	E5504: 2.00 GHz, 80W
<b>Cache</b>	8MB (1 x 8MB) shared L3 cache (all processors except those listed below) 4MB (1 x 4MB) shared L3 cache (L5506, E5504, E5506)	4MB (1 x 4MB) shared L3 cache	4MB (1 x 4MB) shared L3 cache
<b>Maximum memory</b>	128GB RDIMM 24GB UDIMM	24GB UDIMM per node	24GB UDIMM per node
<b>Drives supported</b>	Up to 8 LFF: • Hot plug LFF SAS 15k 450/300/ 146/72/36GB • Hot plug LFF SAS 7.2k 1TB; 750GB • Hot plug LFF SATA 7.2k 1TB; 750/500/250/160GB • Hot plug LFF SATA 3G 120/60GB SSD  OR Up to 16 SFF: • Hot plug SFF SAS 10k 300/146/72/36GB • Hot plug SFF SAS 15k 72/36GB • Hot plug SFF SATA 7.2k 500/160GB • Hot plug SFF SATA 3G 120/60GB SSD	Up to 8 LFF: • Hot plug LFF SAS 15k 450/300/ 146/72/36GB • Hot plug LFF SAS 7.2k 1TB; 750GB • Hot plug LFF SATA 7.2k 1TB; 750/500/250/160GB • Hot plug LFF SATA 3G 120/60GB SSD	Up to 8 LFF: • Hot plug LFF SAS 15k 450/300/ 146/72/36GB • Hot plug LFF SAS 7.2k 1TB; 750GB • Hot plug LFF SATA 7.2k 1TB; 750/500/250/160GB • Hot plug LFF SATA 3G 120/60GB SSD
<b>Maximum internal storage</b>	8.0TB	8.0TB	8.0TB
<b>Form factor</b>	2U rack	2U rack	2U rack
<b>Warranty (parts/labor/onsite)</b>	1-year/1-year/1-year	1-year/1-year/1-year	1-year/1-year/1-year

For additional technical specifications and ordering information, please visit the HP ProLiant DL1000 Multi Node series QuickSpecs at:  
[http://h18000.www1.hp.com/products/quickspecs/13309\\_div/13309\\_div.html](http://h18000.www1.hp.com/products/quickspecs/13309_div/13309_div.html)

## Ideal environment

If you are looking for a more affordable and efficient computing solution with the flexibility to be tailored for different applications, the HP ProLiant DL1000 Multi Node series fits the bill. It is ideal for:

- **Low cost compute:** Environments that demand more affordable compute-density solutions using industry-standard technologies and data center architectures.
- **Enhanced power efficiency:** Providing greater efficiencies for environments with power and cooling constraints.
- **All-in-one convenience:** Use as a complete solution for environments with popular business application suites such as Microsoft® Windows® Essential Business Server and Oracle E-Business Suite.
- **Cloud computing environments:** Deployments in which software applications handle failover, and hardware availability is not a top consideration.

## Typical usage

- **Scale-out:** Web farms, Internet service providers (ISPs), and application service providers (ASPs)
- **Web 2.0:** Social networking, shared content, and blogs
- **High performance computing:** Oil and gas, financial, entertainment, scientific, government, and education

## 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, contact your local HP representative, or visit:

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

## For more information

To find out more about the HP ProLiant DL1000 Multi Node series, contact your local HP representative, or visit: [www.hp.com/servers/dl1000](http://www.hp.com/servers/dl1000)

## HP Services

### When Technology Works, Business Works

The challenge of virtually every IT organization is similar: To develop and maintain an agile, efficient server infrastructure that delivers the service levels your business needs.

HP Technology Services offers a comprehensive portfolio of HP Care Pack Services to help design, deploy, manage, and support your IT environment, enabling cost-effective upgrades to standard warranty with easy-to-buy, easy-to-use support packages.

### Minimum recommended HP Care Pack offerings

- Three-year, same business day, four-hour response, 13 x 5 onsite hardware support coverage
- Hardware installation plus operating system installation and startup

### Enhanced service level Care Pack offerings

- Three-year, same business day, four-hour response, 24 x 7 onsite hardware support coverage
- Proactive Select 90 Credits—access to HP best-in-class technical consultants. Purchase service credits and obtain expertise when needed

### Benefit from HP Care Pack Services helping you:

- Reduce deployment time and manage ProLiant server solutions smoothly and efficiently
- Increase uptime and performance of servers availability to your business
- Detect, diagnose, and repair problems quickly to save time, money, and resources

For more information, visit

[www.hp.com/services/proliantservices](http://www.hp.com/services/proliantservices) or  
[www.hp.com/go/proliant/carepack](http://www.hp.com/go/proliant/carepack)



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