

Build a best-run adaptive infrastructure—
out of the box

The new HP BladeSystem





Best run from day one

In the world of racked, stacked, and wired computing, it's staggering that you can spend up to 80 percent of your budget running IT compared to the 20 percent you spent acquiring it. These operational costs in time and money are the result of every new addition, change, upgrade, fix, process, or larger IT initiative constantly occurring in your environment. They include everything from choosing the right components—to plan for redundancy and connectivity—to anticipating and preparing facilities for the impact to power and cooling and floor space, and ultimately the time and resources needed to manage it all. And when you consider how much time and money are spent on system basics—patching, monitoring, configuring, and deploying—you realize there's no time left to create new applications and services that will move your business forward.

HP believes that blade technology, with its modular, intelligent design, improves the 80:20 cost equation. So we focused the full weight of our engineering, solution, and expertise from across HP to create the new HP BladeSystem—a best-run IT infrastructure right out of the box.

An empty enclosure, full of possibilities

Free from the constraints of conventional infrastructures, the next-generation HP BladeSystem is the powerfully efficient building block of tomorrow's datacenter. It's designed to be "best-run", meaning it delivers IT services to the needs of the business with high levels of IT productivity at low operational costs, high utilization, and extreme flexibility, all aimed at delivering superior quality to users.

HP BladeSystem is cost-savvy, change-ready, energy-thrifty, and time-smart. It maximizes IT's return to your business and gives you the freedom to focus on what matters most, optimizing all your resources so you can take on the increasing demand for IT services with confidence.

Affordability without compromise

HP BladeSystem is built on a modular infrastructure that saves time and money on every front. Thanks to a consolidated design that can share more resources with fewer components, blade computing costs less than a traditional rack-solution. And built-in management that helps administrators do their jobs faster with fewer steps and less people also contributes to lower operational expenses over the long term.

Every device in an HP BladeSystem is modular and consolidated from the start with common management. With your best mix in place, you gain a more cost-effective, flexible way to deliver applications and services to your business without compromising reliability and performance. This gives you an initial advantage that keeps getting better.

Cost-savvy

- Consolidated from the start: compute, storage, network, power/cooling and management
- Lower purchase cost than traditional rack infrastructure
- Lower TCO with built-in control and investment protection

The fastest, easiest way to connect

HP understands that your server infrastructure must play well with the other domains in your environment—like SAN and LAN. These elements are interdependent and rely on each other for every incremental change. So we simply streamlined the interdependence and manual coordination and turned connectivity into a virtualized resource.

The built-in HP Virtual Connect architecture makes this possible. You are now free to move your resources around as necessary to meet the needs of any given moment, such as stopping bottlenecks or scaling to accommodate a spike in demand. Automated workflows step in to save you additional time and trouble. For scalability for years to come, we also added up to five terabits of aggregate bandwidth, support for four redundant fabrics at once and eliminated all points of failure. With a wide choice of your favorite standards, you can connect the way you want to. HP BladeSystem's efficient design can be used to the max and altered easily, without slowing down the operations across the rest of your datacenter.

HP Virtual Connect modules

Allowing LAN and SAN connections to be shared physically as well as virtually, the innovative HP Virtual Connect modules are hands-down the easiest and most flexible way to connect servers to the network and SAN. This breakthrough technology can cut cables more than 94 percent and maintains end-to-end connections to your familiar standards and brands without requiring added switches. Your server staff can make behind-the-scenes adjustments inside HP BladeSystem without impacting the other domain administrators. Upgrading, migrating, redeploying, and failovers are invisible to the outside world. This relieves network and SAN administrators from dealing with day-to-day server maintenance processes. And HP Virtual Connect opens other advantages as well, such as letting you pre-configure and pre-wire your infrastructure before you plug the server in, switch quickly between development, test and production networks, and easily add capacity to an existing workload.

Change-ready

- Virtualized to pool and share all resources and connections
- Automated tasks to recover and scale quickly
- Efficient design simplifies setup, operations, and change



Harness energy like a resource

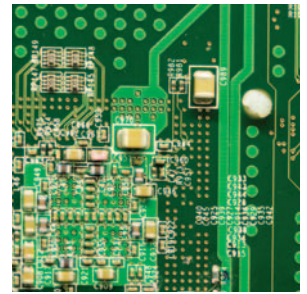
Energy is as precious as any other resource in your IT environment and it's time to treat it as such. If you pool and share it, you can always deliver it more efficiently. HP BladeSystem makes this possible in several ways. First, it gives you a clear view into the infrastructure, so you can easily see and understand how power and cooling is being used and its impact to the datacenter overall. And the modular HP BladeSystem features innovative fans, a newly architected airflow design, and thermal insight and control at every point. These individual elements all work together to conserve every watt and dissipate every BTU of heat without compromise or waste. Combined with integrated power distribution that automatically adjusts based on demand, you have an energy-thrifty IT environment that's built to expand.

HP Thermal Logic technology

HP BladeSystem is fueled by an innovative technology that automatically adjusts and shifts power loads and cooling volume based on changing demands of the workload. This means you save money every second because no component or application ever uses more power or cooling than required. An intelligent fabric of built-in sensors monitors and optimizes power, heat, and cooling capacity, minimizing the cost and impact on your datacenter. A real-time thermal dashboard lets you see and understand everything that's happening from a system level. While blades were once viewed as a problem to cool, HP BladeSystem turns high-performance, high-density into a cooling advantage. Jet-engine-inspired HP Active Cool fans and unique airflow vectoring within the enclosure drives more air to where it's needed while drawing less power. The HP Dynamic Power Saver pools and shares power, shifting the load automatically to their most efficient usage level or to fewer supplies and placing the rest on standby until needed.

Energy-thrifty

- See and understand power and cooling usage and thermal impact
- Aggregated cooling for greater density and adaptive efficiency
- Integrated power distribution to adjust consumption based upon compute demand



More time to do what really counts

HP BladeSystem frees you from the every-day, time-consuming jobs—and readies you for the unexpected ones. It's pre-integrated and consolidated with all the basic datacenter elements you need to deliver services on time and on budget. With thousands of points of instrumentation and data collected throughout, you can control every aspect of your infrastructure anywhere, anytime from the enclosure-mounted display or any web browser. An unified infrastructure management, activated with a simple click, streamlines and eliminates steps in every process—from provisioning to recovery. This time-smart approach brings you great results without overspending on your management resources, and lets you focus on higher priority jobs that drive company revenue.

HP Insight Control management

Intelligence and control are built directly into the enclosure with the HP Onboard Administrator, and into every blade with Integrated Lights-Out (iLO). These tools save valuable time from set-up through day-to-day maintenance. Single-install, single-license software packages, such as the new HP Insight Control Datacenter Edition, are tailored to meet the needs of your unique environment—whether it be it a heterogeneous, Linux-only, or a fully virtualized one. All the integration is done for you, so you can manage everything with one tool set via one console. And you can expand your control with HP OpenView and HP Essentials. Configure new systems in as little as 15 minutes out of the box, ready to deploy the OS and provision the servers anywhere you'd like and migrate your rack-mounted

systems to blades or virtual machines on top of them just as quickly. Engaging automation and virtual management, Insight Control moves freely between physical and virtual servers to maintain performance 24/7 and unleash the full potential of your BladeSystem.

Time-smart

- Total resource control, from anywhere at any time
- Simple point-and-click maintenance, migration, and automated provisioning and recovery
- Increase infrastructure capacity and administrator productivity

Unlimited possibilities for your business

Cost-savvy, change-ready, energy-thrifty, and time-smart, HP BladeSystem delivers a best-run adaptive infrastructure out of the box. To free your datacenter from all the traditional restraints and bring in the qualities you want most—simplicity, agility, and value—bring in the next-generation HP BladeSystem today.

For more information, please visit the HP BladeSystem Evaluation Center at www.hp.com/go/bladepystem/evaluate

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