



SUN™ MODULAR DATACENTER: THE WORLD'S FIRST VIRTUALIZED DATACENTER





It's a fast-moving world



Sun™ Modular Datacenter (widely known as Project Blackbox) is the world's first virtualized datacenter. Combining Sun's trademark innovation and network computing expertise, it speeds time to deployment, reduces datacenter complexity and cost, and delivers all the power and capacity of traditional datacenters. And it does so in one of the world's most universal form factors — an enhanced, 20-foot shipping container.



Capacity as you want, as you need it, where you want it

Today, organizations like yours face a number of issues that your predecessors never had to consider. Maybe you're growing rapidly and are running out of space. Conversely, maybe your growth is unpredictable. Or, maybe you have cyclical compute needs that require IT capacity that can be quickly deployed anywhere. Regardless of the specific situations, the end result is the same: traditional datacenters may no longer be the fastest, most cost-effective, or most efficient way to add IT performance or capacity.

Optimized to deliver exceptional energy, space, and performance efficiencies, Sun Modular Datacenter is specifically targeted at datacenter consolidation and build-outs, large-scale network service deployments, field deployment operations, and emergency response. It also provides rapid expansion and deployment opportunities for organizations who want to expand their opportunities beyond traditional datacenters in pursuit of maximum savings and operational flexibility. Sun Modular Datacenter gives you the freedom to add incremental capacity virtually anywhere and redeploy that capacity virtually everywhere to meet changing business needs and opportunities.



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Build once, deploy anywhere

Sun Modular Datacenter is a build-once, deploy-anywhere, transportable datacenter that delivers the flexibility to locate your compute resources when and where you want them — anywhere in the world. It includes a variety of unique design features that help optimize both efficiency and performance:

- Complete virtualized datacenter housed in an enhanced 20-foot shipping container
- Deployable in one-tenth the time it takes to design, build, and deploy a traditional datacenter
- Configurable with a flexible mix of servers, storage, and networking, including Sun Fire™, UltraSPARC®, and x64 systems running the Solaris™ Operating System (OS) and compatible third-party equipment
- Four times the power and cooling capacity per rack of a typical datacenter for very high-density computing
- Integrated, closed-loop, water cooled system that is over 40 percent more efficient than a traditional typical datacenter — *independent of payload*
- Simple external hookups for water, AC power, and networking
- Integrated sensors, alarms, and fire suppression
- Shock absorption for easier transport using standard shipping methods
- Front and rear doors, central service aisle, and slide mechanism make maintenance easy
- Single end-to-end solution ownership, service, and support
- Minimize eWaste: Sun will take back any container we sell — and its contents — anywhere in the world, and reuse, recycle, or dispose of it in an environmentally responsible way

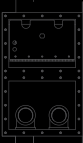
Sun Modular Datacenter delivers true breakthroughs in both economics and energy efficiency. In fact, Sun has several patents pending — general server and installed rack designs, highly efficient cooling systems, and an environmental monitoring system — for the design of Sun Modular Datacenter.

Think inside the box

Sun Modular Datacenter enables high-density and high-performance computing and storage solutions. With seven 25-kW-capable racks for servers and storage, an eighth rack for network and control gear, and additional systems and storage, Sun Modular Datacenter can host a payload that delivers more than 18 teraflops of performance capacity. This gives you considerable flexibility in determining how your Sun Modular Datacenter is configured — and the level of performance it can deliver.

For example, one platform can support:

- ≥ 700 CPUs - and that number is increasing as new, higher density equipment is released
- 2,240 cores & 17,920 compute threads with Sun Fire T5120 servers
- 3 petabytes of disk with Sun Fire X4500 servers
- Nearly 18TB of on-board memory with Sun Fire X4150 servers
- 4x the rack capacity in 1/8th the space
- Easy management of and support for up to 10,000 simultaneous desktop users — without administrators



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Sun Fire



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Datacenter augmentation

Sun Modular Datacenter is an ideal solution for datacenter expansion. For instance, a company headquartered in a large metropolitan area can easily augment its datacenter capacity by locating Sun Modular Datacenter in a secure warehouse, a parking garage, or even a neighboring town that offers more abundant, less expensive real estate or energy.

With its open-standards platform, Sun Modular Datacenter can be configured with almost any type of rackable equipment running virtually any application. Its modular, rapidly deployable form factor appeals to a broad spectrum of customer applications, from high-performance computing and Web services to data warehousing, business intelligence, customer relationship management, and disaster recovery solutions. In fact, we're using Sun Modular Datacenter to augment capacity for our Network.com utility computing offering, and we plan to use other units to expand capacity at our campuses.

Web-scale businesses

Businesses deploying Web services and applications can quickly add datacenter capacity with Sun Modular Datacenter. They can also locate IT capacity wherever it makes sense, such as close to cleaner, less expensive energy sources.

Field deployment and disaster recovery

Sun Modular Datacenter delivers the flexibility to move data and applications closer to operational areas for military or government applications or close to areas hit by natural disasters to serve as a disaster recovery or first-response solution.

Humanitarian aid

With Sun Modular Datacenter, relief agencies can mobilize systems to the most remote areas of the world. The system supports more than 10,000 active users — without a PC administrator. So emerging nations can enter the digital age with an affordable, flexible solution that thrives in less-than-ideal infrastructures and environments.

Sun Modular Datacenter presents a myriad of opportunities for Sun partners. For example:

- Hosting companies could offer container ports that provide chilled water, power, and networking in a structured warehouse space and build their own customized modular-computing facilities.
- Integrators can provide complete solutions to end users that include payload integration and infrastructure purchase and deployment.
- Resellers can sell Sun Modular Datacenter along with Sun and compatible third-party payload.

Without question, Sun Modular Datacenter will revolutionize the way datacenter computing is built — and delivered. Want to learn more?

- Visit sun.com/sunmd
- Visit the Sun Executive Briefing Center or call us at 1-800-USA-4SUN (872-4786) in the U.S. or 1-800-722-4SUN (4786) outside the U.S.



The Network is the Computer™

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