



Great Northern Delivers The Sun Eco Optimized SAP Datacenter

Virtualization for a sustainable datacenter

Great Northern Consulting Services creates a sustainable datacenter for your SAP landscape using Sun's cost-effective virtualization technologies — Sun Logical Domains (LDoms), Solaris™ Containers, and the ZFS™ file system technology — all designed to virtualize hardware, the OS, and storage to meet varying datacenter and business needs.

Sun is the only major vendor with end-to-end virtualization capabilities — from chip design to the OS capabilities — and is supported by Great Northern's architectural expertise to help you build, implement, and manage virtualization solutions across compute, networking, and infrastructure components in SAP environments.

landscape for your business. Great Northern solutions are based on the right mixture of SPARC®, x64, and Sun's chip multithreading (CMT) processor-based systems. Instead of running different applications on different servers, you can run thousands of applications on a single server, reduce your server footprint, simplify your system management, and lower your costs with Solaris Containers. This no-cost container technology requires almost no overhead — as little as 2% for 10 containers — which keeps system performance high.

SAP's Adaptive Computing Controller (ACC) supports Solaris Containers to provide a single source of control to operate, observe,

Highlights

- Plan and implement greener more efficient datacenters built on Sun's cost-effective virtualization technologies
- Simplify system management and reduce datacenter costs
- Increase revenue levels by improving service levels and lowering risk

Great Northern enables you to take full advantage of the virtualization capabilities of the Solaris™ Operating System (OS) and ZFS™ file system to create a simpler, easier-to-use environment.

Great Northern helps you plan greener, more efficient datacenters by providing professional services to build or re-locate sustainable datacenter facilities. Services include:

- Virtualization consulting
- Infrastructure consolidation
- Application migration
- Virtualization implementation

Optimize SAP solutions on the Solaris OS

The Solaris OS, featuring Solaris Containers and the ZFS file system, runs across multiple platforms, enabling you to configure and virtualize the optimum SAP solutions

manage, and provision applications in a container environment. This combination improves operational efficiency and lowers administrative costs.

Engage Great Northern to realize these benefits when you deploy SAP using Sun's virtualization technology:

- Increased resource utilization with predictable service levels
- Application isolation at lower risk
- Rapid testing and deployment
- Create a simpler, easier to use environment
- Reduced costs and improved ROI

Great Northern methodology

Great Northern applies a comprehensive methodology to determine the benefits of a virtualization solution within your specific business environment. The Great Northern method enables an ROI calculation based on the value of increased resource utilization, lower risk, and datacenter cost savings that makes it easy for you to quantify the overall benefits of implementing virtualization technology.

After performing an analysis of your particular needs, Great Northern will assist you to design a specific virtualization solution for your company and deploy that virtualization solution. They also provide on-going support for your virtualized environment.

Sun virtualization technology

Great Northern relies on Sun virtualization technology to deliver a high performance virtualized environment that is, at the same time, simpler and easier to use. As an integral part of the Solaris 10 Operating System, Solaris Containers isolate software applications and services using flexible, software-defined boundaries. A breakthrough approach to virtualization and workload management, Solaris Containers enable many private execution environments to be created within a single instance of the Solaris OS. Each environment has its own identity, separate from the underlying hardware, yet behaves as if it is running on its own system, making consolidation simple, safe, and secure.

Solaris Containers focus on application and workload management. They deliver tools to shrink wrap your application in its own environment with the right attributes such as CPU and memory quantity, IP address, and users. This way it's easier to deploy your application on a shared system.

Some of the benefits of Solaris Containers include the following:

- Higher system utilization through ease of consolidation
- Multiple applications can share a single system but still remain completely isolated from one another
- Restarting a container is much quicker because you are not rebooting the entire operating system

LDoms for separate OS instances

LDoms are a virtualization technology for systems based on the UltraSPARC® T1, T2, and T2 plus processors. LDoms allocate logical CPUs and memory to individual domains, allowing multiple guest operating system instances to be supported on the same CPU. LDoms support separate OS instances without the overhead of virtual machines.

The UltraSPARC T2 is also the first true “system on a chip,” with memory interfaces, I/O interfaces, and network interfaces integrated directly onto the processor silicon. The second generation of chips with Sun’s CoolThreads technology, the UltraSPARC T2 delivers eight cores and 64 threads in a single chip while consuming as much as a third less power as competing processors — as little as 95 watts.

Benefits of virtualization technology

Virtualization is a key to transforming your IT organization’s server, storage, and network devices into a shared, global pool of resources. This can help reduce space, power, and cooling requirements while simultaneously helping make your datacenter more flexible and agile. Solaris Containers and LDoms are of particular importance because of the low overhead they impose on the host server platform. With the ability to use each of these technologies

Learn More

For more information on how Great Northern and Sun can help you implement an eco optimized datacenter, contact: gnorth.com/contact.html or sun.com/sap/virtualization

independently, or in conjunction, Great Northern is able to offer a powerful set of tools for server virtualization in your datacenter.

Implement an eco optimized datacenter

With Sun virtualization technologies, Great Northern is helping customers around the world lessen the impact of IT on the environment through better utilization of internal resources to achieve a reduction in power and energy costs. Assessment, monitoring and support services help you establish a baseline for existing conditions and identify areas for improvement. You can optimize energy usage to reduce power costs, minimize your environmental impact, and transform your datacenter into an eco-friendly IT infrastructure. Specific benefits include:

- Optimize energy usage by improving cooling efficiency, space utilization and general environmental conditions.
- Reduce energy consumption through better optimization of datacenter air conditioning.
- Decrease wear and tear on equipment by optimizing datacenter air conditioning and air distribution systems.

Great Northern and Sun virtualization technologies offer you a clear and actionable path to reducing your energy costs and the impact of your datacenter on the environmental.

