

SmartOS

Key Use Cases

Support High-Demand Applications

Run mobile apps that get a million+ API calls a day, without a hitch. CPU bursting automatically delivers superior performance when you need it most, so end users never experience a system slowdown.

Protect Customer Data

Make sure multi-tenant systems have built-in security characteristics that protect applications and data, so your cloud is ready for clients in regulated industries.

Grow with Customer Needs

SmartOS supports ultra-fast provisioning and deprovisioning, so system administrators can create and destroy virtual machines (and add customers) quickly and easily. A new virtual environment can be ready in minutes to meet growing business needs.

Raise Resource Utilization

Carefully calibrate service levels with pre-set CPU and network resource caps. Clouds running SmartOS can reach utilization rates of more than 70% via OS-level virtualization.

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Powering High-Performance Cloud Infrastructure

Joyent SmartOS provides a combination of hardware and operating system (OS) virtualization to support efficient, reliable and high performing cloud computing. SmartOS contains critical features that give enterprises and service providers the best tools for managing and protecting applications and data and for troubleshooting problems in the production environment as they arise, so that SmartOS-powered clouds never go down.

A Strong Foundation

Foundational software for clouds must be:

- Fast, with the capability to minimize latency
- Scalable, with automatic CPU bursting to meet peak workloads
- Secure, so applications and data are available only to authorized users
- Flexible, so it can run legacy software without modification
- Observable, so system problems can be understood and corrected before they cause an interruption in service

SmartOS, the foundation of Joyent SmartDataCenter cloud infrastructure platform, delivers a better solution that exceeds these key requirements.

Scaling Up and Out

Clouds must deliver an excellent quality of service to every client's applications. SmartOS contains an automatic CPU bursting capability that allows it to scale to meet unexpected spikes in demand. It's also fast and easy to add new client environments, called SmartMachines, to add new capacity for growing workloads over time.

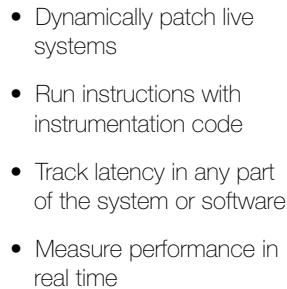
Security and Data Integrity

The ZFS file system architecture in SmartOS protects each client's data set and protects against silent data corruption, so data security and integrity stay high. ZFS also structures storage resources to give you the speed of local storage, with the efficiency of virtualized SAN without the need for expensive, redundant arrays.

Fair Controls on Resources

Guarantee speed and performance for every application with sophisticated controls that manage access to shared CPU, I/O and memory resources across a multi-tenant environment. You can also virtualize network interface cards, to be able to offer unique IP addresses to each customer.

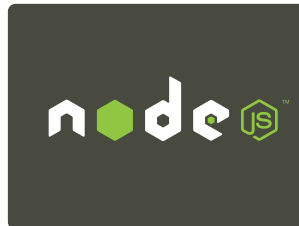
A key feature of SmartOS is its unprecedented ability to show what is going on at any moment, anywhere in the software stack, across client environments. DTrace was designed from the ground up for production environments, and can be safely used to:



Run a range of applications in your unique environment without sacrificing performance or scale. Our KVM port allows you to use SmartOS security, reliability and performance tools with Windows and Linux applications.



SmartOS is the ideal operating system for Node.js, the widely embraced server-side JavaScript runtime for data-intensive real-time apps. Node.js and SmartOS together offer unparalleled overall system and runtime performance thanks to SmartOS resource controls. Comprehensive debugging capabilities enable quick resolution of problems.



- Cassandra
- CouchDB
- Hadoop
- HBase
- Hypertable
- MongoDB
- MySQL
- Oracle
- Percona
- PostgreSQL
- Riak