Stratus OpenVOS Platforms

Get the OpenVOS advantage: uptime assurance for critical applications that must not fail

Uptime. **All the time.**

Stratus OpenVOS

Count on Stratus' OpenVOS platform for Continuous Processing and assured data integrity

In a world where a few short minutes of downtime spells disaster, businesses from every industry and geography count on Stratus' Virtual Operating System — OpenVOS

Whatever the industry, Stratus customers have one thing in common — they must support the most demanding application environments the world has to offer. Our OpenVOS platforms deliver the power, flexibility and efficiency that businesses like yours need for secure, high-volume transaction processing.

Perfected by three decades of engineering enhancements, OpenVOS works seamlessly and transparently with the Continuous Processing® features that comprise every ftServer® V Series system. The result is a tightly integrated fault-tolerant platform that ensures continuous uptime and data integrity for applications that must not fail.

Availability, Reliability, Performance

Stratus® V Series systems unite the stability of the OpenVOS operating system with the power and performance of leading-edge Intel® multi-core processors and the strongest availability program in the industry. OpenVOS takes full advantage of the V Series multi-processor architecture. A single copy of the operating system manages tightly coupled processors within a module. Multiprocessors share the workload for the greatest throughput, maximizing system performance. Scalability features ensure an easy migration and growth path, further protecting the significant investments you've made in online transaction processing (OLTP) applications.

Our customers count on OpenVOS solutions to ensure uptime for essential applications in every major industry: manufacturing, gaming, transportation, financial services including ATM and credit card processing, point of sale, capital markets and many more. Even in the most rigorous on-location and lights-out IT environments, these platforms deliver proven industry-leading uptime that exceeds 99.999%.

Open-system development platform

When you select an OpenVOS platform, you gain access to a comprehensive set of development tools that increase productivity and enable you to bring applications into production quickly and simply. Developers benefit from convenient program development facilities with efficient system and user resource scheduling and allocation — along with extensive networking capabilities.

OpenVOS brings you open-system flexibility for languages and communications as well as a comprehensive range of WAN and LAN protocols for distributed environments. Open StrataLINK® enables multiple VOS modules to share CPU, storage, and I/O device resources — creating a seamless continuously available computing environment that handles the heaviest workloads with ease.

Because continuous availability is built into Stratus' hardware architecture, it is achieved automatically at the application level — without special coding or failover scripting. As a result, OpenVOS applications are easier to write, simpler to maintain, and economical to customize and administer.

Open Source and industry standard technologies keep OpenVOS up-to-date for tomorrow's needs

Easy-to-use programming environment

The OpenVOS programming environment is secure, flexible and easy-to-use.

- **Programming languages**
  The selection of high-level programming languages available to OpenVOS developers includes C++, C, COBOL, PL/I, FORTRAN, Pascal, Perl, and PHP — with full ANSI-compliant versions of the major programming languages. OpenVOS 17.1 also includes Kona, an implementation of the Java® programming language. Kona is based on the OpenJDK® source code.

- **Symbolic debugger**
  A powerful debugger significantly reduces the amount of time required to bring an application into production. Programmers and developers rate the OpenVOS multi-process debugging facility, superior to those found on many other systems. This debugger is compatible with all OpenVOS compilers and languages.

- **Secure data management**
  The Transaction Processing Facility protects the consistency and integrity of data. Its integrated tools allow you to create and administer fast and efficient transaction processing applications that can be distributed across multiple modules and networked systems.

Software Products for OpenVOS

- Kona (based on OpenJDK source code)
- Apache® Web Server with PHP
- MySQL™ database
- IBM® WebSphere MQSeries® 6 software
- OpenSSL and OpenSSH
- Samba file server: (for Microsoft® Windows® compatibility)
- EMANATE® SNMP agent
- BRASS™ SNMP Server
- SightLine™ performance management tools
- Enterprise Backup Agent (NDMP)
- JAM® application manager
- Open StrataNET® / StrataLINK®
- Transaction Processing Facility (TPF)
- Forms Management System (FMS)
- X.25 / X.29 Network Facility
- GNU industry-standard compilers and tools
- COBOL compiler
- PL/I compiler
- FORTRAN compiler
- ANSI C compiler
- RADIUS authentication protocol
- IPsec and IKE
- RPC / XDR

V Series systems unite the stability of OpenVOS with the power and performance of leading-edge Intel® processors — in a fault-tolerant platform that delivers greater than 99.999% uptime.

The Network I/O enclosure provides X.25 and X.29 communication

Stratus fault-tolerant V Series hardware is engineered to provide maximum availability. Right out of the box.

Uptime Assurance

Count on Stratus Continuous Processing technology for the most complete set of availability safeguards in the business.

Achieving five nines or better uptime day after day, year after year, requires servers with Continuous Processing® safeguards that are integral to their design. That's why every aspect of the V Series system — hardware, software, and service — works together to prevent unplanned downtime, not just minimize it.

These Stratus innovations are the result of thirty years' experience of assuring uptime for the world's most demanding applications.

Lockstep technology

Lockstep technology uses replicated, fault-tolerant hardware components that process the same instructions at the same time. In the event of a component malfunction, the redundant component provides an active spare that continues normal operation and averts system downtime. The system also eliminates transient hardware errors that could cause software failures if left unchecked.

The V Series hardware also embodies advanced Continuous Processing features that provide core error detection, fault isolation, and synchronization for the lockstep architecture. And, while other servers may offer duplicated power supplies, fans, and disk drives, only Stratus provides protection for core system components including motherboards, processors, memory, I/O buses, and I/O adapters.

Automated uptime layer

Our automated uptime layer works in concert with lockstep technology to prevent many software errors from escalating into outages. V Series systems handle these errors transparently, shielding the operating system, middleware, and application software. Even in-memory data is fully protected from any loss. Our hardened device drivers also ensure maximum reliability of your environment.

ftServer V Series systems constantly monitor their own operation. Management and diagnostic features automatically capture, analyze, and notify Stratus of hardware and software issues through the remote service network (RSN®) built into every module.

If necessary, the system automatically orders its own hot-swappable replacement part for delivery within 24 hours to key locations worldwide. You can easily replace components while the OpenVOS platform continues to run uninterrupted.

Remote Service Network

The RSN provides secure, proactive availability monitoring and management by Stratus Global support network. Whether your ftServer system deposits a call or you place one by phone or Web, you can count on us to take the initiative in troubleshooting and problem resolution. You'll experience full-service customer care that blends our technology-enabled service capabilities with immediate personal attention from seasoned support engineers.

This winning combination enables Stratus to troubleshoot and resolve problems online more than 98% of the time. Same day on-site emergency service is provided should you need it.* In fact, no matter where in the world your systems are located, our follow-the-sun service model keeps you covered 24/7/365.

* Where available

Built-in operational simplicity makes OpenVOS solutions easy to deploy, use and manage.

ftServer V Series architecture
Stratus V Series systems use a standard dual modular redundancy (DMR) configuration.

Redundant components within the system operate in lockstep — processing the same instructions at the same time — to ensure maximum protection for your most critical solutions.

Stratus originated automatic, hardware-based fault tolerance and continues to enhance and perfect its implementation. Today, no other technology can match the V Series' trouble-free set-up, robust processing, and transaction integrity. When combined with Stratus OpenVOS, your business immediately benefits from a fault-tolerant foundation that enables rapid implementation of strategic applications and services.

Seamless integration

V Series servers deliver maximum levels of uptime right out of the box — eliminating the complex, error-prone configuration and management procedures that are required to implement and maintain clusters. In fact, V Series systems can be installed and ready for operation — in less than a day. The integrated single-system view presented by these servers makes ongoing operations and management simple and straightforward.

OpenVOS products and technologies from Stratus and third-party partners expand the possibilities for integrating V Series systems with other computing environments and platforms in your enterprise.

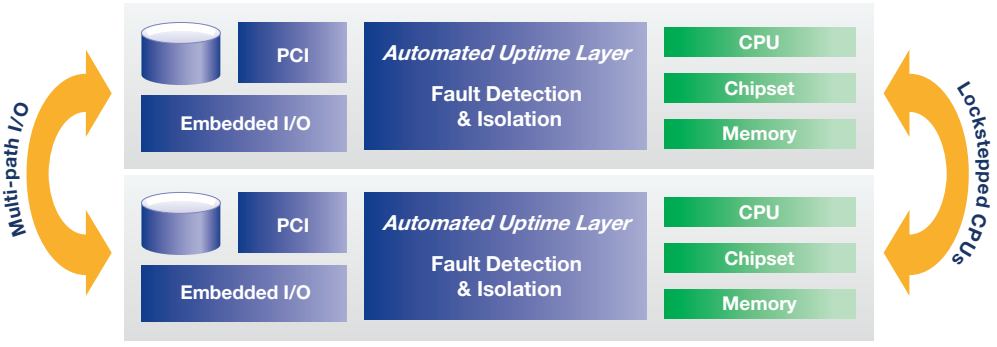
Standard and open

Industry-standard, Intel processor-based V Series servers complement the OpenVOS operating system with maximum power, performance and levels of service. Optimized for high-volume transaction processing, V Series servers are expressly built to handle and protect complex, high-value workloads from downtime and loss of critical data.

Combatting the high cost of downtime
For business- or mission-critical applications, unplanned downtime represents the single biggest risk. The consequences of even a brief outage can be severe: lost revenue, forfeited sales, diminished productivity, overtime expense, stalled communications, dissatisfied customers, financial or legal penalties. Depending on the industry and application, the cost of downtime can run from hundreds of thousands of dollars per minute to millions or more. Lives and property may even be at risk when public safety or emergency systems fail.

No competing solution is built to address these issues like OpenVOS platforms. Whenever mission-critical availability counts, you can count on Stratus.

Lockstep processing



Industry-leading third-party solutions enhance OpenVOS functionality and extend your investment value.

Third-party Solutions

To learn more about OpenVOS partner solutions, link to OpenVOS Third-party Solutions at: www.OpenVOS.com

Mission-critical solutions and services

For 30 years, Stratus customers have relied on OpenVOS platforms to protect their most critical business operations and data. Building on these cores strengths, our third-party partners offer a range of applications, tools and services that complement OpenVOS platforms and infrastructure.

Customized or off-the-shelf, these solutions help you handle every aspect of operating a critical computing environment including: management, security, data communications, automation, capacity, performance and disaster recovery.

Stratus Uptime Assurance

From New York to London to Mumbai to Tokyo, the world's most demanding IT environments run on Stratus. For these customers, uptime, all the time means revenue, efficiency and the peace of mind that comes from protecting businesses, lives, and reputations the world over.

Isn't it time your organization was among them?

Join our OpenVOS blog or participate in our OpenVOS & VOS forum at: www.OpenVOS.com Either one will put you in immediate contact with knowledgeable members of Stratus' OpenVOS community.

Powered by Intel Xeon inside. Powerful. Intelligent.

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