Solution Brief
SGI UV for SAP HANA

Objectives
Solution
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Quick Facts

SGI® UV™ for SAP HANA®
Run Your Business in Real-Time at Extreme Scale and Lower TCO

The ability to combine database, data processing, and application platform capabilities in-memory with the SAP HANA® platform is truly game-changing. Imagine if your operations, financial, research, or marketing teams could operate in real time. Now imagine leveraging SAP HANA in your enterprise at extreme scale and lower total cost of ownership (TCO). SGI is making this possible.

Converging transactional and analytic workloads often warrants a single-node appliance for SAP HANA to meet performance objectives. A single-node appliance provides significant advantages to gain the business breakthroughs of SAP® Business Suite powered by SAP HANA. Performance advantages also extend to heavy analytics, and when consolidating applications and IT infrastructure. Furthermore, single-node systems alleviate administrative complexity as well as the difficulty providing high availability (HA) that clusters can pose for large environments.

Developed by SGI, the trusted leader in high performance computing, SGI® UV™ for SAP HANA® is a purpose-built, in-memory computing appliance for large or growing environments running on SAP HANA. Currently SAP-certified as a 4- or 8-socket single-node system with up to 6TBs of in-memory computing capacity, SGI’s new appliance for SAP HANA is designed to enable enterprises to achieve real-time operations at extreme scale and lower cost of ownership.
Leverage the full power of SAP HANA in large enterprises

Using a scale-up, single-node architecture with breakthrough coherent shared memory, SGI UV for SAP HANA enables you to run SAP Business Suite and other SAP applications in your large enterprise. It combines OLTP and OLAP workloads and eliminates the time-consuming extract, transform, and load process to generate real-time reports on demand. You can perform very complex joins at massive scale and run multiple analytic engines simultaneously to include text, geo-spatial, and live data streaming. And you can consolidate applications and infrastructure, while also eliminating silos.

The result is timely insight across your organization for faster, smarter decisions, greater competitive advantage, and lower costs. The gains are dramatic and span industries. To highlight a few:

- Manufacturers can gain a real-time view of operations to optimize resources and improve efficiency.
- CFOs can gain real-time insight into financial conditions and save millions eliminating reconciliation needs.
- Healthcare organizations can analyze clinical data from larger sample sizes to improve patient care.
- And governments can reduce fraud, waste, and abuse with broader impact.

When your core business processes run in real time, the possibilities for business transformation are endless.
Expand SAP HANA with single-node simplicity

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<td>The single-node architecture of SGI UV for SAP HANA allows enterprises to run applications free from the overhead of clustered appliances. There are no cluster nodes, cluster network, or storage area network to configure and administer. And there’s no need for database partitioning or re-balancing I/O when increasing the size of the SGI appliance, as performance scales near linearly and automatically.</td>
<td>But achieving this level of uptime with clustered appliances requires special attention due to their native complexity. SGI UV for SAP HANA helps maintain application service levels and avoid costly downtime by providing high availability with simplified administration. Using local and remote single-node SGI appliances, your IT department can reliably protect against logical, system, and site failures, as well as fully restore critical applications and data warehouse operations in seconds, resulting in round-the-clock application access and protection.</td>
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Now you can perform real-time analytics and processes at massive scale and with high availability.
Maximize service levels for SAP HANA

In addition to extensive component redundancy such as fans and power supplies, and extensive RAS features of Intel® Xeon® E7 processors residing within the SGI UV for SAP HANA appliance, SGI’s advanced memory resiliency and traffic optimization further help maximize service levels for SAP HANA.

SGI’s memlog utility helps overcome errors on memory DIMMs that can lead to application performance issues and unplanned downtime. Corrected memory errors are logged and analyzed. If a DIMM page is deemed defective, an attempt is made to transparently relocate data to a new page and retire the old page, enabling applications to continue running without interruption. Administrators are also alerted to failing DIMMs in need of replacement during planned maintenance windows.

SGI adaptive routing continuously monitors traffic over SGI’s ultrafast NUMAlink® network. Data flows are routed to fully optimize the all-to-all network topology and automatically re-routed to prevent traffic congestion.

Keep your business running in real time, all the time.
Capitalizing on proven, future-ready SGI technology

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<td>SGI UV for SAP HANA features the SGI UV 300H, a new offering in the SGI® UV™ server line built for SAP HANA. Coupled with Intel® Xeon® E7 8890 v2 15-core processors, this offering leverages seventh generation SGI technology and in-memory computing expertise spanning 20 years. Using advanced SGI HARP ASICs contained in each 4-socket chassis and SGI NUMAlink 7® network interconnects, the UV 300H is designed to scale up as a single-node server in 4-socket increments for growing enterprises.</td>
<td>To protect against power loss, log files and data are stored on NetApp® E2700 RAID arrays. To accelerate time to value, the appliance arrives pre-configured with SAP HANA running on SUSE® Linux Enterprise Server and is deployed by SGI professional services. SAP provides licensing for SAP HANA and complete, first-line appliance support.</td>
<td>&gt;100 SGI patents for in-memory computing</td>
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The appliance is currently certified by SAP at 4 or 8 sockets with up to 6TB of shared memory using 32GB DIMMs. Pending further certification, SGI's future-ready architecture is designed to scale to 32 sockets and 24TB of shared memory as a single-node system (capacity doubles using 64GB DIMMs).
Unleash the power of SAP HANA in your business

Building on SGI’s proven in-memory computing technology and unique scale-up architecture, SGI UV for SAP HANA enables large enterprises to confidently leverage the power of SAP HANA for enterprise resource planning software and heavy, multi-engine analytics that require single-node systems, and to reduce overhead and raise service levels for cluster-supported environments that become a struggle.

It’s now possible to:
- Achieve real-time business at extreme scale and lower TCO
- Run SAP Business Suite powered by SAP HANA with future-ready scalability
- Perform complex joins at massive scale
- Run multiple analytic engines to include text, geospatial, and live data streaming simultaneously
- Run SAP Business Warehouse powered by SAP HANA free from the complexity of clusters to reduce overhead costs, achieve HA, and maximize investments
- Make faster, smarter decisions based on real-time insight across your large enterprise
- Gain competitive advantage by fully realizing the value of SAP HANA

Real-time insight leads to better-informed decisions for achieving business objectives.
## Summary
Want to leverage SAP HANA® at extreme scale and lower total cost of ownership in your large enterprise? You can with SGI UV for SAP HANA. And by simply adding sockets and memory, SGI’s new single-node appliance is designed to scale up to meet future demands and provide extreme capacity, with low administrative overhead and round-the-clock service levels.

### Objectives
- Achieve real-time operations with SAP HANA across the enterprise
- Run SAP® Business Suite applications and/or analytic-intensive apps on SAP HANA at large scale
- Alleviate the complexity of clusters to reduce OpEx and provide HA

### Solution
- Purpose-built SGI UV for SAP HANA is designed to scale as a single-node appliance with extreme capacity
- Currently SAP-certified at 4 and 8 sockets with up to 6TB of coherent shared memory
- Future-ready architecture that scales up without complexity
- Ability to fully protect and restore critical applications in seconds

### Benefits
- Achieve real-time business at extreme scale and lower TCO
- Run analytics, transactions, and processes in real time at 24x7 service levels
- Make faster, smarter decisions and gain competitive advantage by fully leveraging SAP HANA

## Learn more
To find out more, call your SGI representative today at 1-800-800-7441 or visit www.sgi.com/saphana.