

## vSMP Foundation<sup>TM</sup>:

### Freedom to choose the right virtual SMP for your needs

Organizations worldwide have diverse reasons for needing an SMP. Some need large memory for multi-threaded programming, or high core count for data-intensive applications. Some need an SMP for ongoing or occasional use. Others use SMPs as a way to consolidate multiple servers and reduce management overhead.

The only product that provides freedom of choice for any SMP need and budget is: vSMP Foundation<sup>TM</sup>. Using the Versatile SMP<sup>TM</sup> (vSMP) architecture, vSMP Foundation aggregates the power of multiple, commodity x86 servers into one, larger virtual SMP.

This breakthrough approach provides customers in industries such as energy, higher-education, research, life sciences, manufacturing and finance with computational horsepower for the most demanding applications and workloads, and dramatically lowers TCO by as much as 80%.

ScaleMP partners with top server vendors and VARs to deliver virtual SMPs to over 300 customers worldwide.

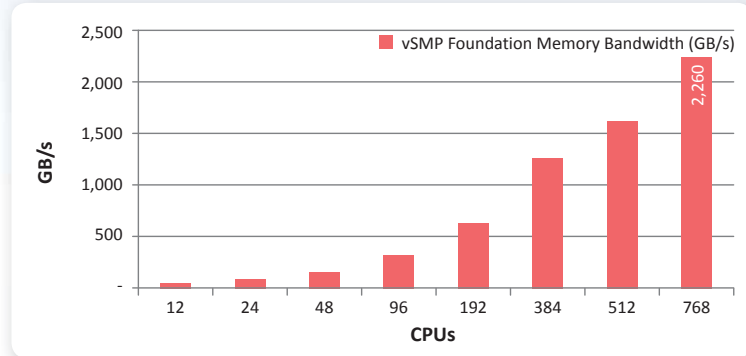
### Choose the vSMP Foundation product that's right for you, at prices as low as \$400 per socket

	vSMP Foundation	vSMP Foundation Advanced Platform
<b>Highly scalable SMP</b> , with up to 16,384 cores and 64 TB RAM by virtualizing the aggregated resources of multiple nodes to a single VM	Up to 32 nodes	Up to 128 nodes
<b>Tailor-made SMP</b> , enabling freedom to select processor type, node-size (2-socket, 4-socket and 8-socket) and I/O capabilities (1GigE, 10GigE, Fibre-Channel, SAS, etc.)	✓	✓
<b>Built-in high-performance storage</b> , providing parallel, non-blocking scratch volume with linear scalability	✓	✓
<b>Unmatched RAS characteristics</b> : node level fault isolation and automatic system recovery – providing maximum system uptime without user intervention	✓	✓
<b>Seamless InfiniBand failover</b> for increased availability using active-passive dual-rail InfiniBand support	✓	✓
<b>Pay as you grow</b> allows for expansion with no price or performance penalties when more resources are needed	✓	✓
<b>On-demand SMP</b> allows repurposing cluster nodes in an ad-hoc basis. Ready-made integrations with multiple provisioning systems: Bright Cluster Manager, Insight CMU, ROCKS and XCAT		✓
<b>Active-active multi-rail InfiniBand</b> for increased performance with up to four HCAs, providing maximum of up to 224Gbps (FDR)		✓
<b>SMP partitioning</b> allows creation of multiple, isolated and independent smaller SMPs		✓
<b>Shared InfiniBand fabric for multiple VMs</b> , providing infrastructure cost savings		✓
<b>Licensing model</b>	Node-locked	Floating
<b>Per-socket pricing</b>	Starting at \$400/socket	Starting at \$800/socket

### Take a look at some of ScaleMP's record-breaking performance benchmarks

#### Memory Bandwidth

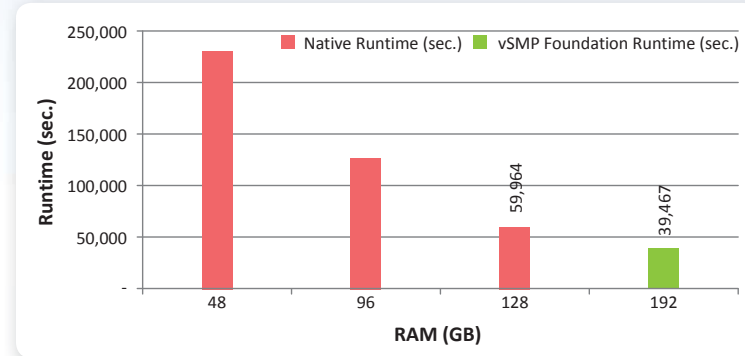
Linear memory bandwidth scaling demonstrated by STREAM benchmark – among the top 3 ever-published STREAM TRIAD result



Virtual SMP of 128 sockets, 6TB RAM, using 64 X dual-socket servers (Intel Xeon X5650 @ 2.67 GHz, 96GB RAM/server)

#### Large Memory

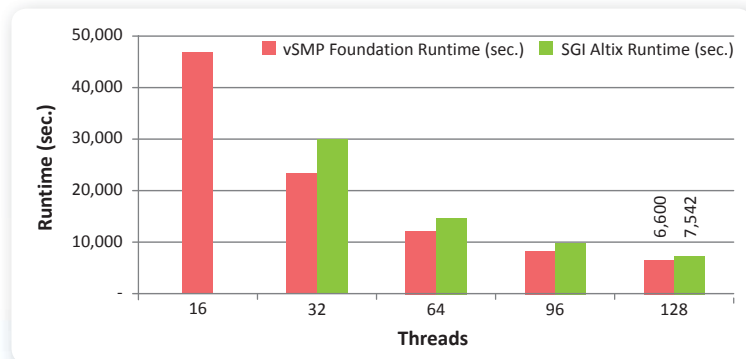
Aggregated memory provides better performance than individual nodes for Abaqus/Standard



Job uses 8 cores only. Runtime for 48GB up to 128GB RAM using dual-socket server (Intel Xeon X5570 @ 2.93 GHz). Virtual SMP of 8 socket, 192 GB RAM: using 4 x dual-socket servers (Intel Xeon X5570 @ 2.93 GHz, 48GB RAM/server)

#### Shared Memory

Faster simulation compared to SGI Altix UV for all scaling levels when running 3D passive scalar field transported by a turbulent flow (courtesy: RWTH Aachen University)



Virtual SMP of 128 cores, 320GB RAM: using 16 x dual-socket servers (Intel Xeon E5550 @ 2.67 GHz, 24GB RAM/server). SGI Altix UV of 256 cores, 512GB RAM (Intel Xeon X7550 @ 2.00 GHz)

#### vSMP Foundation Licensing Model (all details included here are list price in USD)

Processor Class	Intel				AMD		Per-socket pricing
	E7-x8xx Westmere-EX	6500/7500 Nehalem-EX	E5 Sandy-Bridge	5500/5600 Nehalem-EP/ Westmere-EP	61xx Magny-Cours	62xx Interlagos	
A	x830-x899	x540-x599	Pending Intel Product Launch				\$ 1,600
B	x820-x820	x530-x530		5x60-5x90	6176-6180		\$ 1,200
C	x800-x807	x500-x520		5x30-5x50	6136-6174	6274-6282	\$ 800
D				5x00-5x20	6100-6134	6200-6272	\$ 400

#### Per-GB license, based on total memory

- First 32GB/socket are free
- Each additional GB: \$10
- Examples: 16 sockets VM, total of 348GB = free  
16 sockets VM, total of 768GB = \$2,560

#### Annual maintenance & support: 25%

- First year included within price above
- If purchased with licenses: 20%
- Check: [www.scalemp.com/eula](http://www.scalemp.com/eula)
- **Media: \$25 per node**
- Industrial, small form-factor USB key

For our full list of certified hardware and OS, please visit <http://www.scalemp.com/spec>