

vSMP FoundationTM Solutions

vSMP Foundation and vSMP Foundation Advanced Platform let you aggregate standard, x86 machines into one, virtual x86 system.

Whatever your need is, vSMP Foundation delivers record-breaking SMP performance at the economies of a cluster, while delivering the management simplicity of one single system.

vSMP Foundation for Cluster provides a single operating system for cluster management and server consolidation

Before

- Difficult to manage
- Complex
- Clustered storage required

After

- ← Single OS instance
- ← Seamless integration
- ← Built-in storage



Aggregated by:
vSMP Foundation



OPEX savings

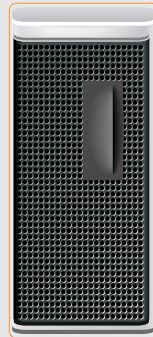
vSMP Foundation for SMP provides a single (large) system for compute- and memory-demanding applications

Before

- Proprietary system
- Vendor lock-in
- Forklift upgrade

After

- ← Industry standard servers
- ← Tailor-made SMP
- ← Modular



Aggregated by:
vSMP Foundation



CAPEX savings

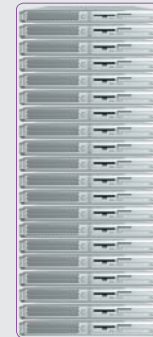
vSMP Foundation for Cloud provides a single infrastructure for cloud and on-demand deployments

Before

- Dedicated infrastructure
- Low utilization
- Plan for peak usage

After

- ← Unified infrastructure
- ← Pay as you grow
- ← On-demand computing



Aggregated by:
vSMP Foundation



Flexibility (CAPEX and OPEX savings)

Virtualize clusters into one, uncluttered system

The alternative to complex cluster-management solutions

Cost-effective, modular software-based SMP solution

The alternative to proprietary systems

On-demand SMP

The alternative to legacy HPC datacenter architecture

vSMP FoundationTM Solutions

Choose the solution that's right for you:

vSMP Foundation for Cluster

Features

Single OS instance for up to 128 nodes

- Up to 16,384 CPUs in a single, shared-memory system

Built-in, high-performance storage

- Delivers linear, non-blocking scratch performance

Aggregated memory footprint

- Delivers top performance for pre- and post-processing

Unparalleled RAS characteristics

- Seamless InfiniBand fail-over
- "Partitioning" to create completely isolated OS instances
- Fault isolation and automatic system recovery

Benefits

Simple management

- Single OS instance across an entire cluster
- No need for job schedulers, resource manager or cluster file-system

Scalable storage with seamless integration

- Eliminates dedicated, costly cluster storage

Fast installation

- Production within 3 hours

Record-breaking performance

- Provides InfiniBand performance with zero management and application portability costs

vSMP Foundation for SMP

Features

Highest CPU capacity

- Up to 16,384 CPUs in a single, shared-memory system

Largest memory footprint

- Up to 64 TB RAM

High speed I/O

- Leverages parallel storage controller for data-intensive workloads

Unparalleled RAS characteristics

- Redundant Infiniband connectivity
- Optional "partitioning" to create completely isolated OS instances
- Fault isolation and automatic system recovery

Benefits

Performance

- Outperforms traditional SMP systems
- Optimal for both large memory and shared-memory workloads

Investment protection

- Pay as your requirements grow
- Supports mixed components with different processor speeds, varied memory amounts or dissimilar I/O devices

SMP for the cost of a cluster

- Leverages industry standard x86 servers for up to 5x CAPEX savings

Platform-neutral

- Available for 2, 4 or 8 socket; rack mount or blade form factor

Modular

- Future-proof architecture provides "pay-as-you-grow" flexibility

vSMP Foundation for Cloud

Features

Use same cluster nodes for on-demand SMP

Highest CPU capacity

- Enables up to 16,384 CPUs in a single, shared-memory system

Largest memory footprint

- Up to 64 TB RAM

Multiple provisioning systems:

- Bright Cluster Manager Suite, CMU, ROCKs, xCAT

Benefits

On-demand computing

- Shape the machine to the workload, rather than the workload to the machine

Cost-effective

- Unified infrastructure for all HPC workloads: distributed memory, shared memory, large memory and I/O-intensive

Decreased TCO and increased utilization

- Support for concurrent, shared-memory systems, with "pay-as-you-grow" flexibility

Network installation

- Provides seamless integration with any grid management system

Cluster-like cost structure

For a list of supported hardware, please visit <http://www.scalemp.com/spec>