

Schooner Appliance for Memcached/NoSQL



Blazing performance and extreme availability to enable simple, cost-effective scaling

The Schooner Memcached/NoSQL Appliance delivers a 100% compatible, high-capacity, and high-performance cache and a NoSQL persistent key-value store based on memcached, enabling datacenters to reduce their total cost of ownership by over 50%.

- Delivers industry-leading performance and capacity by tightly integrating the innovative Schooner Operating Environment (SOE) with best-of-breed hardware, enabling access to terabytes of high-performance, persistent caching capacity.
- Up to 8 traditional memcached servers can be consolidated onto a single Schooner Appliance, significantly reducing capital expense, power consumption, rack space, and networking requirements.
- Comprehensive data and service availability is delivered through a rich set of high availability/disaster recovery (HA/DR) features, including Persistence, Active/Active Replication, RAID, and Backup & Restore.
- Fully compatible with existing memcached apps and tools, making it easy to integrate into existing environments. 100% Memcapable, including full binary-protocol support.

► Blazing Performance:

The Schooner Appliance tightly integrates software and hardware into a single solution that is optimized for dynamic, large-scale Web environments, enabling access to terabytes of high-performance, persistent capacity.

Schooner Operating Environment (SOE) Edge:

- Unlocks the full potential of the hardware by optimizing utilization of all the available physical resources across a broad spectrum of workloads.
- Enables full utilization and linear scalability of multi-core processors, intelligently manages caching from DRAM to flash, and delivers highly-parallel read- and write-optimized flash memory access.

Balanced, Best-of-Breed Hardware:

- Delivered on a standard, proven, IBM x3650 server, with two quad-core Intel Xeon processors, 1/2 TB of Schooner-optimized Intel X25-E SSDs, 64 GB of DRAM, four SAS HDDs, and one 10-G and eight 1-G Ethernet ports.

► Extreme Data and Service Availability:

Web sites are increasingly dependent on Memcached to deliver application performance. Failures in the Memcached tier can lead to large, unexpected loads on the database, which significantly degrade the end-user experience. The Schooner Appliance provides a comprehensive set of HA/DR features to ensure a consistent user experience through both planned and unplanned downtime.



THE SCHOONER ADVANTAGE:

- 512 GB of persistent caching capacity in a single Appliance
- Up to 8:1 consolidation of traditional Memcached servers
- 50%+ reduction in TCO over 3 years
- Up to 90% reduction in downtime relative to traditional Memcached
- 100% compatible with open-source Memcached and fully Memcapable, including binary protocol



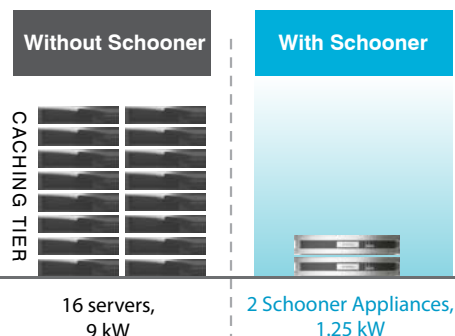
SCHOONER MAKES IT POSSIBLE TO:

- Process requests faster
- Offload the database
- Reduce server clutter
- Recover quickly from failures



PERSISTENT KEY-VALUE STORE SERVICE ENABLES NEW APPLICATIONS:

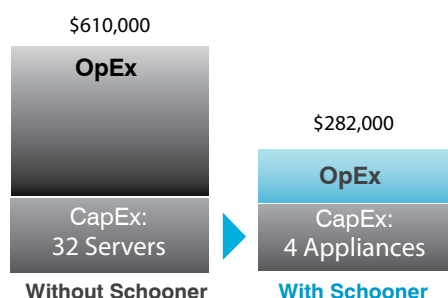
In addition to a traditional caching service, the Schooner Appliance offers a persistent, key-value store service for a compelling NoSQL solution, enabling powerful new applications.

**SCHOONER DELIVERS
8:1 CONSOLIDATION****ECO-UPSIDE:**

- 8x the capacity of traditional servers
- Greening the datacenter with power and space reduction

**SCHOONER DELIVERS
50%+ REDUCTION IN TCO**

3 yr TCO for 2TB Memcached Workload

**THE BOTTOM LINE:**

- Immediate CapEx savings
- 54% TCO savings (\$328,000) over three years.

Replication & Failover

- Active/active replication ensures all nodes are fully utilized.
- Synchronous replication guarantees that no data is lost during outages.
- Automated failover delivers continuous service availability and eliminates the need for manual, error-prone user intervention.
- Failover is transparent to client-side apps and requires no additional client overhead.

Persistence:

- Ensures that all cached data is immediately available, even after a power outage.
- Avoids performance-degrading, multi-hour or multi-day cache warm-up periods.
- Enables the Appliance to be used as a persistent key-value store.

RAID:

- Protects from downtime due to SSD failures and planned SSD maintenance.
- Minimizes the capacity overhead required for redundancy.

Backup & Restore:

- Full and incremental backups can be scheduled to the onboard hard drives.
- Enables the cache data to be restored to a previous state in the event of application-driven data corruption, user error, or other data loss.

Easy to Deploy, Manage, and Scale:

The Schooner Appliance is 100% compatible with existing tools and applications, with easy deployment, and simple, yet powerful centralized management and reporting:

Dynamic Containers:

- Allows multiple “virtual” Memcached domains or key-value stores with different classes of service to be configured on a single Appliance. Up to 128 containers per Appliance.
- Enables easy consolidation of different applications & data types with high quality of service.

Schooner Admin GUI and CLI:

- Simple, Web-enabled management of multiple Appliances through a single console.
- Command Line Interface makes it easy to run scripts, and manage multiple Appliances.

Powerful System Management:

- IBM Integrated Management Module (IMM) provides broad system management capabilities.
- Virtual Media Key for optional remote presence, predictive failure analysis, and automatic restart.

Hot-Key Management:

- Provides visibility into frequently used keys and highly active clients.
- Both current and historical information is available to optimize performance.

Integration with 3rd-Party Tools:

- Out-of-box Integration with 3rd-party tools such as Nagios, Ganglia, and Cacti.
- Supports a rich set of MIBs for integration with common monitoring and management tools.

100% Compatible

- Compatible with existing Memcached applications and tools – no client-side changes required. 100% Memcapable, with full binary-protocol support.

World-class Support:

Schooner Appliances are manufactured by IBM and are based on proven IBM X-Architecture® technology. IBM provides worldwide, single-point-of-contact service and support for Schooner Appliances purchased through IBM.

Schooner Information Technology, Inc.

501 Macara Ave., Suite 101
Sunnyvale, CA 94085, US

Main: (408) 773-7500
Service and Support:
(877) 888-5064
info@schoonerinfotech.com

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**Partnership Power**