

# data sheet



**Scale Computing's StorageNodes** with ICS™ technology are managed with a simple, easy-to-use UI that takes the hassle and cost out of managing your storage.

Create a pool of truly clustered storage by seamlessly adding StorageNodes. Scale's ICS architecture discovers the new node, adds it to the cluster and begins mirroring and managing your data across the entire cluster. Data migration is history and services don't go down. In fact, you can pull drives out, trip over cords and still not suffer services or data access losses.



## Storage Node Specifications

HARDWARE	MANAGEMENT
4 Enterprise-grade SATA Drives	Web (SSL) for management
Protocol support: iSCSI, NFS, CIFS/SAMBA	Serial console for initial set-up only
150w start-up, 100w operating power	PERFORMANCE
(2) GigE ports per appliance	(4) Enterprise-grade SATA drives @ 7200 RPM
S1 Model capacity: 1TB Usable (2TB Raw)	210 MB/Sec throughput per (3) node clusters
S2 Model capacity: 2TB Usable (4TB Raw)	+70 MB/Sec throughput for each additional node
S4 Model capacity: 4TB Usable (8TB Raw)	
Form Factor: 1U	
Proven HPC file system	

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Contact us: [info@scalecomputing.com](mailto:info@scalecomputing.com) (877) SCALE-59  
[www.scalecomputing.com](http://www.scalecomputing.com)



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# PRODUCT CONFIGURATIONS

<p><b>Scale StorageNode (S1, S2, S4)</b></p> <p>StorageNode 1000 StorageNode 2000 StorageNode 4000</p>	<p>1U Rackmount Unit, 2GB Cache, 1 3.4 GHz Processor 2 Gigabit Ethernet Ports (copper)</p> <p>4 500GB Drives (7200 RPM) 4 1TB Drives (7200 RPM) 4 2TB Drives (7200 RPM)</p>
<p><b>Storage Capacities</b></p> <p>StorageNode 1000 StorageNode 2000 StorageNode 4000</p>	<p>S1      1TB usable (2TB raw capacity) S2      2TB usable (4TB raw capacity) S4      4TB usable (8TB raw capacity)</p>
<p><b>Minimum Configuration</b></p>	<p>3 Nodes</p>
<p><b>Technical Highlights</b></p> <p>Data Protection High Availability Scalability Compatibility</p>	<p>All data is mirrored and striped across the nodes in the cluster</p> <p>All data is mirrored on at least 2 nodes. This provides continuous uptime if a drive, network port, power supply or even an entire node stops working</p> <p>Up to 512 nodes per cluster, more than 2.2 PBs per single file system</p> <p>Nodes of different sizes can all participate in the same cluster and be used at full capacity. (Limitation: 1 node can not be bigger than 50% of the total cluster capacity)</p>
<p><b>Storage Area Network Support</b></p> <p>SAN Protocols Max LUNs Hosts Supported Security High Availability</p>	<p>iSCSI 255 Any standards-compliant iSCSI Initiator IP based access control, CHAP Authentication, CRC based connection encryption Connections supported to multiple nodes using iSCSI multi-path to connect to the same target/LUN</p>
<p><b>Network Attached Storage Support</b></p> <p>NAS Protocols <b>Security</b> NFS CIFS High Availability</p>	<p>NFS, CIFS  IP/Host based access control ADS Authentication (Kerberos)  Virtual IP Addresses are used to serve NAS protocols. In the case of a node/Ethernet failure another node will pick up the down IP and continue communication with the client without losing connectivity</p>
<p><b>Snapshots</b></p> <p>Snapshots Recovery</p>	<p>True copy-on-write snapshots—instant security, low overhead Flexible snapshot and replication allocation—no need for dedicated snapshot volumes Any LUN/Share from any historical snapshot can be restored as a working copy</p>
<p><b>Replication</b></p> <p>Efficiency Consistency Recovery Scheduling Multi-site Management Interface Notification Methods Support Upgrades</p>	<p>Copies changes at a block level (minimizing time and bandwidth) Copies point in time snapshots to target cluster Any LUN/Share from any available historical snapshot can be restored on the target cluster as a working copy Replication can be scheduled as continuous, or in 5 min, 10 min, 15 min, 30 min, 1 hour, 2 hour, 4 hour, 6 hour, 8 hour, 12 hour or daily intervals. Replication can be configured as a target or a source site for up to 15 other sites simultaneously Serial Console and Flash-based Administrative GUI over https Email, Syslog Administrator controlled access to the cluster by Scale Support via SSH Upgrades are applied in a rolling fashion to maintain uptime by only removing a single box at a time from the cluster</p>



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