



LEAD DOG TECHNOLOGIES

Lead Dog Technologies, LLC, provides ultra low-energy servers, storage, cooling systems and information technology services to commercial and government agencies. Lead Dog products consume up to 90% less energy than conventional systems. **ECO-Stor™** storage arrays provide extreme performance and reliability with co-located or geographically separated Primary, Secondary and Backup systems, providing simplified Continuity of Operations (COOP) and Disaster Recovery (DR) capabilities *right out of the box*.

HIGH-SPEED, SCALABLE, MULTI-TERABYTE, INTEGRATED STORAGE & BACKUP SYSTEMS

Lead Dog provides very high density super computers and storage subsystems for a wide variety of clients, including classified Government agencies. We offer these same advanced technologies to our commercial customers. These high-speed, small footprint storage subsystems provide extremely high-speed, fault-tolerant, low-cost, massively-scalable, low administration NAS or SAN configurations ranging from 10TB up to 576TB per appliance, all with very low operational costs.

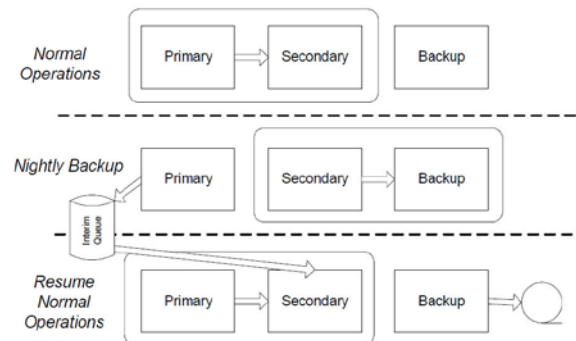
ECO-Stor™ appliances connect either locally or remotely for automated data mirroring and automated disk-to-disk backups, with *Petabyte* backups requiring only about one hour.

Integrated Storage, Mirror, Backup and Network Subsystem – The **ECO-Stor™** appliances may operate as a Primary data store, Primary & Secondary, or Primary, Secondary & Backup configuration – right out of the box. Each **ECO-Stor™** appliance contains additional high-speed NICs thereby adding network bandwidth as each appliance is added to the cluster. **ECO-Stor™** provides automatic Disaster Recovery (DR), Continuity of Operations (COOP), Sarbanes-Oxley compliance and Geoseparation, providing up to 4 levels of data redundancy to protect your valuable data assets with our RAID 61+1™ configurations.

ECO-Stor™ Modes of Operation – During Normal Operations data written to the Primary is written to the Secondary in real time. For nightly backup (or any interval), the Secondary connects to the Backup unit. During the backup process, all subsequent updates to the Primary are stored in a queue. To Resume Normal Operations when the backup process is complete, all queued updates are synchronized between the Primary and Secondary units.

ECO-STOR™ OVERVIEW

Scalable from 10 Terabytes to 576 Terabytes in a standard 19 inch rack. – Racks may be clustered incrementally for an unlimited amount of storage. For example, 2 ECO-Stor™ model GMN384 in 19" racks provide 1.15 Petabytes of storage.



- Automated Petabyte backup in about an hour – Clustered parallel backups reach speeds up to a Petabyte per hour.
- Quad-level data protection – RAID 5 or 6 within each ECO-Stor™ appliance, RAID 61 via local or remote mirroring, RAID 61+1™ via the Backup ECO-Stor™ and optionally a 4th level of redundancy to tape if desired.
- No I/O or network contention – ECO-Stor™ performs backups from the mirrored Secondary appliance to the Backup appliance over a direct connection, eliminating both I/O and network performance degradation.
- Fully compatible block device – ECO-Stor™ looks like a standard block device and supports Linux, Windows, Solaris, Mac OS, OS/390, Oracle, SQL Server, Sybase, DB2 and standard file systems.
- Low initial cost, low operational cost – Surprisingly low cost. The purchase price of a ECO-Stor™ is often cheaper than a single year's maintenance fee for competing storage solutions.
- Minimal System Administration – ECO-Stor™ is designed to be low maintenance with easy, at-a-glance administration.
- Continuity of Operations/Disaster Recovery – ECO-Stor™ provides built-in data redundancy, fault tolerance and automatic application failover capability for smooth COOP and DR capabilities.

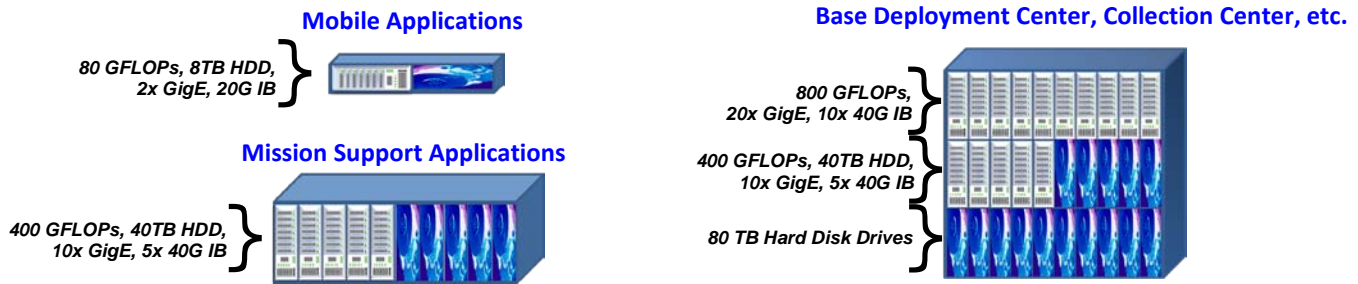
GREEN ECO-Sys MACHINES OVERVIEW

- **Scalable Building Blocks™** from the **80 GigaFLOP “One-half U” Block™** to **6,720 GigaFLOPs** in a standard 19 inch rack.
 - Racks may be clustered incrementally for an unlimited amount of computing capability. For example, 3 Green Machines model EVS-84 systems racks provide 19.65 TeraFLOPs of compute power. Expandable to 2,688 GB RAM.
- **Dynamic Power Management™** – Energy monitoring with rules-driven Dynamic Power On/Off for various server loads, times of the day or energy cost changes.
- **Eliminates or reduces need for computer room air conditioning (HVAC)** – Cool Green modules move heat outside of your data center, thereby reducing or eliminating air conditioning requirements.
- **Low initial cost, low operational cost** – Reduced hardware cost, space, power, cooling, software licenses and administration. Purchase price is typically recovered in less than 3 months of operation.
- **Minimal System Administration** – Green Machines independent Building Block™ modules (processors, storage, power, cooling and networking) are low maintenance and may be independently upgraded to maximize your investment.
- **FPGA Support** – For the ultimate in high-speed scientific computing, the EVS series servers provide Xilinx Field Programmable Gate Array (FPGA) options.
- **Integrated Storage Capability from 8 TB to 768 TB** – Up to 768 TB within a chassis, unlimited expandability with ECO-Stor NAS or SAN systems. Storage Blocks™ available as HDD, Solid State Drive (SDD) or Hybrid options.

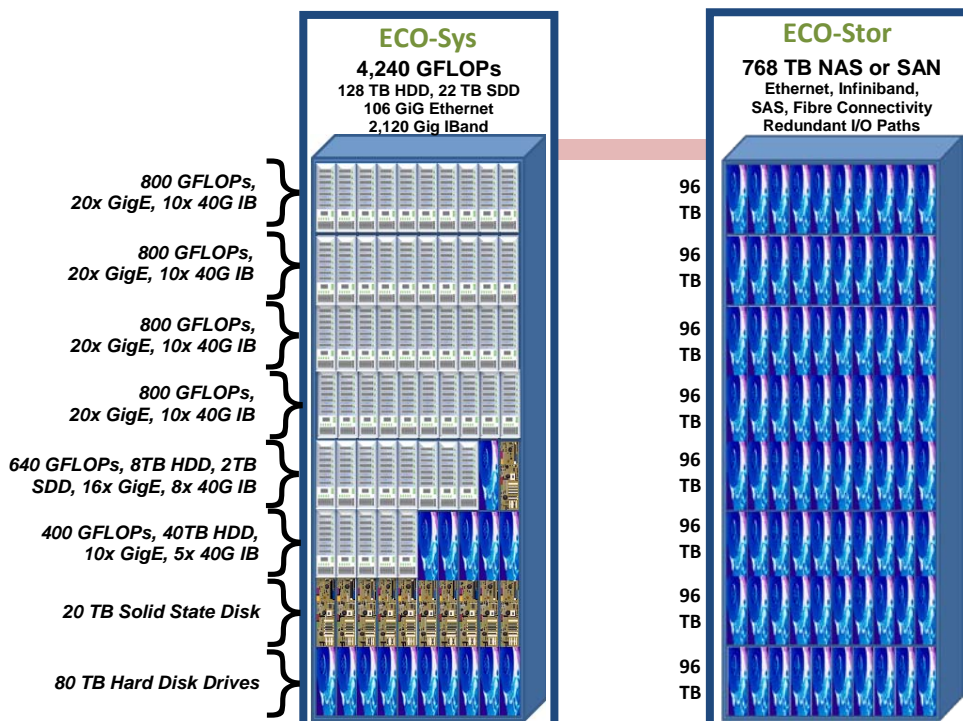
COLOR BY SYSTEM CLASSIFICATION, AVOID SECURITY VIOLATIONS

Choose colors or custom graphics to organize systems by security classification to prevent accidental security compromises and security violations, e.g. Green for Unclassified, etc.

OTHER EXAMPLE CONFIGURATIONS Example configurations of ECO-Sys machines are shown below:



Data Center, Ground Station, Analysis Center, HPC Center



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