![DriveScale]

Software Composable Infrastructure for Modern Workloads

➤ AT A GLANCE

DriveScale's Software Composable Infrastructure (SCI) is a next generation data center architecture designed to handle the scale and dynamic requirements of modern workloads, while providing the agility of the public cloud at a fraction of the cost. It achieves this by disaggregating compute and storage resources into separate pools, letting IT managers easily combine them in any ratio to compose optimally sized servers and clusters, on demand and under software control.

➤ KEY BENEFITS

Spend less on infrastructure and operations

- Achieve higher utilization
- Avoid overprovisioning
- De-couple compute and storage lifecycles
- Reduce data center footprint
- Power down unused resources

### Operate your data center with the agility of a public cloud

- Respond quickly to changing workloads
- Spin-up clusters in minutes instead of weeks
- Share resources across clusters and applications; no more silos
- Recompose servers and clusters on-demand via software
- Recover quickly from disk or server failures

Integrates quickly and easily into your environment

- No changes required to the application stack
- Use industry standard servers and storage of your choice
- Performance equivalent to bare metal servers with direct attached storage
- Redundant architecture for high availability
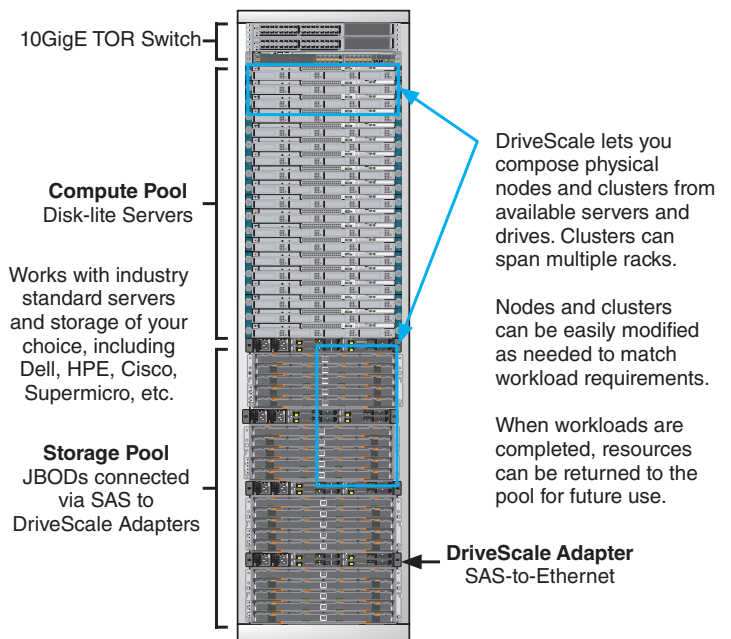- Data security with encryption at rest and in flight

MODERN WORKLOADS REQUIRE A NEW APPROACH

The advent of the big data era has led to the need for innovations in how information is processed. Whereas individual physical or virtual servers were more than adequate to handle traditional business applications like ERP, modern workloads designed for today's social, mobile, analytics and IoT applications require a new approach that distributes the data, and the processing of that data, across dozens to thousands of commodity servers with internal disk drives. This "scale-out", distributed computing approach, originally employed by hyperscale companies like Facebook and Google, is now the standard platform for modern workloads such as Hadoop, NoSQL and containerized web services.
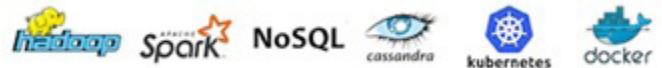
WHAT IS SOFTWARE COMPOSABLE INFRASTRUCTURE?

DriveScale's Software Composable Infrastructure solution lets you disaggregate standard servers into pools of compute and storage resources consisting of disk-lite servers and JBODs (Just a Bunch Of Drives). IT Operations can compose those resources into software-defined *physical* nodes and clusters that are indistinguishable from standard servers to the software running on them. Performance is equivalent to bare metal servers with direct attached storage.

10GigE TOR Switch

Compute Pool
Disk-lite Servers

Works with industry standard servers and storage of your choice, including Dell, HPE, Cisco, Supermicro, etc.

Storage Pool
JBODs connected via SAS to DriveScale Adapters

DriveScale Adapter
SAS-to-Ethernet

DriveScale lets you compose physical nodes and clusters from available servers and drives. Clusters can span multiple racks.

Nodes and clusters can be easily modified as needed to match workload requirements.

When workloads are completed, resources can be returned to the pool for future use.

DRIVESCALE SOLUTION COMPONENTS

DriveScale's solution consists of on-premises software including the DriveScale Management Servers and Agents, a hardware appliance called the DriveScale Adapter and a cloud-based service called DriveScale Central. The system works with your existing server and storage equipment, and incorporates a fully redundant architecture with no single point of failure.

DriveScale Management Servers and Agents

The DriveScale Management Server (DMS) and Agents coordinate to provide the core functionality of the system, connecting compute servers with JBOD drives via the DriveScale Adapter.

The Agents, which are lightweight and automatically deployed on compute nodes (Linux based servers), provide a detailed inventory of available servers, as well as their status (e.g. detects when a server fails).

The DMS collects the information from the Agents, as well as an inventory of disk drives from the DriveScale Adapter, and lets users compose "logical" servers and clusters from the pools of available resources. Servers and clusters can be rebalanced on-demand to optimize for changing workloads, and templates can be created for each to speed future deployments. Status of all physical components and "logical" composed systems is presented to the operator.

DriveScale's RESTful API allows the operator to integrate the DMS with other data center tools. The DMS software can run on bare metal or VM's in a Linux environment.

DriveScale Adapter

The DriveScale Adapter (DSA) is a high performance, fully redundant SAS-to-Ethernet bridge, which allows any drive(s) to be mounted by any server. The 1RU DSA connects to the servers via a standard 10GbE top-of-rack switch, and each DSA can easily support access to 80 drives with equivalent performance to direct attached storage.

Dual redundant power supplies

4 SAS-to-Ethernet adapter cards in a 1u chassis
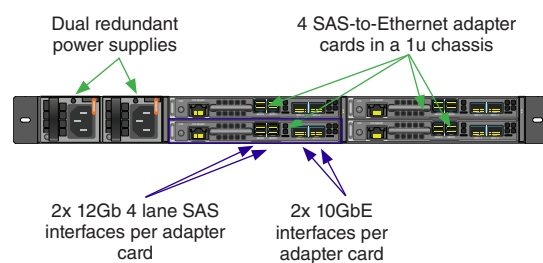
With 80 Gb throughput, a single chassis can comfortably support simultaneous access to 80 drives w/ equivalent performance to direct attached storage

2x 12Gb 4 lane SAS interfaces per adapter card

2x 10GbE interfaces per adapter card

DriveScale Central

DriveScale Central provides cloud-based administration and a centralized view of your DriveScale deployments, including across multiple data centers. Users can download software, get the latest updates, view log files and documentation, and more.

Future versions of DriveScale Central will use anonymized metadata from multiple customer environments to provide actionable recommendations for infrastructure optimization.

DRIVESCALE TECHNOLOGY PARTNERS

DriveScale is proud to partner with these world-class technology solution providers.

ABOUT DRIVESCALE

DriveScale is the leader in Software Composable Infrastructure for modern workloads. Based in Sunnyvale, CA, DriveScale was founded by technologists with deep roots in IT architecture that built enterprise-class systems for Cisco and Sun Microsystems. For more information, please visit www.drivescale.com, or contact us at info@drivescale.com.

DriveScale, Inc
1230 Midas Way, Suite 210
Sunnyvale, CA 94085

Main: +1(408) 849-4651
www. drivescale.com

ov.201706.01.01