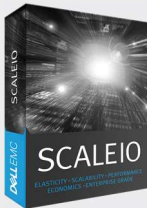


# PERSISTENT CONTAINER STORAGE WITH DELL EMC SCALEIO

Elastic storage cloud with enterprise features for containerized stateful applications

Start building data centric cloud native applications with ScaleIO Container Volumes



For stateful containerized applications, ScaleIO offers:

- Software-based elastic block storage cloud that can be managed entirely through API.
- High performance storage that scales linearly to over 1,000 nodes.
- External persistent storage for stateful applications deployed through Docker Swarm, Kubernetes and Apache Mesos.
- Enterprise data management capabilities including rich data services, redundancy, resiliency, multi-tenancy and security.

## Dell EMC ScaleIO Container Volumes

ScaleIO is a data center grade block storage software that enables stateful cloud native enterprise applications. Container orchestrators (Docker, Kubernetes and Apache Mesos) can take advantage of ScaleIO's high performance and rich data services to offer highly available enterprise-class persistent volumes for containerized stateful applications.

## Adoption of Cloud Native Methods

Faced with the challenges to develop applications that scale up to serve millions of users, web-scale technology companies were early pioneers of building cloud native applications and infrastructure. Given the necessity to increase end-user experience, developer productivity and IT agility, enterprises of all sizes are also now rapidly adopting cloud native methodologies.

- **Application agility with microservices:** Building applications with microservices architecture accelerates development, simplifies application life cycle, and optimizes infrastructure utilization.
- **Application portability with Containers:** Container technologies help eliminate the friction between software and infrastructure, by allowing developers to package software including its environmental dependencies. Container Orchestrators such as Docker Swarm, Kubernetes and Apache Mesos enable IT Operators to easily deploy and manage hundreds of containers on the infrastructure.
- **Automated cloud native infrastructure:** Software-based data center technologies enable the necessary hardware abstraction, automated infrastructure operations and elastic scalability required by cloud native applications.



Cloud Native Transformation

## ScaleIO Enables Stateful Cloud Native Applications

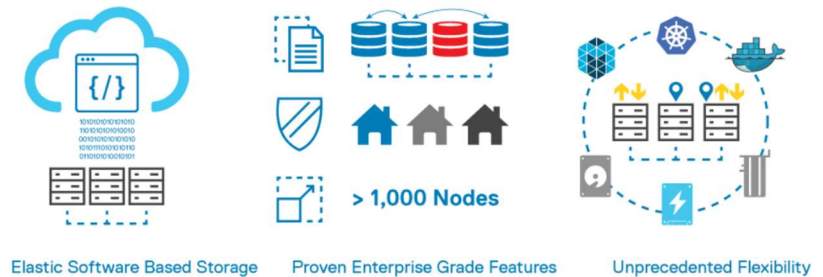
Ephemeral nature for containers has made applicability of container technology to data-centric stateful applications challenging. Placing container data on node-level local volumes limits data availability and scalability and makes data life cycle management complex. Dell EMC ScaleIO is an enterprise storage software that abstracts storage devices available across servers and creates an elastic pool of high performance block storage cloud. Through virtualization and API-driven automation of storage infrastructure, ScaleIO enables container orchestrators to easily provision highly available and elastically scalable container volumes for stateful services.

## Cloud Native Meets Enterprise

As a software-based storage, ScaleIO is designed to run on industry-standard x86 hardware and elastically scale 'on the fly' with linear high performance to over 1000 nodes.

For enterprise applications, ScaleIO offers the necessary data services such as thin provisioning, quality of service (QoS) and writable snapshots, redundancy, multi-tenancy, resiliency through in-flight IO checksum and security features.

ScaleIO's parallel mesh architecture, efficient distribution of metadata across nodes and intelligent algorithms combine to deliver transcending data resiliency for cloud native applications.



*ScaleIO: Elastic Storage Cloud with Enterprise Features*

## Unprecedented Flexibility and Application Portability

ScaleIO interoperates with different container orchestrators, hardware media, hypervisors and operating systems to adapt into organizations of any structure and size.

- ScaleIO can interoperate between all container orchestrators – Docker, Kubernetes and Apache Mesos – thereby allowing you to choose an orchestrator platform ideal for the application or use case.
- As a lightweight software, ScaleIO can be either run as a storage-only node (two-tier) or alongside applications (single-tier). It is also perfectly acceptable to mix these two types of nodes within the same cluster.
- ScaleIO is hardware-agnostic and plays well with any type of media. Automatic data rebalancing and rapid rebuilding capabilities enable transformative infrastructure life cycle operations.
- As a hypervisor-agnostic storage software, ScaleIO allows deploying containers either directly on to bare metal servers or on top of hypervisor of your choice.
- For consumptions, ScaleIO is available as ScaleIO software-only (Bring Your Own Hardware), ScaleIO Ready Node (with industry leading Dell PowerEdge Servers) and VxRack Flex (turn-key hyper-converged rack solution).

## Ready to Evaluate?

Dell EMC ScaleIO is available free and frictionless for you to try. Visit [dell.com/getscaleio](https://dell.com/getscaleio) to request your download and start building stateful containerized applications with ScaleIO persistent volumes.



Learn more about Dell EMC ScaleIO solutions



Contact a Dell EMC Expert