# Introduction

The Distributed Asynchronous Object Storage (DAOS) is an open-source object store designed from the ground up for massively distributed Non Volatile Memory (NVM). DAOS takes advantage of next-generation NVM technology, like Storage Class Memory (SCM) and NVM express (NVMe), while presenting a key-value storage interface on top of commodity hardware that provides features, such as, transactional non-blocking I/O, advanced data protection with self-healing, end-to-end data integrity, fine-grained data control, and elastic storage, to optimize performance and cost.

This initial administration guide version is associated with DAOS v0.4.

## Terms used in this Document

The following terms and abbreviations are used in this document.

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| Term | Definition |
| 1. ACLs | 1. Access Control Lists |
| 1. CaRT | 1. Collective and RPC Transport (CaRT) library. A software library built on top of the Mercury Function Shipping library to support distributed communication functionality. |
| 1. CGO | 1. Go tools that enable creation of Go packages that call C code |
| 1. CN | 1. Compute Node |
| 1. CPU | 1. Central Processing Unit |
| 1. COTS | 1. Commercial off-the-shelf |
| 1. Daemon | 1. A process offering system-level resources. |
| 1. DCPM | 1. Intel Optane DC Persistent Memory |
| 1. DPDK | 1. Data Plane Development Kit |
| 1. dRPC | 1. DAOS Remote Procedure Call |
| 1. BIO | 1. Blob I/O |
| 1. gRPC | 1. gRPC[[1]](#footnote-2) Remote Procedure Calls |
| 1. GURT | 1. A common library of Gurt Useful Routines and Types provided with CaRT. |
| 1. HLD | 1. High-Level Design |
| 1. I/O | 1. Input/Output |
| 1. ISA-L | 1. Intel® Intelligent Storage Acceleration Library |
| 1. libfabric | 1. A user-space library that exports the Open Fabrics Interface |
| 1. Mercury | 1. A user-space RPC library that can use libfabrics as a transport |
| 1. NVM | 1. Non-Volatile Memory |
| 1. NVMe | 1. Non-Volatile Memory express |
| 1. OFI | 1. OpenFabrics Interfaces |
| 1. OS | 1. Operating System |
| 1. PMDK | 1. Persistent Memory Development Kit |
| 1. PMIx | 1. Process Management Interface for Exascale |
| 1. Raft | 1. Raft is a consensus algorithm used to distribute state transitions among DAOS server nodes. |
| 1. RDB | 1. Replicated Database, containing pool metadata and maintained across DAOS servers using the Raft algorithm. |
| 1. RPC | 1. Remote Procedure Call. |
| 1. SPDK | 1. Storage Performance Development Kit |
| 1. SWIM | 1. Scalable Weakly-consistent Infection-style process group Membership protocol |
| 1. UPI | 1. Intel® Ultra Path Interconnect |
| 1. UUID | 1. Universal Unique Identifier |
| 1. VOS | 1. Versioned Object Store |

## Additional Documentation

Refer to the following documentation for architecture and description:

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| Document | Location |
| 1. DAOS Internals | 1. https://github.com/daos-stack/daos/blob/master/src/README.md |
| 1. DAOS Storage Model | 1. <https://github.com/daos-stack/daos/blob/master/doc/storage_model.md> |
| 1. Community Roadmap | 1. https://wiki.hpdd.intel.com/display/DC/Roadmap |

1. <https://grpc.io/> [↑](#footnote-ref-2)