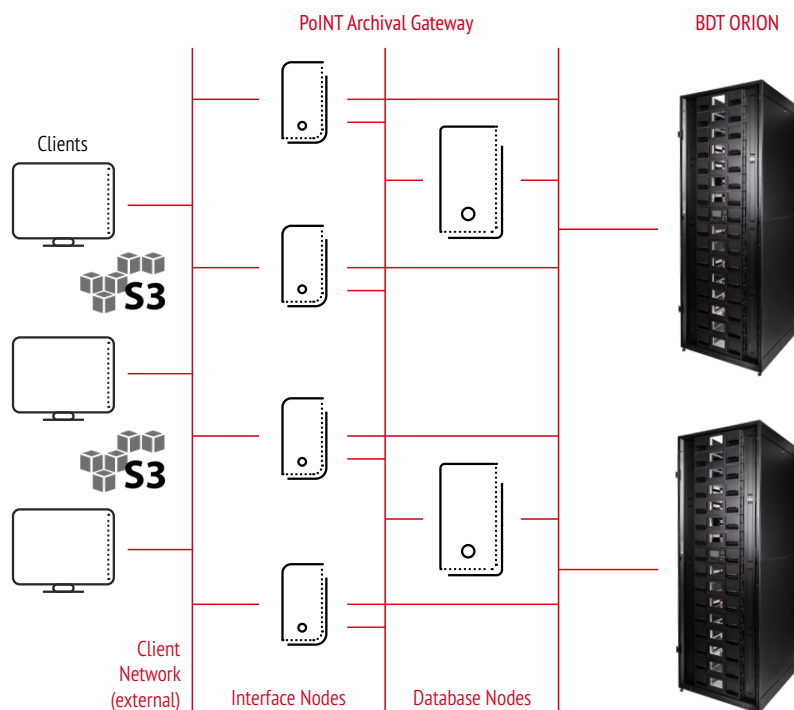


ORION S3: Scalable Object Storage on Tape

Tape-based object storage is the answer to the challenges of digitization and unabated data growth. Object-based data storage on tape offers decisive technical and economic advantages when dealing with constantly growing data volumes. Object storage provides scalability, reliability and high availability. The established S3 interface is a widely used standard. The storage medium tape offers high cost efficiency, combined with a small ecological footprint and important security features.

The joint solution ORION S3 of PoINT and BDT is optimized for the use in data centers: it provides standardization on hardware and software level. The combination of the rack-mountable ORION tape library and the S3-to-Tape solution PoINT Archival Gateway meets the highest demands in terms of scalability, performance, sustainability and cost-effectiveness for the storage of large amounts of data.



FEATURES

- Integration of the BDT ORION tape library via S3
- Direct writing to tape, no hard disk buffer required
- High throughput rates due to parallelization
- Flexible scalability in capacity and throughput
- S3 and S3 Glacier compatibility (including Lifecycle Policies)
- Erasure Coding
- Object Locking, authentication and encryption
- Optimized for hyperscaling and cloud environments

BENEFITS

- Investment protection through standardization: rack-mountable library, LTO standard, standardized interface
- Easy integration into the data center thanks to standardization
- Highly scalable overall solution through modularization of the library and node architecture of the software
- Cost-efficient solution for multiple use cases
- High level of protection against cybercrime and ransomware attacks thanks to "air-gapped" tape

ABOUT POINT

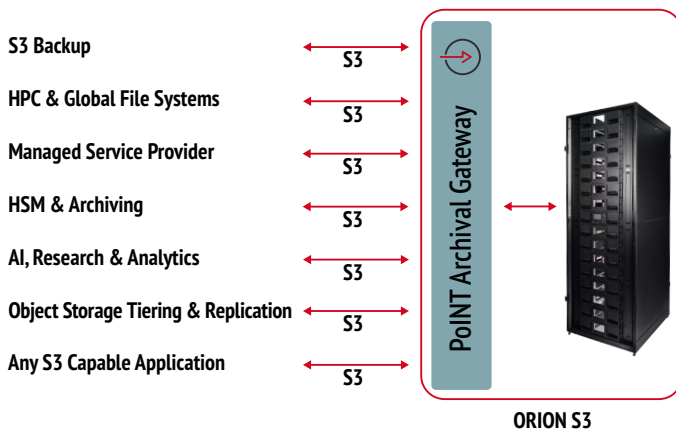
Since 1994, PoINT Software & Systems GmbH has specialized in the development and distribution of software products for storage, management and archiving of data. PoINT solutions for storage & data management offer an easy and efficient integration of different storage technologies and systems in consideration of enterprise requirements. They allow optimized usage of storage systems and help to reduce costs and issues caused by data growth.

ABOUT BDT

BDT Media Automation GmbH is a global technology company and OEM partner specializing in the development and production of data storage solutions for storing and archiving large amounts of data. Since its foundation in 1967, BDT has established itself as a reliable partner and today employs around 350 people at its locations in Rottweil (headquarters), the Netherlands, the USA, Mexico, China and Singapore. As a tradition-conscious family business, now in its third generation, BDT combines innovative strength with decades of experience.

Use Cases

All S3-capable applications (S3 as well as S3 Glacier) can use PoINT Archival Gateway to store data on the ORION Library and benefit from the associated advantages of scalable S3 object storage.



S3 Backup

ORION S3 enables cloud-based backup services on tape via the S3 protocol. Customers benefit from physical air-gap and protect their data from ransomware, for instance.

Hyperscale Computing

The combination of the BDT ORION Library with PoINT Archival Gateway addresses application areas that are confronted with constantly growing data volumes and therefore require highly scalable solutions. Both components offer flexible scalability for increasing data volumes and achieve a particularly cost-effective and secure data storage on tape media.

Managed Service Provider

With ORION S3 storage service providers can expand their portfolio with a cost-effective, tape-based Glacier storage class. The BDT ORION Library fulfills the requirements in terms of capacity and performance. In addition, users benefit from the comprehensive functionality of PoINT Archival Gateway for archiving of cold data as well as for replication and recovery, for example to protect against cyberattacks.

HSM & Archiving

PoINT Archival Gateway offers various functions to meet archiving and compliance requirements. In combination with the BDT ORION Library, a flexible and highly scalable solution is available to archive large amounts of data in a legally compliant manner. The WORM functionality protects

data from accidental deletion and intentional modification (e.g. through ransomware attacks). The integrated retention management allows the activation of retention policies and retention periods on the level of an object repository. HSM applications can use PoINT Archival Gateway as target storage for secure and compliant archiving.

AI, Research & Analytics

Data-intensive workloads dominate AI, research, and analytics. After a productive processing phase on fast and expensive HPC systems, large amounts of data quickly become inactive, but still need to be stored or archived, e.g. for compliance reasons. With ORION S3, a tape-based system can be homogeneously integrated into the storage infrastructure as secondary and archive storage via the S3 interface. PoINT Archival Gateway allows direct data streaming via S3 to tape. Expensive hard disk buffers are not required.

Object Storage Tiering & Replication

ORION S3 is the answer to two central challenges in the context of disk-based on-prem object storage. On the one hand, companies need the possibility to backup their object data with a copy in their own data center so they can fall back on a fast recovery option in case of data loss. On the other hand, the primary storage systems need to be relieved of inactive data. With PoINT Archival Gateway and the BDT ORION Library a tape-based S3 storage class is available, which can be used as target for data replication as well as for tiering of cold data. PoINT Archival Gateway provides the appropriate functionality for both use cases.

Configuration Options

The BDT ORION Library in combination with PoINT Archival Gateway offers very flexible configuration options in terms of capacity (number of slots) and throughput (number of drives). The table shows some examples.

#Libraries ¹⁾	#Slots	#Drives	Capacity in PB ²⁾	Throughput in GB/s ²⁾
1	1115	3	19.6	1200
1	1007	12	17.7	4800
2	2230	6	39.2	4800
2	2014	24	70.8	19200

¹⁾ One mailslot per library

²⁾ LTO-9, uncompressed