



# POLUS NAS Storage Solution

High-performance storage – low cost of ownership

Our POLUS network-attached storage (NAS) solution is based on the highly robust and scalable zettabyte file system (ZFS) architecture on Linux servers, which can be scaled from 10 TB upwards.

With POLUS, everything you need to create your project is right there in one place. ERA's NAS solution is easy to implement into existing infrastructure, so you can get up and running straight away. All you need to do is log in to start tackling demanding projects quickly and effectively...

## Features

- Highly robust and scalable ZFS architecture
- Intuitive user interface to manage pools and file systems
- Multiple configuration options
- Many options to protect data volumes

## Benefits

- Secure storage for large data volumes
- Easy access to media assets – anytime, anywhere
- Efficiently manage your data volumes
- Reduce the chance of data corruption
- Scale and tune to meet demand
- Implement easily into existing infrastructure

## How it works

ERA's straightforward POLUS NAS solution utilises the highly robust and scalable zettabyte file system (ZFS) on Linux servers, which can be scaled from 10 TB upwards.

ZFS provides many options to protect data volumes in the event of a drive failure by using redundant array of independent disks (RAID) – a combination of multiple disks instead of a single disk for increased performance and reliability – and is very efficient at optimising throughput with its adaptive, intelligent cache algorithm.

The ZFS architecture manages underlying storage using two areas:

**Filesystems** – the user file storage areas where data is copied and stored. When creating the filesystem, the options for encryption, compression and quotas are applied.

**Pools** – the disk volumes created by ZFS present storage to the filesystem and protect the data with RAID.

## Choosing a solution

POLUS can be configured for throughput performance, storage capacity, high level of protection and a blend of all – tailored to business requirements.

**Top performance:** a high number of disks configured with stripe mirror pool(s) will give the best throughput.

**Blended solution:** a high-performance SSD disk striped mirror pool in addition to a slower, larger 16 TB SAS disk pool can provide a fast-working pool and a slower store/archive pool.

**High capacity:** a large number of disks with RAID 6 pool(s) will give the optimal capacity and protection.

**Best protection:** a number of disks configured with RAID 6 pools will create a high-availability solution where data is replicated between nodes.



# Straight forward implementation

POLUS combines simple deployment with the scalability media enterprises need.



Integrates into existing infrastructure to allow users to start accessing data volumes quickly.



Expands and contracts the cache as needed depending on demand – ideal for media companies who need content storage on the go.



Scales the file system to the current limits of the hardware and operating system.

## Additional services

**Snapshots:** ZFS can create a user-specified number of snapshot copies and a tailored schedule of individual filesystems. Snapshots are available in hidden folders for users to restore to the 'live' filesystem.

**Replication:** ZFS uses the snapshot feature to capture a point-in-time copy locally, and then ZFS can run a process to copy that data to a remote ZFS system.

**Encryption:** Each filesystem can be protected with encryption, and a separate user-specified encryption key can be used. If the encrypted filesystem is unmounted or changed, it will require the encryption key to enable it again.

**Compression:** Individual ZFS filesystems can be configured with compression. Any data stored in a filesystem with compression enabled will be compressed based on the following compression types: gzip, lz4, lzjb and zle.

**Quotas:** Each ZFS filesystem can set quotas to limit the amount of data stored on that filesystem. The quotas are a logical limit and can be modified online.

## Full control

- Manage and control pools, file systems and Samba/CIFS and NFS shares with a simple-to-use web interface.
- Tune the POLUS storage solution to give the best fit for the environment.
- Customise pool configuration and level of protection to suit customer requirements.

## Advanced architecture

- Protect each file system with encryption and a separate user.
- Configure individual ZFS file systems with compression and set limits on the amount of data that can be stored on that file system.
- Access services that would be optional extras in other solutions – from snapshots, snapshot cloning and replication to encryption, compression and quotas.

## Easy configuration

- Structure for performance, storage capacity, high protection or a blend of all three depending on the requirements.
- Configure a high number of disks with stripe/mirror pool for the best throughput, or use large capacity disks in a large pool to give the best capacity and protection.
- Offer single or multiple servers for high availability and protection with replication.



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