

An enterprise data storage and centralized file management platform. With its ZFS-based architecture, it provides a scalable storage infrastructure by centrally managing data integrity, backup, replication, and secure sharing features.

Challenges of Modern Data Management

The growing data volume in media and enterprise systems, high availability requirements, and the need for centralized management create operational challenges in traditional storage solutions. Data loss risks, management complexity, and backup processes make sustainability difficult. Decentralized storage structures, manual access management, and scattered data sharing processes between different systems lower operational efficiency. Furthermore, the inability to effectively manage replication, snapshot, and disaster recovery processes creates serious operational risks in infrastructures that require uninterrupted service.

⚠️ What Problems Does It Solve?

· Centralized data management need

· Data loss and integrity problems

· Backup and recovery operations

· Management of scattered storage structures

Core Principles

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Data Integrity

Data verification and error correction

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Performance

High data access speed

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Security

Encryption and access control

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Scalability

Flexible storage growth

How Does TrueNAS Work?

TrueNAS provides centralized data management by combining disks into ZFS-based storage pools. It delivers data securely through snapshot, replication, and sharing mechanisms, while making access, backup, and data integrity processes manageable from a single platform.

Workflow

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1. Storage Pool

· Disks are gathered under a storage pool.

· RAID-Z structures are created.

· Data sets are defined.

· Snapshot policies are applied.

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2. Data Management

· Shares are created.

· Snapshot processes run.

· Access privileges are applied.

· Data flow is centrally managed.

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3. Protection and Replication

· Data is replicated.

· Backup is performed.

· Disaster scenarios are managed.

· Data integrity is verified continuously.

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Continuous Improvement

The TrueNAS infrastructure is optimized according to usage patterns; storage performance is increased, and data management operations are continuously enhanced.

Technical Features

📁 Data Management

✔️ ZFS-based data management

✔️ Centralized file sharing

✔️ Snapshot support

✔️ Data compression

🔒 Data Protection

✔️ Replication support

✔️ Encryption mechanisms

✔️ Data integrity control

✔️ Automated error correction

🔌 Integration

✔️ SMB support

✔️ NFS support

✔️ iSCSI support

✔️ API support

👤 Management

✔️ Web-based management

✔️ Monitoring and alerts

✔️ Log management

✔️ User management

Advantages

🛡️ ZFS Infrastructure

Data integrity is continuously preserved with data verification and automated error correction mechanisms.

⚡ Centralized Management

All storage resources are managed from a single center, and access processes are centrally controlled.

👁️ Snapshot Management

Rapid rollback operations are executed using instant data copies, minimizing data losses.

📄 Replication

Data is securely replicated to different systems, supporting business continuity and disaster recovery processes.

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AA Teknoloji is an AI-powered media technologies platform developed for modern newsrooms. Our integrated solutions, ranging from news workflow systems to digital archive solutions, real-time broadcasting infrastructure to multi-channel content management, accelerate the digital transformation processes of media organizations and offer scalable broadcasting operations.

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