

# Cloud-Based File Storage System

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# DOCKER

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Docker-compose

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Multiple  
containers:

MariaDB: database for the system.

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Nextcloud: file storage service.

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# NEXTCLOUD



Nextcloud enables users to easily sign up, log in, or log out.



Nextcloud supports various roles, including admins and regular users, each with appropriate privileges



Each user automatically receives a private storage space.



Admins can create, modify, and delete user accounts and permissions.



Users can upload, download, and delete files from their private storage

# SCALABILITY

## Virtual Disk Expansion:

Increase the space available for file storage by expanding the virtual disk of Docker containers.

## Horizontal Approach:

Configure multiple Nextcloud instances and distribute the load among them.

# SECURITY



**Server-side encryption**



**Two-factor authentication**



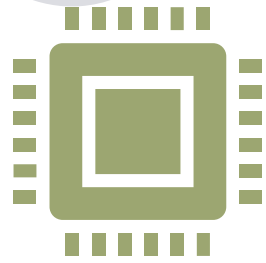
**Password policies**

Special characters

Numbers

Password must be changed every few days

# COST-EFFICIENCY



## Local Deployment:

Initial costs.

Requires hardware and maintenance.

Limited scalability and flexibility.



## Cloud Deployment:

Pay-as-you-go model.

Scalability and flexibility.

Lower initial costs, but ongoing operational costs.

# LOCUST

Simulating user load on Nextcloud.



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graph TD; A[Simulating user load on Nextcloud.] --> B[Evaluating the performance of input/output operations.]; B --> C[Identification of system weaknesses];
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Evaluating the performance of input/output operations.

Identification of system weaknesses



Small size





Large size