



CESS Network

The Decentralized Data Infrastructure

Episode 1: CESS Network Introduction



<https://www.cess.network>



Course Logistics

Course Website: <https://course.cess.network/>

Episode 1 ····· CESS Network Introduction

Episode 2 ····· CESS Architecture & Key Technologies

Episode 3 ····· CESS Ecosystem, Account Setup, and Applications

Episode 4 ····· CESS Nodes & CESS Account Setup

Episode 5 ····· Demo: Running a Consensus Node

Episode 6 ····· Demo: Running a Storage Node

Episode 7 ····· CESS DeOSS and DeOSS REST API

Episode 8 ····· dApp Development using ink! Smart Contract

Episode 9 ····· dApp Development using Solidity Smart Contract

Episode 10 ····· Building Custom Pallet





What is CESS?

The next-generation decentralized data infrastructure

CESS is a public blockchain network based on a distributed storage system with milliseconds high-speed Content Decentralized Delivery Network (CD²N) and empowers AI innovations by web3 protocols.

CESS is a secure, efficient, and scalable decentralized cloud storage network that provides data storage services and data sharing platform.

CESS is a pioneering solution for entropy reduction in our ever-chaotic digital landscape..

Why Choose CESS?



Lightning-Fast
Data Retrieval



Guaranteed Data
Recovery



Fully
Decentralized



Data Ownership



Secure Data
Sharing



High-Frequency
Dynamic Data

Developer Friendly!

Decentralized Storage Industry Challenges



Challenges

Data Vulnerability

Data loss due to node failure or security breaches

Slow Data Retrieval

Lack of indexing and search functionality

Inefficient Use of Storage Space

Underutilization of available storage resources

Limited Commercial Use

Lack of advanced functionality and integration capabilities

CESS Solutions

High Data Assurance

Encryption combined with fault-tolerant data storage achieved by **PoDR²**, ensuring privacy and data sovereignty

Millisecond Data Retrieval

Rapid data access with advanced indexing and caching functionality achieved by **CD²N**

Smart Space Maximization

Optimized storage resource utilization with **Smart Space Management System**

Widely Applicable for Commercial Use

RESTful API and SDKs in Go, JS, and Rust. Supports EVM/WASM smart contracts

CD²N Industry Challenges



Challenges

High Costs

May require substantial initial investments

Data Security Risks

Data transfer across multiple nodes increases the risk of security breaches and unauthorized access.

Transmission Delays

Face transmission delays and network congestions during peak times

Lack of Standards and Interoperability

Absence of standardized protocols and interoperability among different CDN providers

Limited Customization Capabilities

CDN services offer limited customization options, restricting performance and features

CESS Solutions

Free Market for Demand Transactions

Promotes competitive pricing and reduce overall cost for CDN services

Diversified Data Privacy Protection System

CESS offers advanced data privacy protection through diversified security protocols.

Adaptive Dynamic Network Scaling

Ensures optimal performance by dynamically adjusting traffic loads, reducing transmission delays and network congestion

Unified Data Sharing Platform

Unified platform for data sharing, facilitating seamless integration and data exchange

Highly Customizable Features

Enables businesses to tailor CDN performance and features to specific needs

Decentralized AI Training Challenge



Challenges

Lack of Data Privacy

Highly sensitive information leaks

Enormous Demand for Electricity

Requires significant computational power

Computing Resources Monopoly

Requires significant computational power

Ethical and Social Impacts

Unequal access to AI advancements,
biases in algorithms

CESS Solution

CESS AI-LINK

A Byzantine-Robust system with data privacy

Train AI models in a decentralized network without exposing original data

Key Advantages

- Privacy Preserving
- Decentralized Computing
- Synchronized Training with Smart Contracts
- Hardware Acceleration
- Easy Integration

Use Cases



DA Layer for
Blockchains



Decentralized
Streaming Media



Data Lake



Distributed AI
Training



AIGC Innovation



Web3 Gaming



RWA (Real World
Assets)



Decentralized Data
Marketplace



Customized
Network Drive

Roadmap



Try Out CESS Now



Get tokens for CESS testnet:
[Testnet Faucet](#)



Decentralized Cloud Storage:
[DeCloud](#)



Decentralized Video-sharing Platform:
[TellyWelly](#)



CESS Blockchain Explorer (testnet):
[Substats \(testnet\)](#)



Quickly share file via CESS:
[DeShare](#)



Decentralized Video Marketplace
[Videown](#)

Learn, Explore, Contribute



For learning

[Documentation](#)

[Whitepaper](#)

[CESS Github Repository](#)

Our Ambassador Program:

<https://cess.cloud/ambassador.html>



Get In Touch



<https://github.com/CESSProject>



https://twitter.com/CESS_Storage



<https://discord.gg/cess>



https://t.me/CESS_Storage_official



https://www.youtube.com/@cess_storage2312



https://medium.com/@CESS_LAB



[t.ly/Fn1hU](https://www.linkedin.com/in/Fn1hU)





Thank you for watching

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CESS Network Introduction



<https://www.cess.network>



What is CESS?

The next-generation decentralized data system

CESS Blockchain

Fully Decentralized
Diverse Consensus Mechanism
Smart Contract
Economic Incentives
...



CESS CD²N

Real-time Data Sharing
Highly Scalable Solutions

CESS Decentralized Storage

Enhanced Privacy
Location Based Storage Selection
Hierarchical Permission Management

CESS AI-LINK

Byzantine-Robust Circuit
Collaborative Model Training