DCDN Cloud — Complete Documentation

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1. Introduction

DCDN Cloud is a decentralized cloud infrastructure platform providing CDN (Content Delivery Network) and VPS (Virtual Private Server) services, powered by a global network of independent node operators.

Key Features:

- Decentralized CDN with global edge nodes
- VPS hosting on distributed infrastructure
- Revenue-backed DCDN token — minted only from real payments
- Revenue sharing via RSP (Revenue Sharing Protocol)
- All smart contracts are **immutable** — no owner, no admin, no upgrades
- DNS hosting with custom nameservers
- WAF (Web Application Firewall) protection
- SSL/TLS certificate provisioning
- DDoS protection

Website: https://dcdncloud.com
Node Dashboard: https://dcdncloud.com/node-dashboard
Support: support@dcdncloud.com

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2. Cloud CDN Service

Plans & Pricing

Plan	Price	Domains	Bandwidth	Features
Free	$0/mo	1	5 GB	Basic CDN, SSL, WAF

Standard	$5/mo	1	50 GB	CDN, SSL, WAF, 5 VPS
Pro	$15/mo	5	200 GB	Advanced WAF, Bot mgmt, 10 VPS
Business	$99/mo	Unlimited	5 TB	Full WAF, SLA 99.99%, 50 VPS
Enterprise	Custom	Unlimited	Unlimited	Dedicated nodes, SOC2

Pay with Stripe (USD) or DCDN token (10% discount).

Getting Started

1. **Sign up** at https://dcdncloud.com
2. **Add a domain** in Dashboard → Domains
3. **Update your DNS** — change nameservers to `ns1.dcdncloud.com` and `ns2.dcdncloud.com`, or add a CNAME to `edge.dcdncloud.com`
4. **SSL is automatic** — certificates provisioned within minutes
5. **Configure WAF rules** in Dashboard → Security

DNS Management

DCDN provides authoritative DNS hosting:

- **NS1:** ns1.dcdncloud.com (65.109.91.24)
- **NS2:** ns2.dcdncloud.com (187.77.61.68)

Supported record types: A, AAAA, CNAME, MX, TXT, SRV, NS

Cache & Performance

- Global edge caching with 300s default TTL
- Intelligent routing to nearest node
- Gzip/Brotli compression
- HTTP/2 and HTTP/3 support
- Cache purge via API or Dashboard

WAF & Security

- OWASP Top 10 protection
- Rate limiting (configurable per domain)
- Bot detection and blocking
- Geo-blocking (country-level)
- IP access lists (allow/deny)
- DDoS mitigation (L3/L4/L7)

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3. VPS Compute Service

Plans & Pricing

Plan	vCPUs	RAM	Storage	Bandwidth	Price

Nano	1	512 MB	10 GB SSD	1 TB	$3/mo
Micro	1	1 GB	20 GB SSD	2 TB	$5/mo
Small	1	2 GB	40 GB SSD	3 TB	$6/mo
Medium	2	4 GB	60 GB SSD	5 TB	$12/mo
Large	4	8 GB	100 GB SSD	10 TB	$24/mo
XL	8	16 GB	200 GB SSD	20 TB	$48/mo

Available Operating Systems

Ubuntu: 22.04 LTS, 24.04 LTS • **Debian:** 11, 12 • **CentOS/RHEL:** Stream 9, Rocky 9, AlmaLinux 9 • **Fedora:** 40, 41 • **Arch:** Rolling • **Alpine:** 3.19, 3.20 • **Other:** openSUSE 15.6, Amazon Linux 2023, Oracle Linux 9

Creating a VPS

1. Go to Dashboard → **Compute** → **Instances**
2. Click **"+ New Instance"**
3. Select plan, OS image, and region
4. Click **Create Instance**
5. Wait ~30 seconds for provisioning
6. SSH into your server: `ssh root@<ip> -p <port>`

Managing Instances

- **Start/Stop:** Dashboard or API
- **Destroy:** Permanently deletes the instance
- **Reset Password:** Generates new root password
- **Regions:** EU Central, EU West, US East, South America

VPS instances can be purchased standalone — no Cloud plan needed.

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4. Node Operator Guide

What is a Node Operator?

Node operators run DCDN software on their servers to provide CDN and VPS hosting services. In return, they earn DCDN tokens from the NodeRewardPool — funded by 70% of all revenue.

Revenue Split (Unified, Immutable)

All revenue — CDN, VPS, and every other service — follows the same split, enforced on-chain by the immutable BillingEngine contract:

Share	Recipient	Description
70%	NodeRewardPool	Distributed monthly to node operators
25%	RSP Connector	Revenue Sharing Protocol (token holders)

5%	LP Wallet	Uniswap V3 DCDN/USDC liquidity

This split is hardcoded in the BillingEngine contract and **cannot be changed by anyone**.

How Rewards Work

Node rewards are **not** based on node self-reporting. The coordinator measures the performance of every node through the traffic it routes:

1. The coordinator routes real user traffic to nodes and measures every response: did the node respond? Was it correct? How fast?
2. Monthly, the coordinator calculates each node's **reliability score** from this data.
3. Nodes with 95%+ reliability receive full reward share. Nodes below 50% receive nothing.
4. The coordinator builds a merkle tree of allocations and submits the root on-chain.
5. Node operators claim their rewards by calling `claimReward(period, amount, proof)` on the NodeRewardPool contract.

This system is manipulation-resistant: nodes cannot inflate their own stats because the coordinator — not the node — measures performance.

Claiming Rewards

```
 // NodeRewardPool contract (Immutable)
// 1. Connect wallet to Ethereum mainnet
// 2. Get your merkle proof from the coordinator API
// 3. Call claimReward(period, amount, proof)
// 4. DCDN tokens are transferred to your wallet

Contract: 0x98d525395b856FDAbA5ef363a4CE47c75BEE256A
Function: claimReward(uint256 period, uint256 amount, bytes32[] proof)
Gas: ~80,000 (~$0.50 at current gas prices)
```

Earnings Example

If total monthly revenue is $1,000:

- **NodeRewardPool receives:** $700 worth of DCDN tokens (70%)
- **Split among 7 nodes** by routing performance: ~$100/node if equal
- **RSP holders receive:** $250 (25%)
- **LP liquidity:** $50 (5%)

Setting Up a Node

Requirements

- **Minimum:** 1 vCPU, 1 GB RAM, 20 GB disk
- **Recommended:** 2+ vCPU, 4+ GB RAM, 40+ GB disk
- **OS:** Ubuntu 22.04 LTS (recommended)
- **Network:** Public IPv4, ports 8080, 8443, 22000-22100 open
- **Docker** installed

Installation

1. **Install Docker:**

```
curl -fsSL https://get.docker.com | sh
```

2. **Install DCDN Node binary:**

```
wget https://dcdncloud.com/downloads/dcdn-node-v1.1.0-linux-amd64 -O /usr/local/bin/dcdn-node
chmod +x /usr/local/bin/dcdn-node
```

3. **Create configuration:**

```
mkdir -p /etc/dcdn
cat > /etc/dcdn/dcdn.toml << 'EOF'
node_id = "your-node-id"
region = "eu-west"
listen_http = "0.0.0.0:8080"
listen_https = "0.0.0.0:8443"
coordinator_url = "https://dcdncloud.com"

[cache]
max_size_mb = 256
ttl_seconds = 3600
disk_path = "/var/dcdn/cache"

[waf]
enabled = true
rate_limit_rps = 100

[ssl]
auto_provision = true
cert_dir = "/var/dcdn/certs"
acme_email = "team@dcdncloud.com"
EOF
```

4. **Register your node** at https://dcdncloud.com/node-dashboard
5. **Create systemd service and start:**

```
systemctl daemon-reload
systemctl enable dcdn-node
systemctl start dcdn-node
```

6. **Open firewall ports:**

```
ufw allow 8080/tcp
ufw allow 8443/tcp
ufw allow 22000:22100/tcp
```

7. **Verify** in the Node Dashboard — your node should appear as "Online"

Compute Agent (VPS Hosting)

The Compute Agent enables your node to host VPS instances. See the Node Dashboard for setup instructions.

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5. Token Economics

DCDN Token — Revenue-Backed Emission

> **Core Principle:** DCDN tokens are only created when real USD revenue enters the system. No pre-mint, no inflation without revenue.

Property	Value
Name	DCDN Token
Symbol	DCDN
Chain	Ethereum Mainnet (ERC-20 + EIP-2612 Permit)
Contract	`0x9547b7C5c4FDBfc375473037a6699b2Ec2e55729`
Initial Supply	0 (zero — no pre-mint)
Max Supply	None (naturally bounded by revenue)
Minting	Only by BillingEngine, only on verified payment
All Contracts	Immutable — no owner, no admin, no upgrades

How Tokens Are Created

```
User pays $15/mo (Stripe or crypto)
      |
      v
 Coordinator verifies payment, signs attestation
      |
      v
 BillingEngine.processPayment()  -- on-chain
      |
      |  mint()
      v
 DCDNToken (new tokens created)
      |
      +-- 70% --> NodeRewardPool (node operator rewards)
      +-- 25% --> RSP Connector (token holder revenue share)
      +-- 5%  --> LP Wallet (Uniswap V3 DCDN/USDC liquidity)
```

No payment = no tokens. The supply always reflects real revenue.

Token Pricing

The DCDN token price is determined by the **Uniswap V3 DCDN/USDC pool** on Ethereum. The 5% LP allocation from every payment continuously adds liquidity. Before the pool exists, a fallback price of $0.01/DCDN is used.

Paying with DCDN Token

Users who pay with DCDN tokens receive a **10% discount**. These tokens are sent directly to the NodeRewardPool as extra rewards for node operators. No minting occurs — existing tokens are redistributed. This creates demand for the token while rewarding node operators.

Smart Contracts (Ethereum Mainnet)

All contracts are **immutable**. There is no owner, no admin, no pause function, no upgrade mechanism. The code is the law.

Contract	Address	Purpose
DCDNToken	`0x9547...5729`	ERC-20 + Permit, mint only by BillingEngine
BillingEngine	`0xb4C7...4c21`	Payment verification, mint + 70/25/5 split
NodeRewardPool	`0x98d5...256A`	Merkle-based monthly reward claiming
RSP Connector	`0xdf8a...df76`	25% revenue to RSP token holders

Key Wallets

Wallet	Address
Coordinator	`0xf64b64691782133Ae5872523D62BcE3E78CF144f`
LP Wallet (Uniswap V3)	`0x3c6591d7b8d3438f1C2519CF0b62E9D1A1A557a1`
RSP Connector	`0xdf8a37f8a590981695BdBf248A233623f9e7df76`

Security Model

Attack	Defense
Fake payment	Coordinator ECDSA signature required
Replay attack	paymentId nonce + chainId binding
Node gaming rewards	Coordinator routing logs, not node self-report
Ghost node	Synthetic request checks + zero routing = zero reward
Coordinator compromise	Cannot withdraw, only submit allocations
Infinite mint	Mint only via verified payment attestation

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6. API Reference

Base URL: `https://dcdncloud.com/api/v1`

Authentication

All authenticated endpoints require: `Authorization: Bearer <your-token>`

Key Endpoints

Auth

- `POST /auth/register` — Create account
- `POST /auth/login` — Get JWT token

Domains

- `GET /domains` — List your domains
- `POST /domains` — Add domain
- `DELETE /domains/{domain}` — Remove domain

Compute

- `GET /compute/plans` — List VPS plans
- `GET /compute/images` — List OS images
- `GET /compute/regions` — List regions
- `POST /compute/instances` — Create VPS instance
- `GET /compute/instances` — List your instances
- `POST /compute/instances/{id}/stop` — Stop instance
- `POST /compute/instances/{id}/start` — Start instance
- `DELETE /compute/instances/{id}` — Destroy instance

Billing

- `GET /billing/plans` — Cloud plan details with DCDN pricing
- `GET /billing/price` — Current DCDN token price
- `POST /billing/stripe/checkout` — Subscribe via Stripe
- `POST /billing/stripe/vps-checkout` — Purchase VPS via Stripe
- `POST /billing/crypto/pay` — Pay with DCDN token (10% discount)

Node Operator

- `GET /compute/earnings/node/{node_id}` — View node earnings
- `GET /compute/earnings/token-info` — Token distribution info
- `GET /nodes/my-reward-proof` — Get merkle proof for claiming

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7. Security

Infrastructure

- SSH key-only authentication
- UFW firewall on all nodes
- Nginx rate limiting (login: 5/min, register: 3/min, API: 60/min)
- TLS 1.2/1.3 only
- Security headers: HSTS, CSP, X-Frame-Options, X-Content-Type-Options
- PostgreSQL localhost-only binding
- Node API key + IP whitelist authentication
- All sensitive paths blocked (/.env, /.git, /admin, /docs, /redoc)

Smart Contracts

- All contracts are **immutable** — no owner, no admin, no proxy, no pause
- Built on OpenZeppelin v5.6.1 (ERC20, Permit, MerkleProof, SafeERC20, ECDSA)
- 49/49 unit tests passing including fuzz tests
- Full end-to-end simulation tested (deploy → payment → mint → merkle → claim)
- Replay protection (paymentId + chainId binding)
- CEI (Checks-Effects-Interactions) pattern throughout
- No reentrancy vulnerabilities

Reporting

Contact: security@dcdncloud.com

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8. FAQ

Q: Do I need a Cloud plan to buy a VPS?
A: No. VPS instances can be purchased standalone via Stripe.

Q: How do I earn DCDN tokens?
A: Run a node. 70% of ALL revenue goes to node operators, distributed monthly based on routing performance.

Q: Is there a maximum token supply?
A: No hard cap. Tokens are only minted when real payments occur, so supply is naturally bounded by revenue. No payment = no new tokens.

Q: Is there a pre-mint or initial supply?
A: No. Supply starts at zero. Every token in existence was created from a real payment.

Q: Can the contracts be changed?
A: No. All contracts are immutable. There is no owner, no admin, no upgrade mechanism. The 70/25/5 split and all logic is permanent.

Q: How are node rewards calculated?
A: The coordinator measures the performance of every request it routes to your node. Your reward is based on this routing data — not on anything your node reports about itself. This prevents manipulation.

Q: How do I claim rewards?
A: Connect your wallet on the Node Dashboard. Each month, the coordinator submits a merkle allocation. You claim by calling `claimReward(period, amount, proof)` on the NodeRewardPool contract.

Q: Can I pay with DCDN token?
A: Yes, with a 10% discount. Your tokens go to the NodeRewardPool as extra rewards for node operators.

Q: What determines the DCDN token price?
A: The Uniswap V3 DCDN/USDC pool on Ethereum provides real-time market pricing.

Q: What's the minimum payout?
A: No minimum — you claim from the on-chain merkle allocation whenever you want.

Q: Which chain is DCDN on?
A: Ethereum Mainnet.

Q: Can I run a node on any VPS?

A: Yes, minimum 1 vCPU + 1 GB RAM + Docker. Dedicated servers recommended for Compute hosting.

Q: How do I get support?
A: Dashboard → Support Tickets, or email support@dcdncloud.com

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https://dcdncloud.com