NKN: New Kind of Network
building the world’s largest blockchain for network sharing

November 2020 Edition
NKN is building the world’s largest blockchain network

Full nodes: **33426**

Countries and regions running NKN nodes: 36
(join as miner)

<table>
<thead>
<tr>
<th>RANK</th>
<th>COUNTRY</th>
<th>NODES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>United States</td>
<td>32494 (97.22%)</td>
</tr>
<tr>
<td>2</td>
<td>Germany</td>
<td>224 (0.67%)</td>
</tr>
<tr>
<td>3</td>
<td>India</td>
<td>141 (0.42%)</td>
</tr>
<tr>
<td>4</td>
<td>Singap…</td>
<td>103 (0.31%)</td>
</tr>
<tr>
<td>5</td>
<td>Nether…</td>
<td>81 (0.24%)</td>
</tr>
<tr>
<td>6</td>
<td>United States 74 (0.22%)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Canada</td>
<td>70 (0.21%)</td>
</tr>
<tr>
<td>8</td>
<td>South…</td>
<td>61 (0.18%)</td>
</tr>
<tr>
<td>9</td>
<td>Japan</td>
<td>58 (0.17%)</td>
</tr>
<tr>
<td>10</td>
<td>France</td>
<td>45 (0.13%)</td>
</tr>
<tr>
<td>11</td>
<td>China</td>
<td>13 (0.04%)</td>
</tr>
<tr>
<td>12</td>
<td>Russia</td>
<td>10 (0.03%)</td>
</tr>
</tbody>
</table>

NKN full nodes all around the world, with more nodes than Bitcoin network.

Snapshot from nkn.org (November 2020)
NKN: The Missing Element of Web 3.0

- PROOF OF STORAGE
  - e.g. IPFS/Filecoin, Storj

- PROOF OF WORK
  - e.g. Bitcoin, Ethereum

- PROOF OF RELAY/TRANSMIT
  - Missing -> NKN

STORAGE

COMPUTE

NETWORK
$1.4 Trillion business
What is NKN

- Economic incentives are provided to motivate Internet users to share network connection and bandwidth.
- A decentralized platform that contributes as the indispensable networking infrastructure for Web 3.0, the better Internet with transparent and open mechanism, by providing the server-less communication with security and privacy.
The NKN Advantages

- Millions of nodes
- High aggregated throughput
- Zero Server
- Unique & global ID
- Extra security & privacy
- Low latency
NKN core technology innovations

- Dynamic topology & routing based on Chord DHT, overlay on top of TCP/IP
- MOCA consensus algorithm for Billions of equal nodes
- Signature Chain for secure and verifiable data transmission; useful proof of work
- Relay and mining reward to incentivize sharing and building the new Internet
NKN system, services and products

Applications
- nMobile / nMobilePro (IM & wallet & remote control)
- nConnect (secure remote access to private network)
- nCDN (Content Delivery)

Platform Service/SDKs
- Messaging
- Payment
- Tunnel
- dataRide(PaaS)
- File Transfer
- Streaming

NKN Blockchain (MOCA Consensus for billion+ nodes)

NKN Decentralized P2P Network (nnet, fast off-chain data transmission)
DataRide: Decentralized PaaS

DataRide: NKN’s decentralized PaaS, built on crowd-sourced servers, provide the ultimate fast, reliable, secure and low-cost messaging, streaming and file transfer service for person to person, machine-human as well as machine-machine communication.
nMobile 1.0

The Trusted Chat: the World’s most secure chat, where your personal data is kept only on your device with your private one-on-one chat ensured by end-to-end encryption.
nConnect on dataRide

nConnect: remotely and securely accessing files and apps on private networks.
nCDN on dataRide

nCDN: A new kind of content delivery network, a crowdsourced service offering accelerated performance for website, video and all kinds of rich media contents.

Key Benefits

★ 24*7 Always on
★ High Speed
★ Lowest Latency
★ Dependable
★ Low cost
★ Massive scale
★ Especially good for popular and longtail content
★ Smartest scheduling
Commercial Success

NKN with iQiYi

NKN with Synology

NKN with China Mobile
Miscellaneous Applications by community

- **D-Chat**: Secure and anonymous chat  
  More information

- **Surge**: A 100% anonymous P2P file sharing application  
  More information

- **nknX**: NKN node and wallet manager  
  More information

- **nStatus**: NKN node analyser  
  More information

- **NKN shell**: Shell access over NKN network  
  More information

- **nFile transfer**: Sends file securely over NKN  
  More information

- **Vault**: Multi OS desktop wallet  
  More information

- **nScan**: Official NKN explorer  
  More information
ECOSYSTEM

Economic model, partnership, token metrics
Token metrics

At genesis
- **NKN Foundation**: strategic investment in building the ecosystem (17%)
- **Developers**: founding team, community developers (18%)
- **Purchasers**: purchasers of NKN tokens (35%)

Over 25 years
- **Miners**: get reward for traffic relay & block maintenance (30%)
NKN token utility and circulation model

NKN token holder
through exchange/OTC

Buy NKN

Users
customers / enterprises

Pay NKN based on bandwidth consumption

NKN Miner & Services Providers

Sell NKN
Listed Exchanges

- Binance
- Huobi Global
- BitTrex International
- Gate.io
- Upbit
- Uniswap
Strategic partners & alliances
Milestones & Roadmap
NKN Achievements Timeline (2018 - now)

- **2018**
  - Q1: White Paper Released
  - Q4: Funding Complete

- **2019**
  - Q1: Public Testnet Release
  - Q2: NKN 1.0 Mainnet
  - Q3: D-Chat
  - Q4: 1-Click Market for DO, GCP, and AWS

- **2020**
  - Q1: nCDN
  - Q2: dataRide
  - Q3: nMobile 1.0
  - Q4: NKN 2.0 Mainnet

**Additional Information:**
- **DO, GCP, and AWS:** China Mobile, Binance
- **White Paper Release:** Lemur Release 2018-02-11
- **nCDN:** nMobile from NKN
- **nMobile 1.0:** nMobile from NKN
- **NKN 1.0 Mainnet:** NKN 1.0 Mainnet
- **D-Chat:** D-Chat
- **Public Testnet:** Public Testnet
- **Funding Complete:** Funding Complete
- **nMobile 1.0:** nMobile 1.0
NKN Roadmap beyond 2.0

**Technology**
- Mainnet integration with exchanges and hardware wallet
- Fast block synchronization
- More client and wallet SDK supporting different programming languages
- Remove limitation on fixed ports and single IP address per node
- Support IPv6

**Commercialization**
- Pursue the addition of new crypto exchanges for NKN token holders around the world
- Accelerate token circulation by growing business in dataRide and nCDN
- Forge new partnerships for intergalactic communication infrastructure
- Expand nMobile, the extra secure server-less and trusted chat, to mainstream
- Sponsor development community for significant applications utilizing NKN
**NKN Research Directions**

**Blockchain DLT**
- Scale to billions of nodes
- Proof of Relay
- Micro payment
- Instant settlement

**Decentralized Cloud & Edge**
- True global reachability via NKN Address; Massively peer to peer data relay and caching PaaS
- Smart scheduling & routing based on price, performance, utilization

**Advanced Research**
- Self evolution of NKN network topology and routing
- Using Cellular Automata for massive smart "pod" computational evolution and artificial intelligence
ABOUT

Project overview and core team
NKN Project overview

- NKN was founded in January 2018 by a group of entrepreneurs and engineers with many years of building networking and blockchain technology in companies like Google, Nokia, QCOM, Baidu, and OnChain.

- The ideal driving this team is that blockchain provides both technical and economic innovations to disrupt the networking business.

- The team has two sites, in Silicon Valley, California and Beijing, China.
Core team and advisors

**Yanbo Li**
Founder | Strategy & System Architecture
ex-OnChain co-founder

**Bruce Li**
Co-Founder | Strategy & Operations
ex-Googler & Nokia

**Dr. Yilun Zhang**
Co-Founder | Core Researcher & Developer
Ph.D. Physics, UCSD

**Allen Dixon**
Business Development & Compliance
ex-Nokia

**Dr. Whitfield Diffie**
NKN Technical Advisor
2015 Turing Award winner
co-inventor of public key cryptography

**Dr. Stephen Wolfram**
NKN Technical Advisor
Author of New Kind of Science
Chief designer of Mathematica and the Wolfram
Baidu-Owned Video Streaming Giant iQiyi Taps Public Blockchain for Performance Boost

"The joint effort marks a step forward in the development and interoperability of two emerging technological innovations, blockchain and edge computing, NKN said."

Narwhal: NKN’s New Mainnet Comes To Surface

"The Narwhal Mainnet is NKN’s first step to create the world’s largest permissionless public blockchain by number of nodes. The testnet already registered 13,000 full consensus nodes, and now the project hopes to scale it up to “millions if not trillions of nodes.”"

Case Study: NKN

"At the same time China Mobile was rolling out its 5G service, NKN began engaging with one of the largest Video Service Providers in China that have been experiencing phenomenal customer growth and looking for new ways to meet the growing demand."

An NKN Odyssey: A Billion Nodes with Dr. Zhang

"Let me be explicit: the current NKN node code, without any modification, will work with one billion full nodes without any problem.”
Free the bits, rebuild our Internet.

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https://twitter.com/NKN_ORG