



国家(杭州)新型互联网交换中心
NATIONAL (HANGZHOU) NOVEL INTERNET EXCHANGE

Exploration and Practice of Integrated Computing and Networking Services In NNIX

Yisha Liu, China NNIX
Sep 2024 in Wellington

Management Team

Junbo Qian - Chief Executive Officer (CEO)

Mr. Qian Junbo has more than 20 years of experience in telecommunications, mobile Internet, IDC, and digital technology and management. He currently works for NNIX, the first novel Internet exchange organization in China designated by the Ministry of Industry and Information Technology and the Zhejiang Provincial Party Committee and Provincial Government. Before joining NNIX, he served as the chairman and CEO of the Zhejiang Mobile Information System Integration Co., Ltd. which is the first-class digital service support provider in the domestic DICT market, providing digital services to governments and enterprises, with more than 1,000 employees, and has undertaken more than 10,000 digital projects with a total project value of nearly RMB 20 billion.



NNIX Teams

More than 40 total.

- Management, 3
- Design, 7
- Commercial, 7
- Support, 4
- Operations, 20+



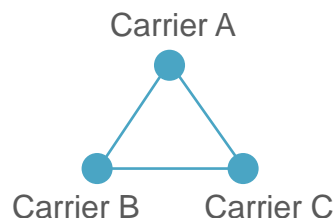
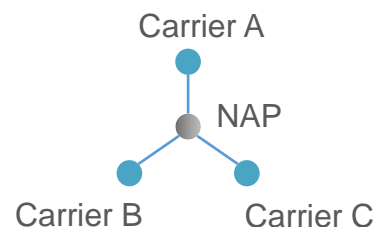
Achieving efficient interconnection and meet the needs of the computing power era

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According to the achieving efficient interconnection, China novel IXPs are established after NAPs and backbone interconnection points to improve the performance of inter-network. In addition, in order to welcome the era of computing power, there is an urgent need to build a high-bandwidth, low-latency computing scheduling network and a unified, intelligent, and easy-to-use comprehensive computing service platform.

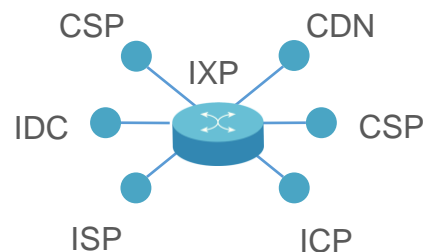
Interconnection Network Architecture Evolution Needs

NAP
2000-01, 3



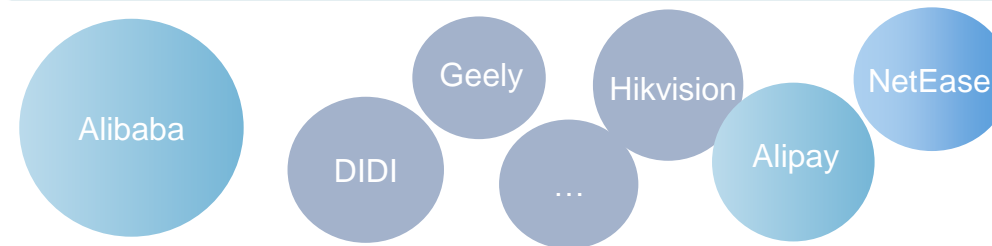
Backbone Interconnection Point
More than 20 from 2002 to now

Novel IXP
4 from 2019 to present



Computing Power Era Needs

Computer power era



Integrated computing service platforms...

Computing scheduling networks...

General computing

Intelligent computing

High-Performance computing



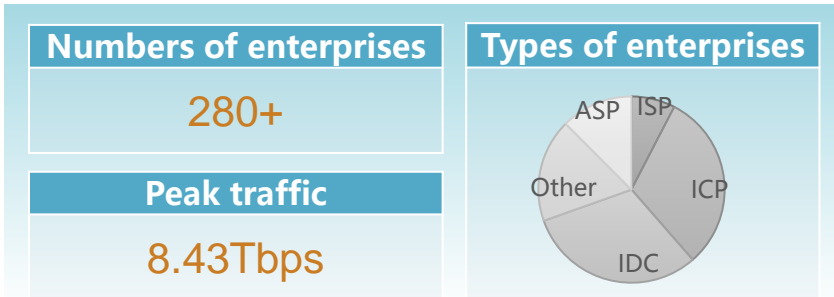
Lack of high-bandwidth, low-latency computing scheduling network



Lack of a unified, intelligent, and easy-to-use integrated computing service platform

Steady iteration forward at network, cloud, computing and data interconnection

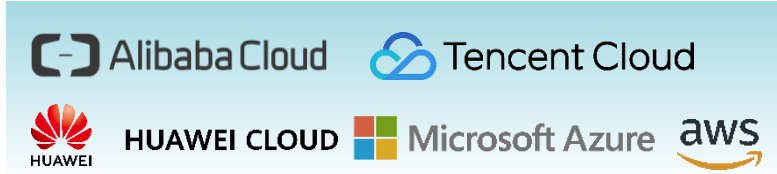
In four years, NNIX continuously exploring, demonstrate a positive trend in network, cloud, computing and data interconnection.



The scale has broken into the global forefront and ranks first in China, covering dozens of top ICPs, with an average latency reduction of 80%.

2020
Inter-network
interconnection

2021
Inter-Cloud
Interconnection



Accessed 58 cloud service areas in and outside China and served 188 enterprises. Built a cloud access channel of "one hop to multiple networks" and "one hop to multiple clouds".

2022
Computing power
interconnection

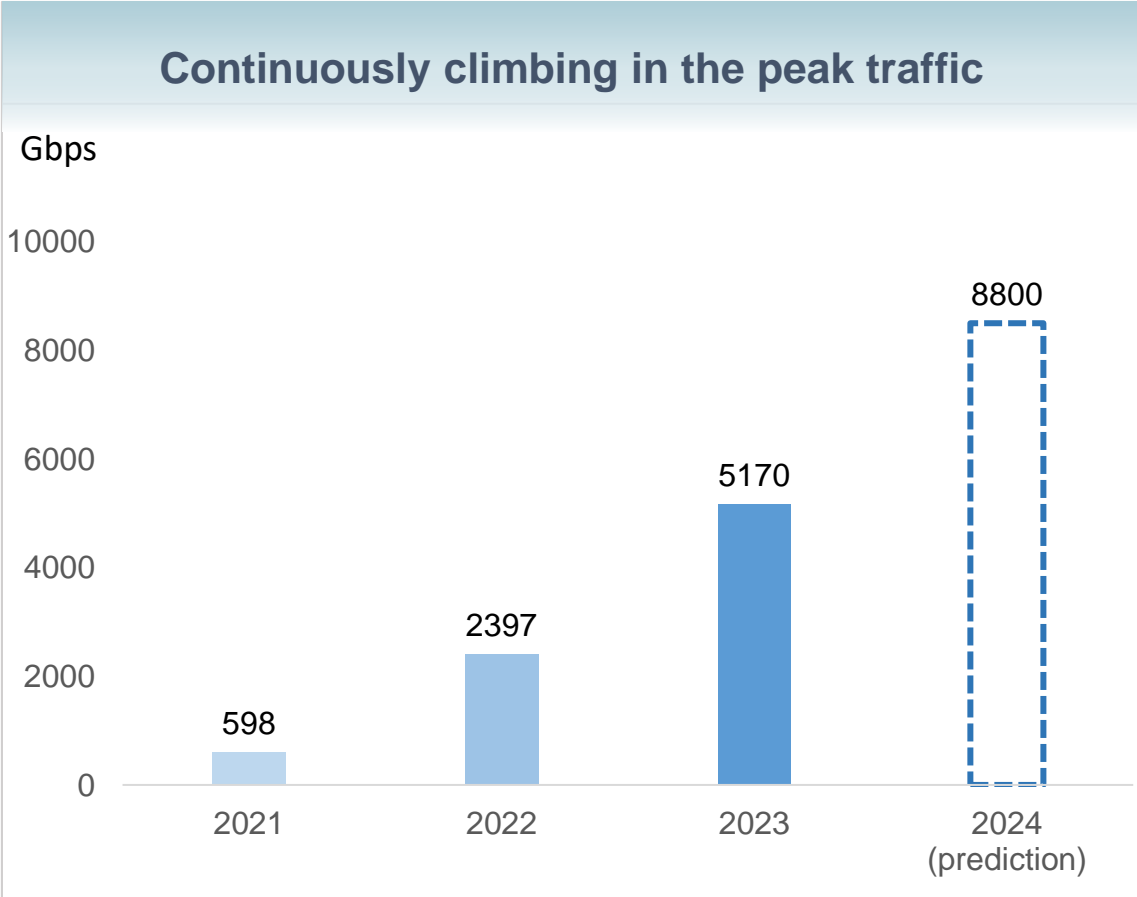
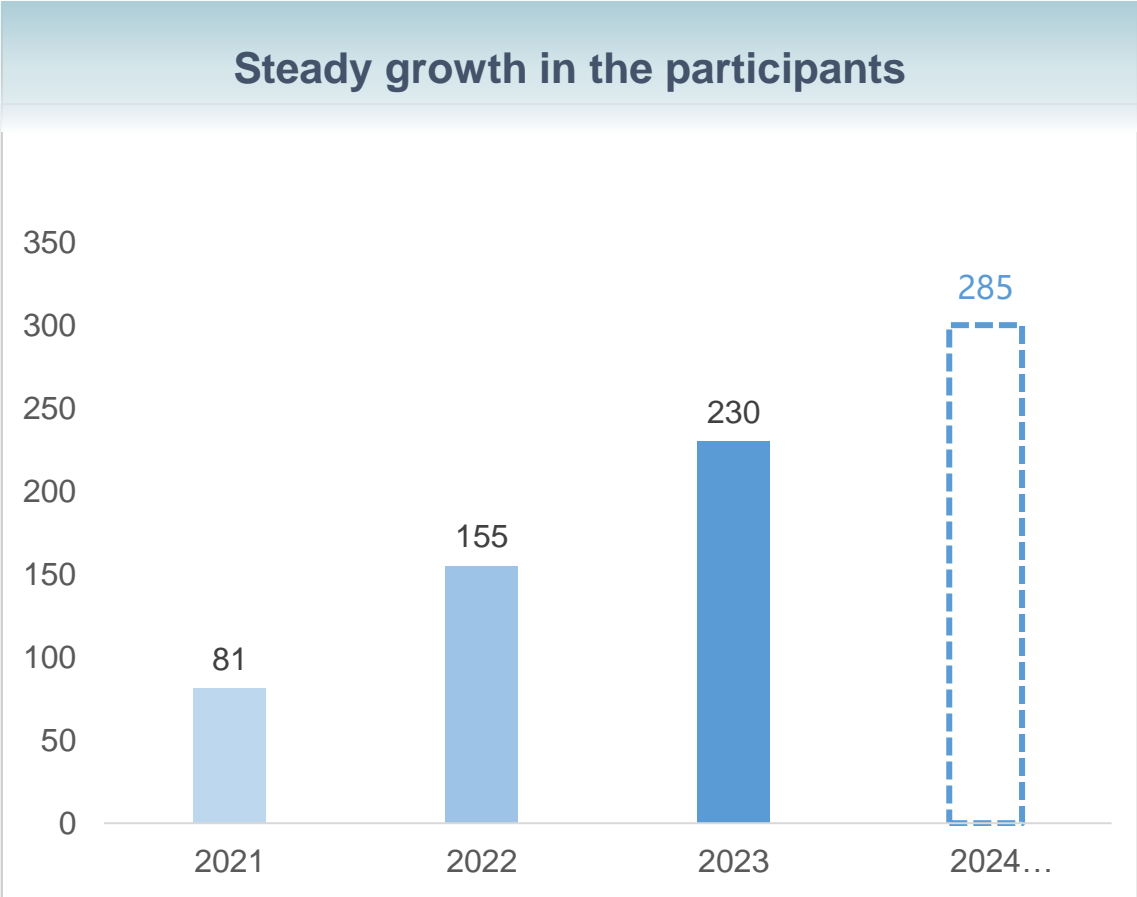


aggregated computing power resources over 13.9 EFlops and built an AI developer community.

2024
Data
Interconnection

Steady growth in participants and continuously climbing in peak traffic

Since establishment, we achieving steady growth in both the number of access enterprises and peak traffic. It is expected that by the end of 2024, the number of connected participants will reach 285, with an 8.8 Tbps peak traffic.



Serve the national strategy with dual-cross computing power scheduling

Recent years, China's computing center industry is developing fast. By 2023, the total computing power has reached 230EFLOPS, and intelligent computing power accounted for 25%. With the rapid development of AI large models, the demand for intelligent computing power has shown an explosive growth trend.

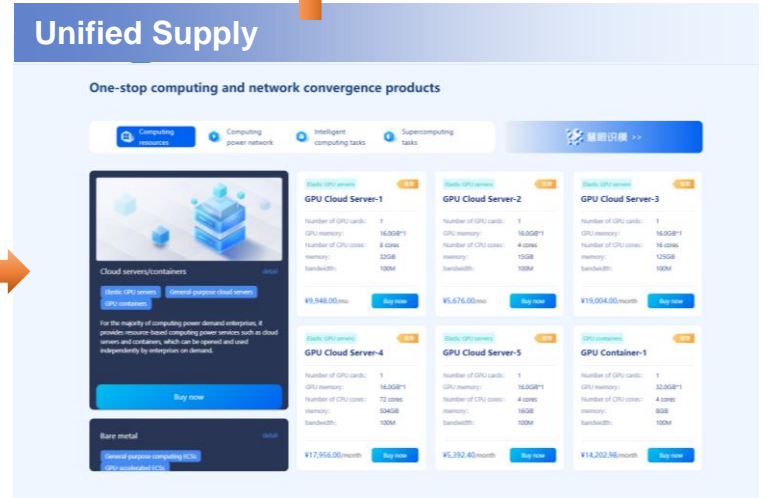
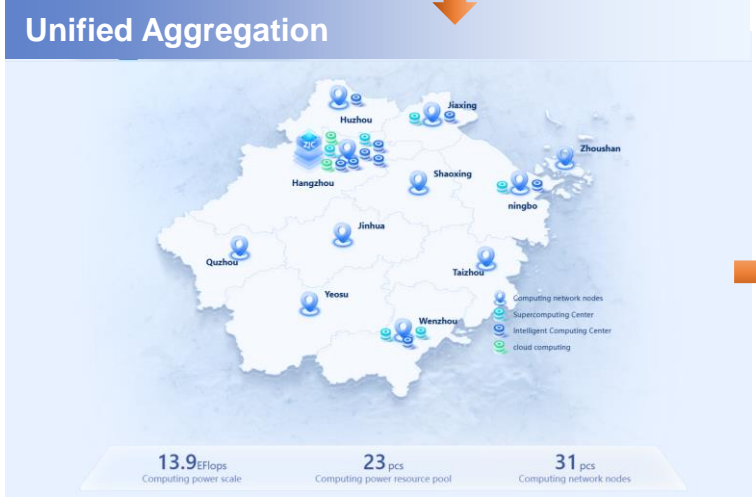
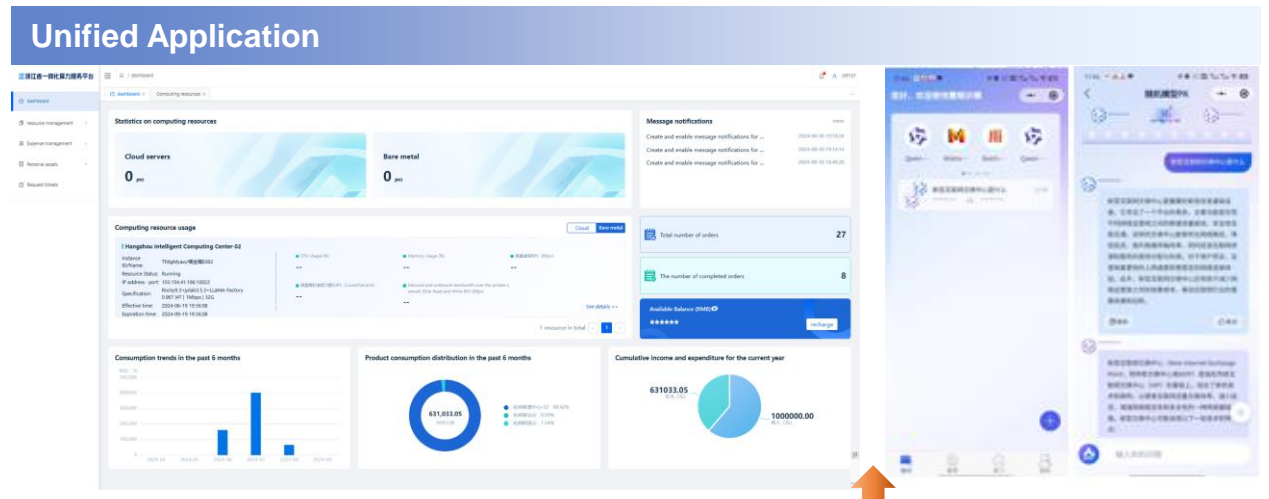
China national strategy of build 8 national computing hubs and 10 national-data center clusters are planned to drive the integrated and coordinated development of data computing across the country.

In accordance with the requirements of national documents, NNIX and other IXPs in China trying to support the construction of national integrated computing power network and explores the coordination of computing power hubs.



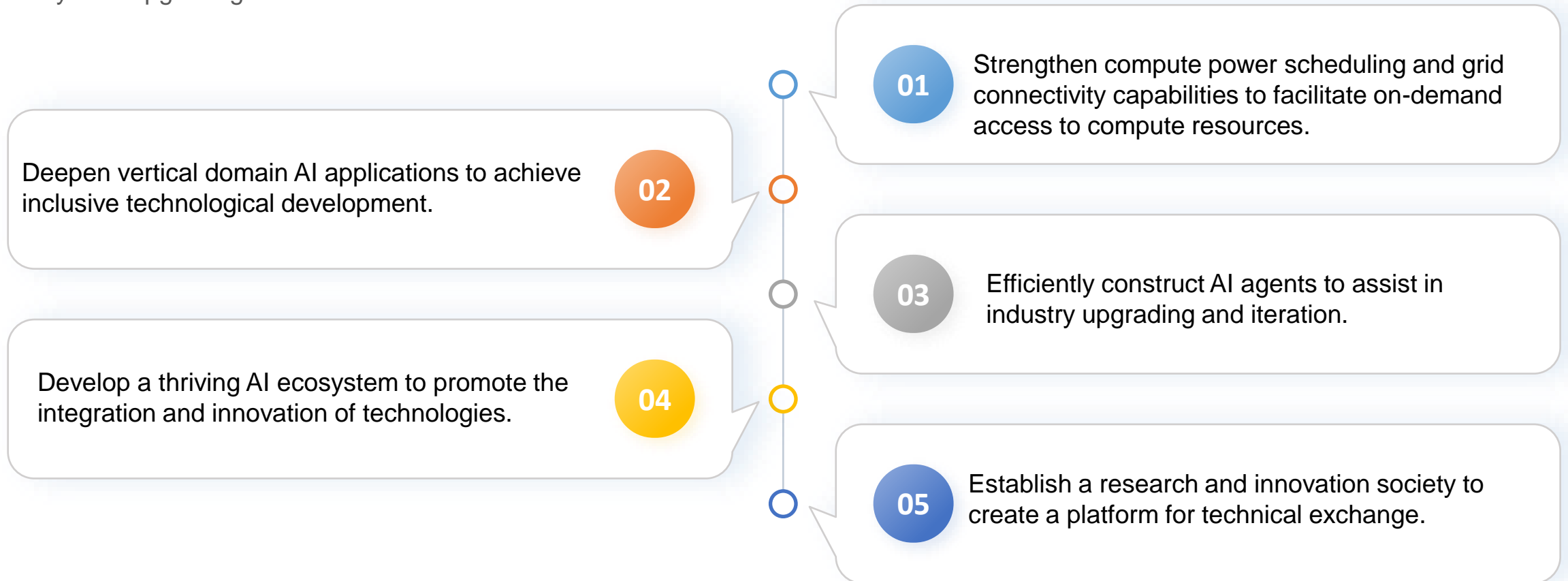
Serve the national strategy with cross-entities computing power scheduling capability NATIONAL (HANGZHOU) NOVEL INTERNET EXCHANGE

With the support of the government, we officially launched an official regional **integrated computing power service platform** in Oct 2023. Realize cross-entities scheduling capability with resource **unified aggregation**, **unified scheduling**, **unified supply** and **unified application**.



Future Planning: Exploration of New Scenarios and Business Models

NNIX is planning to **explore new scenarios and business models**. And will also establish a operation system to drive technological innovation and system upgrading.



About Member

In recent years, the development of big models has been booming.
Have you developed related computing power and AI service businesses?
How did you do it? What is your business model?

—01.

About Oversea Node

Are overseas nodes demand-driven or planning-driven?
Is it cooperation with IDC or commercial procurement?

—02.

About Network

What is the network architecture of globally distributed IX?
Does one RS only serve one exchange point?
Does the customers from different exchange points interconnect with each other by layer 3 forwarding or layer 2 forwarding?

—03.



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Thank you for your attention

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