

For immediate release

NTT commences sales of the network OS Beluganos

Provision of a white-box compatible network OS that achieves a 20% reduction in TCO¹ compared to dedicated devices

Tokyo – March 28, 2023 – [NTT Corporation](#) (NTT) has developed a network OS compatible with white-box devices², and [NTT Advanced Technology Corporation](#) (NTT-AT) will commercialize it through the release of their software Beluganos³, an in-house produced network OS for carriers on March 31. In addition to improving performance, NTT and NTT-AT will boost flexibility and economic efficiency through their product construction.

1. Background

In recent years, due to the proliferation of IoT (Internet of Things) and faster networks such as 5G, societies are rapidly transforming to be data-driven, meaning that data determines analysis and actions. The NTT Group is responding to these social trends by utilizing innovative technologies centered on optics to address the expected increase in data volume and future power consumption. As a high-speed network and information processing infrastructure enabling large-capacity communication and ultra-low power consumption, the IOWN concept⁴ proposed by the NTT Group is fundamental to these endeavors. On March 16, 2023, NTT Group companies launched the first IOWN service, the All-Photonics Network (APN) IOWN1.0⁵ service. By continuing to develop the IOWN services, NTT Group companies, including NTT-AT, plan to provide low-power consumption servers utilizing their newly developed photonic-electronic convergence devices. From the launch of IOWN 2.0 onwards, NTT will apply these photonic-electronic devices not only to networks but to the entire world of computing. Recently, they have begun releasing IOWN services and products at an early stage to create new value with partners, with the commercial provision of Beluganos marking the following initiative.

Today's networks often rely on network equipment that integrates hardware and software. This setup reduces investment efficiency, as customers can only select from a limited product lineup provided by vendors. NTT's innovative solutions make these restrictions a thing of the past.

2. Outline of the initiative

Beluganos is a network OS compatible with white-box equipment and based on the technology that NTT has researched and developed so far in collaboration with IP Infusion, a global partner that also participates in the IOWN Global Forum⁶.

Following verification of the network's high reliability, [NTT Communications](#) decided to introduce Beluganos into their commercial network infrastructure in combination with white box equipment to support their network services. Operation of the service will commence on March 31, 2023. From then on, NTT-AT will provide sales and support for the Beluganos service.

Beluganos utilizes a white-box device to separate hardware and software, making it possible to select any hardware flexibly, improving investment efficiency compared to conventional network equipment that integrates hardware and software, and achieving a 20% reduction in TCO compared to dedicated devices. In addition, Beluganos features enhanced maintenance, operation, and monitoring functions necessary for quick response to network failures, resulting in improved operational quality for customers of telecommunications carriers and data center operators.

3. The role of each company

NTT	Research and development of the network OS Beluganos
NTT-AT	Sale and support of the network OS Beluganos
NTT Com	Introduction of the network OS Beluganos into companies' commercial networks and quality improvement through continuous feedback verification

4. Future plans

Through the use of white-box equipment and co-creation with partners, the NTT Group promotes open innovation and works to transform its own networks and upgrade the networks of its customers.

By strengthening the DevOps system through development, in-house operation, and sales and support, NTT will undertake continuous development and continuously upgrade Beluganos. Furthermore, they will continue to work with global partners to develop and socially implement IOWN services and products in order to provide low power consumption servers equipped with future photonic-electronic convergence devices.

Notes

¹ 20% reduction in TCO: Total Cost of Ownership. Using white-box equipment and Beluganos instead of conventional hardware/software-integrated dedicated devices will reduce the total cost of goods and services, including maintenance, by 20%.

² White-box devices: general-purpose devices that allows businesses to freely select and develop software on the hardware made by the device vendor

³ Beluganos is a registered trademark of NTT.

⁴ [The IOWN Concept](#): IOWN(Innovative Optical and Wireless Network) is a network and information processing platform that includes terminals and provides high-speed, large-capacity communication and enormous computational resources using innovative technologies centered onoptics. Through IOWN, we will contribute to the realization of a prosperous society by creating various services and new value in a wide range of fields.

⁵ APN IOWN1.0: the first commercial service implementing the IOWN concept in the All-Photonics Network, which introduces optics exclusively in all sections of the communication network
https://www.ntt-east.co.jp/release/detail/20230302_01.html (in Japanese)
<https://www.ntt-west.co.jp/news/2303/230302a.html> (in Japanese)

⁶ IOWN Global Forum: a new forum that brings together people in different industries to promote the development of a new communication platform that can meet the future demands of data and information processing. This includes the development of new technologies, frameworks, technical specifications, and reference designs, and particularly of the All-Photonics Network, which encompasses silicon photonics, edge computing, and wireless distributed computing.
<https://iowngf.org/>

For further information:**Contact information for product inquiries**

NTT Advanced Technology Corporation
IOWN Innovation Business Headquarters
In charge of Beluganos

<https://www.ntt-at.com/guide/general.html?title=Beluganos&productid=8095>

Press information

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