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Secure Networking: Hokkoku Bank

# Local breakout from all locations and enhanced endpoint security for cloud era.

By creating local breakouts directly connected to the internet and using DNS-layer security, Hokkoku Bank realizes work style for the cloud computing era that enables work from anywhere easily, safely, and reliably.
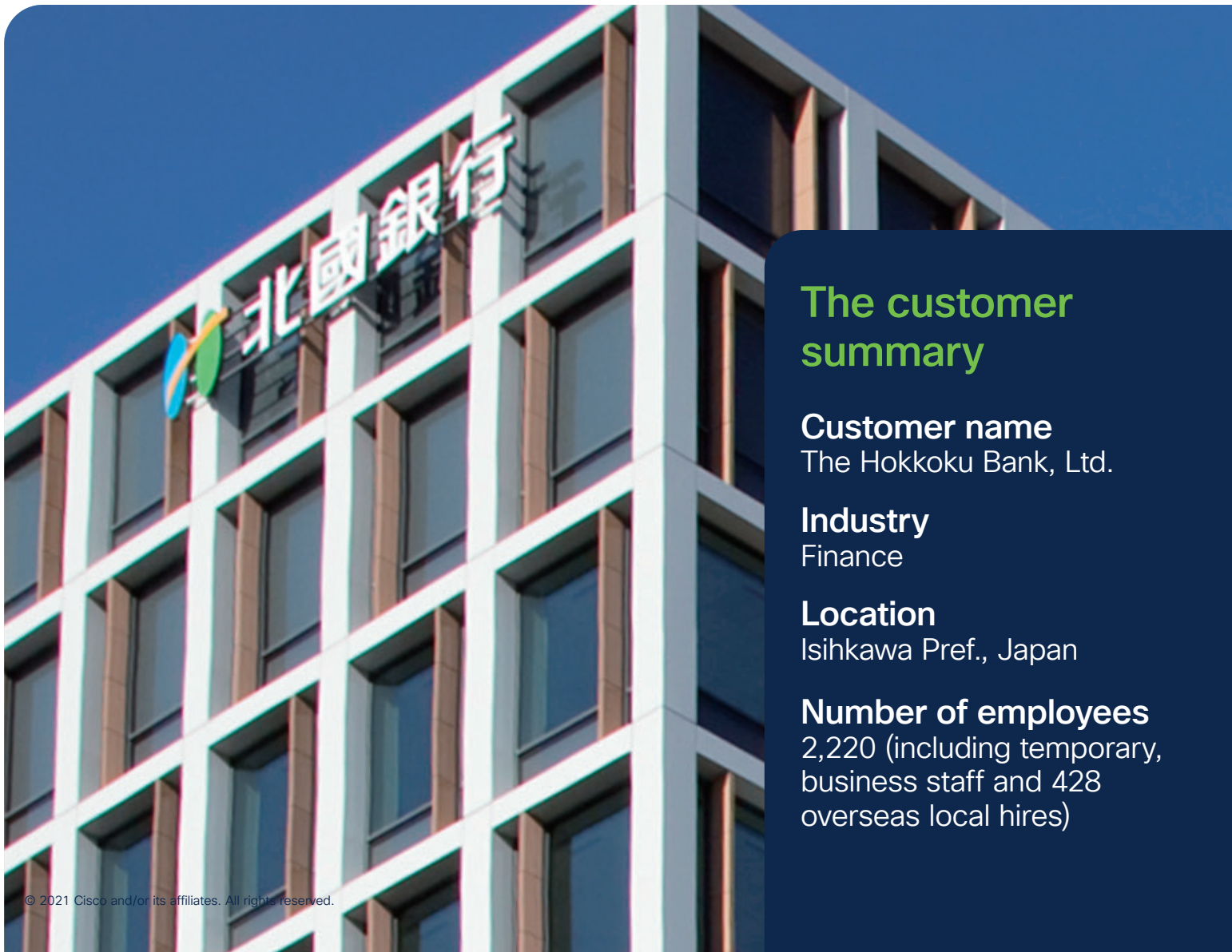
## The customer summary

### Customer name
The Hokkoku Bank, Ltd.

### Industry
Finance

### Location
Isihkawa Pref., Japan

### Number of employees
2,220 (including temporary, business staff and 428 overseas local hires)

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### Business challenge summary

- Intensive review of the bank's unique network

- For the full advantage of the cloud, environment with secure Internet connection is necessary.

- To prepare for increased traffic, need to move away from centralized network and security.

### Network solution summary

- Implemented Cisco® SD-WAN for local breakout from all locations.

- Deployed Cisco Umbrella® for endpoint security and integrated with Cisco AnyConnect® VPN.
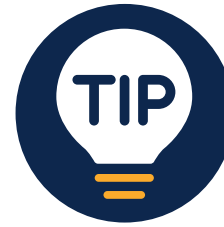
### Business results summary

- Deployment of SD-WAN to all branches was completed in just three months.

- Cloud-based secure operations can now be conducted without concern for location or tools.

## Challenge

Concerning the overall direction of the project, Naoki Shintani, the Systems Planning Section Head of the Systems Department says, "We wanted to create the ideal cloud-native, internet-native network." He describes the challenges the bank faced to date, and the consideration process, as follows. "When considering the various changes in the business environment and recent technological advancements, we felt the need to completely overhaul the network architecture employed at the bank, as it had become less and less usable, much like networks characteristic (virtual desktop infrastructure) of financial institutions, having focused solely on security. In 2014, we started using VDI as part of our 'anywhere store' concept, but faced numerous challenges such as the cumbersome login process, unstable sessions, and connections frequently being interrupted. We needed to ensure that all of our employees could safely and reliably access the internet in order to make effective use of various cloud services.

At the same time, a review of centralized network configurations is in order to respond to increasing amounts of traffic. The team then concluded that a breakout mechanism that would allow them to directly connect to the internet from any device in its offices was the ideal solution."

"The bank felt that enhancing endpoint security through SD-WAN and Umbrella was the best way to go about creating an internet-native network capable of making full use of the cloud."

**Mr. Naoki Shintani,**
Systems Planning Head, Systems Department, Hokkoku Bank

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On the security front, Mr. Tomoaki Yoshikawa, the Systems Planning Section Head of the Systems Department commented stating, "As we continued to promote the use of Microsoft 365 and other cloud-based services, we needed to rethink our approach to security, which had traditionally limited points of access to the internet and had more or less focused on protecting only the boundaries between the bank and the outside world. In order to maximize cloud service functionality and truly reap the benefits thereof, information networks generally want to allow internet access and fully utilize the cloud. This required the use of fat clients and novel strategies to enhance endpoint security." said Mr. Yamanaka concerning the results.

## Solution

### Selected Cisco SD-WAN for its reliability and future prospects as a network device

### We also expect prompt deployment across all offices and robust, comprehensive support upon launch

We received proposals from numerous companies, but decided to engage the Cisco SD-WAN and Cisco Umbrella solution offered by NTT West. Mr. Atsushi Hatta, Acting Section Head of the Systems Department's Systems Planning Section, explains why the bank selected the Integrated Service Router (ISR)-based Cisco SD-WAN solution as follows. "We use Cisco networking equipment at the bank and placed a significant degree of importance on backbone network reliability as a platform for digitalization. In addition to speedy deployment to all of our offices, we saw value in the robust and comprehensive support that Cisco promised not only during the design phase, but also

upon launch, and believed that Cisco's ISR-based SD-WAN solution would continue to evolve and grow as a service in the years to come."

### Selected Umbrella for its advanced defense, deployment, and operational capabilities

### Saw value in SD-WAN and AnyConnect VPN's integrability with other solutions

Mr. Masakazu Marugane, an Assistant from the Management Group (Security) in the Systems Department's Systems Planning Section explains why the bank chose Cisco Umbrella as follows. "We compared and considered many other security solutions, but felt that there were many advantages from an operational and solution-based point of view to using only Cisco products. We were drawn to Cisco Umbrella because its agentless nature lent to speedy deployment across all offices, and will also play a hand in making future updates easier to implement, as well as for its integrability with the Cisco AnyConnect VPN, which allows us to tweak the way we use the service based on the situation at hand."

### Utilize PoCs to develop an understanding of new technology usability

### Lend to the prompt finalization of specifications and speedy project kick-off

Another key deciding factor behind the bank's decision to adopt the Cisco solution was the proof of concept (PoC) that NTT West conducted. Mr. Hatta describes the benefits thereof as follows. "We had NTT West carry out a PoC early on in the process, which allowed us to quickly identify requirements, issues, and challenges, as well as firm up specifications and figure out what equipment and devices to install. The in-depth
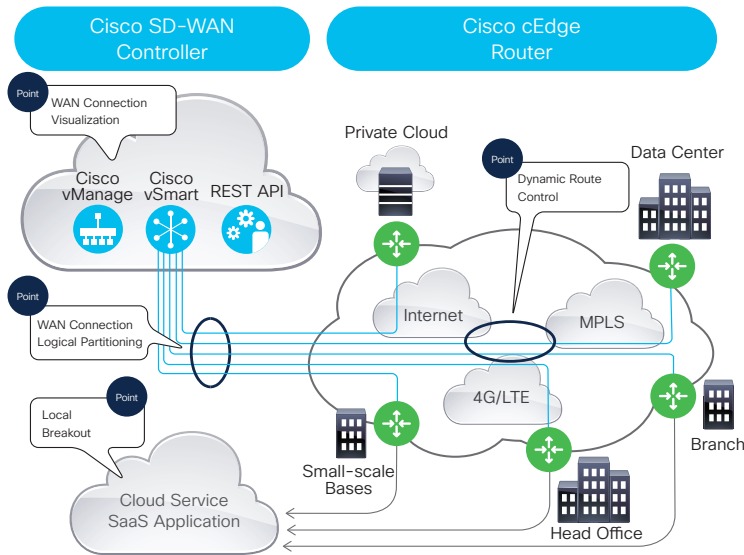
"We revisited our way of thinking regarding how a bank should be, and sought to define the ideal cloud-native network configuration."

**Mr. Naoki Shintani**
Systems Planning Head, Systems Department, Hokkoku Bank

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# Cisco SD-WAN

Cisco SD-WAN can be used to create a WAN using various connection types, such as Multiprotocol Label Switching (MPLS), Internet, and 4G LTE to name a few, and it greatly enhances the user experience as well as accelerates WAN deployment processes. Further, it securely connects users to applications and can protect all forms of data spanning from the edge to the cloud.



**Cisco SD-WAN Controller**

**Cisco cEdge Router**

Point — WAN Connection Visualization

Cisco vManage | Cisco vSmart | REST API

Private Cloud

Point — Dynamic Route Control

Data Center

Point — WAN Connection Logical Partitioning

Internet

MPLS

Point — Local Breakout

4G/LTE

Branch

Cloud Service SaaS Application

Small-scale Bases

Head Office

**Stable Application Experience**

Real-time analytics, visualization and control contribute to the optimization of cloud and on-premise applications, as well as enhance user productivity.

**Simple Enterprise-level Deployment**

Centralized cloud management simplifies SD-WAN deployment and enables policy administration across thousands of sites.

**The Right Security at the Right Place**

Users, devices, and applications are protected through the prompt deployment of embedded or cloud-based security solutions made possible through superior threat intelligence.

**A Flexible Network**

Advanced routing can be utilized to control users, applications and clouds, all while maintaining flexibility.

# Cisco Umbrella
Cloud security that provides front-line user protection at the DNS layer

Cisco Umbrella is a "Secure Internet Gateway (SIG)" that uses Domain Name System (DNS) resolution to provide front-line protection to users from Internet threats. It is the most simple and fast to roll out cloud-based secure DNS that protects all users and devices, regardless of whether they are at head office, a branch location, are offsite, or whether VPNs have been set to ON/OFF.

**The first DNS technology in the sector to preemptively protect against Internet threats**
- Block access from malicious sites to all protocols and ports that have been set to be protected before a connection is made
- Set customized access policies with ease and flexibility as required
- Can also be used to protect against malware (ransomware)

**Fast and simple deployment**
- No additional hardware required as the product is a cloud-based solution
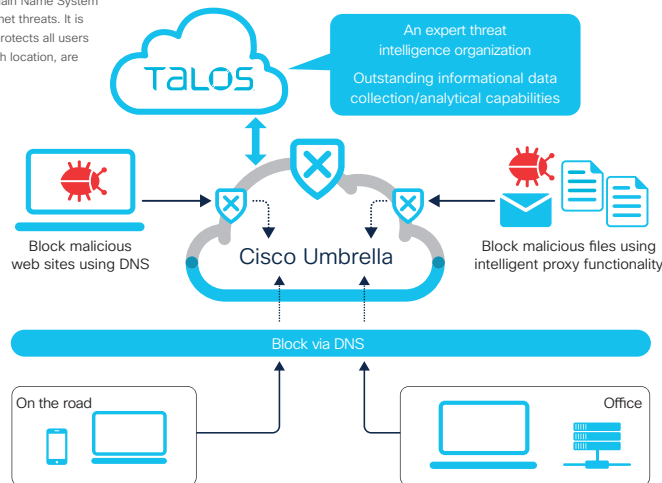
**Ideal for work style reform**
- Protect all locations, users, and devices, regardless of whether the connection being used is internal or external, or whether VPNs have been set to ON/OFF

**The highest detection rate in the sector, able to respond to the latest threats**
- Works in tandem with the Cisco Security Intelligence & Research Group's Cisco Talos, which boasts the most advanced analytical capabilities and information provision system in the world, in order to always offer the most recent and up-to-date security and protection

**Visualize Internet usage conditions**
- Visualize and graphically represent various forms of threat-related information
- Also capable of visualizing "shadow IT" in the form of cloud applications used without ill intent



Talos

An expert threat intelligence organization

Outstanding informational data collection/analytical capabilities

Block malicious web sites using DNS

Cisco Umbrella

Block malicious files using intelligent proxy functionality

Block via DNS

On the road

Office

Cisco Umbrella is a cloud security service designed to protect all internal and remote users on LAN connections, and can be easily implemented by simply modifying one's DNS settings. No effort is needed for customers to update their software or data.

technological verification exercises carried out allowed us to see and appreciate first-hand the usability of new technologies, which provided us with a sense of relief and assurance. Carrying out a PoC in the initial stages of the project proved to be very important. During this process, we were able to understand the upsides of using micro-segmentation as a way to divide our existing network environment from future IT infrastructure and leveraging SD-WAN router-enabled logical partitioning when deploying to all offices. At the same time, NTT West analyzed Cisco Umbrella's threat detection capabilities and overall usefulness in great detail."

# Benefits and Future Plans

### Effectively completed SD-WAN deployment to all offices in three months

The project was kicked off in June 2019. After procuring the necessary equipment, the SD-WAN deployment process was effectively completed within three months' time, and encompassed a total of 105 offices across the Hokuriku region, Tokyo, Osaka, Aichi, and Singapore. The bank began using SD-WAN in October 2020.

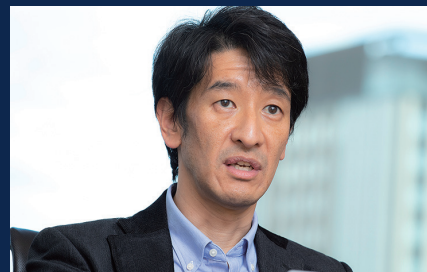The bank was able to use Cisco SD-WAN to create a local breakout

from all of its offices. Approximately 2,000 client devices are protected by Cisco Umbrella's DNS layer security and make effective use of Cisco AnyConnect's VPN capabilities as required, depending on the network environment and destination address. The bank has since distributed Windows machines equipped with SIM cards to enable its employees to simply power up their device and access the cloud to safely and securely carry out their work anywhere and anytime, without having to worry about the hassle of connecting to the internet or dealing with security software and tools. This new IT infrastructure has promoted remote collaboration throughout the organization in the form of web conferences and chatting, and the bank has noticed a marked improvement in productivity levels. Mr. Hatta stated, "We also view the ease of deployment as being one of the advantages of using Cisco SD-WAN. For a moment, we were worried about how the COVID-19 pandemic might affect things, but are most grateful that NTT West worked closely with Cisco to ensure that the project continued smoothly without any issues."

### New Solutions to Propel Further Change

Looking ahead, the bank is considering using Cisco Webex® Calling as a way of promoting bring your own device (BYOD) and replacing corporate smartphones. It also hopes to leverage the solution to monitor and visually represent employee behavior using Cisco Secure Network Analytics (Cisco Stealthwatch®) as well as monitor end-to-end network service quality using other products such



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Systems Department, Systems Planning Section Head



**Mr. Tomoaki Yoshikawa**
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**Mr. Masakazu Marugane**
The Hokkoku Bank, Ltd.
Systems Department, Systems Planning Section Head
Management Group (Security)
Assistant



**Mr. Atsushi Hatta**
The Hokkoku Bank, Ltd.
Systems Department, Systems Planning Section Head
Deputy Manager

as ThousandEyes. In addition, the bank hopes to employ Cisco Duo's multi-factor authentication capabilities to implement Zero Trust security models. Mr. Shintani described his expectations for Cisco as follows. "As technology and work styles continue to change and evolve rapidly, Cisco has contributed in many ways through its robust support, strong track record and reliability when it comes to mission-critical networks, as well as its extensive product lineup which encompasses security, collaboration solutions, and more. We will continue to strive to change and grow, without being constrained by conventional ways of thinking, and look forward to working with Cisco in the future."

The Hokkoku Bank was formed on December 18, 1943 through the merger of three banks: Kano Godo Bank, Kashu Bank, and Nowa Bank. As a regional leading bank, and based on the bank's corporate philosophy of "Trust — a bridge to a fruitful regional future: to enrich interactions and build up growth in the region," Hokkoku Bank aims to become a bank that is "trusted and loved by every client in the region" by leading regional activities in various aspects.

URL: https://www.hokkokubank.co.jp/english/index.html

# Products and services

- Cisco SD-WAN
- Cisco Umbrella
- Cisco AnyConnect
- Cisco Adaptive Security Appliance (ASA)