



# Global robotics innovator moves key applications to IaaS with performance and reliability optimized by SD-WAN

## FUJI CORPORATION improves efficiency and agility by transforming its WAN with the Unity EdgeConnect SD-WAN edge platform and Unity Boost WAN optimization

FUJI CORPORATION is an enterprise founded on innovation, and to this day it is that same spirit of innovation that drives the company forward. FUJI CORPORATION is a leading global developer and manufacturer for industrial robotic solutions and machine tools that include electronic component mounting robots, modular production equipment, compact multi-joint robots, and mobility support robots.

Headquartered in Chiryu city in the Aichi prefecture of Japan, FUJI CORPORATION has manufacturing plants in the cities of Toyota and Okazaki, as well as branch offices and sales locations in Tokyo, Osaka, and Sendai. The business relies on a wide range of applications, all of which traditionally ran in the company's central data center. However, as FUJI CORPORATION moved to AWS infrastructure as a service (IaaS) to run workloads such as file services and workflow systems



BOOSTS THROUGH-  
PUT 2X-3X



REDUCES DATA  
UP TO 85%



LOWERS COSTS  
BY 80%

commonly used for many business operations, the reliability and availability of cloud connectivity became a concern.

Kohei Yamashita, senior leader in the ICT Section of the Information Systems Department within FUJI CORPORATION, explains, "Because our branch locations and sales offices were using a hub-and-spoke topology centered on the headquarters, there was concern about business impact of a circuit failure. Since our internet gateway was in the data center, there were concerns of cloud service availability in the event of a failure in the data center."



**The option to license WAN acceleration through the EdgeConnect SD-WAN appliance was one of the reasons we selected Silver Peak. Also important were the capabilities to use broadband reliably, optimize application routing to the cloud, and enable local breakout."**

— Kohei Yamashita, Senior Leader, ICT Section, Information Systems Department,

## Modernizing the WAN for FUJI CORPORATION's cloud journey

With the move to AWS, and adoption of a growing number of SaaS applications such as Salesforce and Microsoft Office 365, FUJI CORPORATION needed to modernize its traditional wide-area network (WAN) architecture comprised of wide-area Ethernet and MPLS connectivity. The primary drivers for the new WAN were to ensure stable, performant and scalable connectivity to AWS, while lowering costs

and reducing dependence on MPLS and Ethernet service providers.

Mr. Yamashita and his team focused on SD-WAN as the ideal path to modernize FUJI CORPORATION's WAN, and established a clear set of requirements for selecting an SD-WAN vendor. These included the ability to use broadband instead of expensive MPLS, even for VoIP, as well as capabilities to minimize latency for users accessing files and applications in AWS, and local breakout to SaaS.

FUJI CORPORATION has worked closely in cooperation with local Silver Peak partner, [Macnica Networks](#). Mr. Yamashita says he and his team quickly learned the detailed offerings and technical capabilities of various SD-WAN vendors, including Silver Peak. "Macnica was able to rapidly and accurately address our questions and advanced technical queries."



Following this analysis, FUJI CORPORATION selected the Silver Peak [Unity EdgeConnect™](#) SD-WAN edge platform with optional [Unity Boost™](#) WAN optimization as part of a unified SD-WAN platform. Why? "The option to license WAN acceleration through the EdgeConnect SD-WAN appliance was one of the reasons we selected Silver Peak," Mr. Yamashita notes. "Also important were the capabilities to use broadband reliably, optimize application routing to the cloud, and enable local breakout."

## SD-WAN plus WAN optimization is a winning combination

Relying on Macnica to provide use cases and information for designing and building the SD-WAN, FUJI CORPORATION deployed the EdgeConnect platform at ten locations across Japan, as well as a virtual EdgeConnect appliance connected to the AWS transit gateway for accessing multiple virtual private clouds (VPCs) in AWS. FUJI CORPORATION decommissioned MPLS and now terminates EdgeConnect at most locations with dual bonded broadband, scaling down Ethernet to just the company's main location in Aichi. Each location is also enabled with local breakout to Office 365 and Salesforce. The ICT team uses the [Unity Orchestrator™](#) management interface to centrally manage routing and for administration of the SD-WAN.

In addition, Boost WAN optimization is selectively applied to CIFS and HTTP/HTTPS traffic to reduce the impact of latency when transferring files from AWS and other web servers. Boost has been especially effective in reducing data on the network by as much as 85 percent through compression and deduplication. Moreover, in validating Boost prior to deployment, the ICT team confirmed that Boost improved throughput of large files 2X-3X.

### Delivers greater network efficiency and control

FUJI CORPORATION has successfully transferred key workloads to the cloud, leveraging the cost advantages and efficiencies of broadband over SD-WAN for assured access. In particular, advanced SD-WAN features in EdgeConnect, such as [path conditioning](#), quality of service and [dynamic path control](#), ensure application performance and quality of experience for end users working with applications running in AWS.

In addition, network uptime has improved substantially since moving to the EdgeConnect-driven SD-WAN. In the past, relying strictly on the centralized

internet gateway, FUJI CORPORATION experienced several circuit failures that prevented end users across multiple divisions from accessing Office 365. With bonded broadband links, sub-millisecond failover, and local breakout directly to the internet provided by EdgeConnect, the company no longer has such disruptions.

Moreover, the ICT team achieved another primary objective: lowering costs and reducing dependence on service providers. By massively reducing the expense of wide-area Ethernet and MPLS, as well as optimizing bandwidth utilization across the SD-WAN, FUJI CORPORATION expects to reduce costs as

much as 80 percent compared to its previous network architecture. Having intelligent, centralized SD-WAN administration through Orchestrator allows the ICT team to make changes and troubleshoot network issues directly, without the need for outside third parties as before.

“With Orchestrator, we have more flexibility and can change settings by ourselves,” Mr. Yamashita says. “We did

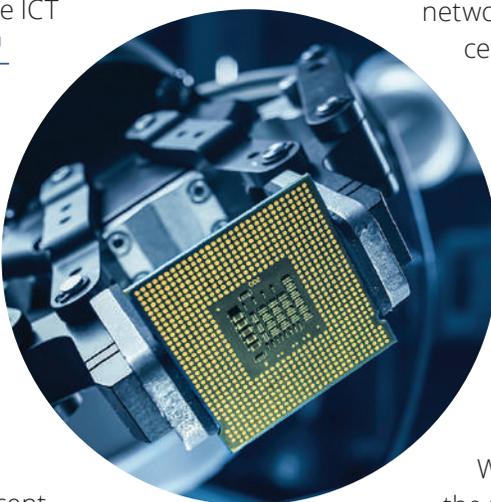
not have any method to monitor WAN status before. Now we check the Orchestrator dashboard every day

for breakout communication volume, Boost

levels for each application, and to quickly identify any network problems. Just recently, we experienced a throughput problem between the underlying circuits, and we were able to resolve the issues with a tunnel exception in Orchestrator.”

With the efficiencies and agility provided by transforming its WAN and adopting cloud, Mr. Yamashita concludes that the business impact on FUJI CORPORATION has been quite positive. “By changing the topology, network agility and fault tolerance have improved. Now we can flexibly respond to sudden network configuration changes and drive each line of business without disruption. As a result, it contributes to the increased speed of product development and enhanced quality of our product and service offerings.”

For more information on Silver Peak and our solutions, please visit: [silver-peak.com](http://silver-peak.com)



## Customer

**FUJI CORPORATION** is a world leader in the development and manufacturing of industrial robotic solutions and machine tools. Founded in 1959, FUJI CORPORATION has grown to become a global enterprise with nearly 2,500 employees serving customers through approximately 100 offices around the world.

## Challenge

FUJI CORPORATION was moving key applications into AWS and was concerned about reliability, performance, and uptime for end users connecting to the cloud. The previous WAN architecture, comprised of MPLS and wide-area Ethernet, backhauled all cloud-destined traffic through an internet gateway in FUJI CORPORATION's central data center. Circuit failures were disrupting access to SaaS applications such as Office 365, and the customer was concerned this architecture would be problematic when moving other applications to AWS.

## Solution

FUJI CORPORATION worked closely in cooperation with local Silver Peak partner, Macnica Networks, and decided to modernize its network. FUJI CORPORATION deployed the EdgeConnect platform at its manufacturing plants and branch and sales offices across Japan, as well as a virtual

EdgeConnect appliance in AWS, and eliminated use of MPLS in favor of broadband. The company also implemented Boost WAN optimization for CIFS and HTTP/HTTPS traffic to mitigate latency issues accessing large files in AWS and other web servers. FUJI CORPORATION also enabled local breakout to SaaS applications, including Office 365 and Salesforce. FUJI CORPORATION's ICT team centrally manages the SD-WAN through Orchestrator.

## Results

- Modernizes WAN architecture to support cloud journey and growing use of SaaS
- Ensures reliable, high-performance access to applications running in AWS, delivering quality of experience equal to on-premises
- Achieves data reduction of up to 85 percent with Boost WAN acceleration, improving throughput 2X-3X
- Assures network uptime with sub-millisecond circuit failover, eliminating disruption accessing applications in AWS or on premises
- Reduces dependence on service providers, empowering internal staff to manage and control the SD-WAN through Orchestrator
- Accelerates product development, positively affecting Fuji's product and service offerings



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