Anritsu Advancing beyond

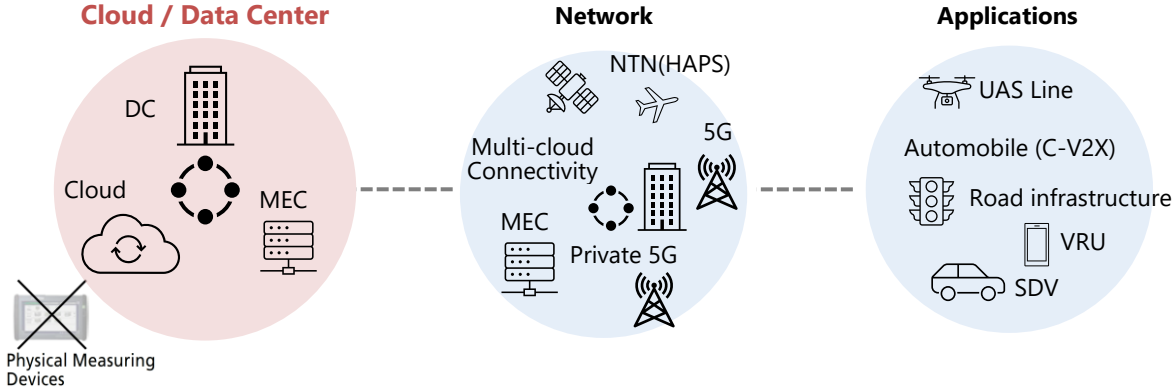
Visualization of Communication Quality in a Cloud Networks

Contributing to Improving the Quality of Cloud Services

Virtual Network Master for AWS MX109030PC
Network Master Pro MT1000A / MT1040A

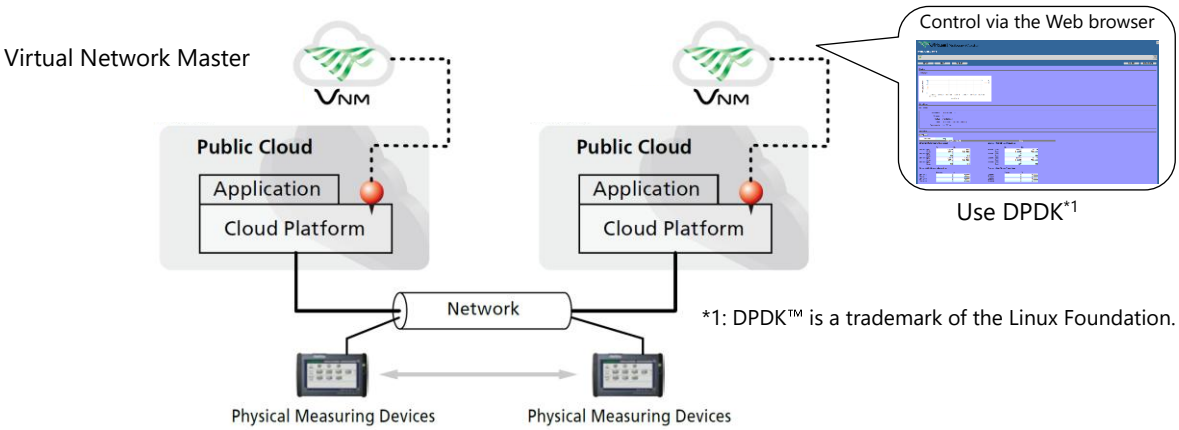
Challenge in the Evaluation of the Network Quality of Cloud Services

The spread of 5G, AI, and IoT has put various cloud services into general use. Amid this situation, how to evaluate the quality of network communication is a major concern for service providers and users alike.
On the other hand, installing physical measuring instruments in a cloud environment or virtual environment is impractical, and software-based conventional simple communication quality evaluation approaches, such as ping, are no longer good enough to monitor communication characteristics accurately.



Providing a Quantitative Measurement Environment in a Cloud Server

The Virtual Network Master (VNM) is a new software-based measuring instrument designed to meet this challenge. While it can quantitatively evaluate measurement items, such as one-way latency and frame loss, this physical measuring instrument does not need to be installed in a cloud environment. The VNM is capable of visualizing the communication quality of the network including virtual layers.

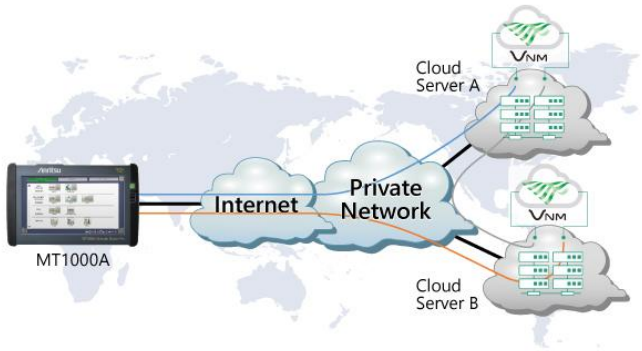


*1: DPDK™ is a trademark of the Linux Foundation.

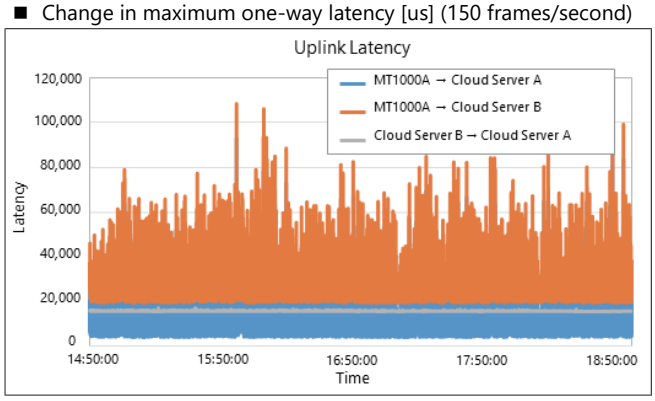
Use Cases

Redundant Configuration of a Cloud Service and Evaluation of the Backup Route

When installed in the cloud server in use, the VNM allows the communication quality of different routes to be evaluated simultaneously. Visualizing the difference in quality between the communication via the internet and the communication via the network among cloud regions helps make a decision to switch routes in a redundant configuration as well as evaluate the reliability of the backup route.

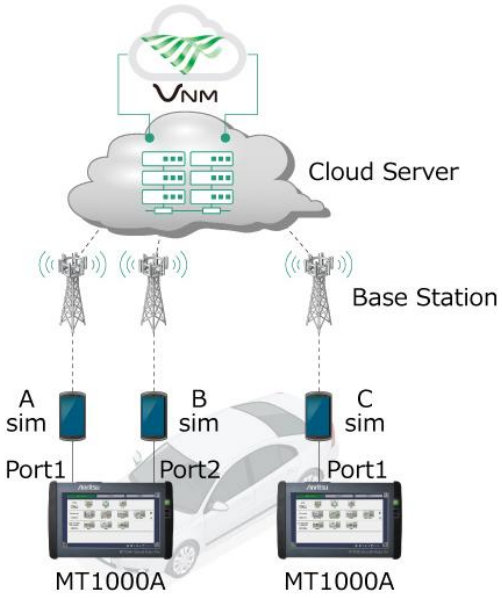


■ Change in maximum one-way latency [us] (150 frames/second)

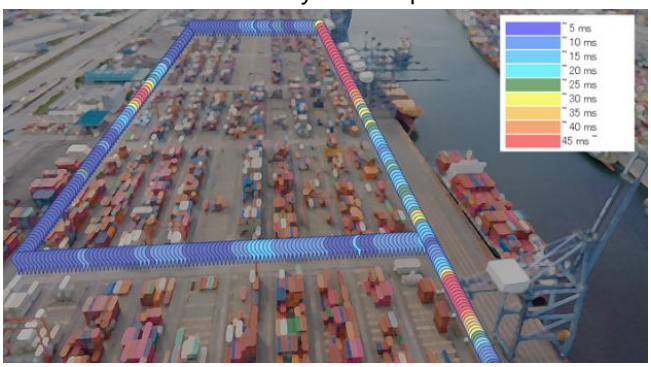


Visualization of End-to-End Latencies for a Mission-Critical System

In a mission-critical system for autonomous driving or other advanced application, the quantitative evaluation of latency characteristics is directly linked to the reliability and service quality of the system. Measuring the quality of end-to-end communication between the VNM in the cloud server and the mobile device visualizes the amount of latency, which helps in optimizing the system design and determining the allowable level.



■ Travel route and latency heatmap



* The heatmap is created using an external tool.

Ordering Information

Model	Name	Remark
MX109030PC	Virtual Network Master for AWS	The MX109030PC-TL003 or MX109030PC-TL011 is required.
MX109030PC-TL003	3 Months License	
MX109030PC-TL011	1 Year License	

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