We aim to improve the performance of a virtual environment in which various services are deployed simultaneously by using MAGONIA (SPP*1).

To achieve a data transfer rate of 40Gbps or higher (100Gbps, in the near future) among service functions and NICs, we are working on increasing the scalability of SPP using MCP*2 based FPGA.

*1 SPP: Soft Patch Panel, a key technology of MAGONIA server architecture
*2 MCP: Multi-Chip Package

SPP*1

- Enables high speed data transfer among NICs and VMs
- Improves performance by bypassing OS kernel processing

NTT’s efforts:
- Improve performance
- Support community activities

SPP using MCP*2 based FPGA

- Aiming to utilize new type FPGA connected to CPU in package to attain 40+ Gbps
- Increase scalability by offloading load balancing function

Packet losses occurring

FPGA processes efficiently

Over 40G

Over 40G