

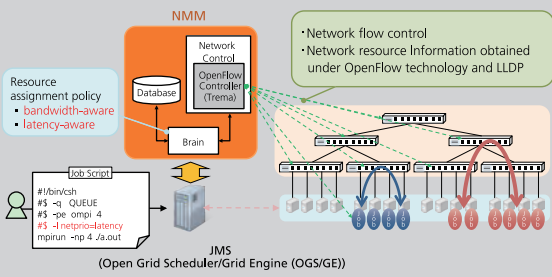
Does SDN Technology Make HPC Guys Happy?

R&D and Empirical Studies Towards HPC With Enhanced Network Controllability

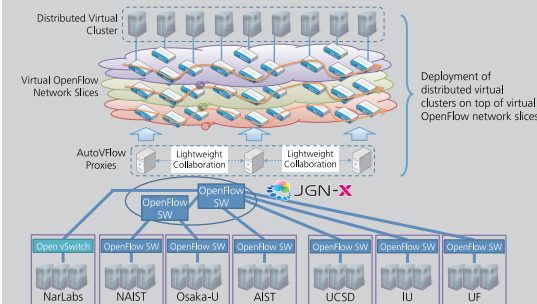
Cybermedia Center, Osaka University, Japan

Does SDN Technology Make HPC Guys Happy?

SDN-enhanced Job Management System overturns the common sense that network is static and uncontrollable resource

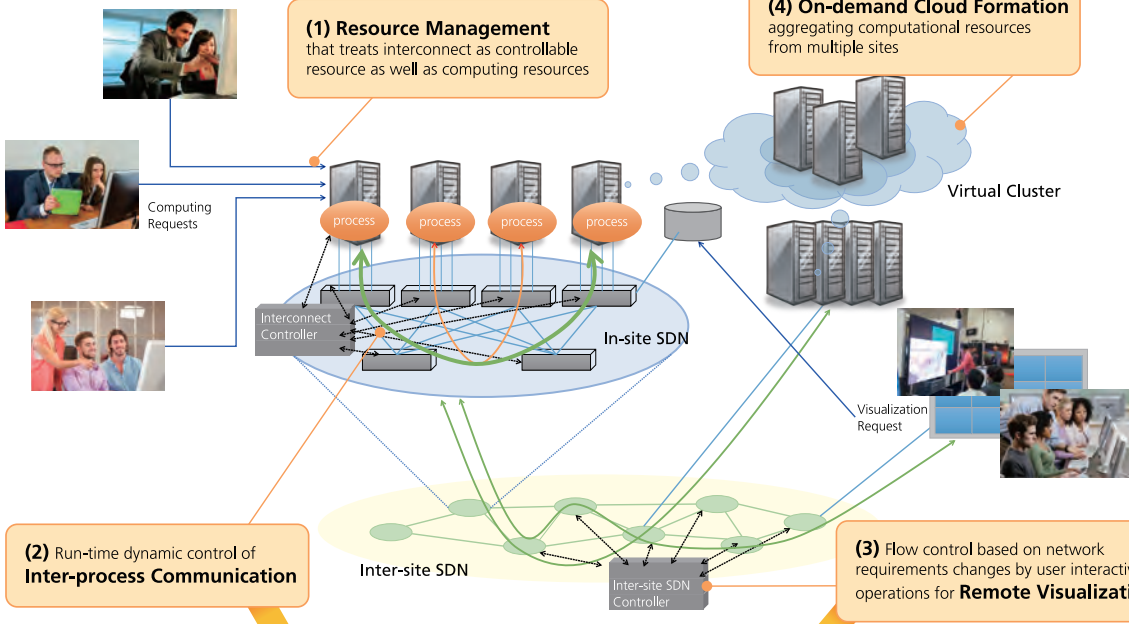


Multi-site Virtual Cluster aggregates a set of computational and network resources into a HPC cloud



(1) Resource Management that treats interconnect as controllable resource as well as computing resources

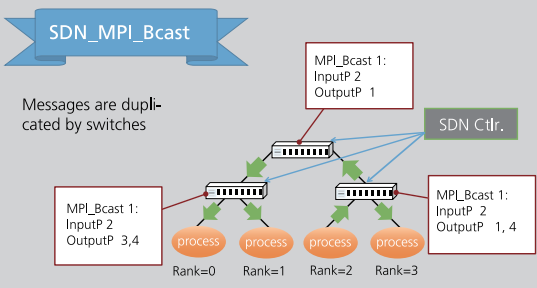
(4) On-demand Cloud Formation aggregating computational resources from multiple sites



(2) Run-time dynamic control of Inter-process Communication

(3) Flow control based on network requirements changes by user interactive operations for Remote Visualization

SDN-MPI reduces the execution time of MPI program by shortening MPI communication time occurred during parallel computation



SDN-enhanced SAGE manages both tiled display walls and network resources for smooth high-res scientific visualization

