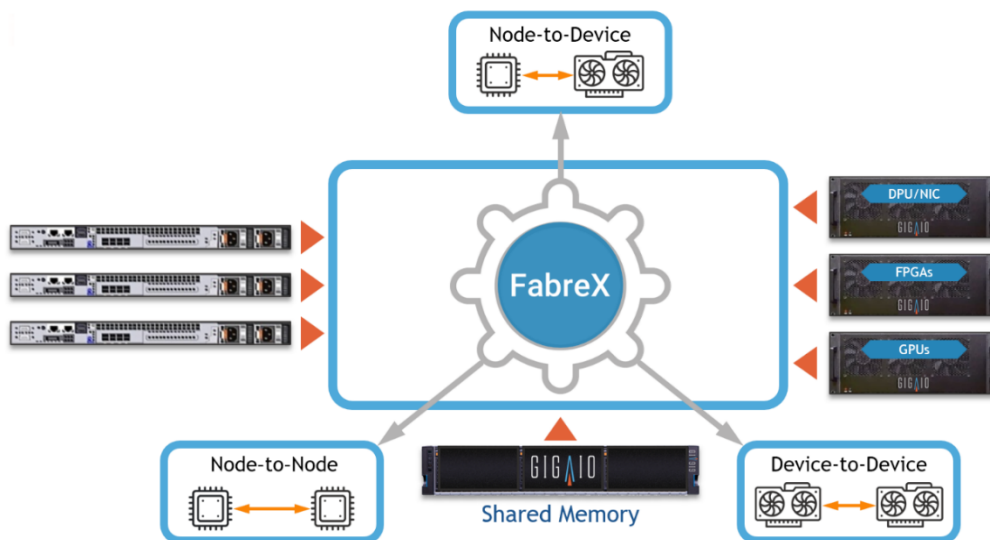


# FabreX™ Software - A Fundamental Building Block for Composable Memory

GigalO's Fabric Memory Manager, FabreX, is the software engine that drives the performance and dynamic composability of GigalO's Software-Defined Hardware™ (SDH) for enterprise data centers and high-performance computing environments. This Linux-based, resource-efficient software layers onto FabreX hardware for easy-to-use memory and device composition.

GigalO's memory fabric is the foundation of our PCIe switching infrastructure, enabling native protocol communications from server-to-server, server-to-device, or even device-to-device communications. These communication paths are created and managed using FabreX software. DMTF open-source Redfish® APIs provide unprecedented integration with a range of third-party applications for fabric automation and orchestration.

Workloads no longer need to be limited by what fits in a server chassis. GigalO's FabreX software provides the flexibility to compose bare metal devices such as GPUs, FPGAs, NVMe, and even DRAM to a server. This allows the servers' resources to scale up or down dynamically to meet workloads needs. FabreX can even connect multiple servers together so they share resources previously confined to a server's sheet metal, or share the workload with a remote server. All this is accomplished using the same Direct Memory Access (DMA) method that a server uses to access resources residing on its motherboard.



## Northbound Integrations

Today's IT environments have many needs, but what they don't want is another management pane of glass. GigaIO's software integrates with our customers' existing tools, thanks to our open ecosystem platform and ever-growing list of pre-integrated partners. The following lists our existing integrations as of January 2022.

<b>High Performance Computing Partners</b>	<ul style="list-style-type: none"><li>• Bright Cluster Manager, which includes integrations with<ul style="list-style-type: none"><li>○ Slurm</li><li>○ OpenPBS</li><li>○ PBS Pro</li><li>○ LSF</li><li>○ Altair Grid Engine</li><li>○ Kubernetes</li></ul></li><li>• CTRL IQ - Fuzzball</li><li>• LMX - Slurm and OpenStack</li></ul>
<b>Lab-as-a-Service and HPC-as-a-Service Partners</b>	<ul style="list-style-type: none"><li>• Quali Cloudshell</li><li>• Bright Cluster Manager</li><li>• Supermicro SuperCloud Composer (server brand agnostic)</li></ul>
<b>Artificial Intelligence Partners</b>	<ul style="list-style-type: none"><li>• Bright Cluster Manager</li></ul>
<b>Infrastructure Management Partner</b>	<ul style="list-style-type: none"><li>• Supermicro SuperCloud Composer (server brand agnostic)</li><li>• Bright Cluster Manager VMware vSphere integration</li></ul>
<b>Edge Computing Partner</b>	<ul style="list-style-type: none"><li>• Bright Cluster Manager (Bright Edge)</li><li>• CTRL IQ - Fuzzball</li></ul>
<b>Hybrid Cloud Computing Partner</b>	<ul style="list-style-type: none"><li>• Bright Cluster Manager</li><li>• CTRL IQ - Fuzzball</li></ul>

The above software tools have been fully integrated with the FabreX software. GigaIO also provides an integration guide and an easy to use CLI to allow any customer to build playbooks, blueprints, or just straight API calls for personalized integration and seamless integration with Ansible, Chef, Puppet and other commonly used DevOps tool sets.

GigaIO's FabreX software also includes host-based drivers to enable advanced features. These range from device discovery assistance to enabling TCP traffic across FabreX. Since FabreX can connect servers using DMA, the possibilities for host optimizations are endless. Below is a list of the current host features.

- Compatibility assistant
- Message Passing Interface (MPI)
- LibFabric PCI Provider
- NVMeOF Initiator / Target
- GPU Direct DMA
- NCCL Driver
- TCP/IP Driver

