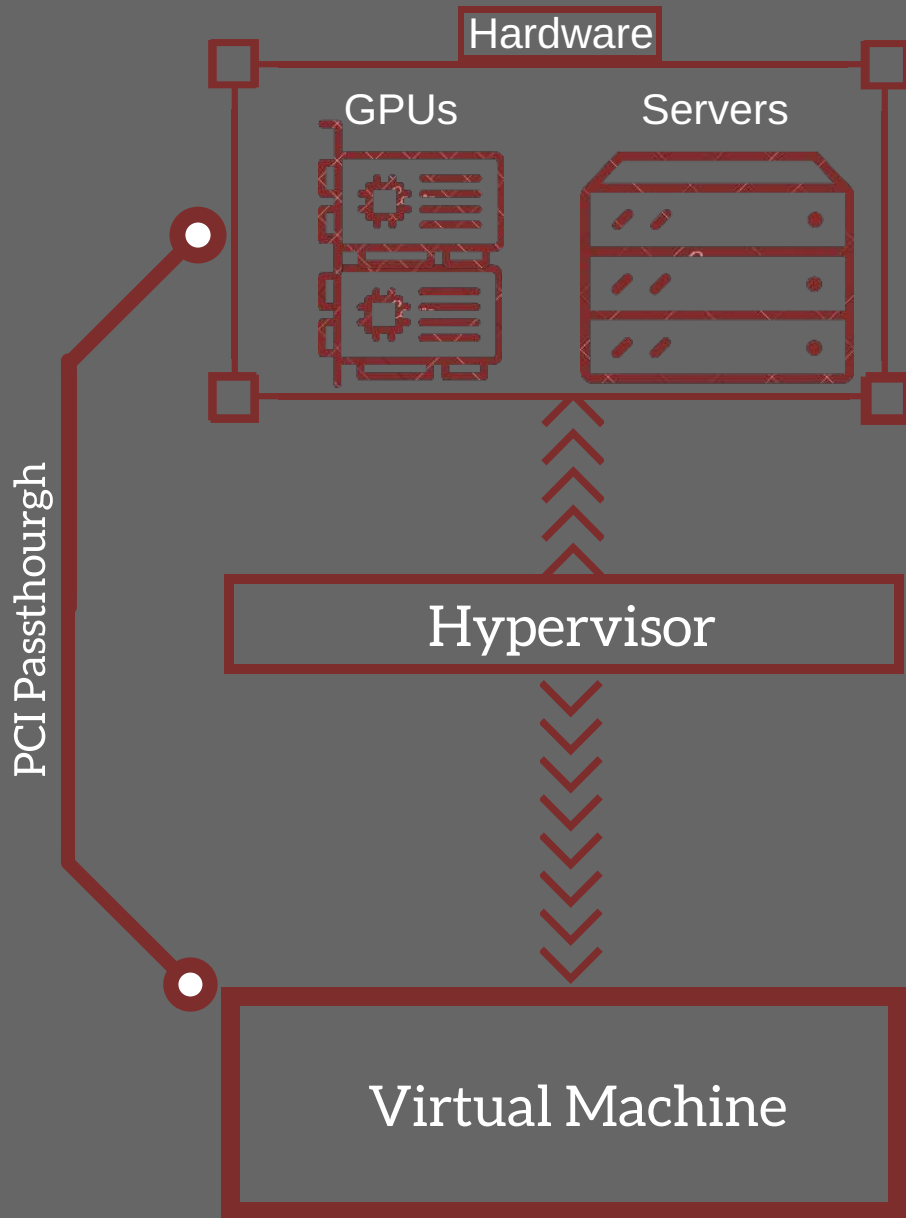


GPUs as Accelerators



“The primary lesson from this study is that GPU passthrough to virtual machines is achievable at low overhead, and across a variety of hypervisors and virtualization platforms”

*GPU Passthrough Performance: A Comparison of KVM, Xen, VMWare ESXi, and LXC for CUDA and OpenCL Applications 2014

“We draw the vision of a possible next generation computing clusters characterized by highly heterogeneous parallelism heading to a lower electric power demanding, less heat producing and more environmental friendliness.”

*Virtualizing high-end GPGPUs on ARM clusters for the next generation of high performance cloud computing 2014

For data-transfers over PCI-e, the GPU provides the best overall performance

*Quantum Chemical Calculations Using Accelerators: Migrating Matrix Operations to the NVIDIA Kepler GPU and the Intel Xeon Phi