BlueField SNAP

NVIDIA® BlueField® SNAP (Software-defined Network Accelerated Processing) technology enables hardware-accelerated virtualization of NVMe storage. BlueField SNAP presents networked storage as a local NVMe SSD, emulating an NVMe drive on the PCIe bus. The host OS/Hypervisor makes use of its standard NVMe-driver unaware that the communication is terminated, not by a physical drive, but by the BlueField SNAP. Any logic may be applied to the data via the BlueField SNAP framework and transmitted over the network, on either Ethernet or InfiniBand protocol, to a storage target.

BlueField SNAP combines unique hardware-accelerated storage virtualization with the advanced networking and programmability capabilities of NVIDIA® BlueField® networking platforms (DPU or SuperNIC). BlueField SNAP together with the DPU enable a world of applications addressing storage and networking efficiency and performance.

To enable BlueField SNAP, please refer to the NVIDIA BlueField-3 SNAP for NVMe and Virtio-blk documentation.