

NVIDIA Scalable Hierarchical Aggregation and Reduction Protocol (SHARP)[™]

Overview

NVIDIA Scalable Hierarchical Aggregation and Reduction Protocol (SHARP)[™] technology improves upon the performance of MPI operation, by offloading collective operations from the CPU to the switch network, and eliminating the need to send data multiple times between endpoints. This innovative approach decreases the amount of data traversing the network as aggregation nodes are reached, and dramatically reduces the MPI operations time. Implementing collective communication algorithms in the network also has additional benefits, such as freeing up valuable CPU resources for computation rather than using them to process communication.

Further information on this product can be found in the following NVIDIA SHARP documents:

- [Release Notes](#)
- [Deployment Guide](#)

Software Download

Please visit <https://developer.nvidia.com/networking/hpc-x>

Document Revision History

For the list of changes made to this document, refer to [Deployment Guide Revision History](#).