

Demartek RoCE Deployment Guide

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Executive Summary

Data center managers and administrators face increasing pressure to accelerate application performance because data continues to grow, and demand for quick access to this data continues to intensify.

The computing industry continues to develop new technologies such as flash storage and more powerful processors to keep pace with these demands. Product design engineers are also incorporating performance acceleration techniques into network adapters and switches.

One of these networking adapter technologies, Remote Direct Memory Access (RDMA) has been built into special network adapters that use RDMA over Converged Ethernet, or RoCE technology. This performance acceleration technology is built into specialized network adapters that work with a streamlined software stack in the operating system to improve performance and lower the host CPU consumption required to process network traffic.

This guide is designed for managers and technical professionals within IT departments who are exploring the benefits of deploying RoCE technology or who are looking for practical guidance and deployment examples of RoCE solutions.

As RoCE includes server, adapter and switching technologies, this guide provides information and guidance in each area. A basic understanding of each of these areas is needed to successfully deploy RoCE technology.

This guide is intended to be used as a reference and includes screen shots and information from actual deployments of specific RoCE-enabled products.

All of the work was performed in the Demartek lab in Golden, Colorado, USA.