THUNDERBOLT™–ENABLED VMWARE ESXI

Mac Pro® and Micro Server Storage Connectivity for VMware vSphere® Environments

Using Thunderbolt I/O for vSphere Environments

The introduction of the cylindrical Apple Mac Pro® 6.1 showcased a newly designed hardware platform with Thunderbolt-accessible external PCIe connectivity as the only I/O option for connectivity to external storage and peripherals. The new Thunderbolt-enabled Apple Mac Pro, with its uniquely designed and powerful hardware, met the certification requirements for the VMware Compatibility Guide (VCG) as a host, but the I/O connectivity options appeared to be limited.

The six port Thunderbolt-enabled Mac Pro presented a challenge in using the platform as virtualized servers when connecting to external storage, because the PCIe slots that would allow for traditional Host Bus Adapter (HBA) I/O installation were not accessible. The Mac Pro furthered Thunderbolt as high performance I/O connectivity. The question that loomed was would Thunderbolt be able to provide legitimate ESXi connectivity to external storage in a vSphere environment?

Considering the lack of PCIe slots, it would seem the only option would be the storage that was originally installed in the Mac Pro. This did not sit well for Apple developers, Mac administrators, and VMware administrators who needed the Mac hardware to access the Mac operating system and who wanted to test with virtual instances connected to external storage. They began to look for I/O solutions to meet their needs. Consequently, none of the existing Thunderbolt I/O interface solutions were VMware Ready certified.

Other server class hardware offering Thunderbolt as an I/O connectivity option soon followed on other platforms. Systems like the Intel® NUC have become a favorite of VMware administrators for testing deployments in home labs and smaller lab environments.

Each platform type helped to characterize a unique set of use cases, ranging from software development, application deployment or patch rollouts, compact demo kits, or VDI, and they have made their way to commercial, educational, and enterprise data centers. The challenge still remains in using these devices as virtualized servers, as there is a lack of accessible PCIe slots to allow for HBA installation to provide I/O connectivity.

ATTO ThunderLink® Adapters Offer Fibre Channel Connectivity

ATTO recognized the opportunity to meet the needs of the community by providing a VMware Ready™ certified ESXi driver for ATTO ThunderLink Thunderbolt to Fibre Channel adapters. It was a result of ATTO's tenure and experience as a VMware developer that ATTO submitted the new driver to VMware for approval.

Now users can virtualize Mac Pro or other hosts using ATTO ThunderLink Thunderbolt adapters to efficiently connect to Fibre Channel storage with a fully supported and certified solution for their vSphere environment.

> "Thunderbolt enabled VMWare ESXi by ATTO with the ThunderLink product line allowed us to create a vSphere setup based on Mac to be able to provide virtualization services for our macOS Servers. Mixing virtual hardware, snapshots and Veeam backup with the simplicity of macOS server is a game changer for the SMB market."

YOANN GINI
FOUNDER
ABELIONNI SERVICES

VMWARE vSPHERE

The vSphere platform—the best Foundation for your applications, your cloud and your business vSphere helps you get the best performance, availability, and efficiency from your infrastructure and applications. It's the ideal foundation for any cloud environment.

ATTO THUNDERBOLT THUNDERLINK ADAPTERS

Delivering creative, engineering and technical professionals a high performance and low latency Thunderbolt connectivity solution engineered for application where optimized performance and high throughput are essential. Thunderlink adapters enable today's Thunderbolt-enabled micro server platforms, desktop and mobile workstations to connect into high performance storage or networks.

USE CASES

The Thunderbolt-enabled VMware ESXi Solution is designed for software developers, Web developers, and VMware and other administrators, or other users that need Mac hardware on which to develop and test.

The solution is also suitable for virtual test or home labs and demo kits with systems that have Thunderbolt I/O connectivity.

SEE OUR SOLUTION IN THE VMWARE SOLUTION EXCHANGE

https://marketplace.vmware.com/vsx/solutions/thunderbolt-enabled-vmware-esxi-1?ref=search

Figure 1. ATTO Thunderlink

How is ATTO Thunderbolt with vSphere Different than Other Options in the Market?
- ATTO Thunderlink Thunderbolt to Fibre Channel adapters are VMware Ready certified.
- The adapters are uniquely designed as purpose-built devices.
- With a smaller footprint and less power required, users achieve the same throughput with a singular device compared to other Thunderbolt-enabled solutions.

How It Works
Using the ATTO ThunderLink Thunderbolt-enabled ESXi driver with vSphere combined with Mac Pro or Micro Server Platforms allows for streamlined connectivity to external Fibre Channel storage in a fully supported VCG environment.
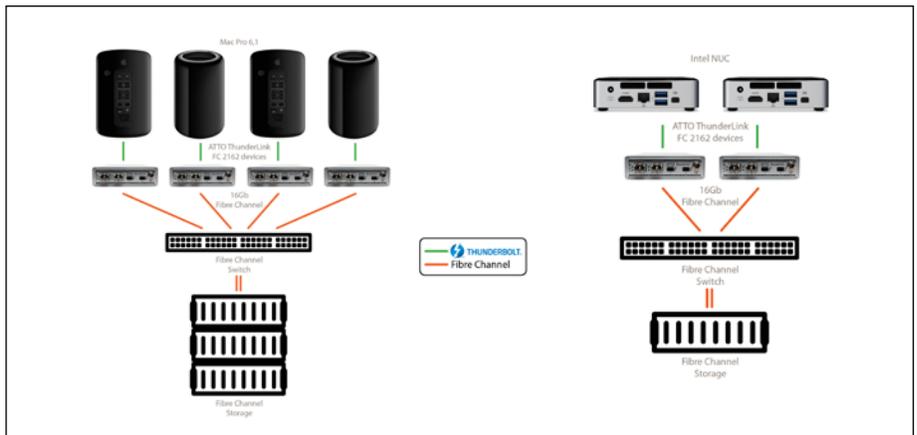

Figure 2. (Left) Mac Pro Thunderbolt ESXi FC SAN connectivity through ATTO ThunderLink. (Right): Intel NUC Thunderbolt ESXi FC SAN connectivity through ATTO ThunderLink.

Learn More
To learn how to take advantage of an ATTO ThunderLink Thunderbolt-enabled ESXi solution in your vSphere Essentials or Essentials Plus environment, contact your ATTO Technology Account Representative or VMware partner or sales representative.