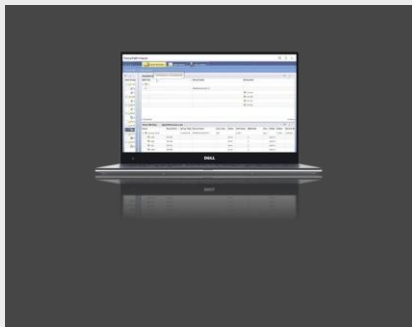


PowerPath Multipathing Software

Optimize data paths in your physical and virtual environment with PowerPath and PowerPath Virtual Edition

PowerPath Essentials

Standardize data path management across physical and virtual environments



Automate multipathing policies and load balancing to provide predictable and consistent application availability and performance across physical and virtual environments

Improve service-level agreements by eliminating application impact from I/O failures

PowerPath™ is host-based software that provides automated data path management and load-balancing capabilities for heterogeneous server, network, and storage deployed in physical and virtual environments. It enables you to meet your aggressive service levels with the highest application availability and performance, and with all the advantages of the industry's leading information storage systems. The PowerPath family includes PowerPath Multipathing for physical environments for Linux and Windows and PowerPath/VE Multipathing for VMware vSphere and Microsoft Hyper-V virtual environments.

Multipathing Business Challenges

With constrained budgets and the rush to virtualize for better resource utilization, many IT organizations are challenged to ensure application availability and performance. With multiple vendor arrays, operating systems, and virtual platforms, you need flexible and automated tools to manage your data paths consistently and effectively.

Standardized Path Management

PowerPath is used by many Dell customers, and it is a leading path management solution. Instead of using multi-point solutions, you can standardize on a single offering across your evolving physical and virtual environments. PowerPath supports heterogeneous servers, operating systems, and Dell storage arrays. Leverage PowerPath application-transparent failover to insulate core business operations from any disruption caused by a faulty path. Automatically optimize physical and logical I/O paths by using sophisticated load-balancing algorithms to ensure consistent and predictable application availability and performance. Dell Technologies E-Lab tested interoperability assures PowerPath multipathing support for many combinations of servers, operating systems and storage.

Automate Path Failover and Recovery for High Availability

PowerPath's automated path failover and recovery eliminates the possibility of disrupting an application due to the failure of an adapter, cable, or user error. In the event of a path failover, all outstanding and subsequent I/O requests are automatically directed to alternative paths. From mission-critical to lower priority applications, your business remains online. This dynamic software's intelligent and dynamic path testing periodically probes inactive paths to check for path failures. When a failed path is found and the fault condition is resolved, the path is automatically restored to service without user intervention and without disrupting applications. Since it is automatic, no complex mapping is required, unlike most other vendors' MPIO solutions.

Optimize Load Balancing

PowerPath uniquely uses multiple I/O data paths to share the workload and automate load balancing to ensure data path efficiently. Performance is enhanced by intelligently optimizing data access across all available paths. The workload balancing capabilities of PowerPath ensure that no one path becomes overloaded while others have underutilized bandwidth, causing an I/O bottleneck. When one or two paths become busier than others, PowerPath shifts the I/O traffic while keeping track of the load characteristics from the busy paths to the others, further enhancing throughput over the already efficient multipathing capabilities.

PowerPath for the Virtual Data Center

PowerPath and PowerPath Virtual Edition (VE) enable you to standardize on a single multipathing solution across your entire environment. The base technology in PowerPath multipathing for physical environments is leveraged to enhance control and ensure application availability and performance in VMware or Microsoft Hyper-V environments with PowerPath/VE. PowerPath and PowerPath/VE effectively manage virtual environments with ever increasing ratios to scale-out mission-critical applications. With hyper-consolidation, you may have hundreds or thousands of independent virtual machines running, including I/O-intensive applications which can disrupt IO from other applications.

Manually configuring load-balancing policies to ensure that all virtual machines receive the required I/O response time is very difficult. This situation is further complicated when tools such as VMware vMotion®, Data Resource Scheduler, and High-Availability are introduced, as these tools invalidate any assumptions about which I/O streams will be sharing which data paths.

PowerPath and PowerPath/VE automatically manage all this complexity by constantly adjusting the I/O path usage to the changes in I/O loads coming from the virtual machines. Simply assign all devices to all paths and PowerPath and PowerPath/VE will automatically optimize the overall I/O performance for you. For VMware deployments, PowerPath/VE is integrated with VMware vCenter™ Server and Update Manager as well as vSphere auto-deploy and stateless licensing capabilities to further simplify path management in a virtual environment.

PowerPath Data Migration Enabler - PowerPath Migration Enabler leverages PowerPath and Dell data mobility technologies to perform data migrations without application downtime. PowerPath Migration Enabler is included with your PowerPath license.

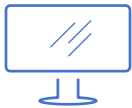
PowerPath Integration with Microsoft Windows Admin Center - PowerPath for Windows can be inserted into Windows Admin Center (WAC). WAC users have insight to PowerPath connected devices such as HBAs and Dell storage arrays while utilizing a single GUI for path management.

PowerPath Management Appliance (PPMA) - PPMA is a virtual appliance which is delivered to you as a no charge download. PPMA provides a single pane of glass that provides insight into the health of the data path and licensed assets.

Dell Services for PowerPath – Dell offers implementation services for single-host and four-host implementations in addition to custom PowerPath services to expand its features and functionality.

For Dell and Operating System Support – Review the Dell Support Matrix by searching “PowerPath” at this link:

<https://elabnavigator.dell.com/eln/modernHomeSSM>



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