

The Advantages of Configuring a PowerEdge Server with Agnostic SSD Drives

Tech Note by

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Summary

Dell EMC gives customers the option to purchase an Agnostic (Dell Branded), SSD drive with their PowerEdge server configuration.

Although some customers prefer specific SSD vendors, most PowerEdge owners do not prefer one brand name over another, especially when they benefit from picking agnostic offerings

This DfD debriefs why agnostic drives are included as an option and highlights how PowerEdge customers benefit from going agnostic with their SSD drive selection.

What is an Agnostic Drive?

When configuring a PowerEdge server with components, Dell EMC prefers to give customers ample solid-state drive (SSD) options to meet their server requirements. These choices have traditionally consisted of approved drive vendors, such as Intel or Samsung, but now include one more alternative; agnostic (Dell-branded) SSDs.

The underlying concept is that without an agnostic choice to select, customers may be subject to trade-offs associated with a specific brand, such as prolonged lead times or premium pricing. By purchasing a large pool of SSD hardware from approved vendors, Dell EMC can provide a drive configuration with minimal trade-offs. The primary drawback of agnostic is that customers can't pick the exact drive brand they want. However, this strategy is advantageous for the 65% of customers who do not prefer one brand name over another or are willing to disregard brand name for the advantages that will be discussed within this paper.



Figure 1: Agnostic (Dell Branded) SSD

Rigorous Validation

Agnostic SSD drives are put through the same rigorous qualification process as vendor-specific drives. First, the manufacturing process is heavily scrutinized for quality standards, including quality control processes that will confirm every drive is compatible with all other components installed in PowerEdge servers. Then once within a server, each drive must meet the exact specifications for performance, duty cycles, mean time between failure (MTBF) and rotational vibration to pass reliability testing standards and move forward for sales distribution. Additionally, once off the shelf, a full history report for traceability is available in case proactive replacement is needed.

Dell Firmware

Similarly, both agnostic and branded drives have Dell firmware installed that enhances PowerEdge servers in the following ways:

- Mode page settings that are compatible with PowerEdge Raid Controller (PERC) & Dell HBA
- Proprietary VPD page for system inventory management and quality tracking
- Support for live firmware updates and compatibility with Dell Update Package (DUP)
- Tuned to PowerEdge hardware for optimal performance, stability and reliability

Improved Supply Chain

The agnostic SSD supply chain model focuses heavily on mitigating the possibility of a supply disruption by purchasing large volumes of SSD drives from approved vendors. Approved SATA drive vendors include Micron, Intel, Kioxia (previously Toshiba), Hynix and Samsung, while the approved SAS drive vendors include Kioxia, Samsung and Western Digital. By working with multiple vendors, Dell EMC can keep a constant supply of drive configurations in stock, which may enable significantly reduced lead times.

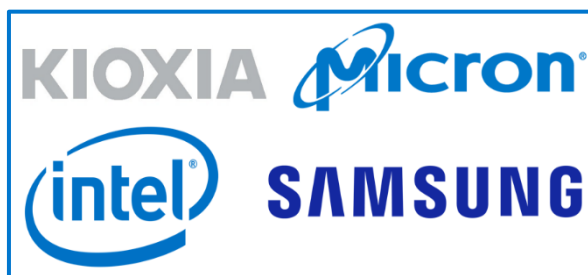


Figure 2: Various agnostic drive approved

Purchasing large volumes of SSD drives introduces greater pricing competition between vendors. Because Dell EMC manages all software processes, any major vendor differentiators aside from the hardware are eliminated. This allows for a more aggressive pricing landscape for vendors trying to sell drives in volume.

The pricing reduction of agnostic drives compared to vendor-specific drives presents *significant* savings. The exact savings will vary based on several factors, such as the drive size, type and market timing. Agnostic SSD prices can range from 10% to 30% less than vendor-specific list prices, with the savings percentage generally increasing with the drive size. Most Dell EMC customers can expect to average about a **15%** drive price reduction when choosing agnostic.

Conclusion

Dell EMC offers customers more options with the inclusion of agnostic SSD drives. Configuring a PowerEdge server with agnostic SSD drives ensures shortened lead times, significant price reductions, and consistent implementation.



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