

# Principled Technologies research report examines flexible server cooling options in Dell PowerEdge servers

*Principled Technologies (PT) found that Dell PowerEdge servers offer multiple cooling options to suit a variety of business-critical workloads, including AI*

ROUND ROCK, TX, UNITED STATES, February 5, 2025 /EINPresswire.com/ -- Compute-intensive activities such as artificial intelligence (AI) workloads continue to grow in all sectors. This has created an increasingly urgent need for effective, efficient server cooling technologies. There's no one-size-fits-all cooling solution, so organizations must consider which type of technology best suits their specific needs and workloads.

According to a new research report from Principled Technologies, "Dell Technologies offers a wide range of cooling technologies to suit the needs of different organizations and workloads. By choosing new Dell PowerEdge servers powered by AMD EPYC processors, you also access unique innovations in air cooling and liquid cooling, with the option to configure the right cooling solution for your specific needs."

The PT report continues, "In this increasingly expensive space, administrators must make three overall choices when strategizing their approach to cooling: how to design the physical space of



**Dell PowerEdge server cooling:  
Choose the cooling options that match  
the needs of you and your workloads**

The Dell server portfolio powered by AMD EPYC enables multiple, flexible cooling options to suit your business-critical workloads, including AI

As compute-intensive activities such as artificial intelligence (AI) workloads have continued to grow in prominence worldwide, so have data center power requirements. While server energy consumption has grown steadily, the power required to cool those servers to keep them from overheating and failing is also a big piece of the power cost puzzle. According to one McKinsey analysis, "Cooling accounts for some 40 percent of a data center's energy consumption," and "efficient cooling is therefore a crucial driver of a data center's profitability." While no single cooling solution is right for every situation, air cooling, liquid cooling, or a combination of innovative cooling technology all offer unique advantages.

Dell Technologies offers a wide range of cooling technologies to suit the needs of different organizations and workloads. By choosing new Dell PowerEdge servers powered by AMD EPYC processors, you also access unique innovations in air cooling and liquid cooling, with the option to configure the right cooling solution for your specific needs. In this paper, we review publicly available data to discuss the Dell portfolio of server cooling technologies, including rack and multi-rack cooling, and discuss various factors you might consider when crafting your approach to cooling.

Choose the right cooling solution for your servers with air, liquid, or a combination of innovative cooling technology	Monitor power usage to better control costs with OpenManage™ Enterprise Power Manager
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the data center, what systems to invest in solely for cooling (e.g., specialized in-row coolers), and what cooling technologies to choose inside the servers or racks themselves.”

The PT research report offers background on air and liquid cooling, and it highlights options in the Dell PowerEdge portfolio for each. It also notes which AMD EPYC processor-powered servers support which types of cooling, as well as which methods may work for specific use cases. The report concludes, “From traditional air-cooled servers including Dell Smart Flow configurations for less taxing workloads, to direct liquid cooling or innovative technologies that allow organizations to leverage the benefits of liquid cooling for GPU-dense AI workloads, the PowerEdge server portfolio is poised to help you meet the cooling demands of your data centers both today and into the future. By selecting a suitable cooling approach (or combination of approaches) from the Dell PowerEdge portfolio, you can successfully keep your data centers cool, ensure reliability, and minimize ongoing operating expenses related to cooling.

To learn more, read the report: <https://facts.pt/IXHKiNS>.

About Principled Technologies, Inc.

Principled Technologies, Inc. is the leading provider of technology marketing and learning & development services.

Principled Technologies, Inc. is located in Durham, North Carolina, USA. For more information, please visit [www.principledtechnologies.com](http://www.principledtechnologies.com).

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