PANDUIT®

Technology Brief

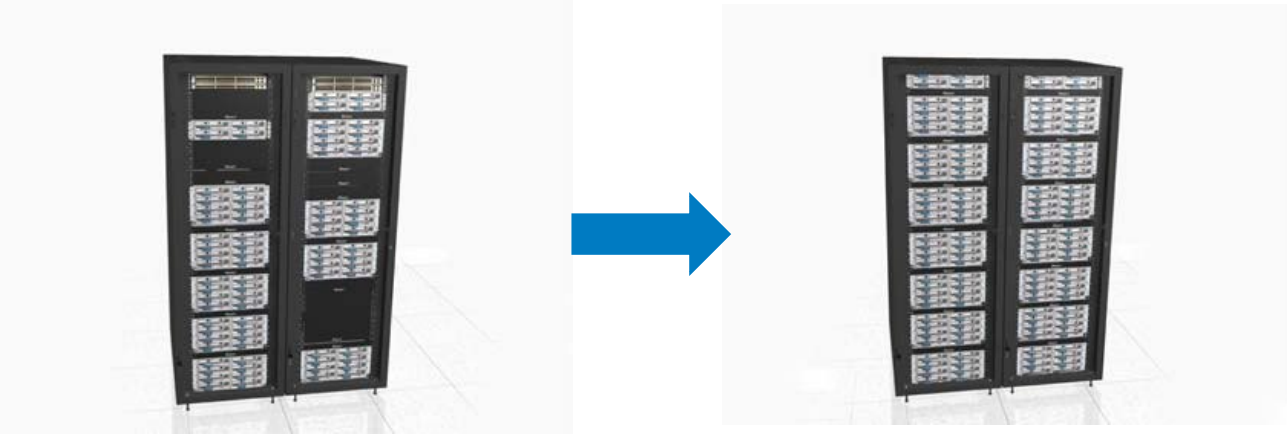
February 2026

Overhead Distribution Racks for the Deployment of Zone Distribution Areas

Overhead Distribution Racks Enable the Deployment of Zone Distribution Areas within the Data Center for Greater Scalability and Quicker Server Deployments

Increase Capacity Utilization and Reduce Capital Expense

Even though data center space is expensive, existing cabinet/rack space is typically not optimized. Gartner research indicates that actual compute space within racks/cabinets is underutilized, with average rack densities approaching only 50%.[1] Considering that the average cost for a single cabinet space is $4,900[2], optimizing the capacity within the cabinet or rack can add up to significant CapEx savings. If an average 45 RU server cabinet uses 22 RUs for patching and other devices, freeing that space for additional servers and reaching 100% cabinet utilization could save $2,450 per cabinet.[3]

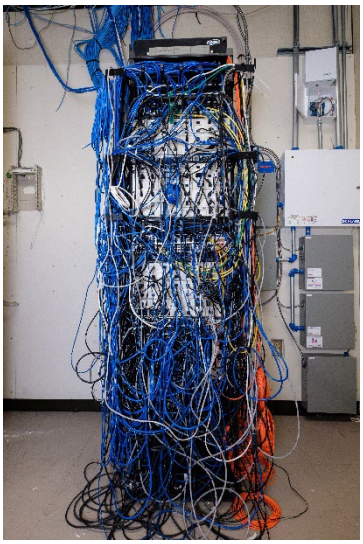


Typical

Ideal

Modular Data Center Infrastructure Can Speed Deployment and Reduce Downtime

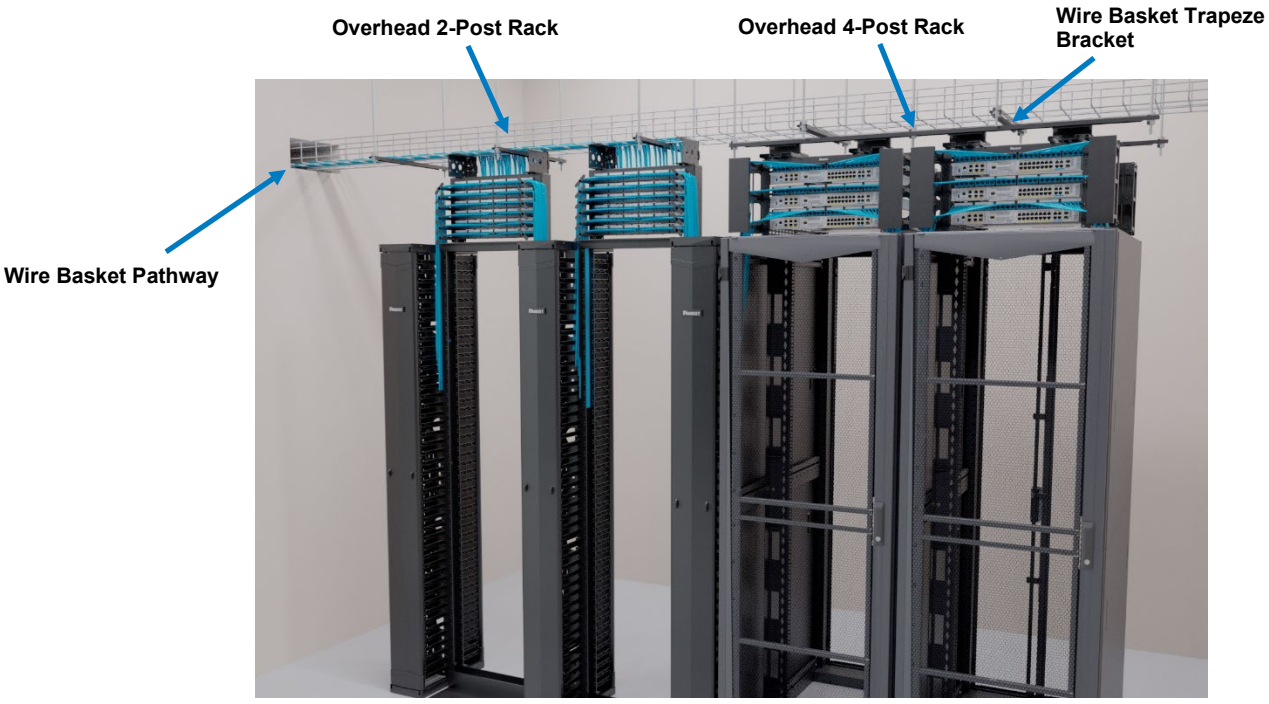
Rising labor costs and downtime are becoming increasingly expensive. For instance, Erwood Group research indicates the average downtime cost is $9,000/minute.[4] It can also take up to eight hours to install and cable up a populated cabinet. As a result, customers are increasingly utilizing an architecture that enables fully populated cabinets/racks to be rolled into an existing lineup.



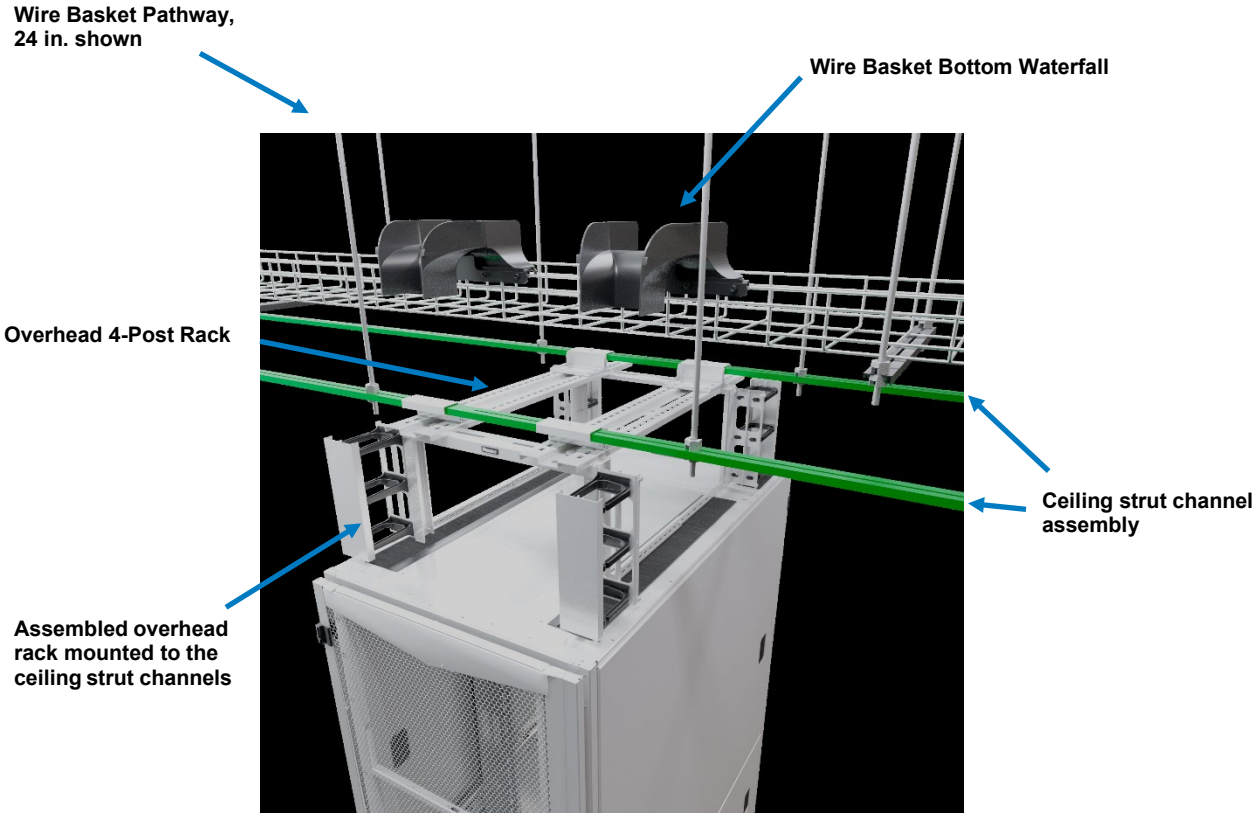


The Solution: Panduit Overhead Distribution Racks

2-Post and 4-Post Overhead Distribution Racks



4-Post Panduit Overhead Distribution Rack



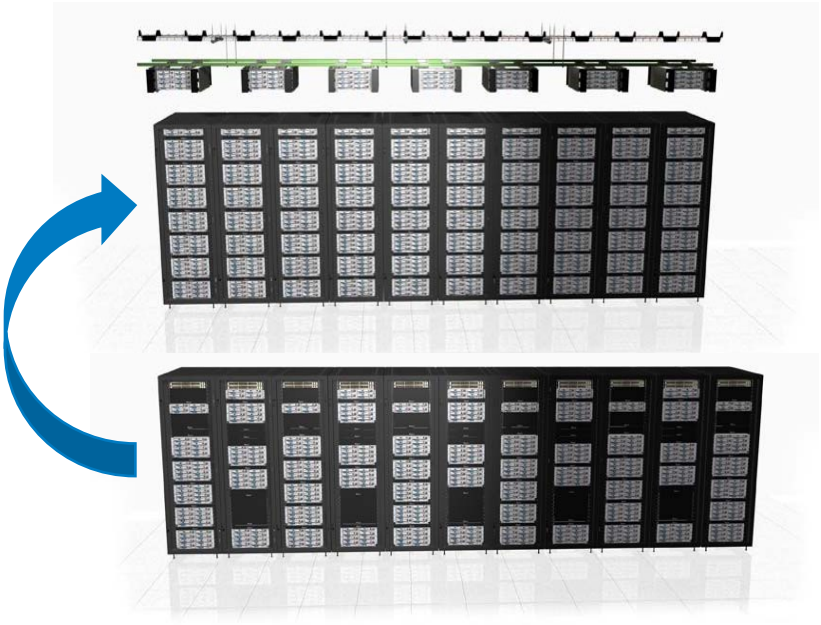
The Panduit Overhead 2-Post and 4-Post Racks are designed to be a practical overhead switching and patching solution for the data center. These overhead distribution racks allow maximum equipment utilization by placing server row switching and patching above the racks or cabinets.

Key Features and Benefits

- The 2-Post and 4-Post overhead distribution racks can be used in compact areas
- Multiple overhead racks can be mounted next to each other over a lineup of racks or cabinets for higher density and greater space utilization
- The overhead racks can be used to manage high-performance copper and fiber cables for greater application versatility
- For 4-Post overhead distribution racks, Vertical cable managers can be added for enhanced cable control and organization, reducing the time needed for moves, adds, or changes
- These modular rack systems are compatible with Panduit horizontal cable managers, facilitating simple, fast integration and reducing assembly and specification time
- The overhead racks are designed for use with FiberRunner® Pathway Systems and Wire Basket or ladder rack systems, facilitating simple, fast integration and reducing assembly costs.

The Benefit: Overhead Switching Increases Capacity Utilization and Reduces Capital Expense

For example, by using Panduit overhead racking and moving the ToR switching and patching into the overhead 2-Post Rack, an 11-cabinet or rack lineup can be reduced to ten. If 100% utilization of rack or cabinet RU space is realized, the cost of the one cabinet space is no longer needed, averaging $4900[2] can be saved.



The Benefit: Overhead Switching Increases the Speed of Deployment

Reports by Gartner reflect the growing realization that "The first two generations of data center designs are no longer appropriate for current and future needs. New data centers should be perceived less as a static structure and more as an agile, living organism that evolves as the server and storage infrastructure changes." In response, Gartner suggests operators should "Include flexible, modular, virtualized design principles in new data center designs.[5]

A modular data center facility separates some or all the core facility areas described earlier into discrete, prefabricated components assembled at the target location. Overhead switching infrastructure enables an approach that is more like the assembly of building blocks – where the right mixture and type of blocks, when assembled, produce an operational facility that meets the requirements of the customer or operator.

Rolling a pre-populated rack into place takes only several minutes and can save up to eight hours or $800 (assuming a $100 per hour rate in labor), in addition to system downtime.

Overhead 2-Post Rack and Accessories Ordering Information



PZLRB4U



PZBR3



CMVDR2

Part Number	Description
Overhead 2-Post Racks	
PZLRB2U	2 RU Overhead Distribution Rack
PZLRB4U	4 RU Overhead Distribution Rack
PZLRB6U	6 RU Overhead Distribution Rack
PZLRB8U	8 RU Overhead Distribution Rack
PZLRB2UWH	2 RU Overhead Distribution Rack (White)
PZLRB4UWH	4 RU Overhead Distribution Rack (White)
PZLRB6UWH	6 RU Overhead Distribution Rack (White)
Cable Bend Radius Post	
PZBR3	Zero rack space cable manager 3 in.
PZBR4	Zero rack space cable manager 4 in.
Accessories	
CMVDR2	Vertical D-ring is 2 RU. Overall depth (in.) 5.7

Overhead 4-Post Rack and Accessories Ordering Information



PZLRB4P6



PZLRB4P6LR



PZLRB4

Part Number	Description
Overhead 4-Post Racks	
PZLRB4P6	6 RU Overhead Distribution Rack
PZLRB4P6WH	6 RU Overhead Distribution Rack (White)
Vertical D-ring Manager	
PZLRB4P6LR	6 RU set of (2) 2.5" x 4.5" (64mm x 114mm) Vertical Cable Managers
PZLRB4P6LRWH	6 RU set of (2) 2.5" x 4.5" (64mm x 114mm) Vertical Cable Managers (White)
Accessories	
PZBR4	Bend Radius Post 4.0 in. (102mm)
CMPHF1	1 RU Horizontal Ring Manager 19" EIA
CMPH1C	1 RU Horizontal Manager Cover
CMPHF2	2 RU Horizontal Ring Manager 19" EIA
CMPH2C	2 RU Horizontal Manager Cover



CMPHF1



CMPH1C



CMPHF2



CMPH2C

Resources

1. "To the Point: A Simplified Approach to Building a Data Center TCO" by David Cappuccio, Gartner Research
2. "To the Point: A Simplified Approach to Building a Data Center TCO" by David Cappuccio, Gartner Research
3. Savings derived assuming 45 RU cabinets with 50% (22 RU) used for patching switching
4. "The True Costs of Downtime in 2025: A Deep Dive by Business Size and Industry" Erwood Group, June 16, 2025
5. The Data Center as a Living Organism: Why history is not a good guide to the future", by Rakesh Kumar and Philip Dawson, Gartner Research