Configuring IT Equipment Racks for Growing Healthcare Networks

A Vertiv Application Brief

VERTIV

Overview

With a host of new technologies entering healthcare to improve diagnostics and patient care, healthcare IT networks are having to expand to deal with more data and IT is being put in places it hasn't previously been. While there are multiple decisions to be made when planning expansions or upgrades to network infrastructure, one of the most basic is the rack system that will house the equipment. While technically simple relative to other infrastructure systems, proper attention to rack selection and configuration can contribute to improved equipment availability, manageability and serviceability.

The Challenges

The challenges related to specifying and configuring IT equipment racks can be successfully addressed through careful planning focused in the following areas:
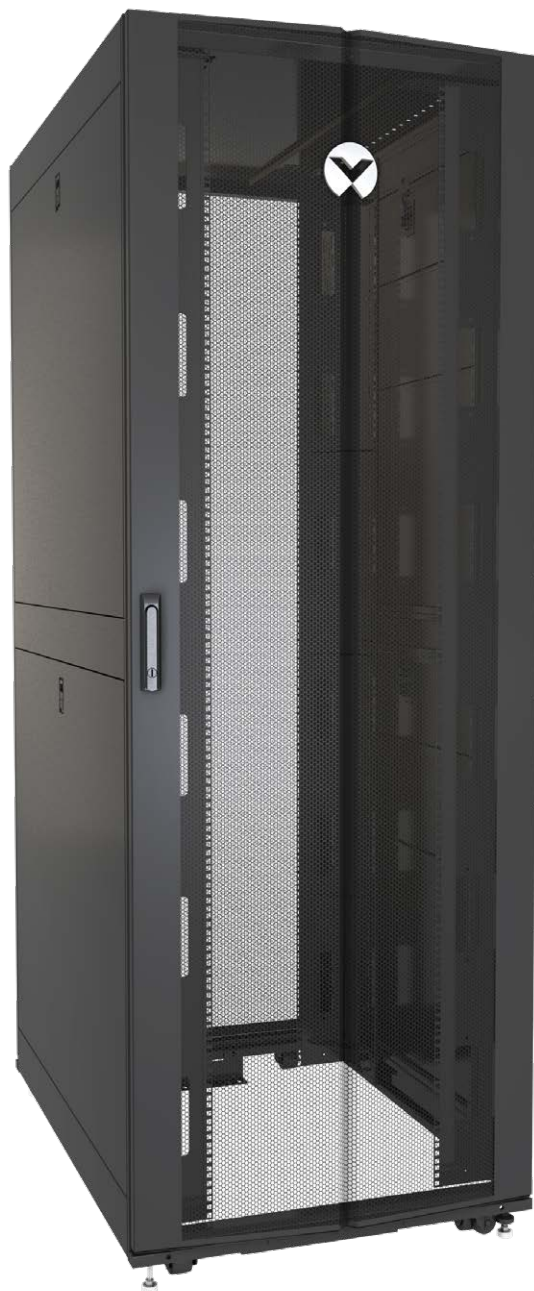
- **Sizing and Scalability:** Particularly in tight spaces such as network closets, it can be tempting to use a two-post rack, but that could limit scalability. Two-post racks can't support the same weight as a four-post rack. Also, be sure to consider all the equipment the rack must support, including UPS systems, external battery cabinets, rack-mounted cooling if required, gateways, switches, routers and servers.

- **Cable Management:** Poorly routed cables can complicate service, make it harder to add new devices and compromise airflow. Racks with integrated and customizable cable management capabilities can eliminate these issues. Also look for the flexibility to accommodate front or rear cable entry at the top of the rack.

- **Airflow:** For racks installed in closets or small rooms with a lockable door, consider deploying the rack in an open configuration that does not include a door. In environments where the rack must ensure the physical security of IT equipment, choose racks with a high percentage of perforation in the door to maximize airflow. Accessories that can enhance airflow and minimize recirculation can also help protect installed equipment.

- **Physical Security:** Protect IT equipment from unauthorized access with racks that feature lockable front and rear doors.

- **Serviceability:** While most IT equipment racks feature standard 19-inch mounting brackets, rack depths can vary. A couple of extra inches of depth can enhance serviceability and cable management as can features such as removeable top and side panels.

- **Easy installation:** Look for rack systems designed for easy set-up with side and top panels that enable tool-less, single-person installation.

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Vertiv™ Solutions

Vertiv offers a family of wall-mount cabinets and IT equipment racks that deliver the durability, ease-of-installation and extra features that simplify IT equipment deployment, management and service. Available in multiple sizes with a full range of cable and airflow management accessories, Vertiv solutions make it easy to tailor to your rack or cabinet to the exact requirements of your equipment and application.

Vertiv™ VR Rack

IT Equipment Racks

The Vertiv™ VR Rack handles up to 3,000 pounds of equipment and is available in sizes of 42U, 45U and 48U to supports a wide variety of equipment with scalability. With designed-in physical security, tool-less set-up and cable management, Vertiv VR racks come complete with doors, side panels, 19-inch EIA rails, full-length PDU-mounting and cable management brackets and installation hardware. The racks also feature a full complement of accessories that provide flexibility in how cables are managed and enable airflow through the rack to be optimized.

Key features include:

- **Perforated Doors:** Vertiv VR Racks feature a single 77% perforated, front door and a split 77% perforated, rear door to maximize airflow. The front door features lift-off hinges for easy removal and is field reversible.

- **Lockable Doors**: Front and rear doors are lockable with interchangeable handles for an added layer of security

- **Tool-less Cable Management:** Standard cable management is achieved using tool-less accessories on the vertical mounting rail or cable management brackets. In addition, the Vertiv VR Rack offers a complete range of cable management accessories that organize cables to minimize stress and enhance serviceability. Available accessories include horizontal cable mounting panels and side channels, vertical management kits, lobster claws and velcro strips.

- **Airflow Management:** Tightly packed racks or those in spaces such as closets and other small spaces, can benefit from the Vertiv VR Racks range of airflow accessories. Adding blanking panels to cover open spaces in the rack can promote proper airflow through equipment. You can also close gaps between the mounting rails and side panels with a recirculation kit.

- **Simple Cable Entry:** The top panel of the cabinet can be configured with removable openings for cable entry that can accommodate over 2000 Cat 6 cables, simplifying set up and supporting enhanced cable management.

- **High Weight Capacity:** The strong rack frame supports load capacities of up to 3,000 pounds static and 2,250 pounds dynamic to deliver the scalability growing healthcare networks require.

- **Usable Depth:** The Vertiv VR Rack frame offers more usable depth compared to other racks, enabling easier cable management and service.

- **Integrated Rail Alignment:** Guides on the rack frame enable the 19-inch rack rails to be accurately positioned without measurement for faster installation.

- **Shelves and mounting hardware:** Select from a range of optional shelves, brackets and mounting hardware to support heavy loads or accommodate peripherals.

- **Shock Packaging:** Vertiv VR Racks are available with shock packaging that enables racks to be shipped fully integrated with 2,000 pounds of items like UPS, PDU and IT equipment for plug-and-play installation.

- **TAA Compliant:** TAA compliant Vertiv VR Racks are available in a variety of sizes.

Vertiv™ Racks and Wall-Mount Cabinets

	Vertiv™ VR Rack
Type:	Floor Standing
U Space	42, 45, 48
Dimensions	H: 78.6" 83.9", 89.7" W: 23.6", 31.5" D: 43.3, 47.8"
Load rating (Lbs)	3,000 static, 2,250 dynamic, 2,000 with shock packaging

Vertiv Partners Are Ready to Help

Vertiv offers critical infrastructure technologies and edge solutions to meet the needs of healthcare providers.
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