

TELECOM AND IT INFRASTRUCTURE SOLUTIONS

Network Infrastructure as Dynamic as Your Business



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Telecom and IT managers are realizing the value of using a single-source provider for integrated and complementary solutions. This approach results in improved reliability and scalability, quicker deployments, optimized troubleshooting, and reduced cost whenever and wherever needed. Telecom and IT infrastructure solutions from Vertiv™ deliver purposefully designed and meaningfully integrated hardware, software, and services that enable your network infrastructure to be as dynamic as your business.

Vertiv specializes in providing telecom and IT services to wide range of end users and service providers. Whether it is cable providers, local network operators, long distance carriers, or advanced data management companies, we have a solution for your network infrastructure.

Vertiv provides engineering, furnish and installation (EF&I), project management services to telecom and IT service providers, including specialized custom built cabinet solutions and equipment test and turn up.

Our wide range of expertise and experience in data centers and telecommunication networks allow us to support projects that require diverse types of equipment from multiple industry suppliers.

Contact us today to determine how we can assist you.

Email: ESNA.FieldService@Vertiv.com or call 1.800.800.1280 option 7

Our solutions enable your telecom and IT infrastructure to be:



Highly Available

So you can rely on your network when crises arise



Rapidly Deployable and Scalable

In order to minimize cost and effort to deploy your network



Easy to Troubleshoot

To help you identify and resolve problems faster



Safe and Compliant

To ensure operational safety and adhere to local standards

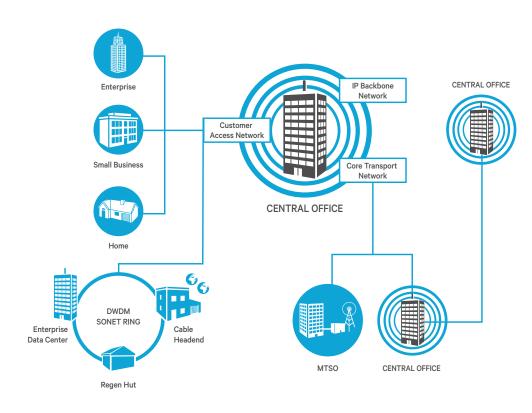


Economical and Efficient

To help you manage capital expense and run more efficiently

Communications Network Elements

Vertiv engineers, installs, connects and commissions DC power and network/IT equipment in a wide array of core facilities. Our engineering experts are familiar with an extensive array of communications infrastructure and can readily support any type of network/IT equipment. Our experience has taken us into all types of facilities including central offices, video headend offices, mobile telephone switching offices (MTSOs), data centers and enterprise corporations.





KEY FEATURES

We have access to all major ILEC/IXC electronic databases and adhere to customer specifications or Telcordia GR1275 standards.

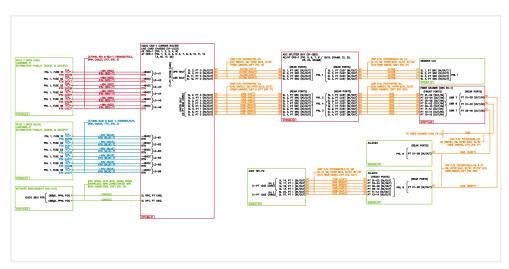
Our wide array of services include:

- Capacity and site planning.
- Core office and remote facility design and engineering.
- Infrastructure planning.
 - Floor plans with cable tray/rack and fiber duct layout.
 - · Equipment rack layout.
 - Intra-bay and inter-bay AC /DC power, copper & fiber optics signal cable connectivity drawing.
- Complete bill of material (BOM) for hardware installations including:
 - Cable trays/racks.
 - Fiber duct systems.
 - Equipment racks and cabinets.
 - Power systems.
 - Copper and fiber optic signal cables.
- Engineering specifications and/ or method of procedure (MOP) with detailed installation instructions for field technicians.
- Test and turn up procedures.
- Preliminary IP configuration of network servers and equipment.

Engineering and Design

When you rely on Vertiv for installation engineering assistance, you determine the necessary skill set and level of Vertiv involvement you desire. Vertiv designs solutions to the needs and requirements of your network. We provide qualified specialists in all aspects of telecom and IT infrastructure, as it relates to your specific environment.





Single-line diagram of intra-bay and inter-bay cable connectivity

KEY FEATURES

Your rack cabling systems are the lifelines of your IT operations. Optimized cable management can enhance your operations:

- Reduced signal interference
- Improved maintenance and serviceability
- Cooler performance
- A roadmap for growth

Read the white paper for more information:

"Applying Proper Cable Management In IT Racks: A Guide For Planning, Deployment And Growth" at **VertivCo.com**

Installation Services

Vertiv offers industry leading experience and resources to proficiently and cost effectively install network infrastructure facilities and equipment. Our field installation team is deployed globally, providing local knowledge and quick response to project requirements.

We offer a variety of options to ensure the project is completed and tested per engineering specifications. All installation services include an inventory of customer supplied equipment and installation material provided by Vertiv.

We are ready to support all types of telecom and IT infrastructure installations:

Infrastructure Build Out

Including overhead or under raised flooring

- Support structure/frame work
- Installation of fiber duct system
- Installation of cable tray/racks

Equipment Racks/Cabinets

Mounting, hardware and connectivity

- Equipment mounting.
- OEM hardware including.
 - AC/DC power distribution equipment.
 - Fiber optic distribution bays.
 - Copper patch bays (DS3/CAT5e/6/6A).
- Intra and inter-bay cable connectivity
 - Grounding.
 - Copper signal cabling.
 - Fiber optics signal cabling.
 - AC/DC power cabling.

Cable Management and Routing

Within and outside the rack or cabinet

- Identification of each cable with labeling them at both ends with near & far end information (rack ID, slot, port etc.) and all equipment ID labeling.
- Copper and fiber optics (Tier-1 & Tier-2) signal cable testing for signal integrity & providing cable test records
- Fiber testing to NETA section 7.25 standards.
- Power/turn up of all equipment.
- Acceptance testing & commissioning of the system to customer's expectations.





KEY FEATURES

We provide:

- A single point of contact to the customer for the project
- Management of all aspects of the project from beginning to end including engineering, material logistics, installation, acceptance testing and commissioning, customer acceptance.
- Multi-vendor collaboration.



Project Management

Whether the installation is a single rack of equipment or a complete office build-out, all projects are managed to assure all aspects –engineering, materials and installation – are coordinated to meet the project timeline. Our project management team will supervise all Vertiv and subcontracted personnel. We ensure quality installation of all Vertiv and auxiliary equipment and conformity to the engineered design, as well as customer specific, regulatory and industry standards.

Vertiv's team of project managers is focused on meeting customer expectations for turnkey solutions from project inception through job completion. Total customer satisfaction is our measurement of success.

Custom Build

Vertiv provides rack and stack service to our customers. Our expert team of technicians delivers full turn-key solutions in custom build services, including material management, inventory, engineering and installation.

Documentation for our custom build services include the creation of the equipment layout, the intra-bay cable running list and connectivity drawing, a bill of materials, and the standard methods of procedure (MOP) or engineering specifications.

We also prepare a detailed inventory of customer provided equipment and hardware, as well as Vertiv-supplied installation materials.



- Installation covers mounting the equipment, grounding the equipment and terminating the power leads o f the equipment to an internal power source (fuse and alarm panel within the cabinet).
- Installation of intra-bay cabling including copper and fiber optics signal cabling with proper cable management.
- IP configuration of network/IT equipment.
- Performing detail quality checks and powering up equipment to ensure proper operation.
- Packaging and shipping of the custom built cabinets to the customer specified location.

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Engineering and installation services from Vertiv encompass all aspects of creating the most reliable, cost-efficient communications network possible. Ranging from site planning to test and turn-up, our experience and dedicated approach to providing turnkey solutions will compliment your business investment.

Vertiv has vast experience servicing and deploying a wide range of telecom and IT equipment from major industry manufacturers.

Rest assured, our engineering and installation skill set is always growing. We continuously add new capabilities and competencies in order to service and support your evolving network infrastructure.





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