



# Vertiv™ Service and Software Solutions Capability

## About Vertiv™

Vertiv brings together hardware, software, analytics and ongoing services to ensure its customers' vital applications run continuously, perform optimally and grow with their business needs. Vertiv solves the most important challenges facing today's data centers, communication networks and commercial and industrial facilities with a portfolio of power, cooling and IT infrastructure solutions and services that extends from the cloud to the edge of the network. Headquartered in Columbus, Ohio, USA, Vertiv employs around 20,000 people and does business in more than 130 countries. For more information, and for the latest news and content from Vertiv, visit [Vertiv.com](http://Vertiv.com).

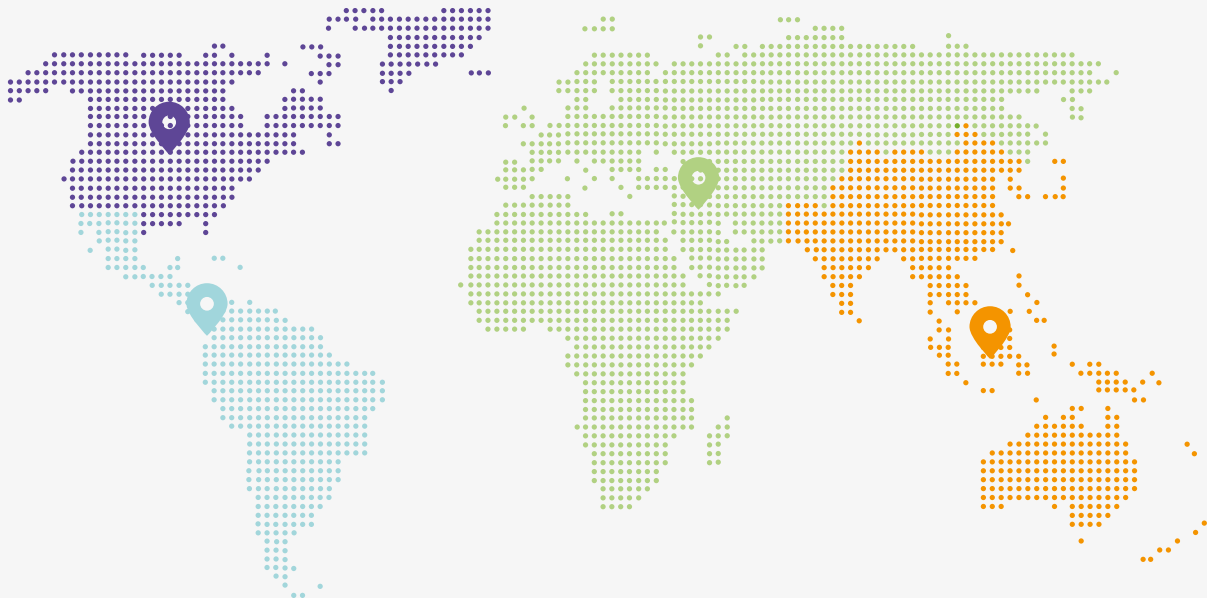
### OUR PURPOSE

We believe there is a better way to meet the world's accelerating demand for data - one driven by passion and innovation.

### OUR PRESENCE

#### GLOBAL PRESENCE

Manuf. and Assembly Locations **19**  
Service Centers **270+**  
Service Field Engineers **2,700+**  
Technical Support/Response **330+**  
Customer Experience Centers/Labs **17**



#### US AND CANADA

Manuf. and Assembly Locations **7**  
Service Centers **120+**  
Service Field Engineers **850+**  
Technical Support/Response **120+**  
Customer Experience Centers/Labs **4**



#### LATIN AMERICA

Manuf. and Assembly Locations **1**  
Service Centers **20+**  
Service Field Engineers **300+**  
Technical Support/Response **25+**  
Customer Experience Centers/Labs **2**



#### EUROPE, MIDDLE EAST AND AFRICA

Manuf. and Assembly Locations **5**  
Service Centers **70+**  
Service Field Engineers **600+**  
Technical Support/Response **95+**  
Customer Experience Centers/Labs **6**



#### ASIA PACIFIC

Manuf. and Assembly Locations **6**  
Service Centers **60+**  
Service Field Engineers **950+**  
Technical Support/Response **90+**  
Customer Experience Centers/Labs **5**

## Service and Software Solutions Offering

Guarantee continuity to your business activities with a service partner who stands by you throughout your critical equipment lifecycle. From product delivery and installation to its remote and direct maintenance Vertiv ensures your equipment runs at optimal performance.



Proactive equipment maintenance reduces downtime and extends equipment life which in turn maximizes return on investment and increases system availability.

Vertiv supports any application with an extensive service offering including installation, start-up, commissioning, maintenance, replacements, 24/7 remote monitoring and diagnostics and much more. Our remote diagnostics and preventive monitoring LIFE Service is adding value providing actual information to take decisions, as it allows early detection of anomalies and immediate reaction in case of alarms.

### Local Resources

With the broadest, most comprehensive service presence in the industry and more than 600 Customer Engineers dedicated to servicing Europe, Middle East and Africa, Vertiv ensures that your business is always protected and that Vertiv Service is available whenever needed 24 hours a day.

### Prompt Response

An extensive supply of critical parts ready for deployment allows Customer Engineers to respond to requests in record time, guaranteeing a premium first-time fix-rate in the unlikely event of a fault.

### Expertise & Training

Vertiv service engineers are trained, experienced professionals who undergo an average of one week of intensive training each quarter, totalling one month of full-time training per year. All service engineers are certified according to country specific as well as wider European and international regulations and standards.

### Service Programs

Regular service of critical equipment guarantees uptime and reduces its total cost of ownership.

A service program ensures timely and proactive maintenance avoiding unexpected, costly equipment downtime and granting optimal equipment operation. Vertiv service programs cover all technologies and can be tailored to suit individual business needs.

## Vertiv™ Servicing Critical Applications

### Multi-Technology Service Capabilities



#### AC Power Services

- Increased system availability
- Commissioning and site acceptance
  - Preventive maintenance
  - Emergency services
  - On-site repair capabilities
  - Upgrades and replacements
  - Assessments and testing
  - Power distribution unit testing and maintenance.



#### Battery Maintenance & Replacement Services

- Preventive maintenance inspection and testing follows industry recognized standards, OEM specifications and requirements
- Battery load testing
  - Battery health testing using Impedance, internal resistance or conductance - reliable and safe testing of battery aging status
  - Full string replacements
  - Expert installation of new cells
  - Battery monitoring
  - Certified disposal of used batteries
  - Lubrication and torque checks
  - Thermography.



#### Thermal Management System Services

- Optimized system performance
- Commissioning and site acceptance testing
  - Preventive maintenance
  - Emergency services
  - On-site repair capabilities
  - Upgrades and replacements
  - Assessments and testing.



#### ATS & DC Power Services

- Increased system availability
- Preventive maintenance
  - Emergency services
  - Power plant, battery and equipment inspection
  - Rectifier redundancy and battery reserve-time calculation
  - Site and grounding audits
  - Load sharing analysis
  - Voltage drop and excessive heat inspection
  - Thermography
  - Lubrication and torque checks.



#### Generator Services

- Ensuring optimum system performance and reliability
- Preventive maintenance including system cooling, air intake, fuel storage and delivery systems
  - Emergency call out
  - Control function checks
  - Repair and upgrade programs
  - Single and multiple set testing
  - Load bank and integrated building tests.



### SOFTWARE SOLUTIONS: VERTIV™ TRELLIS™ CRITICAL INSIGHT

Trellis™ Critical Insight is a powerful web-based building and site monitoring platform with software tools to manage energy conservation projects, identify key operational problems and analyze the results. The platform supports major communications protocols, including Modbus® and SNMP to allow sharing data with enterprise or third-party systems to accomplish a range of tasks. It allows them to understand their facility operations and analyze the results.

## Implementation Services



### Project Services

Better and quicker bid accuracy, cost tracking and saving

- Project management
- Positioning & Installation, waste management
- Construction works
- Electrical & Thermal works
- Integrated Site Acceptance Testing, plant certification.



### Installation, Start Up & Commissioning

Complete turnkey capability

- Factory trained experts carry out professional installation
- Installation and pre-power checks
- Optimized hardware and software configurations
- Operational and functional testing.

## Restoration Services



### Spare Parts

Delivering the fastest system recovery

- Extensive availability of spare parts
- Access to captive spare parts
- 24-hour express delivery.



### 24/7 Emergency Service

Response and resolution for minimized downtime

- Factory trained expert engineers available 24/7
- Guaranteed on-site response time.

## Digital Services



### Vertiv LIFE™ Services Remote Diagnostics

Maximized system availability via real-time diagnosis and resolution of operating anomalies

- 24-hour monitoring and service delivery by expert engineers
- Monitoring and trending of system data
- Diagnosis through expert data analysis allowing effective proactive maintenance and prevention of future anomalies
- Prompt alarm identification and resolution
- Alarm notification
- On-site corrective maintenance dispatching
- Customer reporting.



### Remote & Site Monitoring Services

System-wide monitoring solutions

- Phone or Email 8x5 or 24x7r help desk support by expert engineers
- Remote monitoring for proactive identification of anomalies
- Remote battery testing
- Alarm management
- Equipment optimization advice
- 24/7 customer access via internet
- Third party equipment integration
- Customized reports.

## Optimization Services



### Infrastructure Assessments

Complete infrastructure audits and assessments maximize system availability and enhance data center efficiency

- Airflow, heat and power assessments
- Temperature measurements
- Floor plan layout
- Thermography
- Reporting
- Recommendation.

### Upgrades & Retrofits

Increased infrastructure life and optimized energy efficiency

- EC Fans enhance energy savings on installed equipment
- Vertiv ICOM Control enables communication capabilities of multiple units
- Programmed fan and capacitor replacements extend UPS service life.

## Training



### Customer Learning Programs

- We offer business-specific programs that cover our technologies, focusing on our customers' newly purchased equipment
- Training sessions are carefully planned to cover training needs that are mapped and prioritized with management teams
- In order to enhance and maximize learning transfer, we adopt different learning methodologies to essentially help our students make the most of the specific tools available for each course.

## EXPERT TRAINING

Accelerating our learning and developing new knowledge and new skills becomes crucial to maximise our impact and the way we can support change. Even more so in today's world, characterized by high-speed changes which may become disruptive for companies if not managed correctly. The Academy accompanies you throughout change and helps you govern it.

Our Customer Engineers are trained by the Vertiv Academy. The Academy is dedicated to ensuring that engineers strengthen and maintain their technical skills, knowledge, and know-how, increasing their existing expertise with relation to product life-cycles, commissioning, maintenance and field-based incident resolution.

## Service Contract Portfolio

The most comprehensive insurance for business protection can be obtained with a service contract. Vertiv's complete range of services provide customers with service agreements tailored to meet individual business needs.

Vertiv's service offering ensures that customers can rely on continuous system availability, increased uptime, fast downtime recovery, minimized operating costs and maximized return on investment, while entirely taking care of their applications.

WARRANTY CONTRACTS		
WARRANTY LIFE	PREMIER WARRANTY	PREFERRED WARRANTY
	 <b>Preventive Maintenance</b> Fixed number of visits per year to ensure continuous and optimal equipment performance	 <b>Preventive Maintenance</b> Fixed number of visits per year to ensure continuous and optimal equipment performance
	 <b>Response Time</b> If an anomaly occurs, CE visit is granted within known and established amount of time	 <b>Response Time</b> If an anomaly occurs, CE visit is granted within known and established amount of time
 <b>Vertiv LIFE Services</b> Remote Diagnostics and preventive monitoring for AC Power and Thermal Management equipment	 <b>Vertiv LIFE Services</b> Remote Diagnostics and preventive monitoring for AC Power and Thermal Management equipment	

## AFTER WARRANTY CONTRACTS



### BASIC



#### Preventive Maintenance

Fixed number of visits per year to ensure continuous and optimal equipment performance



#### Response Time

If an anomaly occurs, CE visit is granted within known and established amount of time



#### Labour Included

The cost of labour is included, no extra cost

#### Optional

##### Vertiv LIFE Services

Remote Diagnostics and preventive monitoring for AC Power and Thermal Management equipment



### ESSENTIAL



#### Preventive Maintenance

Fixed number of visits per year to ensure continuous and optimal equipment performance



#### Response Time

If an anomaly occurs, CE visit is granted within known and established amount of time



#### Labour Included

The cost of labour is included, no extra cost

#### Optional

##### Vertiv LIFE Services

Remote Diagnostics and preventive monitoring for AC Power and Thermal Management equipment



### PREFERRED



#### Preventive Maintenance

Fixed number of visits per year to ensure continuous and optimal equipment performance



#### Response Time

If an anomaly occurs, CE visit is granted within known and established amount of time



#### Labour Included

The cost of labour is included, no extra cost



#### Parts Included

All parts included except EOL components and consumables

#### Optional

##### Vertiv LIFE Services

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### PREMIER



#### Preventive Maintenance

Fixed number of visits per year to ensure continuous and optimal equipment performance



#### Response Time

If an anomaly occurs, CE visit is granted within known and established amount of time



#### Labour Included

The cost of labour is included, no extra cost



#### Parts Included

All parts included except EOL components and consumables



#### Vertiv LIFE Services

Remote Diagnostics and preventive monitoring for AC Power and Thermal Management equipment

