







We design, build and service mission-critical technologies for:

- Data centers
- Communication networks
- Commercial and industrial applications

We support today's growing mobile and cloud computing markets with a portfolio of power, thermal and infrastructure management solutions.

We offer unsurpassed global scale and broad expertise, built from our heritage as Emerson Network Power.

And now as Vertiv, we match industry leadership with the focus and spirit of a startup.

Your Vision. Our Passion.

## **DATA CENTERS**

Micro, Edge, Cloud, Enterprise, Prefab, Colo, Hyperscale

### Legacy of reliability and innovation

Our depth of knowledge and a breadth of reliable, innovative products is unmatched in the industry.

### Intelligent, integrated controls and solutions

Our fully loaded, integrated solutions are customized to your needs, standardized across your sites and easy to monitor and manage, optimizing your network from core to edge. Our solutions ensure efficiency and optimized performance.

### **Activating data-driven management**

Our scalable, flexible solutions deliver visibility and control across your network's physical infrastructure – whether it's a point solution, or a more holistic DCIM solution.

#### World class service

Our global service organization is located in every world region equipped to handle the toughest challenges.



# COMMUNICATION NETWORKS

**Small Cell, Macro Sites, Central Office, Data Center** 

### Proven innovation you can trust

Our solutions deliver intelligent network visibility and management capabilities with flexible power architectures that support solar, wind and hydrogen fuel cells to deliver efficient, highly available power in core and access sites in any environment.

### **Fast, turnkey solutions**

Wire-to-wire support for all of your network needs. Providing the critical infrastructure – power protection, thermal management, and software controls. We install and commission site solutions and provide industry-leading preventive maintenance, warranty, repair, site assessments, performance optimization and other life cycle services.

### Intelligence for seamless operations

Technology platforms rely on software defined networks (SDN) and network function virtualization (NFV) to effectively and efficiently leverage computing power and assets. We're on the leading edge of SDN and NFV technology development and have an unmatched understanding of these converged, software-defined and virtualized environments.



# COMMERCIAL AND INDUSTRIAL

Healthcare, Rail, Transportation, Power Generation, Oil and Gas

### Delivering safe, reliable and efficient power

Our industrial systems meet the harshest electrical and mechanical conditions in industrial environments, with proactive service plans that minimize downtime and avoid expensive emergency repairs.

### Global perspective, local knowledge

With teams and facilities around the world, we have the expertise to design, build, equip and service your facilities – wherever they may be. Our comprehensive array of site-level services ensure the highest level of productivity, efficiency and reliability.

### Streamlined and simplified for safety and compliance

Our industrial-grade infrastructure systems safely deliver best-in-class availability with innovative technologies designed to improve energy efficiency, reduce consumption and navigate environmental regulations around the world.



### **WHO WE ARE**





**EMPLOYEES** 

~18,000



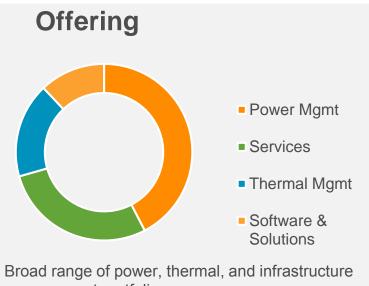
# **CUSTOMERS INCLUDE**

America Movil, Apple, AT&T, China Mobile, China Tower, Ericsson, Facebook, Microsoft, Reliance, Verizon, Walmart

**MANUFACTURING SITES: 20** 

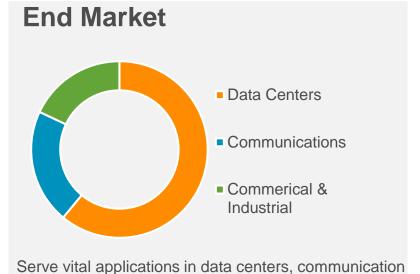
**ENGINEERING CENTERS: 15** 

**OPERATIONS: 50 COUNTRIES** 



management portfolio

# Geography Americas EMEA AP Global, well-established footprint and supply-chain network



networks, and commercial/industrial environments

NOTE: FY '17E revenue excluding ASCO



### **OUR FLAGSHIP BRANDS**

### We're a brand-new company that's also an established industry leader









### **Chloride®**

Our global industrial power solutions meet the most demanding technical specifications and provide safe, reliable power – no matter the challenge

### Liebert®

Our global power and thermal management solutions are some of the world's most efficient and reliable power and cooling technologies

### NetSure™

Our global intelligently engineered DC power systems deliver high availability, energy efficiency and scalability for converged networks

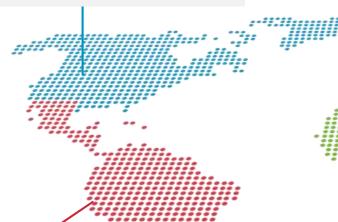
#### Trellis<sup>™</sup>

Our industryleading software gives customers an integrated view of operations across IT and facilities resources, enabling better decisions that save time and money

# **OUR GLOBAL PRESENCE**

US and Canada		
Manuf. and Assembly Locations	13	
Service Centers	<b>80</b> +	
Service Field Engineers	965+	
Technical Support/Response	145+	
<b>Customer Experience Centers/Labs</b>	5	

WORLDWIDE	
Manuf. and Assembly Locations	28
Service Centers	255+
Service Field Engineers	3,135+
Technical Support/Response	415+
<b>Customer Experience Centers/Labs</b>	14



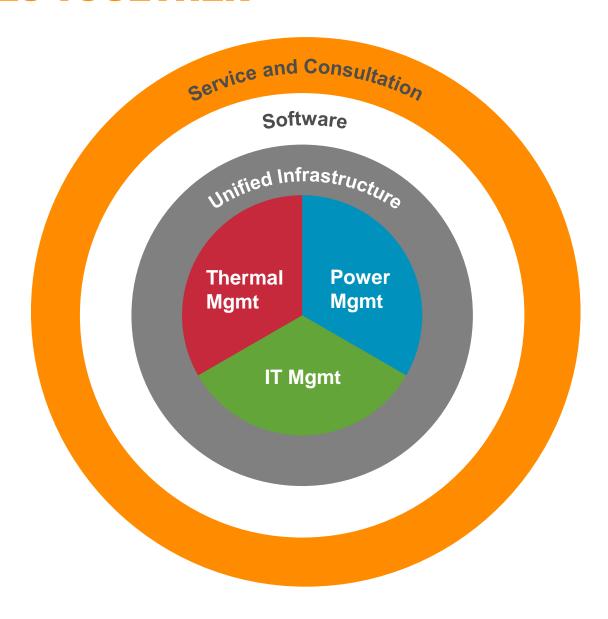
Latin America		
Manuf. and Assembly Locations	1	
Service Centers	7	
Service Field Engineers	350	
Technical Support/Response	60	
<b>Customer Experience Centers/Labs</b>	2	

Europe, Middle East and Africa	
Manuf. and Assembly Locations	9
Service Centers	60+
Service Field Engineers	535+
Technical Support/Response	100+
<b>Customer Experience Centers/Labs</b>	4





# **HOW IT ALL COMES TOGETHER**





# **CORPORATE VIDEO**



# TECHNOLOGIES AND SERVICES: THERMAL MANAGEMENT

### **VERTIV CAPABILITIES**

# A complete line of energy-efficient and reliable technology

- Perimeter, in-row and high-density cooling
- Freecooling chillers, heat rejection and economization
- Evaporative freecooling
- Custom air handling solutions
- Small systems for edge applications, small computer rooms and network closets
- Modular Smart Solutions to add capacity with IT growth

# Controls to optimize efficiency and uptime

- Unit and supervisory controls with machine to machine communication and real-time monitoring
- Advanced algorithms for system auto-tuning, energy optimization, and capacity management



# **VERTIV CAPABILITIES**



Perimeter Cooling



In-Row Cooling, SmartAisle<sup>™</sup>



Freecooling Chillers



Evaporative Freecooling



iCOM <sup>™</sup> Controls

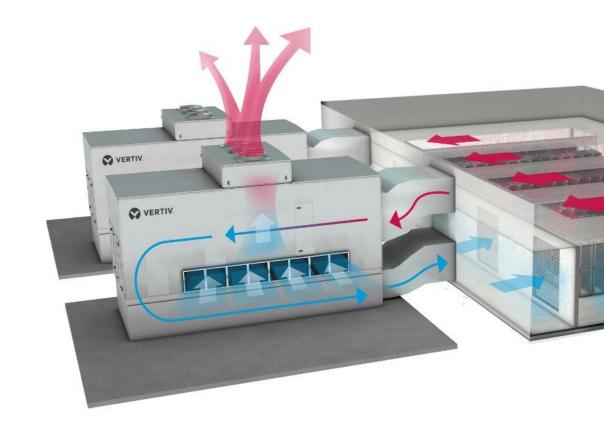
# THE VERTIV DIFFERENCE

# Unmatched efficiency and reliability for mission-critical applications

- We deliver the highest level of protection and uptime
- Industry-leading efficiency levels (Power Usage Effectiveness as low as 1.1)
- Up to 50 percent lower capital and operating costs
- Industry-leading, awardwinning technologies

# Deep design and application knowledge

- We partner with each customer to develop and deploy solutions that best meet their needs
- Intelligent, self-optimizing solutions that enable customers to spend less time managing cooling and more time managing their facilities



# **CUSTOMER SPOTLIGHT: GREEN HOUSE DATA**

### **Customer Need**

Dramatically reduce energy consumption for a 35,000-square-foot,
 5-megawatt data center

### **Solutions**

- Four 300kW Liebert® Indirect Evaporative Freecooling Systems, optimized for low operating cost
- iCOM™ Controls for multi-unit teamwork with superior efficiency and control

### **Benefits**

- Up to 64.5 percent energy savings compared with average data center
- Site Power Usage Effectiveness down to 1.14
- Maximized sellable square footage



"The Liebert air handlers allowed us to avoid building a central cooling plant, they matched our modular build design, which is important for both environmental and capital efficiency, and they enabled us to more tightly control the data center temperature and humidity."

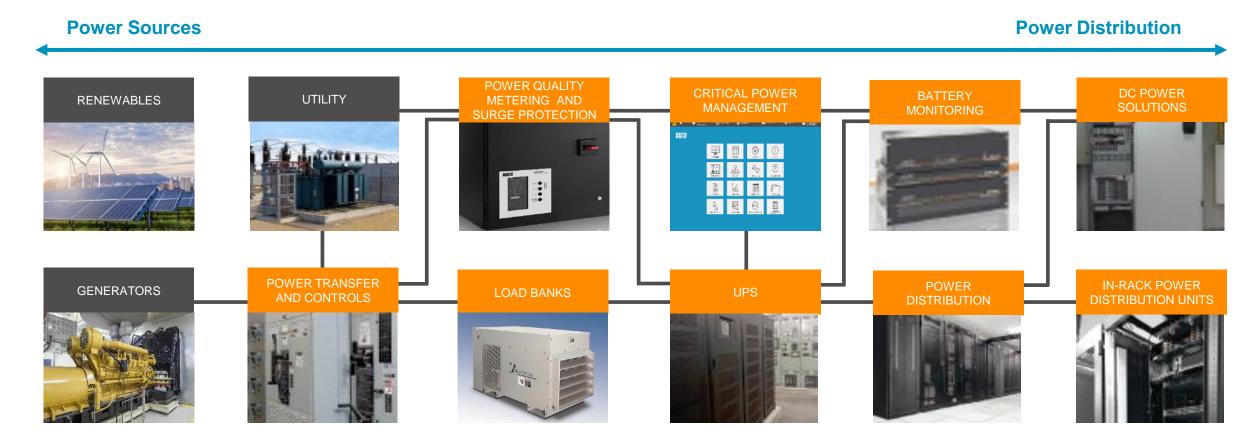
Chief Technology Officer,
 Green House Data





# TECHNOLOGIES AND SERVICES: POWER MANAGEMENT

# **VERTIV CAPABILITIES**



**Critical Infrastructure Services** 

Project, Maintenance and Performance services for Data Center, Communication Networks and Industrial Markets

# THE VERTIV DIFFERENCE

Comprehensive range of power solutions for data centers, communications networks, commercial and industrial networks



Industry leader in safe and reliable power solutions for heavy-duty, data center and Edge of Network applications



Complimented by our full software suite and global service organization



# THE VERTIV DIFFERENCE

### **Chloride**®

Industrial power systems can improve uptime, while providing maximum availability

## **Liebert**®

AC power systems can improve uptime and support customer service level agreements, while providing maximum efficiency

### NetSure™

DC power
management
platform can
reduce costs and
simplify power
architecture,
while providing
maximum
availability



# CUSTOMER SPOTLIGHT: GLOBAL FINANCIAL SERVICES

#### **Customer Needs**

- Centralized power and energy management for North American facilities
- Real-time visualization, control automation, power quality analytics, event logging, email alerting and automated reporting
- Flexible vendor-agnostic approach to enable complete integration and insight of entire critical infrastructure

#### **Solutions**

- ASCO® including critical power management, bypass transfer switches, power control switchgear, load banks
- Liebert® including multi-module uninterruptable power supply systems and static transfer switches
- Alber® battery monitoring system

#### **Benefits**

- Increased operational efficiency by centralizing critical power management and expertise
- Fully automated control of utility and emergency power system reducing risk of overloading emergency generators and UPS
- Improved understanding of current and future capacity demands reducing or eliminating wasteful infrastructure build-outs

Increased the customer's operational efficiency by centralizing critical power management and control.



# TECHNOLOGIES AND SERVICES: IT MANAGEMENT

## **VERTIV CAPABILITIES**

# Remote data center access and management

- Centralized, secure access at any time, to devices and content from any location or vendor – in traditional data centers and Edge applications
- Rack based back up power and power distribution

# Control room solutions

- Reliable, real-time access to highresolution content across multiple systems
- Rack based back up power and power distribution

# Desktop productivity and security

- Solutions to enable desktop access to multiple systems with a single keyboard and mouse
- Rack based back up power and power distribution



# **VERTIV CAPABILITIES**



Serial Console



Consolidated Management Appliance



High Performance KVM



Desktop Secure KVM and KM



Management Software

## THE VERTIV DIFFERENCE

**Vertiv is the leader in IT Management.** Its portfolio is unmatched for remote data center access and control and rack power. The portfolio spans devices and software and is supported by cutting edge services.

Vertiv IT Management products and services make it not only an outstanding performer in the traditional data center but its portfolio is uniquely positioned to deliver outstanding performance in Edge applications.



### The Vertiv IT Management portfolio benefits customers by:

- Improved performance with an ecosystem of IT Management products
- Easy and efficient monitoring and controlling through a single interface
- Automated analysis and closed loop actions with IoT functionality
- Enabling the simplicity of sourcing from a single supplier

# **CUSTOMER SPOTLIGHT: MAJOR NATIONAL BANK**

#### **Customer Needs**

- Standardize the IT infrastructure in a new acquisition (bank branches)
- Remote data center access and management and rack power
- Simplify their buying process (buy from one supplier)

### **Solutions**

- Sourcing the entire IT management suite of products from Vertiv
- Phase 1: UPS (GXT4)
- Phase 2: Serial Console (ACS) and Cradlepoint wireless module, PDU (MPH2), UPS (GXT4)

#### **Benefits**

- Standardized infrastructure across all branches
- Consolidated and simplified management
- Sourced and supported from one supplier Vertiv

Standardized infrastructure across all branches that supports consolidated and simplified management.



# TECHNOLOGIES AND SERVICES: UNIFIED INFRASTRUCTURE

#### **UNIFIED INFRASTRUCTURE**

## **VERTIV CAPABILITIES**

Value: Rapid Deployment, Modularity/Scalability and Lower Total Cost of Ownership

# Integrated environments for IT and telecommunications

 Delivery in a single plug-and-play system, or in modules that can be assembled on-site

# Full range of solutions, from single-rack enclosures to complete prefabricated structures

 Customized based on technology, business objectives and site requirements

# **Built upon our Core Capabilities**

- Thermal Management,
   Power Management, IT
   Management and Services
- Complemented with software and controls



#### **UNIFIED INFRASTRUCTURE**

# **VERTIV CAPABILITIES**

SmartCabinet™ SmartRow™





Rack/Row Level
Design and Integration

SmartAisle™ SmartMod™





Room Level
Design and Integration

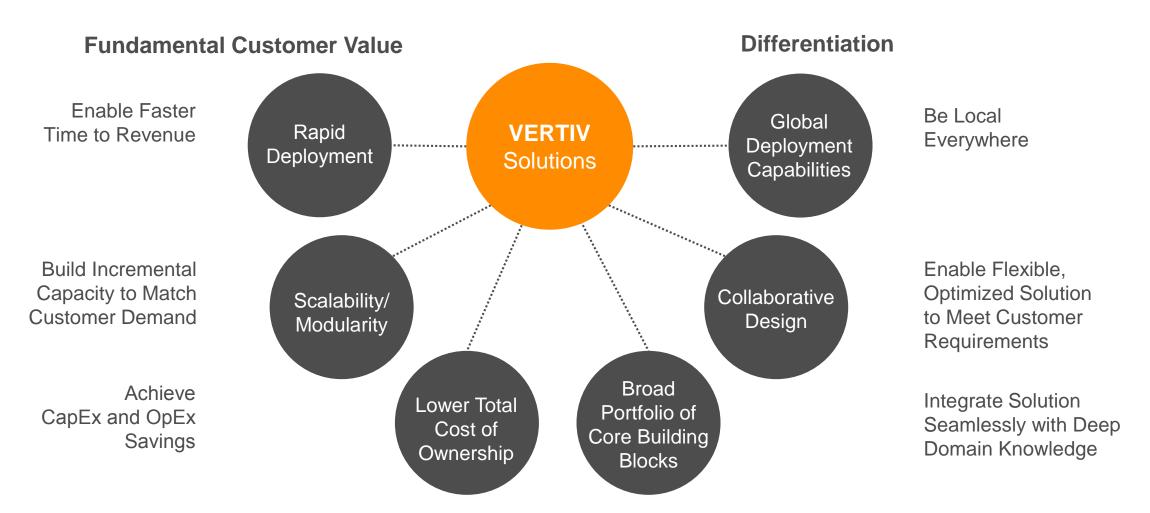


**Site Level**Design, Integration, and Build

Providing complete turnkey capabilities and capacities

## THE VERTIV DIFFERENCE

Key Value Proposition: Rapid Deployment, Global Capabilities & Trusted Partnership



Purposefully Designed and Integrated Solutions Reduce Project Complexity and Management Burden of the Client

# **CUSTOMER SPOTLIGHT: T-SYSTEMS**

### **Customer Needs**

- Provide cloud services across Europe
- Meet customer SLAs of availability, reliability, security, scalability, transparency, efficiency and sustainability
- Quickly deploy a state-of-the-art, Tier III, twin-core data center

### **Solutions**

 A modular, containerized structure to achieve rapid availability, high scalability, streamlined expansion and staggered investment

### **Benefits**

- Nine-month deployment time frame
- 99.98 percent availability
- Site Power Usage Effectiveness of 1.3
- 30 percent reduction in power use over comparable facilities



"The modular design gives us increased flexibility and scalability for future investment, while immediately offering an array of benefits for our customers. (Vertiv) worked with us to deliver true expertise and industry knowledge, positioning us to provide a strong cloud platform that serves both domestic and regional customers in Europe."

Program Manager,
 T-Systems Iberia





# TECHNOLOGIES AND SERVICES: SOFTWARE

## VERTIV CAPABILITIES

Today's telecom, IT and converged networks are **more intelligent** and increasingly virtualized and software-enabled.

To fully **leverage these networks**, you need visibility into every corner and the ability to manage all of your resources **remotely** and in real-time.

Whether it's point solutions for management of specific sites or systems or more holistic DCIM solutions that manage loads all across the network, the benefits are the same: **reduced risk and increased efficiency**.

Our scalable, flexible solutions deliver **visibility and control** across your network's physical infrastructure.

**Data center monitoring** 

**Energy management** 

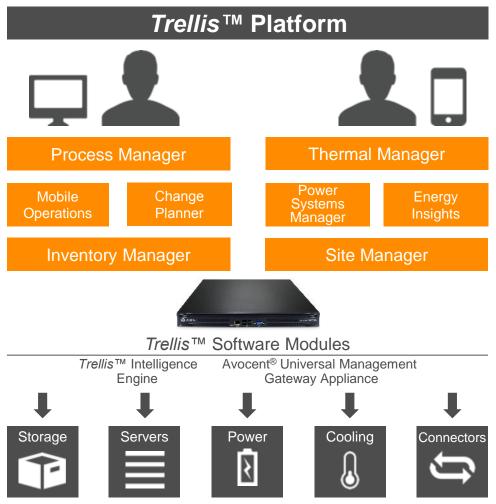
**Power management** 

**Capacity management** 

Remote management

**Change management** 

## VERTIV CAPABILITIES: TRELLIS™ PLATFORM



Data Center Assessment, Design, Installation and Integration Services

### The *Trellis*™ software solution provides:

- Comprehensive capabilities for managing data centers of all sizes
- Consistent look and feel, usability and architecture
- Infrastructure management processes that bridge across IT, power, thermal and space domains
- Easy integration with other systems such as workflow, ERP and Building Management Systems
- Simple options for implementation with modular deployment

Holistic, real-time, distributed architecture

## THE VERTIV DIFFERENCE

### **Expertise**

Encapsulates our long experience in data center systems engineering and management

- Comprehensive capability across data center inventory, power, thermal and space management
- Deep, rich connectivity across all domains covering IT and facilities equipment from all vendors
- Tightly integrated hardware and systems offerings for optimal performance and efficiency

### Scale

Global software and services capabilities for all data center operating models

- Modular software architecture that allows customers to choose the right components as needs dictate
- Installed base of over 5,000 global customers across numerous industries and geographies
- Extensive, experienced channel and business partner ecosystem to serve customers globally

### Commitment

Extensive and ongoing investment in products and research to continue our leadership position in critical infrastructure management

 Solid track record of partnering with customers to address their unique needs



# CUSTOMER SPOTLIGHT: CAMBRIDGE UNIVERSITY

### **Customer Needs**

- Consolidate multiple server rooms to one
- Reduce carbon footprint by 30 percent
- Reduce IT energy costs by as much as 40 percent
- Consolidate management and standardize service delivery
- Improve security and availability of infrastructure and systems

#### Solution

 A DCIM tool that provides real-time insights and analytics of the power, thermal management and IT equipment with a service contract including remote diagnostics and preventive monitoring services.

#### **Benefits**

- Reduced OpEx
- Improved staff productivity by gaining visibility
- Adhered to governmental regulations by reducing carbon footprint
- Simplified calibration for a reduction in overall maintenance costs



"We've been challenged to achieve higher efficiency by virtualising platforms and refreshing equipment throughout our campus via a common, centralised data centre space. We've begun implementing a program where we're seeking to combine the functionality of as many of these server rooms as possible into one facility, and to reduce our carbon footprint by 30 percent in the process, and by as much as 40 percent in IT energy costs."

Data Centre Manager,
 Cambridge University





# TECHNOLOGIES AND SERVICES: SERVICES

## **VERTIV CAPABILITIES**

A complete life-cycle approach to service, from project launch to ongoing maintenance and performance optimization

### **PROJECT**

When launching new facilities or powering up new equipment, you want to do it right – right from the start

- Plan
- Design
- Engineer
- Integrate
- Commission
- Project Management

### **MAINTENANCE**

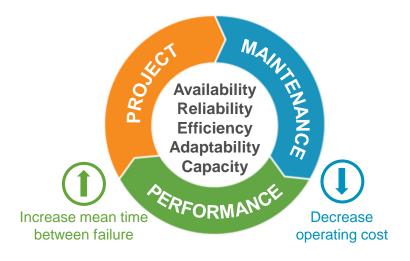
Services to ensure that your businesscritical infrastructure operates reliably, safely and efficiently

- Preventive and corrective maintenance
- Remote services and monitoring
- Cap / Fan / Battery replacements
- Repair
- Spare parts

### **PERFORMANCE**

Full range of services designed to optimize infrastructure performance and reduce process complexity

- Assess
- Audit
- Model
- Configure
- Upgrade
- Train



# THE VERTIV DIFFERENCE

Services ensure that your vital applications stay up and running. We do this through our vast array of project, maintenance and performance capabilities, supporting you in making better decisions to operate more efficiently and reduce complexity.



# **CUSTOMER SPOTLIGHT: QTS REALTY TRUST**

### **Customer Need**

Improved cooling system efficiency and greater visibility into system performance

### **Solutions**

- Installed electrically commutated (EC) fans and Liebert<sup>®</sup> iCom<sup>™</sup> control systems into 64 cooling units
- Provided and installed wireless sensors for monitoring of cooling improvements

### **Benefits**

- Initial savings of \$12,000 per month in energy costs, with additional savings expected through continued system optimization
- Reduced carbon footprint with more than 75 percent immediate reduction in the energy consumption of Liebert <sup>®</sup> thermal management units
- Improved Power Usage Effectiveness (PUE) by 0.16
- Provided better intelligence to building management system (BMS) for improved system visibility



"As soon as we placed the first new EC plug fan into a unit, even at 100 percent speed, the power consumption dropped 30 percent. We were very excited to see that result, but then it got even better. By varying the fan speed to match the load in the zone, the power consumption dropped another 33 percent, and we are now experiencing higher than expected energy savings!"

 Western Region Vice President, QTS





# **LEARN MORE ABOUT VERTIV**













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**YOUKU** 优酷



G+



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