VERTIV™

Trellis™ Platform

for Data Center Infrastructure
Management (DCIM)

"Vertiv™'s R&D investment, sales channels and partnerships within the DCIM ecosystem position its solutions to meet the critical needs of data center availability and agility. The *Trellis™* platform, in particular, represents the realization of many DCIM wish lists by delivering a single pane of glass that enables users to monitor, control and analyze data center assets in real time."

– JENNIFER KOPPY, Research Manager,
International Data Corporation (IDC)

Is Your Data Center Operating at Peak Performance?

Mitigate Risk. Optimize Efficiency. Support Business Initiatives.

The goals for every IT and facilities organization are simple: Mitigate risk by maintaining high availability, access and agility. Optimize the capacity and efficiency of data center resources and operations. And maximize the value of IT services by redeploying resources to support business growth initiatives.

But in the modern data center, these goals are easier said than done. Constant change, infrastructure complexity and the rapid growth in the resource needs requires IT and facilities to work together to reduce risk, deliver the balance of efficiency and availability required for peak performance and enable business transformation. For data centers to thrive now and in the future, they must be able to monitor, manage and measure the assets using an integrated, cost-efficient and real-time solution.

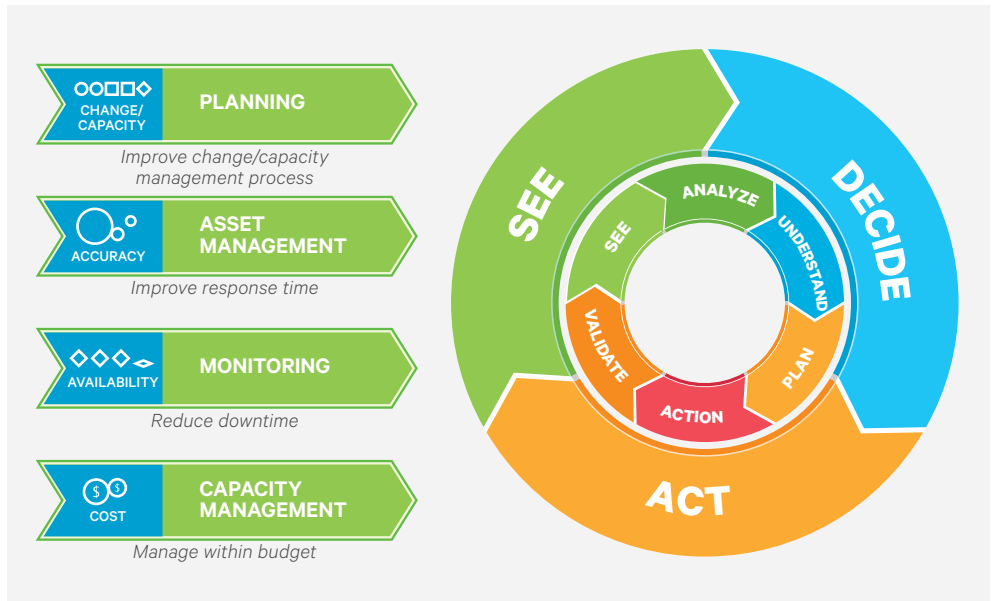## Make the Right Decision with the *Trellis™* Platform

For customers to effectively and efficiently realize the promised benefits of DCIM, their solution needs to have holistic, real-time visibility across all IT and facility resources. It should also be designed on a simple modular, scalable platform that allows custom configurations and ability to scale from small to very large data centers.

Vertiv is addressing the challenges of the data center with the *Trellis™* dynamic infrastructure optimization platform. Unlike any other DCIM solution, the *Trellis™* platform delivers unprecedented, real-time visibility into critical infrastructures and the impact of changes. The *Trellis™* platform monitors all IT and facilities resources in the data center and automates management and control to help your IT and facilities organizations realize their objectives. With this unified and complete solution, you gain the power to visualize the real situation in your data center, make the right decision and take action with confidence.

The *Trellis™* platform delivers a complete suite of tools to manage every aspect of your data center infrastructure, enabling better decision-making that leads to lower risk, higher performance and business transformation.

The *Trellis™* Platform Difference

- **High Scalability**
  Multi-tenant, real-time architecture that is scalable with open APIs and vendor agnostic

- **Flexible, Extensible Industry-Standard Platform**
  Single "real-time" platform allows for data integration, filtering and processing (CEP) with temporality.

- **Enterprise Security**
  Integrated view into IT and facilities assets with enterprise-class security and fine-grained authorization.

- **Time-to-Market**
  Multi-tenant, real-time architecture getting enterprise service providers to market quicker.

CHANGE/CAPACITY — **PLANNING**
Improve change/capacity management process

ACCURACY — **ASSET MANAGEMENT**
Improve response time

AVAILABILITY — **MONITORING**
Reduce downtime

COST — **CAPACITY MANAGEMENT**
Manage within budget

SEE — DECIDE — ACT
ANALYZE / SEE / UNDERSTAND / PLAN / ACTION / VALIDATE

See.
Visualize all critical information and know the real situation (in real-time or historical trending)

Decide.
Leverage the *Trellis™* platform's ability to analyze data center status information and deliver deep insight into the interplay between efficiency, availability and capacity to make well-grounded decisions
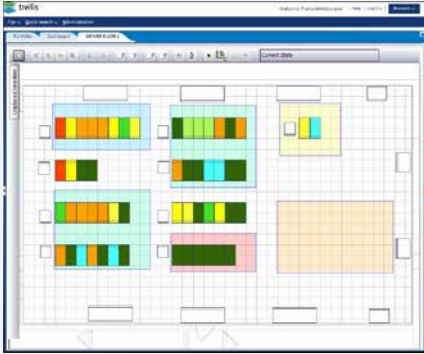
Act.
Take actions with confidence, immediately validate the effects and assess the impact on data center infrastructure
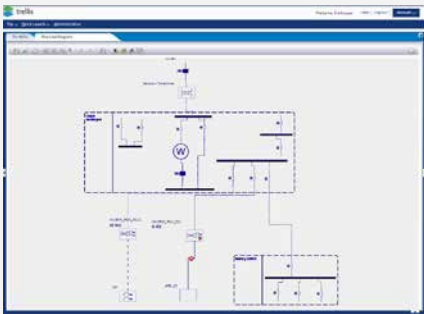
Data Center-Focused Tools

Maximize Risk Mitigation and Operational Efficiency

Trellis™ Inventory and Change Manager

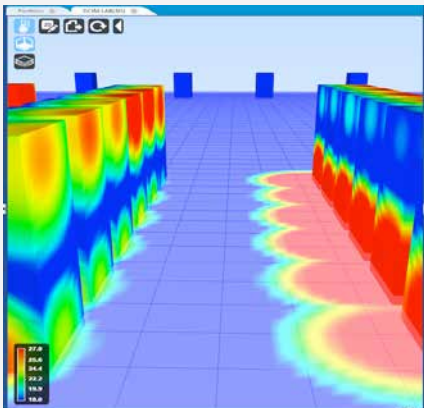Real-time inventory of every asset's floor or rack position with detailed status.

- A single source for tracking inventory reduces time and costs for floor and zone space management.
- Ability to search and locate equipment helps to quickly determine the optimal location for devices.
- Models showing the impact of proposed changes reduce planning time and eliminate costly rework.
- A complete change history provides control over all changes.

Trellis™ Power System Manager

Comprehensive view into power system resource utilization and capacity improves business continuity.

- Insight into the active power path, dependencies and status of each device helps to limit disruptions.
- Dynamic visualization and dashboards of status and capacity improve alarm response and operational management.
- Thresholds provide a complete view of resource utilization and capacity to improve availability and risk assessments.
- Quick response time via one-line diagram.

Trellis™ Thermal System Manager

Unlock the true thermal capacity for your cooling units and data center and reduce stranded thermal capacity. Save money on expensive floor space, new equipment and improved equipment placement planning to maximize the investment you already made.

- Complete monitoring, reporting and alarm management for the entire mechanical chain from chillers and cooling towers to CRAC and CRAH cooling units.
- Prevents wasteful over cooling of the data center, and eliminates troublesome hot spots that consume support resources and increase the risk of downtime.
- Safely adjust temperatures and fan speeds directly and monitor the effect in real-time.
- Device Placement Optimization.

Trellis™ Mobile Suite

Real-time, remote access allows users to manage inventory and keep the floor plan accurate as well as the ability to respond to alarms via a mobile device.

- Ability to scan devices and barcodes reduces errors, eliminates rekeying and enables auditing at the rack.

- Connectivity to data regardless of location on or off the data center floor reduces risk while increasing agility and flexibility.

Trellis™ Site and Energy Manager

Details about operating status and site conditions such as event management, alarm notifications and current and historical efficiency metrics including PUE and DCIE.
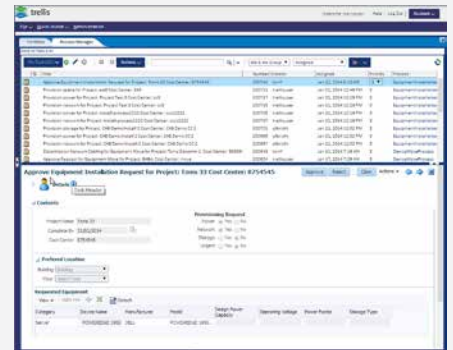
- Visual representation of alarm locations improves mean time to repair.

- Real-time and historical metrics offer insight into how changes impact energy efficiency and costs.

- Unified dashboard reduces unforeseen overages, helps contain costs and improves insight into equipment placement.

- Collection of up to 50,000 data points per minute per instance.

Trellis™ Process Manager

Pre-defined, built in processes for installing, moving, decommissioning and renaming devices.

- Device placement decisions made easy through the *Trellis™* smart install tool.

- User-friendly admin configuration that allows the organization to continuously improve their processes.

- Comprehensive reports provide insight into the status and performance of a project, process, group or individual.

- Customize processes that are specific to the organizations needs and requirements.

Avocent® Universal Management Gateway

A dedicated hardware appliance for real-time, integrated monitoring, access and control across IT and facilities systems.

- Combines the functions of KVM over IP, serial console over IP, rack PDU, SP and environmental management in a single chassis for a unified approach to infrastructure management.

- Scales to support growing operations with up to 10,000 data points collected per minute, 40 simultaneous KVM sessions run and 1,024 service processors managed.

"Forrester believes that Vertiv™ is one of the most dominant suppliers in the DCIM market as it exists today. Key infrastructure vendors and I&O professionals should consider Vertiv™'s *Trellis™* platform, a new real-time infrastructure optimization platform that enables the unified management of the data center's IT and facilities infrastructure."

– RICHARD FICHERA, Vice President and
Principal Analyst, Forrester Research, Inc.

Control Your Data Center Operations

The *Trellis™* platform provides comprehensive, real-time insight into your data center and the interplay between IT and facility components. It also maps your data center so that all changes can have their effects predicted so that you can avoid problems and unnecessary downtime.

A modular solution that fits every sized company, the *Trellis™* platform taps into servers, routers, storage, power distribution units, environmental monitors and more to intelligently aggregate, analyze and react to change and loads placed on environmental controls. And with the multi-functional Avocent® Universal Management Gateway appliance you can aggregate KVM, serial and service processor functionality with environmental and physical monitoring capabilities.

- **Comprehensive data** provides meaningful views to IT and facilities, making it far easier to collaborate, plan and control changes, proactively prevent downtime, discover hidden capacity and calculate actual data center costs.

- **Data center-wide monitoring and logging** visually present information for every asset so that you fully understand the current data or likely impact of changes on your operations, power consumption and cooling demands.

- **Automated device management** detects events and optionally automates managing devices, providing immediate insight and remedy so that you can increase data center management efficiency and proactively forestall outages.

REAP THE BENEFITS OF A UNIFIED SOLUTION

Mitigate IT Risk

- Minimize the risk of change by easily recognizing dependencies.

- Increase accuracy with a real-time inventory of assets.

- Automatically monitor and respond to events to ensure availability.

- Increase security with complete control over access to every asset in the data center.

Optimize Efficiency

- Consolidate data center management with a single source of truth for IT and facilities.

- Gain deep insight into capacity to maximize usage and defer capital expense.

- Model the effect of change to enhance availability and performance.

- Improve operating margins with accurate planning and execution.

Support Business Initiatives

- Support business model shifts and growth with accurate insight into current usage and the ability to model the impact of change.

- Increase the flexibility and resilience of the infrastructure with real-time, trend and historical change tracking.

- Optimize processes and workload management with a unified view of IT and facilities assets.

Empower Every Member of Your Data Center Team

IT Management

- Ensure interdependencies are taken into account with one touch point for evaluating infrastructure.

- Automatically inventory all your assets with minimal to no manual effort.

- Control change with trend analysis and "before and after" real-time loading data.

Facilities Management

- Diagram your data center from end to end to identify opportunities for increasing efficiency and usage.

- Analyze current loads in real time and model proposed changes to assure availability and reduce costs.

- Keep track of exactly where power is going and how to optimize power and cooling.

- Exploit hidden efficiencies with automated processes to adjust power and cooling equipment.

Data Center Executive Management

- Empower your team with complete real-time data, mapping and modeling capabilities for smarter planning and change control.

- Understand where resources are deployed and how they are used to recover unrealized capacity and accurately plan capacity needs.

- Continuously improve collaboration and communication with shared knowledge about the interplay between IT and facilities assets.

- Plan for future needs while supporting today's initiatives.

VERTIV™