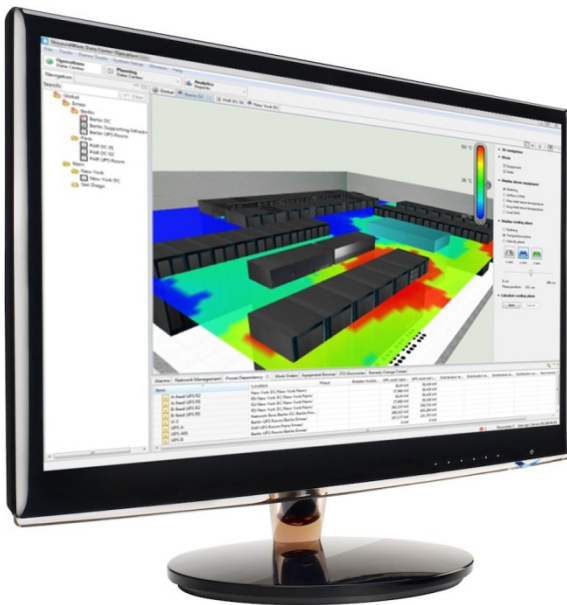
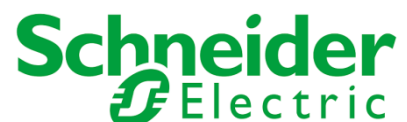


StruxureWare™ Data Center Operation

Data Center Infrastructure Management (DCIM) software for proactive data center life cycle management, optimizing existing capacities through intelligent resource and energy analysis, coupled with impact analysis, based on asset tracking and documentation.



A new level of business intelligence for your data center infrastructure management



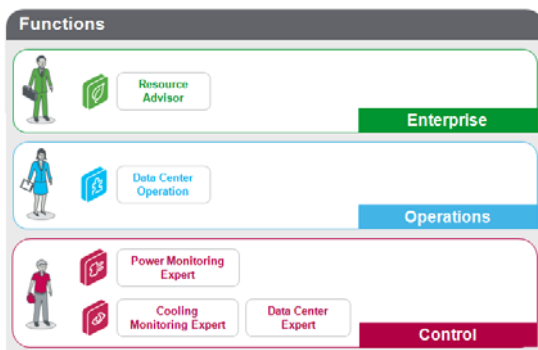
StruxureWare™ Data Center Operation

Part of StruxureWare for Data Centers



StruxureWare for Data Centers

- an integrated suite of management software applications for balancing the demands of availability and efficiency throughout the data center lifecycle.



A new level of business intelligence for your data centre physical infrastructure management

StruxureWare for Data Centers is designed to plan, monitor, and operate the data center from server to rack to row to room to building.

The suite addresses specific challenges across data centers through:

- > Easy integration with third-party offers and legacy systems.
- > An open, scalable platform.
- > A consistent user experience.

A DCIM suite

Data Center Infrastructure Management (DCIM) systems collect and manage data about a data center's assets, resource use and operational status throughout the data center lifecycle.

This information is then distributed, integrated, analyzed and applied in ways that help managers meet business and service-oriented goals and optimize the data center's performance

DCIM solution benefits

- > A holistic DCIM suite managing all aspects of the data center
- > Leverages and optimizes the existing infrastructure
- > Provides robust, scalable and integrated software solutions
- > Created by people who builds data centers daily



DCIM releases the potential for energy savings

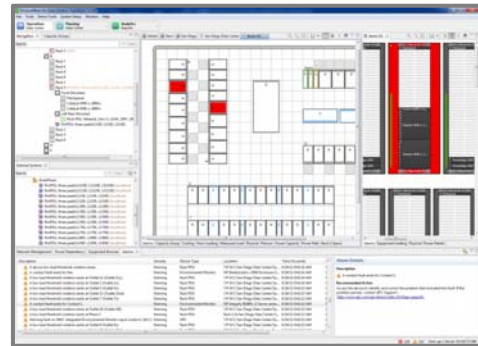
StruxureWare™ Data Center Operation

A new level of business intelligence for your data center

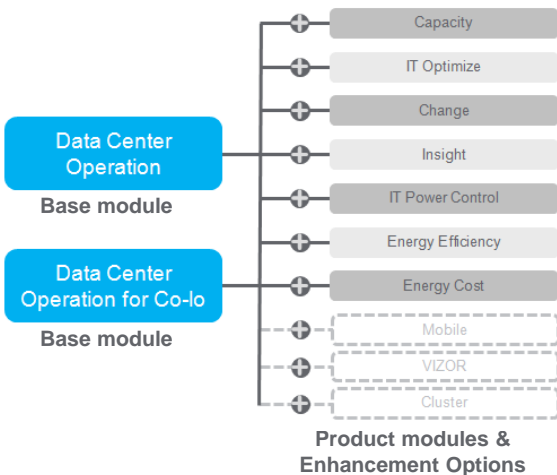


Data Center Operation

With its capability of communicating with building, enterprise and network management systems, StruxureWare Data Center Operation optimizes energy and cost efficiencies and aids in short - and long-term planning and provisioning of data center equipment and resources



StruxureWare Data Center Operation



StruxureWare Data Center Operation forms the base layer of software, available either as an enterprise or a co-location base module, which other modules and enhancement options can be added onto.

StruxureWare Data Center Operation is a scalable Data Center Infrastructure Management (DCIM) framework that can run on any physical or virtual server.

A DCIM application

StruxureWare Data Center Operation enables vendor-agnostic inventory management with real-time device failures and data shown within your data center physical layout, as well as recommendations on how to resolve issues.

> A location-based drill-down view provides a structured overview of data center locations, from a global to local view down to single assets.

> A network management tool offering support for incomplete routes and patch panel to patch panel mapping.

> Virtualization capabilities through integrations with VMware vSphere and Microsoft System Center Virtual Machine Manager 2008.

> The Power Usage Effectiveness (PUE) calculator supplies information on daily utilization of energy.

> For instant updates on the go, Operation: Mobile provides access to information from StruxureWare Data Center Operation via handheld PDA.

StruxureWare™ Data Center Operation for Co-location

A new level of business intelligence for your data center

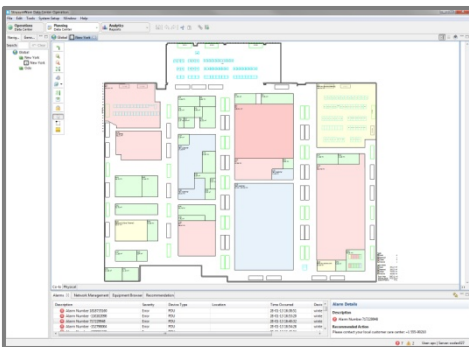


Data Center Operation for Co-location

Asset and cage space management for an optimized multi-tenant data center.

StruxureWare Data Center Operation for Co-location enables vendor-agnostic inventory management with real-time device failures and data shown within your data center physical layout, as well as recommendations on how to resolve issues.

Visualize new cages during the pre-sales phase for planning potential new customer cages and supporting the sales process



StruxureWare Data Center Operation for Co-location extends the usage of DCIM tools to the multi-tenant sales process, where it provides instant visualization of space available for selling on to tenants, broken down by used, reserved and available capacity, and identifies how much is required going forward. This expands the user group of DCIM into the front office of the business - making it a driver for business development.

A DCIM application

StruxureWare Data Center Operation for Co-location transforms the way that multi-tenant providers are doing business by optimizing data center capacities and business processes, which in turn frees up valuable time to focus on developing the business.

> The application provides multi-tenant providers with a real-time status of their current data center capacities, in terms of data center power, cooling & space, and the ability to drill down further and identify any constraints for expansion.

> With cage space management the data center operator can import CAD drawings, apply grid-based naming for floor mount equipment, utilize cage drawing tools and cage power modeling and visualize the solution in 3D.

> Facility maintenance is made easy through a complete audit trail on all facility equipment and cages, the ability to create and track maintenance schedules by equipment and use impact analysis to ensure redundancy is maintained during maintenance.

> The open system integrates tenant billing information into the Data Center Infrastructure Management (DCIM) system for mapping tenant assets, providing detailed power draw, total energy footprint and access to an instant impact analysis at the tenant level.

Data Center Operation: Capacity

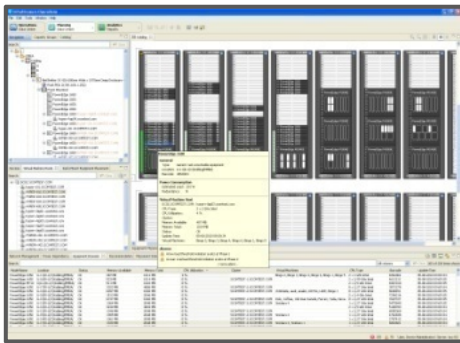
Simulation, planning and optimization of infrastructure capacities to right-size the data center



Data Center Operation: Capacity

Asset and cage space management for an optimized multi-tenant data center.

Planning and optimizing utilization of actual physical infrastructure capacities via shared data center model, enabling efficient equipment provisioning and right-sizing of your data center



Virtual environment integrations between Data Center Operation: Capacity and VMware and Microsoft System Center Virtual Machine Manager.

> The integrations provide insight into how virtual machines relate to physical servers and their location, automatically migrating virtual machines to secure host environments from faulty infrastructure enabling customers to maintain Service Level Agreements and view and manage network health.

Integration between Data Center Operation: Capacity and Cisco UCS.

> Power capping can be set for the rack, either as automatic global power capping for all racks, or as individual settings for specific servers, but with the difference of knowing your real-time physical capacity constraints.

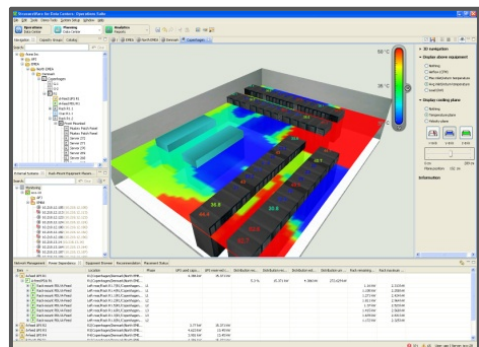
A DCIM product module

Data Center Operation: Capacity predicts the optimal location for physical infrastructure and rack-based IT equipment based on the availability and capacity requirements; and user defined requirements such as redundancy, network and business use grouping.

> It reduces stranded capacity through optimized use of the physical infrastructure and avoids unplanned downtime.

> With its sophisticated simulation based on live data, Data Center Operation: Capacity proactively analyzes the impact of changes before they occur, enabling informed decision making and planning, ensuring that your physical infrastructure provides the required capacity for current and future needs.

> Data Center Operation: Capacity calculates the airflow and temperature inside the data center and displays it in a modern 3D view making it easier to locate hot spots.



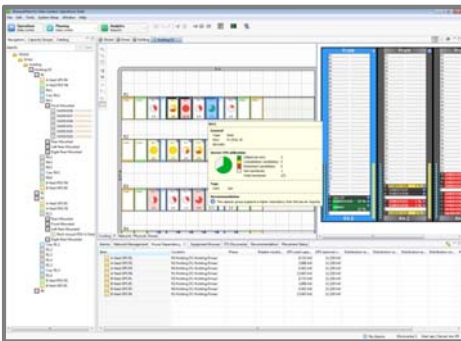
Data Center Operation: IT Optimize

Gain insight into IT power consumption and utilization to increase efficiency and decrease cost



Data Center Operation: IT Optimize

Reduce IT system energy usage through in-depth optimization of server utilization for increased data center performance



Provides IT auto discovery and monitoring for up to the minute asset management.

Extending the data center life cycle through:

- > Accurate understanding of IT assets
- > Freeing up available capacity
- > Delaying CapEx investments and reducing OpEx
- > Significant efficiency gains
- > Automated and detailed inventory

Integration between Data Center Operation: IT Optimize and Cisco UCS.

- > Provides auto-discovery of assets managed by Cisco UCS Manager, enabling data center managers to monitor the CPU/power utilization along side utilization at the physical infrastructure.

A DCIM product module

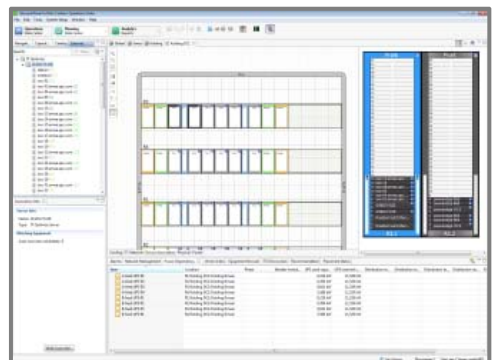
Data Center Operation: IT Optimize increases utilization of infrastructure and IT assets through accurate, detailed energy consumption profile of data centers, server by server and rack by rack.

> Data Center Operation: IT Optimize monitors IT asset utilization and power consumption to help reduce costs associated with over-provisioning, underutilization, and imbalanced power and cooling throughout the data center.

> Business critical analytics tie IT costs to business groups for chargeback, provide critical information for build vs. buy decisions and track capacity at the rack, row and room level.

> At the core of Data Center Operation: IT Optimize is the Genome™ library, which continually discovers and monitors individual IT components and collects information to keep track of server specific information.

The information forms the building blocks for understanding IT energy consumption and how it impacts the business.



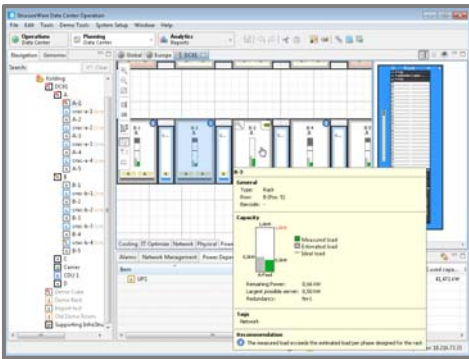
Data Center Operation: IT Power Control

Rack-level power capping for an optimized performance of server applications



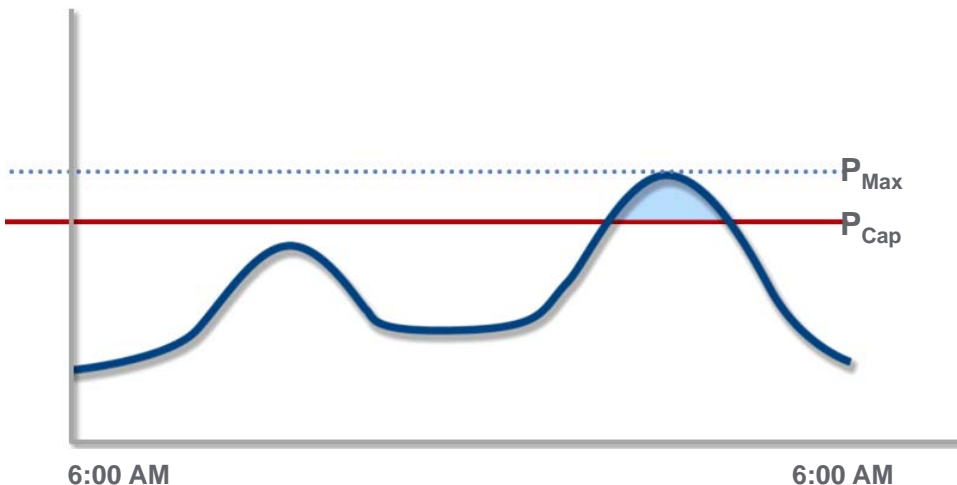
Data Center Operation: IT Power Control

An add-on module for Data Center Operation: IT Optimize



Real-time temperature and power data for accurate policy configuration.

Moderate energy savings achievable through always-on power cap



A DCIM product module

Data Center Operation: IT Power Control, powered by Intel® DCM, delivers rack-level power capping for an optimized infrastructure and delayed physical equipment investment.

> Increased rack densities are achieved through power capping of servers and racks, reducing over-provisioning and enabling operation of the data center closer to the capacity limit without compromising availability and safety margins.

> Redistribution of power density according to criticality levels are easily implemented through the use of rack based policy configurations, ensuring power savings and delayed physical equipment investments.

> Business continuity is maintained in the event of a UPS failing, as power capping ensures that business critical racks and servers maintain their power supply and no breakers are inadvertently tripped.

> The software requires Data Center Operation: IT Optimize.

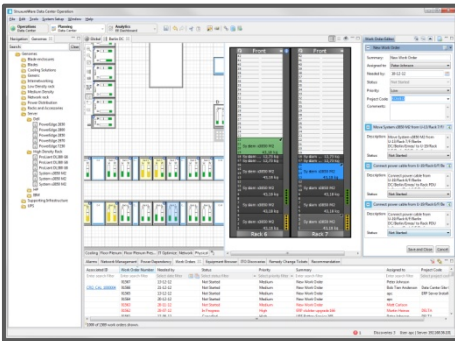
Data Center Operation: Change

Fully integrated workflow management for your IT physical infrastructure



Data Center Operation: Change

Workflow management allows for easy tracking and executing of moves, adds, and changes of equipment in the data center



Integration between Data Center Operation: Change and BMC Remedy.

- > Ensures relevant information is shared and flowing between Data Center Operation: Change and the market leading process management system.
- > Associate BMC Remedy change tickets with Data Center Operation: Change work orders, as well as view and filter BMC Remedy tickets for an overview of current work load.

The change dashboard shows past, future and pending changes to assist with resource and workload balancing, and avoid scheduling conflicts.

A DCIM product module

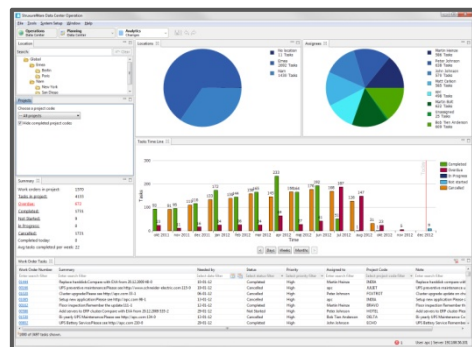
Data Center Operation: Change enables operators to gain control over the data center environment by implementing organized moves, adds, and change work processes, significantly reducing the risk for inadvertent downtime.

> With its automated workflow system, operators can assign work orders, reserve space, track status, and extract an audit trail for complete visibility and history into the change lifecycle.

> The optional Data Center Operation: Mobile provides you with your operational changes while on the data center floor, enabling barcode scanning and ensuring data integrity, as well as improved operational efficiency.

> Gain total transparency of physical equipment changes by user in the data center through Data Center Operation: Change.

> Track asset moves, adds and changes by date/time, owner and work orders for view, print and export.



Data Center Operation: Energy Efficiency

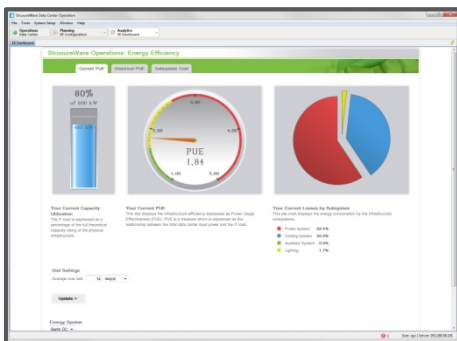
Intelligent PUE/DCiE analytics at subsystem level



Data Center Operation: Energy Efficiency

Full insight into current and historical energy efficiency for facilities, identifying efficiency losses and enabling improved PUE/DCiE values at subsystem level.

Provides insight into energy losses and cost of energy at subsystem level, providing details of which subsystem draws the most costs.



Carbon footprint - Shows the CO2 footprint for each energy sub-system, for instant measurement of impact on the environment.

A DCIM product module

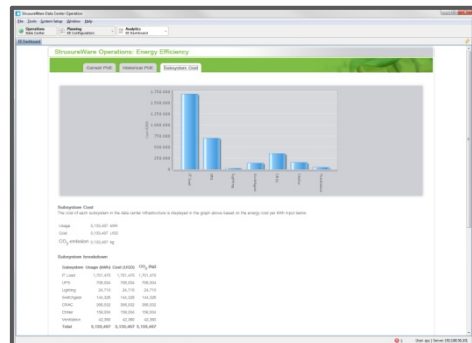
Data Center Operation: Energy Efficiency provides current and historical Power Usage Effectiveness (PUE) and Data Center Infrastructure Efficiency (DCiE) values, enabling a fact-based understanding of how much power is devoted to driving the installed IT equipment compared with the total facility consumption.

> It provides a detailed insight into how effectively energy is utilized down to subsystem level.

> Provides an understanding of how to improve energy efficiency. Subsystem data can either be measured or estimated, also allowing customers with few power meters to benefit from the application.

> The web-based dashboard view includes efficiency data on current and historical PUE/DCiE, as well as detailed subsystem cost analysis.

> Available via StruxureWare Data Center Operation, which enables integrations with StruxureWare Data Center Expert for monitoring purposes and 3rd party enterprise systems.



Data Center Operation: Mobile

Wireless operation of your data center



Data Center Operation: Mobile

Handheld, wireless bar-code scanner for viewing, creating & instantly synchronizing changes on the go. Based on Motorola MC75 hardware.



Eliminate manual data entry and reduce errors by adding, moving and retiring devices whilst on the move.

A DCIM product module

Data Center Operation: Mobile, based on Motorola MC75 hardware, provides you with your data center inventory while on the data center floor.

> The integrated barcode scanner makes light work of implementing work orders and identifying equipment.

> Using your wireless network, Data Center Operation: Mobile automatically synchronizes server locations, ensuring data integrity, removing human error and improving operational efficiency.

> Work online or offline to access work orders and asset data whilst on the move in the data center.

> Always keep your physical data center updated and synchronized with Data Center Operation: Mobile



Provides alarms, alarm descriptions and recommended actions via Data Center Operation: Mobile for data center operations on the go.

Data Center Operation: Insight

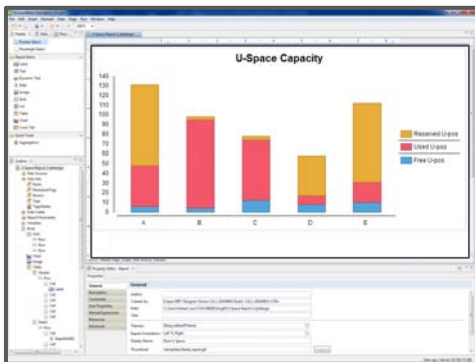
Comprehensive tool for customizing report designs to visualize data



Data Center Operation: Insight

Asset and cage space management for an optimized multi-tenant data center.

User-friendly report design tool to meet individual business needs to configure and design custom reports complete with data obtainable from StruxureWare Data Center Operation, web services or external databases.



Advanced report designer, built on BIRT, allows you to design any report within minutes using drag and drop functionality.

> **Export of reports** - Customized reports can easily be shared with all stakeholders using various file formats (html, csv, excel and pdf).

> **Large pool of templates** - Choose between a large selection of report templates, or design your own customized template and save it for future use

> **Report building with external data points** - Allows building of reports that combine StruxureWare Data Center Operation data with any external data points obtainable via web services or databases

A DCIM product module

Data Center Operation: Insight is a report generator tool that allows for customization to individual business needs supported by a large community.

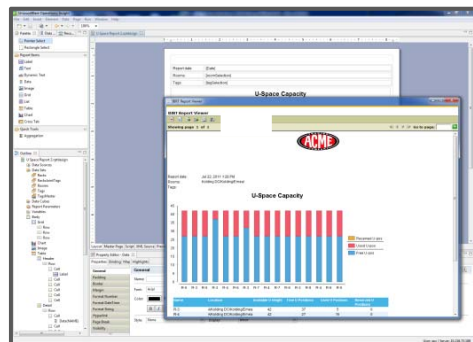
> Provides reporting capabilities with transparency into key performance indicators.

> Advanced report designer that allows you to design any report within minutes using drag and drop functionalities.

> Customized reports built in Data Center Operation: Insight can be published in StruxureWare Data Center Operation with instant availability to all users or exported to various file formats.

> Allows creation of reports that combine data from StruxureWare Data Center Operation with any external data point obtainable via web services or databases.

> Large set of plug-ins, templates and customizations available online. Consultants available world-wide.



Data Center Operation: VIZOR

High level data center key parameters on the go via your tablet or smart phone.



Data Center Operation: VIZOR

Key data center capacity parameters on power, cooling, space, and network as well as high level values on data center utilization straight to your smart phone or tablet.

Data Center Operation: VIZOR can currently run on Apple iPhone®, iPad®, Blackberry®, or Android-based devices.



Providing key data center capacity parameters on power, cooling, space, and network as well as high level values on data center utilization on the go.

A DCIM product module

Data Center Operation: VIZOR delivers key data center capacity parameters straight to a wireless device such as Apple iPhone, iPad, Blackberry, or Android-based smart phone devices.

> High level values of data center utilization at a glance.

> Shows key performance indicators on power, cooling, space, and network within the data center.

> Drill down view into any location or room and predict the remaining capacity based on current growth rate in your data center.

> Access to complete asset inventory and details straight to your smart phone device or tablet. Graphical overview of power, cooling, space, and network.

> Access to complete asset inventory and details straight to your smart phone device or tablet.



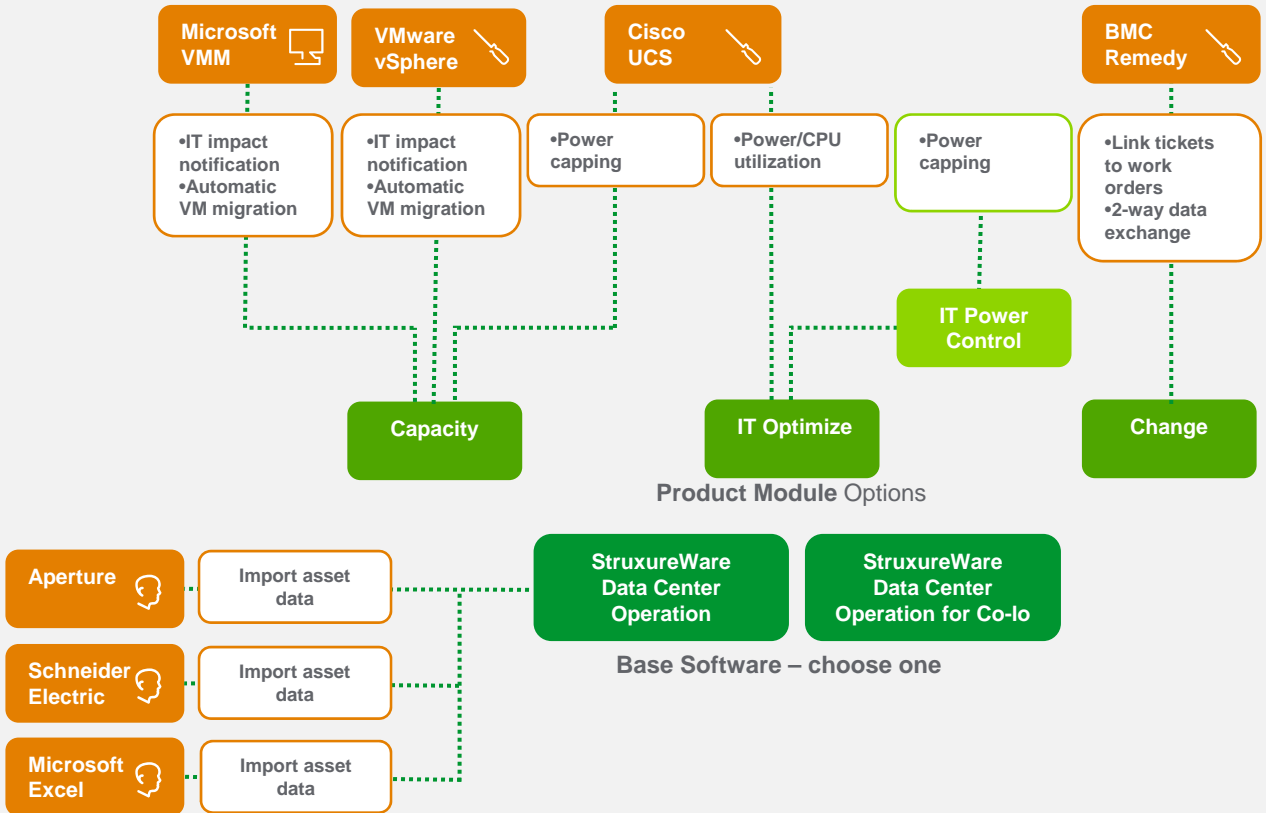
Overview of network capacity displayed on Apple iPad.



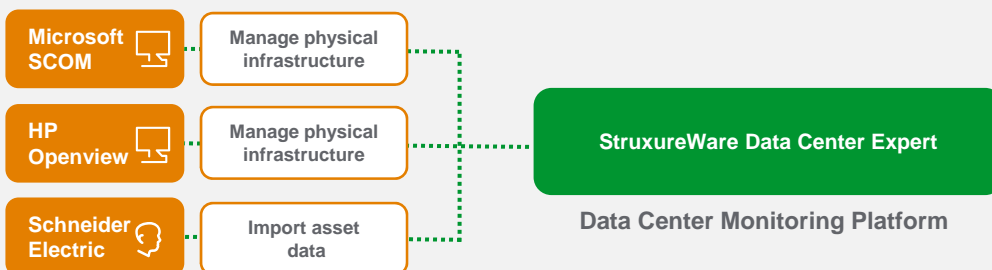
Integrations

StruxureWare Data Center Operation & Expert.

StruxureWare Data Center Operation



StruxureWare Data Center Expert



Integrations available via:

- Download
- Service
- External system configuration

StruxureWare Portal

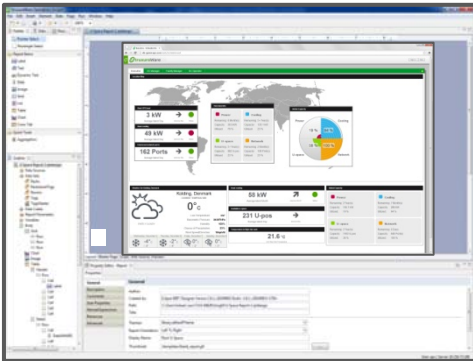
Live overview of data center operations using widgets and data sets.



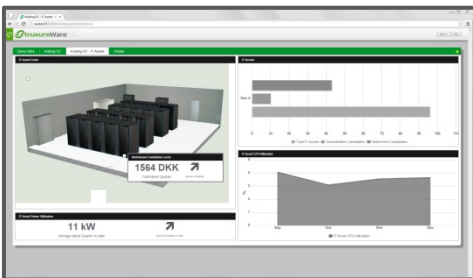
StruxureWare Portal

Easy-configurable web dashboards creating transparency to data center key performance indicators.

Choose between more than 20 data center metrics to create transparency and an instant overview of key data center information



The widgets displaying data center metrics can easily be re-used on the company's intranet or website.



A DCIM product module

The StruxureWare Portal provides transparency to data center key performance indicators and business metrics, displaying customizable information for a high-level overview of data center operations.

> The StruxureWare Portal is configured via a choice of predefined portlets, and provides the option to create custom portlets through an integrated, easy-to-use configurator. The portlets are based on a comprehensive and detailed charting library, enabling the user to easily add interactive charts and graphs to the display.

> Built on an open platform, the user-friendly interface allows anyone to quickly configure a dashboard showing management-level information.

> The open source environment, based on the Liferay platform, provides the option to display web content and metrics from several applications, such as StruxureWare Data Center Operation, StruxureWare Power Monitoring Expert, StruxureWare Building Operation and StruxureWare Data Center Expert.

> Provides simple drag and drop functionalities that opens up for modifications to match individual customer themes, designs and brand guidelines. The application works in all modern browsers, as well as with Apple iPhone®, iPad®, and Android-based devices. .

Software Services

Peace-of-mind software services.



Comprehensive services

Schneider Electric has the services you need to protect your investment, efficiency, and availability. Our comprehensive software services portfolio, which supports third-party integrations, is designed to ensure your applications receive the care they need to operate at optimal levels – at all times – from installation to ongoing operations.

Software Installation

- > We offer Software Installation Services that will increase your efficiency by decreasing your time to deployment.
- > We use repeatable industry best practices for installing and registering in accordance to manufacturer specification.
- > The service is fulfilled by highly skilled and certified field service engineers, ensuring that all software products are installed correctly and are ready for use in your dynamic data center.

Software configuration

- > By quickly and precisely configuring the system to emulate your unique data center, you will be able to take advantage of the features and benefits of the tools included in the software. In turn, you can make critical decisions that will save you time and money.
- > Our certified field service engineer will configure the application down to the rack and row level, including IT devices for your as-purchased solution.
- > Our services manage the complete deployment of your software, giving you the data you desire to run an efficient data center today, while planning for tomorrow.

Software integration

- > The Software Integration Service provides planning, designs, and project management for the integration of StruxureWare for Data Centers software products into your existing system, providing you with a customized view into your existing applications.
- > Our highly skilled and certified software engineers will utilize industry best practices to integrate or enhance our StruxureWare for Data Centers applications to meet your individual business requirements.

Software education

- > Are you interested in learning more about your StruxureWare for Data Centers tool set and want to be empowered with the knowledge to make educated changes? If so, our Software Education Services provide you with expert training, enabling you to get the most from your investment by learning operational skills and best practices for your solution.
- > Our Education Services are designed to provide a practical learning experience for professionals with real-life, hands-on exercises.

Post Configuration Review

- > Provides you with a review of how the StruxureWare for Data Centers application was configured, enabling you to quickly take control of your environment.
- > This approach to transfer knowledge lowers your cost of implementation by maintaining your operations in house.

For more information

Additional resources

Visit whitepapers.apc.com

Read more about the technology and research behind the StruxureWare for Data Centers Suite.

> How Data Center Infrastructure Management Software Improves Planning and Cuts Operational Costs (White Paper #107).

> Avoiding Common Pitfalls of Evaluating and Implementing DCIM Solutions (White Paper #170).

> Virtualization and Cloud Computing: Optimized Power, Cooling, and Management Maximizes Benefits (White Paper #118).

> Guidelines for Specification of Data Center Power Density (White Paper #120).

> Allocating Data Center Energy Costs and Carbon to IT Users (White Paper #161).

> Estimating a Data Center's Electrical Carbon Footprint (White Paper #66).

View videos

Visit tv.schneider-electric.com to watch our StruxureWare for Data Centers videos and customer testimonials.

> www.youtube.com/user/SchneiderCorporate
> tv.schneider-electric.com

Read our Blogs

Discussing challenges and trends of DCIM, and inviting you to join in.

> Blog.schneider-electric.com/datacenter

Follow us on Twitter

For updates on all news on StruxureWare for Data Centers.

> www-twitter.com/StruxureWare_DC

Need additional information?

Check out our webpages or DCIMsupport for answers to your questions.

> www.apc.com/struxureware
> DCIMsupport.apc.com

