NIyte Enterprise Edition for BMC Software solutions

Reduce the effort, time, and costs associated with data center consolidation and changes by optimizing your use of data center space, cooling assets, and power systems. Track operations to your plan and facilitate assessment of how changes affect data center Power Utilization Efficiency (PUE).

Key Benefits

- Optimize your data center's physical environment
- Reduce time, effort, and costs
- Proactively prevent hot spots
- Speed data center migration
- Extend data center lifespan

Business challenge

Many data centers inefficiently use available space, cooling, and power, resulting in premature expansion of data centers. Excessive time to plan and execute data center physical changes significantly impact the agility of the business to adjust to rapid market shifts. As the pressure increases to reduce IT costs, you can improve the management of your data center's physical environment to increase the efficient utilization of existing data center assets and extend the life of existing real-estate.

The BMC solution

NIyte Enterprise Edition for BMC Software solutions maximizes the use of data center space, available air conditioning, and electrical power facilities. With NIyte Enterprise Edition for BMC Software solutions, you can address common IT activities involving the physical environment of data centers:

- Identify and locate equipment in the data center
- Associate communications cabling and electric circuits with each equipment item
- Identify heat hot spots that may affect expected equipment performance
- Simplify planning of equipment changes, optimize cooling, and evaluate power consumption
- Manage and document moves, adds, and changes of data center equipment
- Report on equipment change activity and data center facilities utilization

Optimizing your data center exposes the space, cooling, and power capacity that can be used for growth or consolidation in the future — exploiting the full potential of the existing facilities before undertaking expensive data center expansions or moves.

Quick time-to-value

NIyte Enterprise Edition for BMC Software solutions gets up and running quickly — without heavy professional services customization or extensive user training. Automated import of data center computing hardware, as well as NIyte device detail databases, rapidly populate the database so that optimizing a data center begins soon after the system is operational. Automated placement of equipment and visualization facilitate rapid optimization with minimum effort.

Proactive prevention of service impact

Visualization of potential hot spots enables planning of equipment moves before services are affected. Automatic placement of equipment evenly distributes heat load, avoiding the creation of hot spots that can cause service impacts. With the addition of power consumption data, cooling demand can be tracked to predict unexpected hot spots before service impacts occur.

Expedited data center changes and migration

Once moves, adds, changes, and migrations are planned, the physical work begins to acquire and install data center equipment. NIyte Enterprise Edition for BMC Software solutions guides and documents these tasks to make the equipment ready to take on the data center computing load faster than previous manual effort could accomplish, adding agility and faster response to changing business demands.

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Planning

- Visualize the data center
- Identify hot spots
- Optimize placement
- Avoid placement collisions
- Improve service delivery

Features

- Central repository of data center asset information
- Robust library of specific attributes for data center assets
- Data-driven model of data center floors and cabinets
- Visualization of data center physical capacities
- Automatic best asset allocation selection
- Sophisticated “what if” modeling, including evaluation of changes in power demand
- Web-based workflow engine that manages tasks along with complete project lifecycle management
- Comprehensive reporting, trend analytics, and demand forecasting
- Charge-back capabilities enabled by multi-tenancy reporting
- Business intelligence data warehouse for advanced analytics and connection to “Big Data” projects

NIyte Enterprise Edition for BMC Software solutions is comprised of functional components to fully implement Data Center Infrastructure Management (DCIM).

Data center performance management database

The data center performance management database (PMDB) is a SQL database containing data center assets and associated information:

- Network, server, and storage devices
- Cooling and power infrastructure
- Cabinets, KVM switches, and sensors

The PMDB is the reference source used by NIyte Enterprise Edition for BMC Software solutions for equipment location, as well as power and cooling requirements of data computing components in the data center. Physical assets and basic properties of equipment discovered in the data center are associated with additional data in the PMDB. Traditionally, much of this data is either in spreadsheets or in the head of a data center manager.

The PMDB is the foundation for effective utilization of the data center environmental facilities. Features include:

- **Materials catalog** — Provides common details for different models of data center equipment that can be related to each individual item in the data center inventory
- **Bulk data manager** — Enables asset data, as well as external legacy data, to be extracted from the materials catalog and loaded quickly into the PMDB at minimum cost and time
- **Organizer** — Relates additional information to equipment that is relevant for efficient data center operations, such as support group responsibilities, to expedite the dispatching of resources and the resolution of issues

Data center planning

NIyte Enterprise Edition for BMC Software solutions visualizes the data center floor plan and equipment location in cabinets. Tools for evaluating effective use of cooling and power capacity identify hot spots and also automatically distribute and model equipment in cabinets across the data center floor to optimize utilization of data center facilities.

The **floor planner** presents a layered graphical map of all IT assets on the data center floor — an easy-to-understand visualization of the data center that does not rely on interpreting a difficult combination of architectural drawings and equipment spreadsheets. Individual layers can be created for each asset category, such as cabinets, floor standing servers, cage representations, power infrastructure, air conditioning, and networks. Assets can be dragged and dropped onto the floor plan to create precise and accurate room layouts. Cabling and power hierarchy records can be built to expedite change planning and repair logistics.

Reporting

- Automate delivery
- Define custom reports
- Maximize use of assets
- Predict facility exhaustion

To help identify potential threats and issues, the **floor planner** includes real-time, ad hoc capacity reports. Nlyte Enterprise Edition for BMC Software solutions monitors performance thresholds that apply to each device and color-codes affected devices on the appropriate layer of a graphical report when thresholds are exceeded. From the color-coded results of each report, jeopardized assets are quickly identified and a drill-down into details can be launched.

Additional features include:

- **Cabinet planner** — Models move, add, and change (MAC) initiatives before equipment is moved to ensure sufficient enough space, cooling, and power to support the project
- **Auto-allocator (patent pending)** — Finds all the cabinets that have the right power and network connections to support a piece of equipment — and sorts the cabinet options by current power draw to ensure that heat load is balanced across the data center floor
- **Control module** — Tracks execution of change project, enforcing ITIL®, COBIT, and enterprise best practices for efficiency and compliance in rapid service delivery

Analytic reporting and forecasting

Reporting provides detailed business intelligence to support daily operations, ongoing management, and strategic planning from a library of standard reports:

- **Trending and forecasting reports** — Enable management of assets over time, including asset utilization and the prediction of future demand
- **Data center capacity planning** — Gives insight into the status of physical resources, such as network connections, power, cooling, and space within rooms and cabinets, to show what is in use and what is available for immediate expansion
- **Contingency planning** — Enables assessment of the possible impact of events on data center infrastructure utilization and shows the effects of facility failures

In a way, overspending for capacity that you don't need is worse than not having enough capacity to complete a new project. Either way, the consequences of missing the mark and not accurately projecting data center demand for space, cooling, and power will keep IT cost unnecessarily high. Nlyte Enterprise Edition for BMC Software solutions enables precision forecasting of data center facility capacity and change-impact analysis, in time to plan actions rather than reacting to unanticipated issues.

Integration framework

The integration framework enables integration of data center instrumentation and applications with Nlyte Enterprise Edition for BMC Software solutions. The "plug-in" architecture provides an interface to intelligent power strips, power distribution units (PDUs), environmental sensors, and other data center instrumentation that collects data center environmental data related to the physical equipment in the PMDB. In addition to data center instrumentation, the Nlyte Open Web Service API also supports interworking with software applications, such as the BMC Atrium CMDB and BMC Change Management.

Alignment with best practices

Nlyte Enterprise Edition for BMC Software solutions defines tasks and processes based on ITIL and COBIT to enforce best practices and enterprise governance in the execution of work order processes. Task responsibilities and results are documented for reporting and continuous improvement. Advanced algorithms automatically place equipment in the data center based on defined parameters for floor loading, cooling, and power distribution. Physical segregation policies are enforced in placement algorithms.

Task management

The **control module** defines and tracks the execution of work order tasks for MACs within data center infrastructure. The web-based graphical interface visualizes modeling of complex processes and enables management of project progress. Alerts and reminders are automatically transmitted to ensure timely completion of individual tasks and a more rapid completion of projects. Using details captured as the workflow is processed, projects are documented, performance is analyzed, and workflows can be

streamlined for further improvement. Task management automation increases staff productivity and reduces the time to execute changes — inspiring confidence in the reliability of IT to deliver timely infrastructure changes that meet dynamic business demands.

Part of a comprehensive solution

NIyte Enterprise Edition for BMC Software solutions is part of the BMC solution for managing data center resources and automating processes. NIyte Enterprise Edition for BMC Software solutions automates the placement of resources based upon the capacity plans and recommendations from BMC Capacity Optimization. Integration with BMC Remedy Action Request System enables work orders for physical changes on the data center floor to be entered directly from BMC Change Management screens.

For more information

To learn more on NIyte Enterprise Edition for BMC Software solutions, please visit www.bmc.com/nlyte.