

## Helping Customers Maximize High Availability and Operational Efficiency with GFS Crane Managed DCIM Service

Customers look to outsource their IT infrastructure when they outgrow capacity in their captive facilities and expect huge infrastructure growth in the coming years. While most Data Center Services operators provide additional power, space, cooling and network capacities in a cost-effective manner, it can be a challenge to ensure their customers' private cages or racks are optimized, managed effectively, and meets industry regulations, particularly when they are located across multiple facilities of the Colocation services provider. This is where GFS Crane Managed DCIM offered as a Value Added Service (VAS) can help to differentiate.

When an operator hosts a customer's IT infrastructure across its multiple Data Centers, GFS Crane Managed DCIM Service will help that customer optimize their infrastructure in the multiple facilities without being physically present at the operator's premises.

Here are some of the benefits of subscribing for GFS Crane DCIM as a VAS compared to a regular Collocation & Managed Services offering. The VAS offering will be a *personalized* portal for the customer – with visibility, monitoring, and planning options of the IT infrastructure across the operator's multiple facilities, all from the comfort of their own office.

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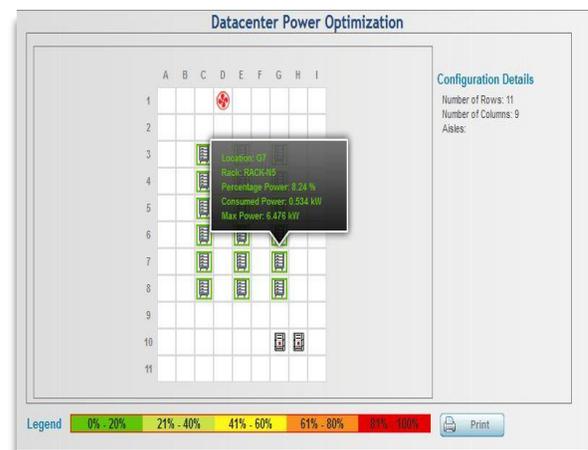
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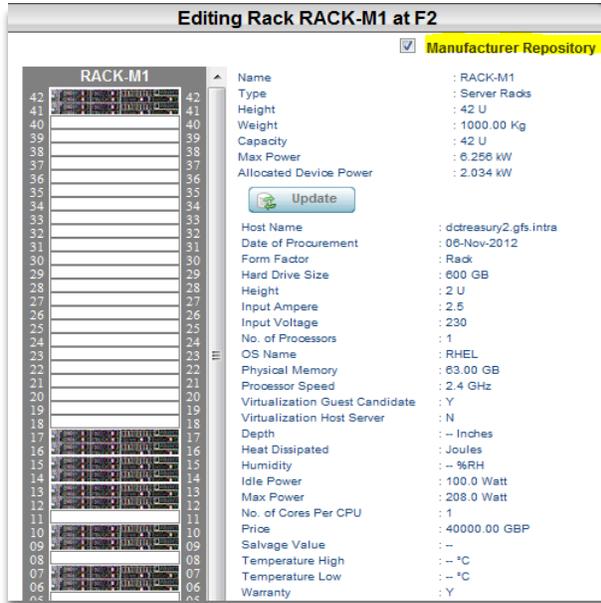
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### Visibility of DC Infrastructure

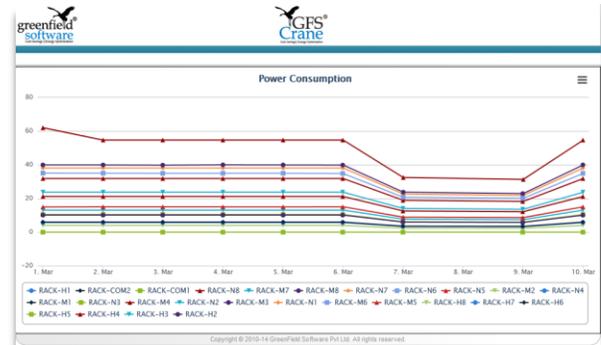
GFS Crane captures and stores information about all assets in the customers' racks or cages, maps relationships and dependencies among assets and provides advanced interactive GUI of the floor and rack elevation modeling with real-time information. This gives a complete visibility of the collocated infrastructure in terms of used power, space and network capacities, without being physically present in the facility.

GFS Crane replaces conventional spreadsheet and Visio way of asset management with an automated and real-time tracking and management of customers' assets and this web-based console can be viewed from anywhere.





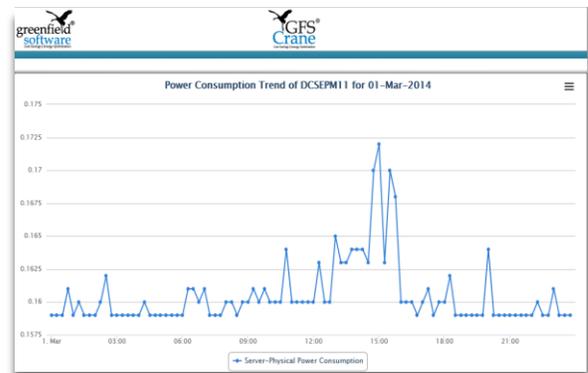
Threshold based alerts on power, environment and device health can be sent through GFS Crane to the customer using email, SMS or SNMP traps



## Better Monitoring, Reporting and Alarm Management

GFS Crane monitors all equipment in the customers' racks/cages - not only IT devices like servers, storages and network devices, even non-IT devices like row/rack PDUs, in-row cooling devices, RDHX units, energy meters or environmental sensors can be monitored real-time. Dashboards and reports on power consumption, environmental conditions, equipment health and utilization can be viewed remotely by the customer at real-time.

GFS Crane provides power analytics like trending, comparative analysis, 'what-if' or predictive analysis for all monitored parameters that facilitates informed decision making.



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**Datacenter Space Optimization Report for GFS DR**

Position	Hardware Group	Hardware Name	Percentage Space	Used Space	Max Space
C3	Rack	RACK-H1	55	23 U	42 U
C4	Rack	RACK-H2	0	0 U	42 U
C5	Rack	RACK-H3	0	0 U	42 U
C6	Rack	RACK-H4	0	0 U	42 U
C7	Rack	RACK-H5	0	0 U	42 U
C8	Rack	RACK-H6	0	0 U	42 U
D1	Cooling	COOLING 101	-	-	-
E3	Rack	RACK-M1	0	0 U	42 U
E4	Rack	RACK-M2	0	0 U	42 U
E5	Rack	RACK-M3	0	0 U	42 U
E6	Rack	RACK-M4	0	0 U	42 U
E7	Rack	RACK-M5	45	19 U	42 U
E8	Rack	RACK-M6	0	0 U	42 U
G3	Rack	RACK-N1	0	0 U	42 U
G4	Rack	RACK-N2	0	0 U	42 U
G5	Rack	RACK-N3	0	0 U	42 U

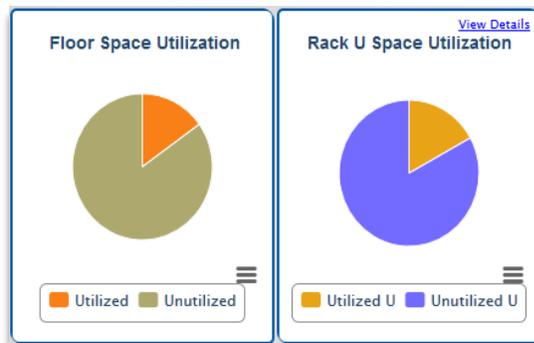
## Self-provisioning of IT Equipment

GFS Crane continuously keeps track of the used power, space, network capacity, weight and other critical parameters of the customer racks and helps in identifying stranded capacities within the infrastructure that can be used to optimize utilization of the contracted capacities.

**Datacenter Power Optimization Report for GFS DR**

Position	Hardware Group	Hardware Name	Percentage Power	Consumed Power	Max Power
C3	Rack	RACK-H1	20.69	0.67 kW	3.236 kW
C4	Rack	RACK-H2	0.00	0.0 kW	3.236 kW
C5	Rack	RACK-H3	0.00	0.0 kW	6.476 kW
C6	Rack	RACK-H4	0.00	0.0 kW	6.476 kW
C7	Rack	RACK-H5	0.00	0.0 kW	6.476 kW
C8	Rack	RACK-H6	0.00	0.0 kW	6.476 kW
D1	Cooling	COOLING 101	-	2.024 kW	-
E3	Rack	RACK-M1	0.00	0.0 kW	6.476 kW
E4	Rack	RACK-M2	0.00	0.0 kW	6.476 kW
E5	Rack	RACK-M3	0.00	0.0 kW	6.476 kW
E6	Rack	RACK-M4	0.00	0.0 kW	6.476 kW
E7	Rack	RACK-M5	5.26	0.341 kW	6.476 kW

The auto-provisioning feature of DCIM automates the process of identifying the best-fit rack where new IT devices can be provisioned without the rack getting overloaded.



## Compliance with Industry Standards

GFS Crane measures critical data center metrics and can help the customer to compare the health of his infrastructure, hosted at the collocation facility, with industry standards. The DCIM Software will calculate PUE, DCIE and other important data center metrics in real-

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time as well the average values over a specified period and will provide an efficiency score card for the data center, benchmarked against global standards. It will also help in calculating PUE at multiple levels as per The Green Grid recommendation.

Metric	Current Value	Benchmark	Rating Scale
PUE	1.55	1.50	
DCIE (%)	64.51	66.67	
Watt per Rack	2600.000	3000.000	
Watt per Square Feet	143.000	160.000	

Findings  
As of 15-Jul-2013 14:31  
PUE: 3% greater than benchmark. DCIE (%): 3% less than benchmark. Watt per Rack: 13% less than benchmark. Watt per Square Feet: 10% less than benchmark.



## Summary

The key is to find a partner-operator who will work with you to understand how your IT infrastructure operates and has experience in integrating your data center operations across multiple locations.

GFS Crane Managed DCIM as a Value Added Service can form a crucial element of an operator's innovation strategy for providing better value to its customers.

*GreenField Software's Mission is to help Data Centers control capital expenditures, reduce operating expenses and mitigate risks of Data Center failures.*

*Besides DCIM Software, GFS offers Data Center Advisory Services in areas of best practices, capacity planning, energy efficiency and business continuity of data centers*

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