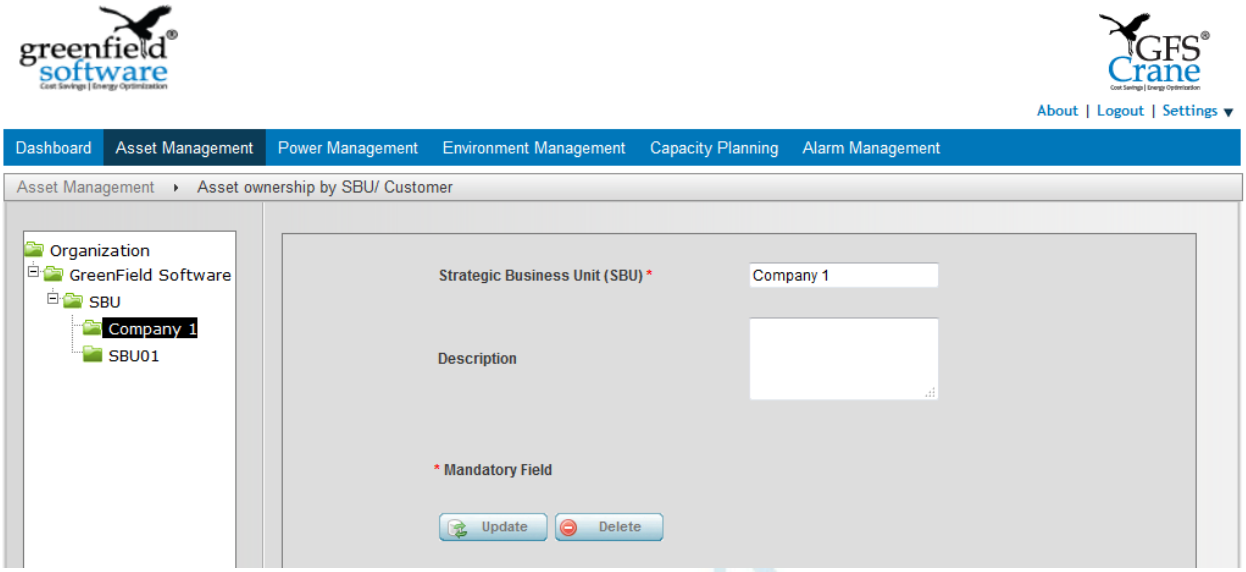
Customer Energy Billing using GFS Crane DCIM

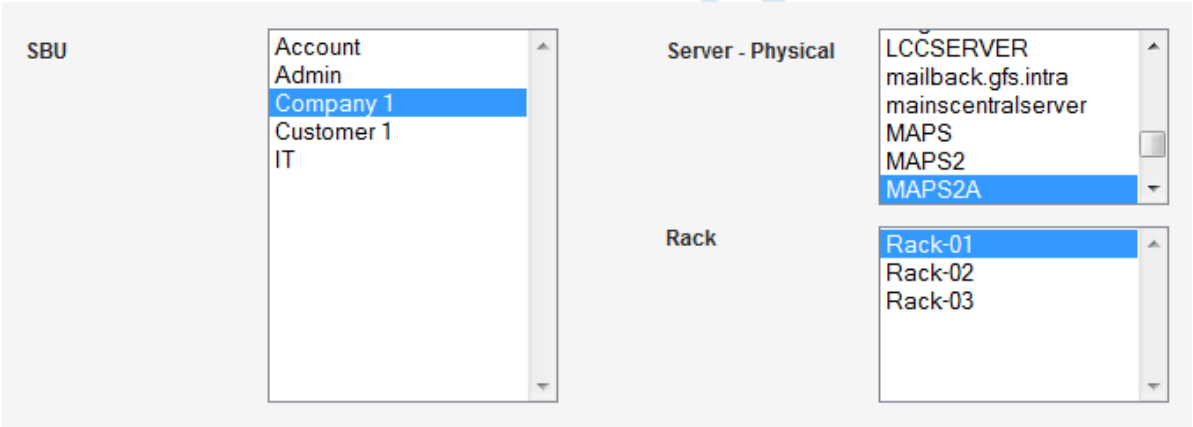
GFS Crane DCIM tracks critical resource usage by each tenant in a multi-tenant data center environment and facilitates accurate billing by the data center provider. The software helps in monitoring actual capacity utilization against contracted limits of power and prevents revenue leakage by alerting the data center business whenever the contracted limit is exceeded.

The capability of GFS Crane to accurately allocate shared energy resource of the facility among individual tenants/customers also helps the data center provider to meet business SLA and ensure customer satisfaction through transparent energy bills.

How it works?

GFS Crane provides users the facility to create tenants/customers/SBU through a User Interface and then maps cages, racks, IT devices and even applications with each customer.





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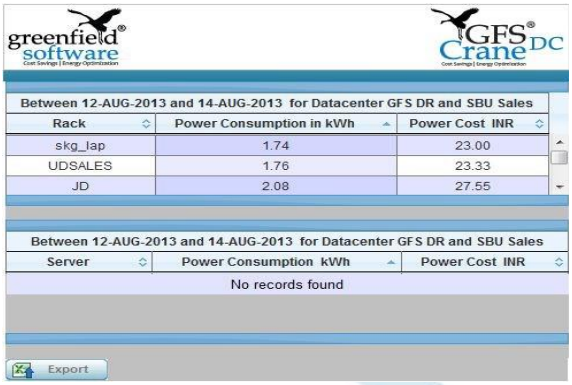
GFS Crane then monitors the power consumption of the racks and/or IT devices of that customer on continuous basis and provides accurate energy billing for a user-defined period. The energy bill, for a certain customer, generated using GFS Crane Charge-back module not only provides the total energy usage and cost for that customer but also breaks down the usage and cost at a rack/device level.



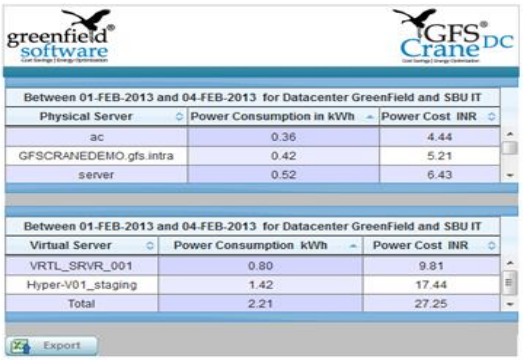
Between 12-AUG-2013 and 14-AUG-2013 for Datacenter GFS DR and SBU Sales

Rack	Power Consumption in kWh	Power Cost INR
skg_lap	1.74	23.00
UDSALES	1.76	23.33
JD	2.08	27.55

Between 12-AUG-2013 and 14-AUG-2013 for Datacenter GFS DR and SBU Sales

Server	Power Consumption kWh	Power Cost INR
No records found		

Export



Between 01-FEB-2013 and 04-FEB-2013 for Datacenter GreenField and SBU IT

Physical Server	Power Consumption in kWh	Power Cost INR
ac	0.36	4.44
GFSCRANEDEMO.gfs.intra	0.42	5.21
server	0.52	6.43

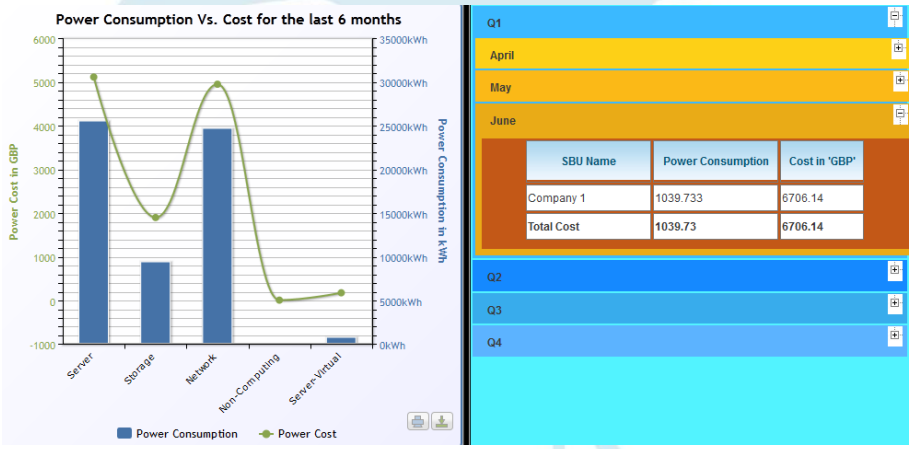
Between 01-FEB-2013 and 04-FEB-2013 for Datacenter GreenField and SBU IT

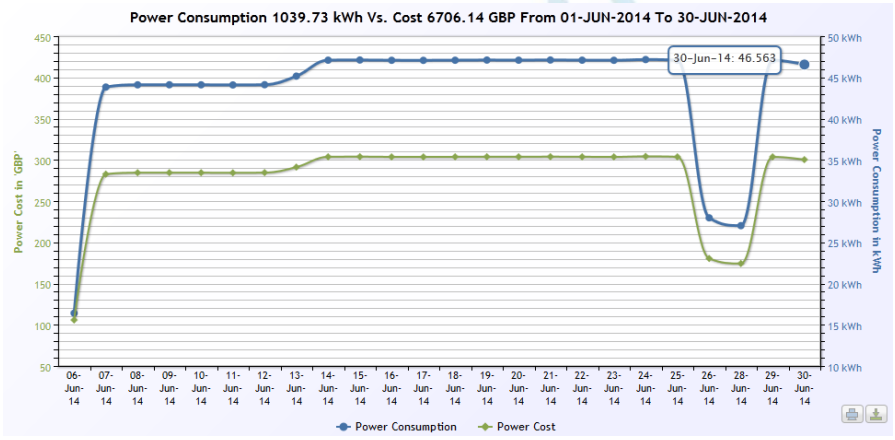
Virtual Server	Power Consumption kWh	Power Cost INR
VRTL_SRVR_001	0.80	9.81
Hyper-V01_staging	1.42	17.44
Total	2.21	27.25

Export

Trend Analysis

Apart from generating the energy bills, GFS Crane also provides analytics on the resource utilization pattern and customer revenue. This helps in identifying stranded capacities in customer racks/cages or additional revenue opportunity for the DC provider through upgrade of the current capacity.





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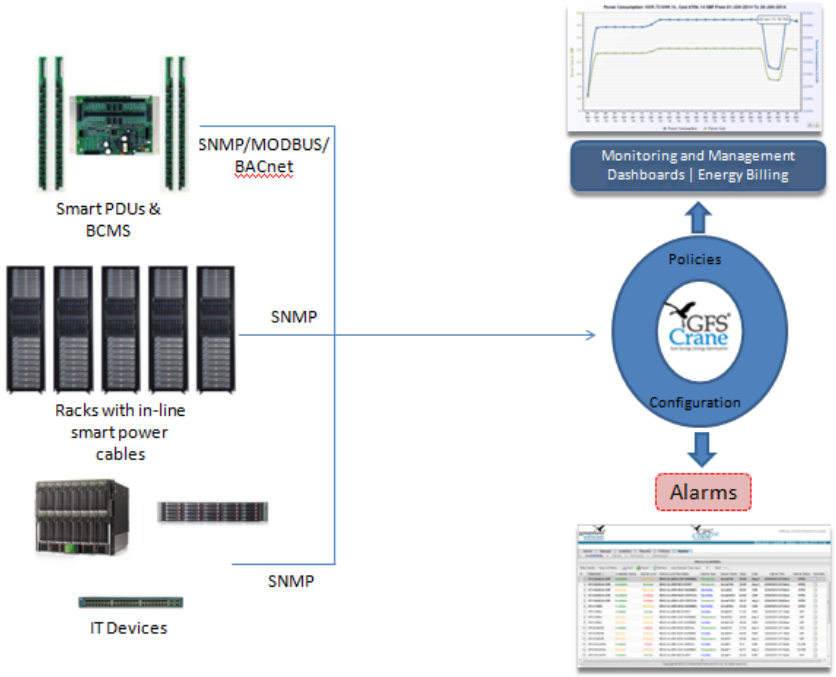
Configuring GFS Crane Energy Billing

1. Power consumption for racks are captured by GFS from the multiple metering options available in the data center, such as:
    - Intelligent PDUs installed within the racks
    - Option to monitor at socket level, provided socket level OIDS are available
    - Branch Circuit Monitoring System, if available
    - Smart Power Cables attached with dumb PDUs in the rack
    - Conventional Multi-function Energy Meters installed on the BUSBAR drop for each rack

2. GFS Crane comes with multiple protocol support such as MODBUS, BACnet and SNMP to interface with multiple metering devices for real-time acquisition of power data of racks and IT devices.
3. All power parameters like Current, Voltage, kWh, real and apparent power, Power Factor, Power Quality etc. can be measured and reported by GFS Crane, depending on the type of metering solution available.
4. SBUs can be created for each customer; racks and IT devices can then be mapped to SBUs using GFS Crane UI
5. GFS Crane performs probes at user-defined intervals (refer diagram below) to acquire power parameters for racks and IT devices and provide Energy Bills for customers along with other reports, dashboards and analytics
6. GFS Crane can also be configured for alarm management of rack power consumption by setting thresholds on power usage, which can then be sent over email, text messages or can be displayed on monitoring console.



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GFS Crane Energy Billing: *Business Benefits*

- Real-time monitoring of power consumption and power cost for customers help track revenue leakage due to over-usage. Customers can be billed for the variable usage over contracted limit.
- Helps in discovering hidden power capacity in customer cage or rack which in turn helpsin maximizing utilization of existing resources
- Transparent and granular energy billing till device level in case of socket level monitoring

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