GFS Crane DCIM - Asset Management

An integral feature of GFS Crane DCIM is comprehensive Asset Lifecycle Management that covers both Facilities & IT infrastructure of the Data Center:

1. Discovery of SNMP-enabled & BMS-connected assets
2. Creating Asset Inventory using built-in GFS Manufacturer Repository (OEM Library)
3. Asset Relationship mapping
4. Visualization with 2D & 3D Layouts
5. Mobile UI Support
6. Preventive Maintenance Schedules
7. Critical Device Uptime & SLA Reports
8. Workflow-based Move-Add-Change operations
9. Asset-related widgets on Dashboard

1. Discovery of IT and Facility Assets:

IT Assets: DCIM supports Asset discovery over SNMP. A range of IP addresses of IT assets are provided and DCIM discovers all assets within this IP range. The user-friendly Interface is easy to use and enables users to quickly add new assets within the data center environment.

Discovery of Facility Assets over various protocols (SNMP, BACnet ID Objects):

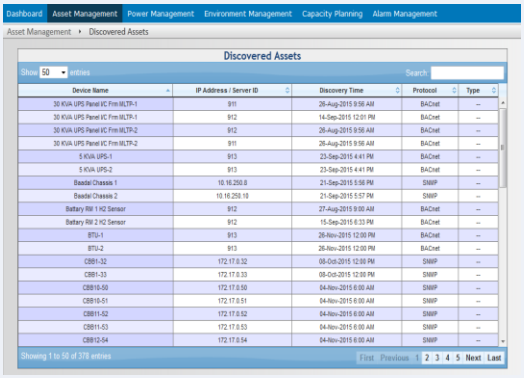

Figure 1: Discovery of SNMP-based assets within a specified IP address range

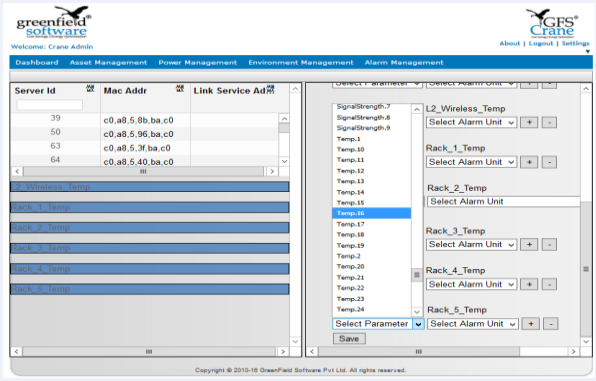

Figure 2: GFS Crane DCIM BACnet Configuration Cockpit UI allows users to Add and track Facility devices monitored by existing BMS Systems or other Plant Manager tools.

2. Creating Asset Inventory using built-in GFS Manufacturer Repository (OEM Library):

The Asset management module is integrated with an OEM Library that includes a list of Static Parameters of facility and IT assets of different makes and models. Post asset discovery, the OEM Library enables quick automated way of building a centralized asset inventory as it includes

- device data like max & idle power, weight, U-space, single/dual power supply, number of network ports
- front & rear device image

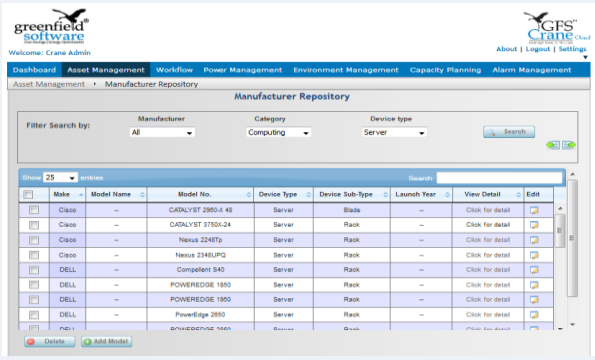

Figure 3: OEM Library - GFS Manufacturer Repository.

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Key Benefits of Manufacturer Repository (MR):

1. Populating Asset database from MR minimizes manual entry
2. Enables quick addition of device (with image) on rack and floor
3. Enables simulation for capacity forecasting
4. MR data helps to identify best-fit rack

Asset Management tool offers a clear visibility into Asset inventory, physical location, ownership and age. DCIM further maintains updated information on count, physical location and health of all physical assets. Provides asset lifecycle management by capturing procurement information, age and preventive maintenance schedules.

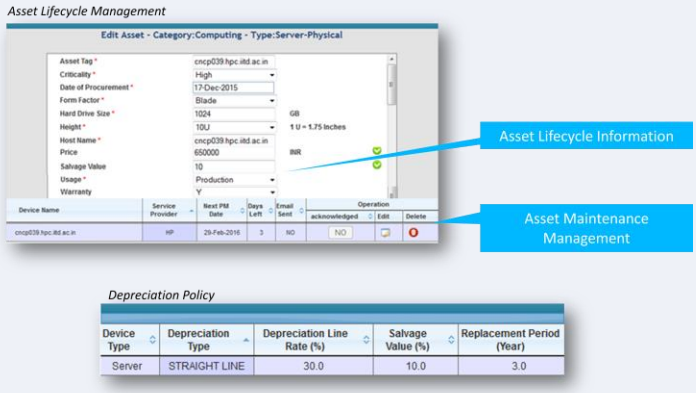


Figure 4: Asset Creation to Decommissioning

Rack & Floor Elevation with Space Management:

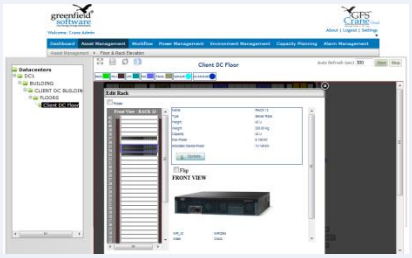
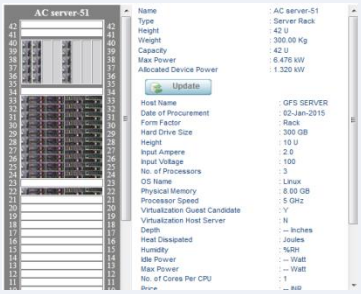


Figure 5: Rack elevation visualizing u-space occupancy, with list of devices populating the rack.
Figure 6: Manufacturer Repository provides OEM specs for integrated list of devices



3. Asset relationship mapping

With a view of upstream and downstream connected devices, the ARM chart provides clear visualization for impact analysis.

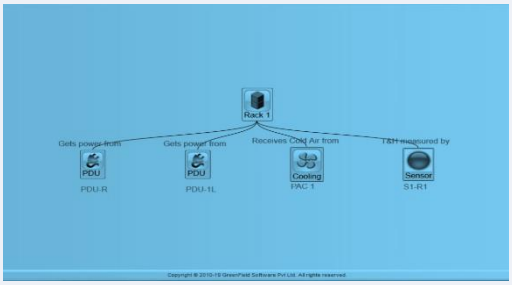
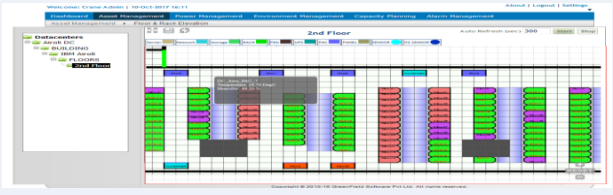


Figure 7: ARM Chart coupled with preventive maintenance schedules module helps DC managers make backup plans for planned downtime of devices for upcoming maintenance without affecting DC uptime.

4. Visualization with 2D & 3D Layouts

Floor space visualization helps the user to remotely identify assets within the Datacenter space.

2D Visualization (figure 8):



2D layout supports visual Row/ Rack Number based identification of Racks and provides Building/ Floor/customer-wise representation of the entire DC area. PAC units, UPS units and other facility devices can be

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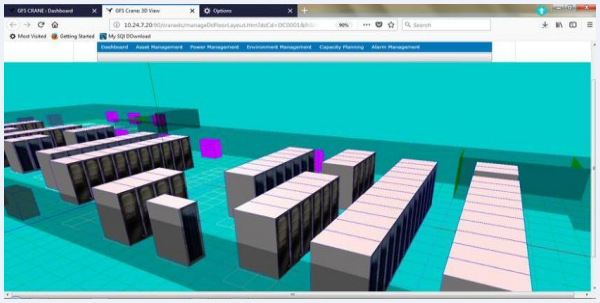
visualized, along with the Racks. Assets are color coded for quick identification along with its coordinates.

3D Visualization (figure 9):

3D layout also supports Row/Rack-wise identification of Assets and provides visual representation of the DC. PAC units, UPS units and other facility devices can be visualized, along with the Racks.



5. Mobile UI Support

Mobile support enables users to search for asset details from asset inventory, visualize 2D layout, and look at dashboard with asset management related KPIs.

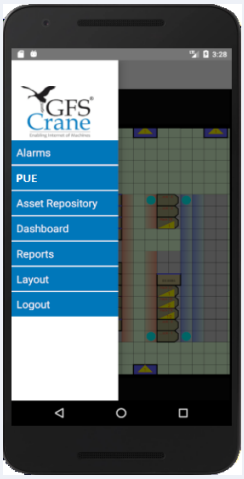


Figure 10: App-Based Mobile Support

6. Preventive Maintenance Schedules

Preventive maintenance scheduling for Facility and IT Infra Assets are configured through GFS Crane DCIM.

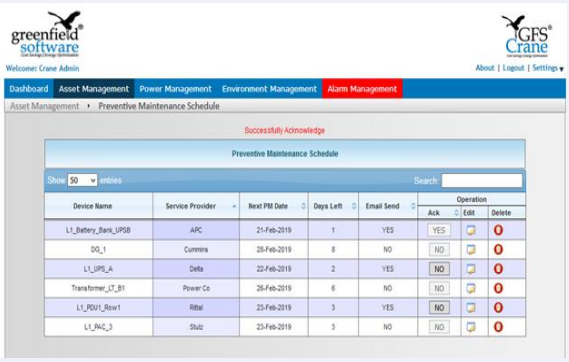


Figure 11: Preventive maintenance schedules

Auto email generation with reminders to respective service providers can be configured.

7. Uptime & SLA Reports:

Based on monitored data, specific critical facility devices can be monitored for uptime calculations.

Figure 12: Time-wise breach reports can be viewed/emailed for determining SLA compliance.

Combined with device age and asset performance information (example: UPS load efficiency), the Uptime report provides valuable guidance for lifecycle management of the asset.

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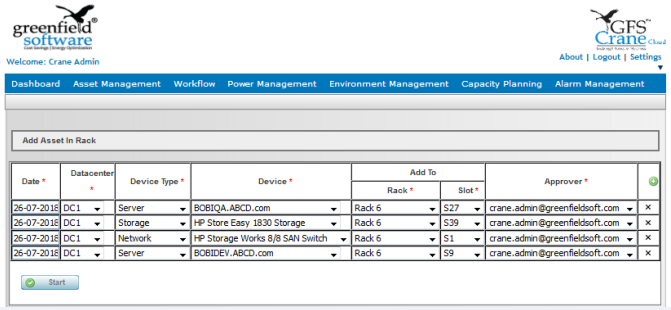
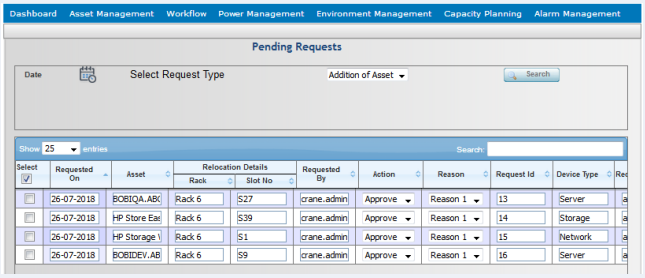
8. Workflow-based Move-Add-Change operations

Policy driven GFS Crane Asset management tools help enforce IT standards and practices for reliable data center Management. Workflow based change management is one of them: A request for a MAC is initiated (Figure 13 below):



The pending requests are submitted to the designated senior IT management for Approval.



Work orders can be created for Approved requests and emailed to the assignee for execution on the DC floor.

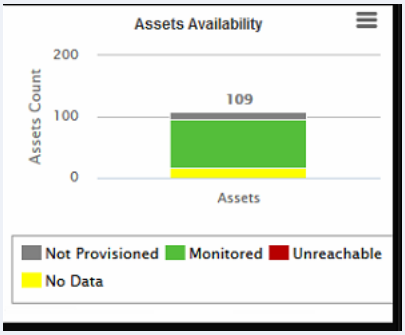
Audit Trail: Logs are recorded for each change carried out and records maintained for each IT asset during its entire life cycle until decommissioned. Similar workflows for 'Move Asset' or 'Decommission Asset' can be carried out based on day-to-day change management occurring within the data center.

9. Asset-Related Dashboard Widgets:

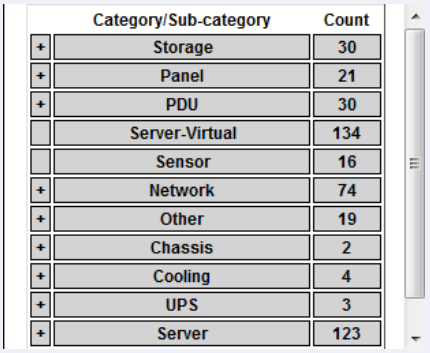
GFS Crane DCIM offers a customizable widget-based dashboard where at a glance key KPIs can be viewed.

Asset Management KPIs would include: Rack Space Utilization, Floor Space Utilization, Asset Count and Aging Analysis (Figure 14):

Asset Availability (Figure 15):



Asset Count (Figure 16):



Category/Sub-category	Count
Storage	30
Panel	21
PDU	30
Server-Virtual	134
Sensor	16
Network	74
Other	19
Chassis	2
Cooling	4
UPS	3
Server	123

Finally, GFS Crane Asset Management provides the foundation for other DCIM functions – Device Monitoring, Power Consumption, Capacity Planning and Impact Analysis.

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