G5 Intelligent PDU and 3rd Party Software

Application Note

This document highlights the integration of 3rd party software to Panduit G5 intelligent rack power distribution units (PDU).

Panduit's G5 Intelligent PDUs include a control module that includes IP network connectivity using RJ-45 port network interface card that supports up to 1G ethernet port. Also, Simple Network Management Protocol (SNMP) versions 1, 2c and 3 are supported that enable software tools such as network monitors and Data Center Infrastructure Management (DCIM) tools.
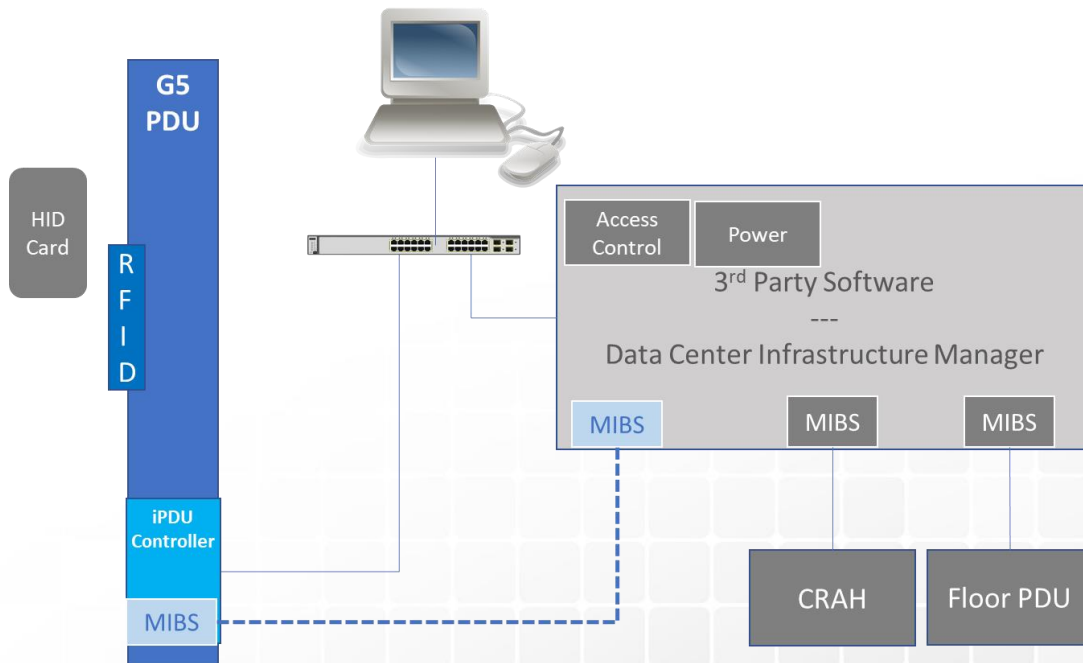
The G5 Intelligent PDU's SNMP capabilities are defined in the Management Information Base (MIBs) their functionalities include:

- Configuration
- Power Monitoring, Usage, and control
- Control of USB device such as LED lights
- Access control including electronic handles and RFID/HID Card reader for physical cabinet security

Panduit's G5 PDU's MIB file is distributed with its firmware that can be found in Panduit Support site.

Diagram 1 - Generic Relationship Between Device and Software

Software Tasks

Similar to any new device support, all work needed to include Panduit G5 intelligent PDUs are configuration changes on the software. There are 3 main tasks required on the 3rd party software to interface with G5 Intelligent PDU using the MIB:

- **Device Definition** – a software component that uses device MIB to associate necessary data to software structure. These are collected as Catalog, Library or Supported Devices
- **Discovery** – establish communication with the device using SNMP setting including IP address/segment and SNMP strings/credentials
- **Modeling** – software configures discovered devices unto physical layout and create relationships between the new device and existing elements configured in the software, effectively placing the new device into 'active' mode

For most DCIM software tools, a user needs to work with vendor supporting the DCIM tool to create and add the new Device Definition.

APC Struxureware

- Define the G5 PDU by creating Data Definition File (DDF). Send Request to APC Struxureware team. Here are some useful links to create DDF.
    - General FAQ
    - DDF Requests
- Add the Genome Library
- Discover and add using Data Center Expert and Data Center Operation

Sunbird PowerIQ

- Define a new device as DYNAMIC PLUGIN using G5 PDU MIB using JSON template provided software vendor
- IMPORT new DYNAMIC PLUGINS in the PowerIQ setting
- Add G5 PDU as a Facility Item
- Discover and add G5 PDU to Data Center model