PYTHIA TECHNOLOGIES

DM FOR SMALL AND MIDSIZE DATA CENTERS

From the branch closet to the UPS room. One console.

A raised-floor room, a UPS room, a few IDF closets and a handful of branch offices. The UPS, cooling, batteries and sensors in every one of them, live in one place, with floor plans, alarms and trends, shared with your BMS, your NMS and your AI assistants.



Every room

The data hall, UPS room, electrical room, NOC and closets on a live floor plan.

Every UPS

The big UPS in the UPS room and every small one in the closets and branches.

Every jar

Voltage, internal resistance and temperature for each lead-acid jar.

Ask it

The AI Connector answers questions from live site data.

WHAT GOES WRONG

Small sites fail in small ways. The DM watches for all of them.

A branch UPS on battery

The utility blinks at a branch office and the UPS carries the load. Nobody on site notices until it runs flat. The DM raises it the moment the UPS goes on battery.

A self-test that failed

Small UPS test their own batteries on a schedule. A failed test usually means a dead battery pack waiting for the next outage. The DM reports the result of every test.

A closet unit that stopped

A compressor lockout, a clogged filter or a full condensate pan stops a ceiling unit, and the closet starts to warm. The DM shows why it stopped, not just that it did.

A lead-acid jar drying out

One weak VRLA jar limits its whole string. Rising internal resistance is the early sign, long before a discharge test fails.

Hot spots on the floor

Rack inlet sensors on the cold aisles feed a live heat map, so a warm row is found before it becomes a hot row.

Batteries past their life

Battery age, test history and room temperature in one place, so replacements are budgeted instead of discovered.

1
Data hall

Raised floor, perimeter cooling, rack inlet sensors, PDUs and leak rope.

2
UPS room

The UPS, its maintenance bypass, the battery strings and the room sensors.

3
Closets and the NOC

Rack UPS and ceiling cooling units in every IDF, the NOC and the electrical room.

4
Branch offices

The small UPS that keep each branch's network up, across the WAN.

EVERY ROOM, ONE CONSOLE

UPS, large and small · Battery monitoring · Perimeter cooling · Ceiling cooling units · Generators & ATS · PDUs · Temperature & humidity · Leak detection · Hydrogen sensing

FLOOR PLAN

The floor plan your team already knows. Live.

The data hall, the UPS room, the electrical room, the NOC and the closets on one plan. Every piece of equipment sits where it is, with its status and its readings, and opens with a click.



A heat map that's real

Colored from the rack inlet sensors on the cold aisles, against the ASHRAE recommended range.

Every unit where it sits

Cooling units, PDUs, the UPS and its battery cabinets, the generator, each with a live status dot.

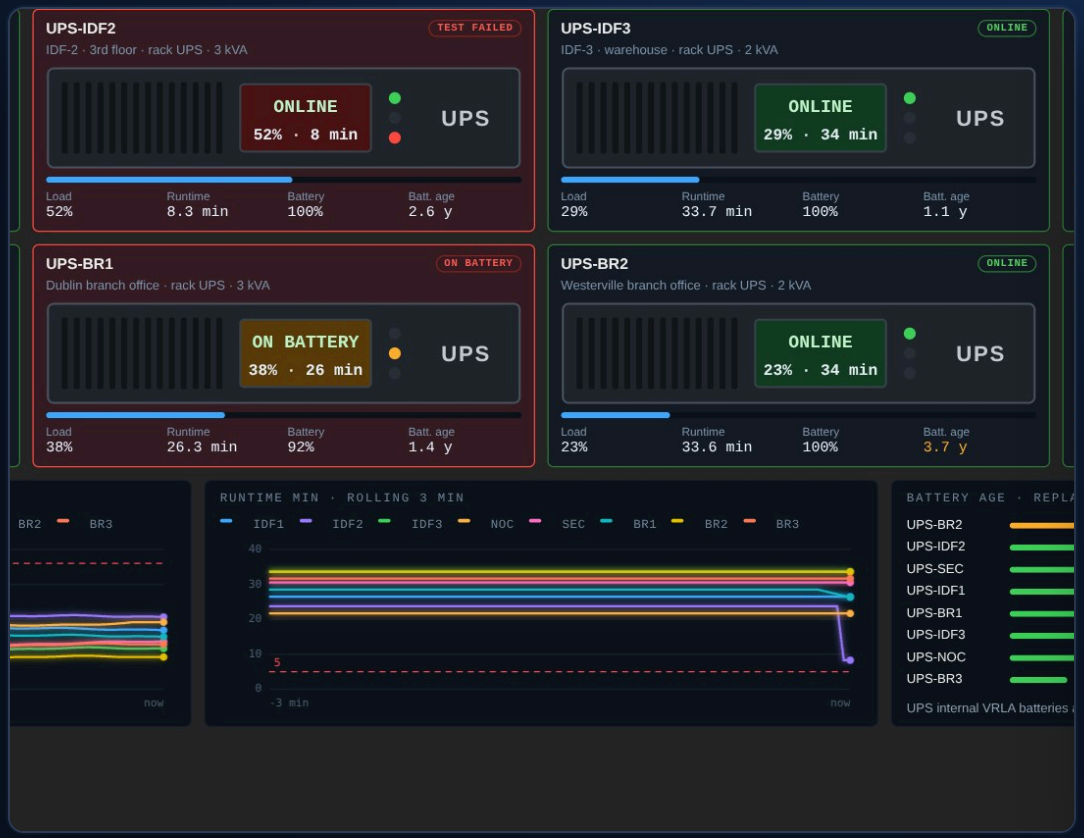
Other floors and branches

Closets on other floors and the branch offices listed beside the plan, with their UPS and cooling live.

SMALL UPS IN EVERY CLOSET AND BRANCH

Every small UPS on one screen.

Eight rack UPS in closets, the NOC, security and three branch offices: load, runtime, battery charge and age, and every self-test. Each one opens to the same live UPS page your team already uses.





On battery, at once

The Dublin branch loses utility. Its UPS turns amber and the alarm goes out by email and SNMP trap.

Every self-test

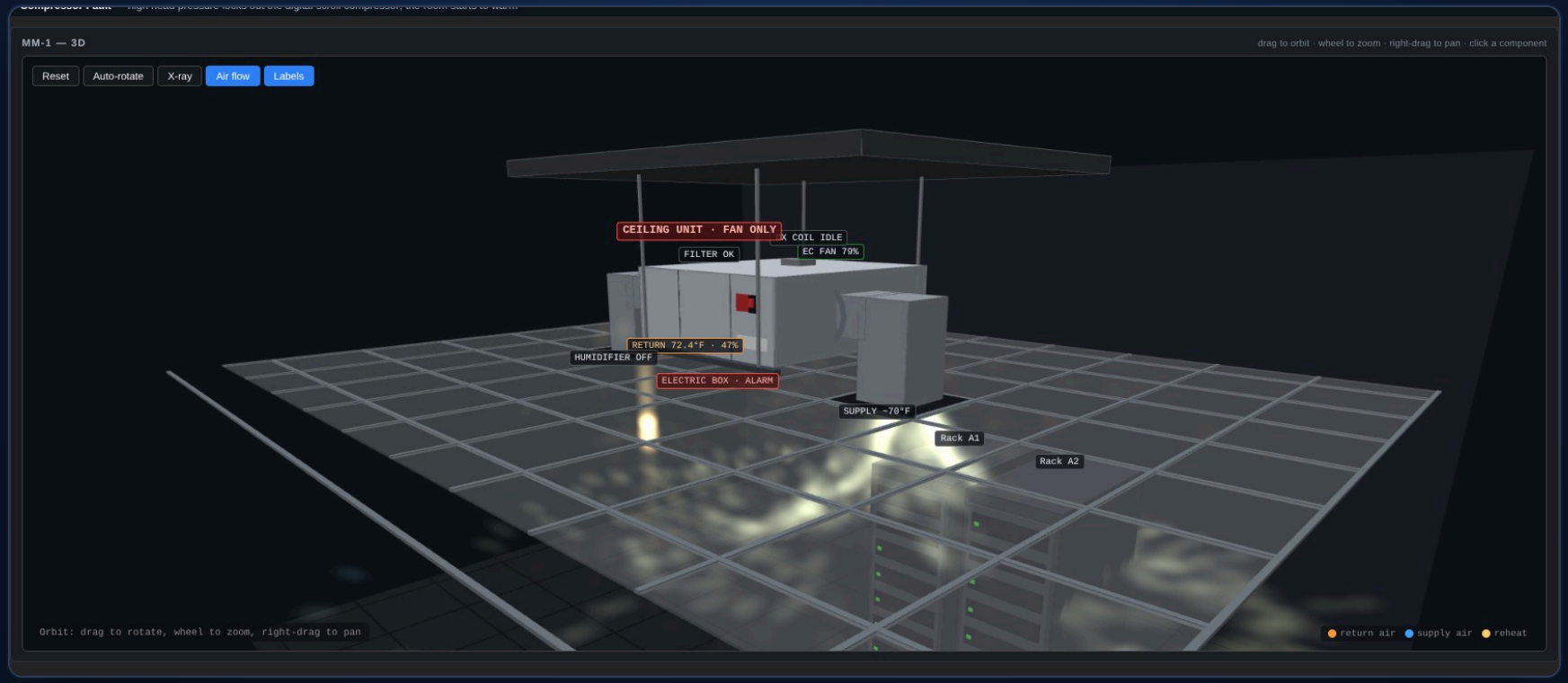
UPS-IDF2's battery test fails. Battery Test Failed and Replace Battery come in before the next outage finds it.

Battery age

Every unit's battery age against a four-year replacement plan, so packs are swapped on schedule.

CLOSET COOLING

Every ceiling unit, in 3D. And why it stopped.



Inside the unit

Return and supply air, cooling capacity, fan speed, compressor, humidifier and filter, live.

Why it stopped

Compressor lockout, clogged filter, humidifier fault, smoke shutdown or high condensate water, each its own alarm.

The closet it cools

The room's return air beside the unit, so a warming closet is seen before the switches complain.

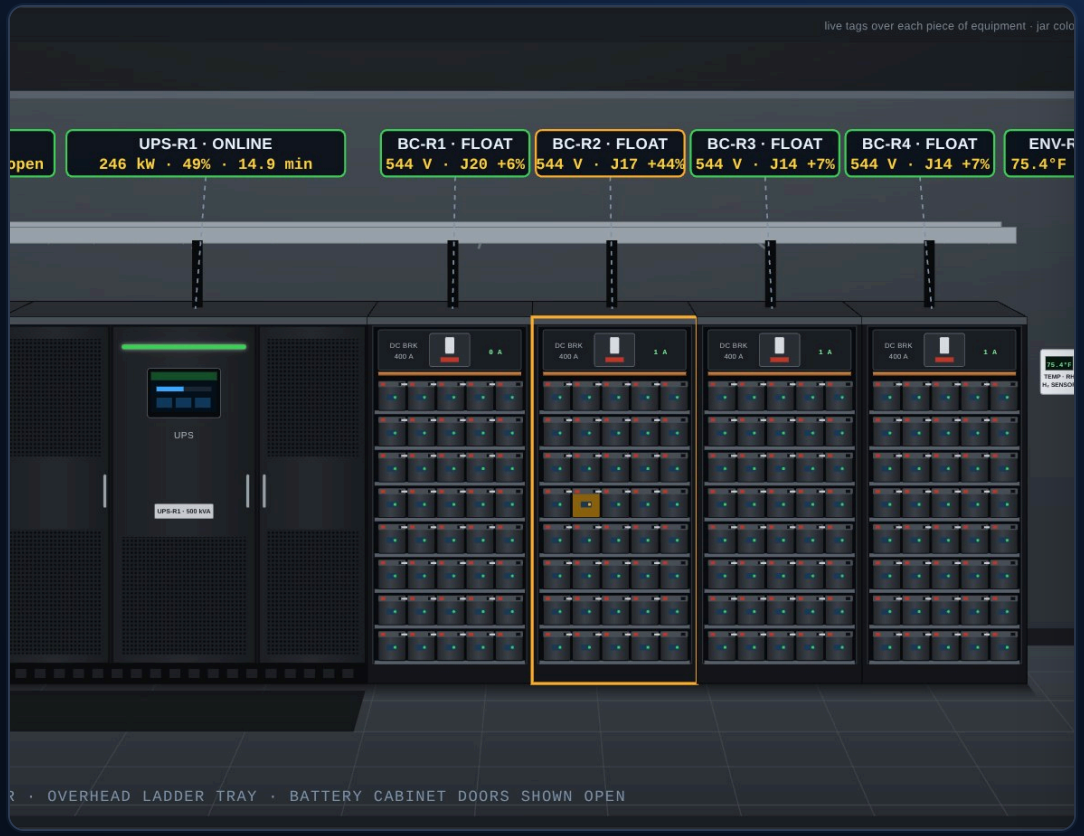
The protocol it speaks

BACnet/IP through the unit's network card, or Liebert units through the Smart Panel IGM.

THE UPS ROOM

The UPS room, as you'd walk into it.

The UPS, its maintenance bypass and four lead-acid battery cabinets with a live tag over each one, plus the room's temperature and hydrogen. Every jar is monitored against its string average.





The weak jar, found

Warning at 25 % above the string average, Major at 50 %. Replace one jar before it fails the next discharge test.

Runtime you can trust

Runtime, charge and load on the UPS, with the generator and transfer switch on the same one-line.

The room itself

Room temperature and hydrogen beside the batteries. VRLA life halves for every 15 °F above 77 °F.

WHAT THE DM CONNECTS TO

Every room, every make, one console.

The DM polls each piece of equipment in the protocol it already speaks. No controller is replaced, and each unit's own control and protection stay exactly where they are.

Layer	Typical equipment	What the DM reads	How
UPS	Rack and tower UPS in closets and branches, three-phase UPS in the UPS room	Mode, input, output and bypass, load, runtime, battery charge, self-test result, battery age, every alarm	SNMP, Modbus/TCP
Batteries	Battery monitoring systems on lead-acid strings, lithium-ion battery management systems	String voltage and current, each jar's voltage, internal resistance and temperature, discharge events	Modbus/TCP, SNMP
Cooling	Perimeter downflow units, ceiling-mounted closet units, in-row units	Return and supply air, humidity, capacity, fan, compressor, filter, humidifier, condensate, smoke	BACnet/IP, Modbus; Liebert units through the Smart Panel IGM
Power	Generators, transfer switches, PDUs and panelboards	Engine status, transfer position, sources available, loads, transformer temperature, branch circuits	Modbus/TCP, SNMP, BACnet
Environment	Rack inlet temperature and humidity sensors, leak rope, hydrogen sensors	Temperature, humidity, leak zones, hydrogen % LEL	SNMP, HTTP, Modbus, Pythia leak panels

One structure

Each site is a location in the tree, with groups for the UPS room, power, closets and branches. An alarm turns its group, the location and the site red.

Published to what you run

Everything the DM reads is published as BACnet/IP, Modbus/TCP and SNMP, so the BMS and NMS get every room without new integration work.

No server in the closet

A Smart Panel DM on the wall runs the whole DM, with cellular or Starlink where there is no network.

Built to keep running

Run the DM on a server in the rack, a redundant pair, a Smart Panel or a dedicated cloud VM.

ALARMS AND ANSWERS

Alarms that match the risk. Answers when you ask.

Category	Examples	Typical response
Critical	UPS runtime below 5 minutes · smoke shutdown · leak · load on battery at the UPS room	Immediate email and trap to facilities and IT.
Major	Branch UPS on battery · battery self-test failed · compressor lockout · high condensate water · jar resistance 50 % high	Same-shift response: still running, but the margin is gone.
Minor	Replace battery · clogged filter · humidifier fault · rack inlet above the ASHRAE limit · jar resistance 25 % high	Planned maintenance, before it becomes urgent.

Each category goes to the right people by email and SNMP trap, with quiet-time exceptions. A fail count keeps a single bad reading from raising an alarm.

DM AI CONNECTOR

Ask your data center a question.

Which UPS batteries are due for replacement?

Two right now: UPS-IDF2 just failed its self-test, and the UPS at the Westerville branch is 3.7 years old. The VRLA strings behind UPS-R1 are 4.7 years into a 5-year life, so budget them for March 2027.

Which closets are running hot?

IDF-1. Its ceiling unit locked out its compressor on high head pressure and return air is at 81 °F. Check the condensing unit on the roof.

Connect Claude, ChatGPT or any assistant that speaks MCP. New accounts are read-only, and only an administrator can allow changes.

See your rooms, closets and branches in the DM.

Ask for a demo. We'll walk you through the floor plan, the UPS fleet, the closet cooling and the UPS room, and show how every site comes together in one console.

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