

DM FOR POWER

From the utility to the server. One console.

Utility service, switchgear, generators, transfer switches, UPS, PDUs, rack PDUs and the server's own power supplies, live in one place. With alarms, trends and dashboards, shared with your BMS, your NMS and your AI assistants.



Every link

Utility, switchgear, generators, UPS, PDUs, rack PDUs and servers in one site tree.

Every fallover

Know the moment 2N becomes N, and what the surviving side would carry.

Every watt

Load, capacity and losses at each layer, trended over time.

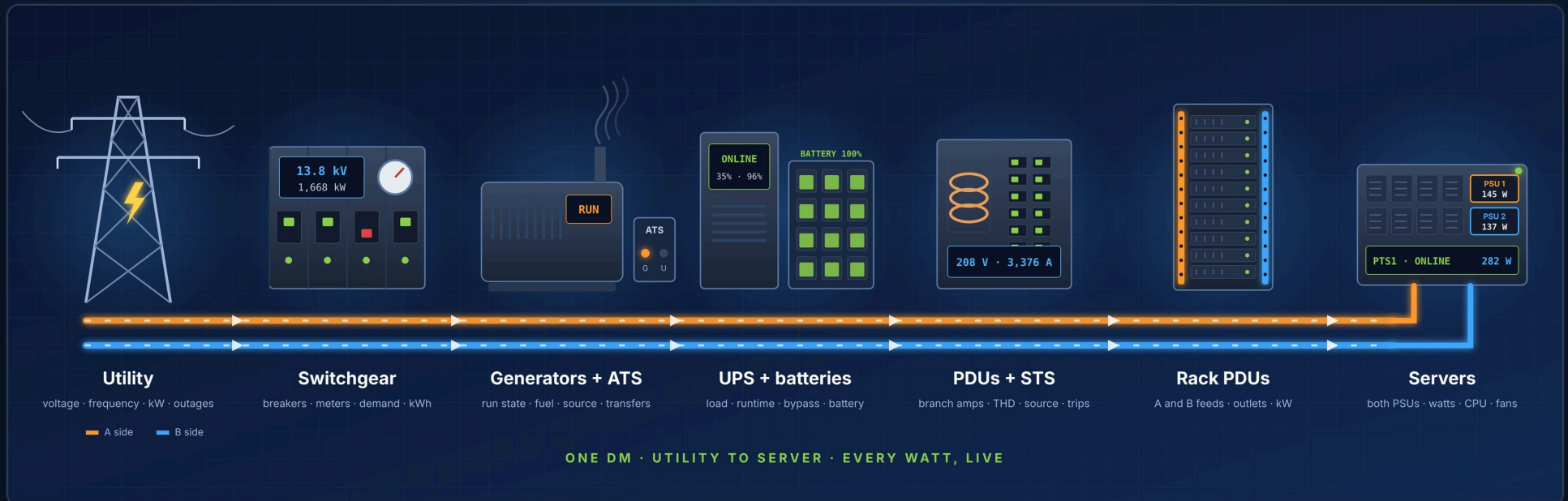
Ask it

The AI Connector answers questions from live power data.

WHY IT MATTERS

Power is still the leading cause of serious outages.

Most power failures give warning first: a battery that is aging, a generator left out of auto, a redundant pair that quietly lost its partner. The DM shows every one of them, from the service entrance to the server's power supplies.



No. 1 cause

Power remains the leading cause of impactful data center outages, with UPS systems, transfer switches and generators among the most common failure points.

Source: Uptime Institute, 2026 outage analysis

~30 seconds

When CDU pumps lose power, coolant stops in about 10 seconds; beyond about 30 seconds, GPUs face thermal shutdown. Vertiv recommends a dedicated UPS for CDU pumps.

Source: Vertiv, Aug 2026

800 VDC

NVIDIA's Kyber racks, planned for 2027, move to 800-volt DC power as rack loads head toward a megawatt.

Source: DatacenterDynamics

WHAT GOES WRONG

Six ways power fails. The DM watches for all of them.

Generator not ready

A generator left out of auto, low on fuel or failing its exercise won't save you in an outage. The DM shows its mode, fuel, engine and alternator, and warns when automatic start is disabled.

Transfer problems

Transfer switches and static switches must move to the good source. The DM shows which source is on load, whether each source is healthy, and whether the switch is still redundant.

UPS and battery

Runtime, load, battery charge and temperature, bypass and on-battery events from every UPS, with the blackout and brownout counts the unit keeps.

Hidden overload on failover

In a 2N or N+1 design each side runs lightly loaded, until one side is lost. The DM shows what the surviving UPS or PDU would carry if its partner dropped.

Lost redundancy at the server

A failed power supply or an unplugged cord leaves a server on one feed with no alarm on the floor. The DM reads each power supply from the server's BMC.

Power quality

Sags, frequency drift and harmonics stress equipment before anything fails. Voltage, frequency, power factor and, where reported, THD and K-factor are trended.

1

Utility and generators

The service, transformers and switchgear bring power in. Generators and transfer switches take over when the utility drops.

2

UPS and batteries

The UPS rides through the seconds before the generators carry the load, and conditions the power the whole time.

3

Distribution

PDUs, static transfer switches and panels split the power into branch circuits for each row and rack.

4

Racks and servers

A and B rack PDUs feed each server's two power supplies, the last place redundancy can be lost.

EVERY LINK, ONE CONSOLE

Utility & power quality meters

Switchgear

Transformers

Generators

Transfer switches

UPS

Batteries

PDUs & STS

Rack PDUs

Server power supplies

AT THE SERVICE ENTRANCE

See the utility the way a power quality meter does.

The utility page reads both services the way a power quality meter sees them: phasors, waveforms, harmonics and demand, live and trended.



Both services, live

Phasors and waveforms for each service, with per-phase voltage, current and power factor.

Harmonics in context

Harmonics shown against IEEE 519, so distortion is caught before it stresses equipment.

Demand and sags

Seven days of demand and every sag of the month, trended instead of estimated.

GENERATORS AND TRANSFER SWITCHES

Know every generator is ready before you need it.



Ready, or not

Each generator's mode, block heater, fuel, engine and alternator. Not in auto is an alarm, not a surprise.

Fuel on site

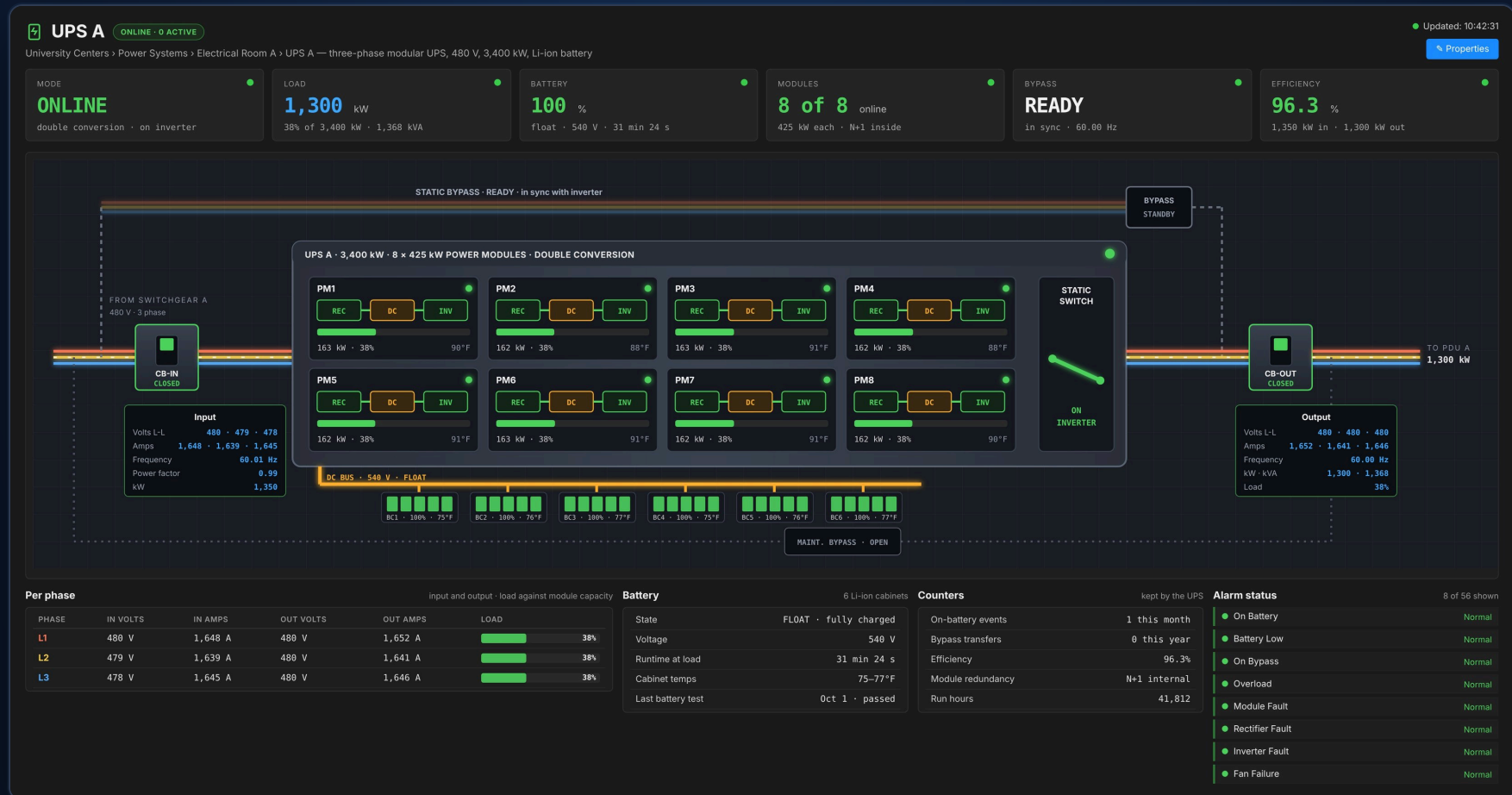
Belly tanks and bulk fuel in one view, with a reorder level that warns before it's low.

Every test, second by second

Which source each transfer switch is on, and how long the last test took to pick up the load.

UPS AND BATTERIES

Follow the power through every UPS.



Inside the UPS

Input breaker, power modules, DC bus, static switch, bypass and output, as the power flows.

Every battery cabinet

Charge, temperature and runtime for each cabinet, with the counters the UPS keeps.

Per phase

Input and output voltage, current and load on every phase.

Every alarm

On battery, on bypass, module faults and battery alarms, routed by category.

Know what each UPS would carry if its partner failed.

UPS System — 2N

REDUNDANT

University Centers > Power Systems > UPS System — UPS A and UPS B, 3,400 kW each, dual-fed load

Updated: 10:42:31

Properties

REDUNDANCY

2N

both UPS online · on inverter

COMBINED LOAD

2,588 kW

A 1,300 · B 1,288

IF ONE UPS IS LOST

76 %

survivor load · watch at 80%

RUNTIME AT LOAD

31:24 min

A 31:24 · B 31:40

BATTERY HEALTH

97 %

12 cabinets · lowest 96%

ON BATTERY

1 event

this month · 1.0 s · Oct 12

Load on each UPS, and on the survivor

2N · each UPS rated 3,400 kW · live

Last 24 hours

% of one UPS · 5-minute points

UPS A

IF ONE UPS IS LOST

UPS B

scale 0-120% of one UPS · amber 80-100% · red over 100%

Battery cabinets

12 Li-Ion cabinets · state of charge, temperature, cell voltage spread, health

A · BC1

FLOAT

100%

75°F · spread 10 mV
health 98%

A · BC2

FLOAT

100%

76°F · spread 13 mV
health 97%

A · BC3

FLOAT

100%

77°F · spread 14 mV
health 98%

A · BC4

FLOAT

100%

75°F · spread 14 mV
health 97%

A · BC5

FLOAT

100%

76°F · spread 11 mV
health 98%

A · BC6

FLOAT

100%

77°F · spread 12 mV
health 97%

B · BC1

FLOAT

100%

76°F · spread 14 mV
health 96%

B · BC2

FLOAT

100%

77°F · spread 9 mV
health 97%

B · BC3

FLOAT

100%

76°F · spread 14 mV
health 97%

B · BC4

FLOAT

100%

77°F · spread 12 mV
health 96%

B · BC5

FLOAT

100%

76°F · spread 10 mV
health 97%

B · BC6

FLOAT

100%

77°F · spread 13 mV
health 97%

Events this month

both UPS

Oct 12 14:31

WATCH

UPS A on battery, 1.0 s

Utility A sag to 82% · returned to normal · battery recharged in 6 min

Oct 02 06:00

PASSED

Battery test, UPS B

all six cabinets passed · runtime 31 min at load

Oct 01 06:00

PASSED

Battery test, UPS A

all six cabinets passed · runtime 31 min at load

Both UPS of a 2N pair, and the load one would carry alone, on one screen.

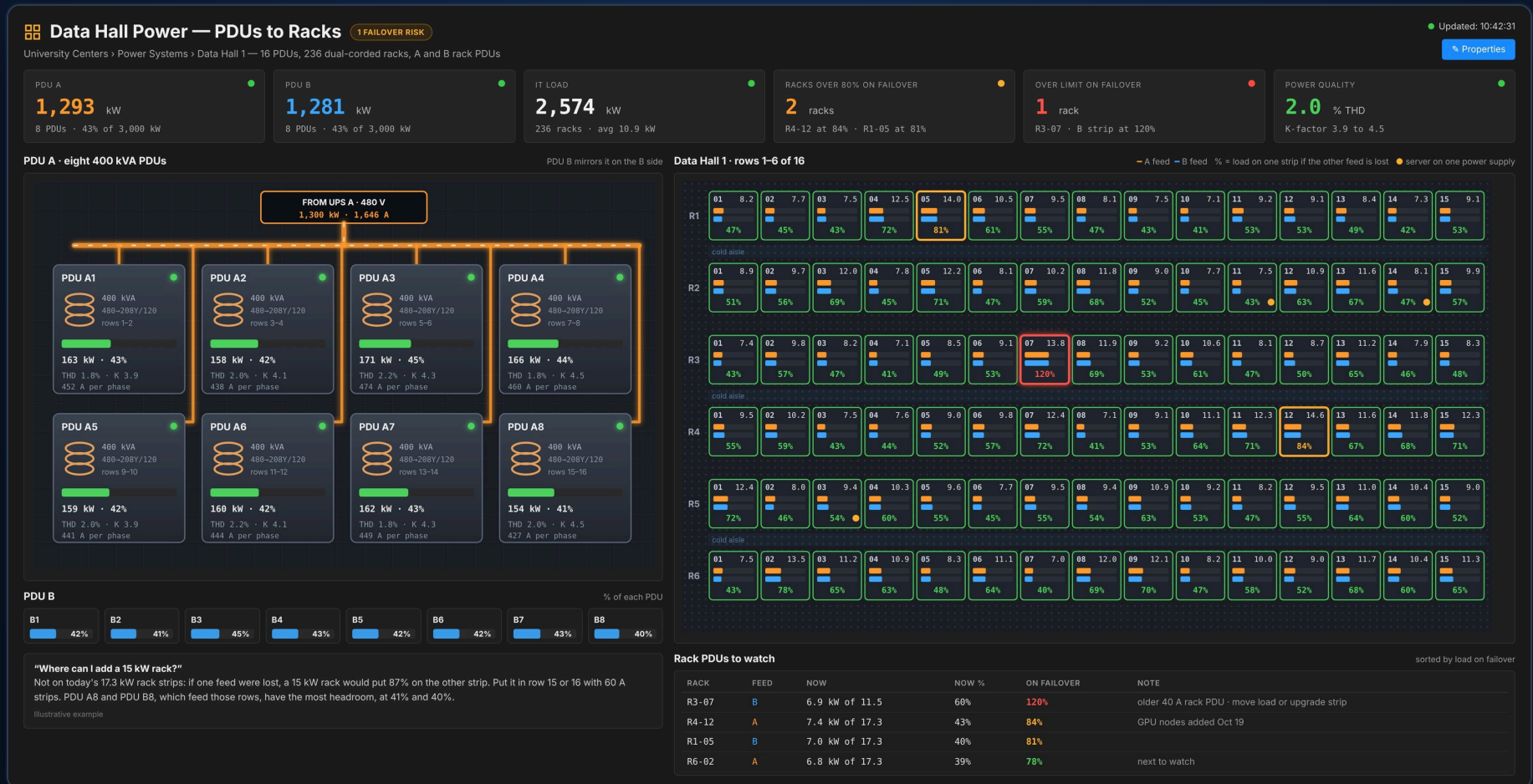
24 hours of load against the 80% watch line, so creeping growth is seen early.

Every battery cabinet's charge, temperature, cell spread and health in one place.

DATA HALL POWER

Find the rack that would overload on failover.

The data hall page follows the power out of the PDUs to every rack, and colors each rack by what one rack PDU would carry if the other feed were lost.



PDUs to racks

Every PDU on each side, and each rack's A and B rack PDU loads.

Colored by risk

Each rack is colored by what one rack PDU would carry if the other feed were lost.

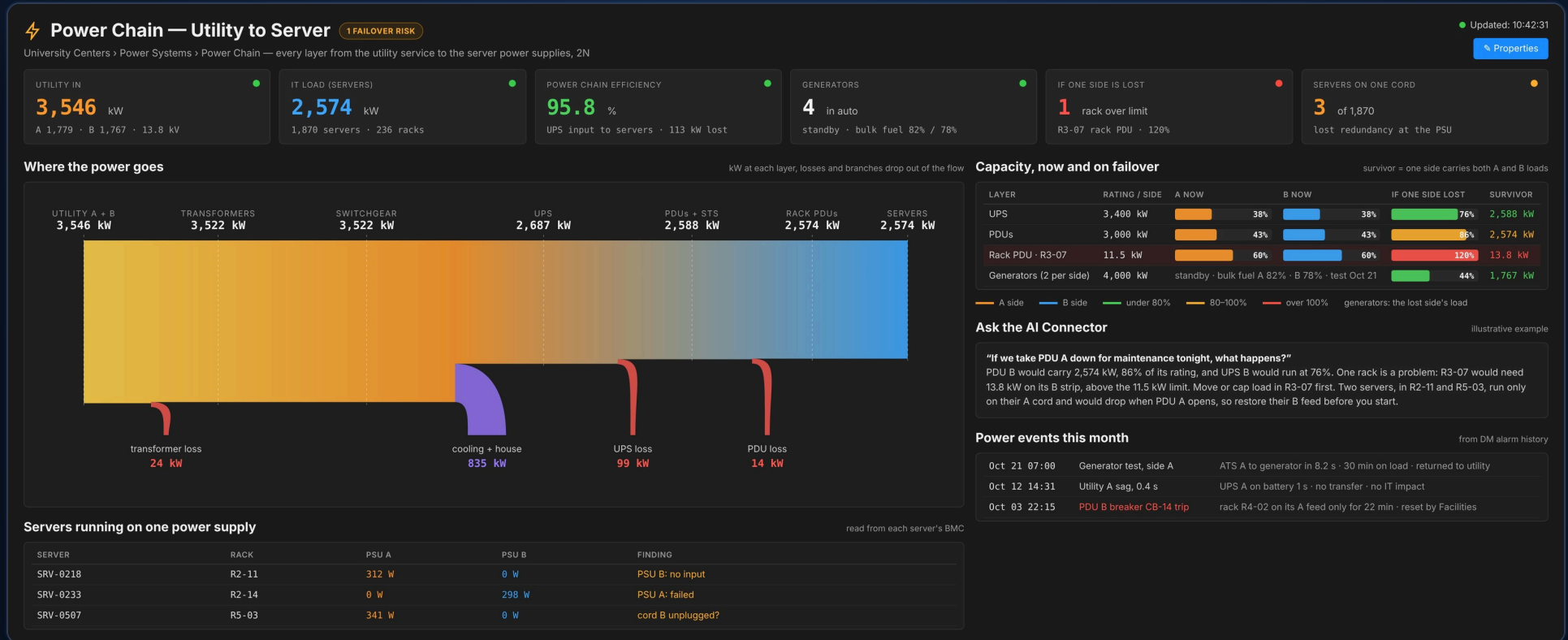
Fix it first

A rack at 60% on each feed needs 120% of one feed on failover. See it now, not during an outage.

THE WHOLE CHAIN ON ONE PAGE

From 3,546 kW at the meter to 2,574 kW at the servers.

How much power enters, where it goes, how much each layer loses, and what each layer would carry if one side of a 2N system were lost.



Where the power goes

Utility in, cooling and house loads, transformer, UPS and PDU losses, and the IT load that remains.

Failover, before it happens

For every layer, the load the surviving side would carry if its partner were lost.

Redundancy at the plug

Servers running on one power supply are listed with their rack, so the B feed is restored before work starts on side A.

WHAT THE DM CONNECTS TO

Seven links, one console.

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

Layer	Typical equipment	What the DM reads	How
Utility service	Utility and revenue meters, power quality meters, protective relays	Voltage, current, frequency, kW, kVA, power factor, kWh and demand, sags and outages	Modbus/TCP, Modbus RTU, BACnet/IP
Switchgear	Main and tie breakers, transformers, paralleling switchgear, feeder meters	Breaker positions and trips, bus voltage and load, transformer temperature, feeder kW	Modbus, BACnet, SNMP
Generators and ATS	Generators, automatic transfer switches, fuel systems	Run mode, engine and alternator, fuel level, source on load, transfers, not-in-auto	Generac H100 driver with dashboard; CyberPower ATS; others by Modbus
UPS and batteries	Single-module and multi-module UPS, battery monitors	Input, output and bypass, load, runtime, battery charge and temperature, mode, every UPS alarm	Vertiv GXT5 and EXM, Liebert GXT4, CyberPower; any UPS with the standard UPS MIB; Liebert UPS over IGM
Distribution	PDUs and power centers, static transfer switches, panelboards	Panel and branch loads, voltage, THD, K-factor, preferred and on-load source	Liebert PPC and STS over IGM; others by Modbus or SNMP
Racks	A and B rack PDUs, rack ATS	Load per feed and per outlet where reported, voltage, source, rack kW	SNMP
Servers	Servers and their management controllers (BMC)	Each power supply's watts and status, input watts, processor temperatures, fans	Supermicro X12 by SNMP; other platforms on request

One structure for every site

Power is a location in the site tree, with groups for each side of a 2N system, the generators, the UPS and each power rack. A UPS in alarm turns its group, the location and the site red.

Points that mean the same thing

Every UPS, meter and PDU lands with the same names, units and alarm settings, whatever its make.

Alarms built from several readings

Redundancy lost when one UPS of a pair is offline, on generator while fuel is low, or one cord lost on a dual-corded rack.

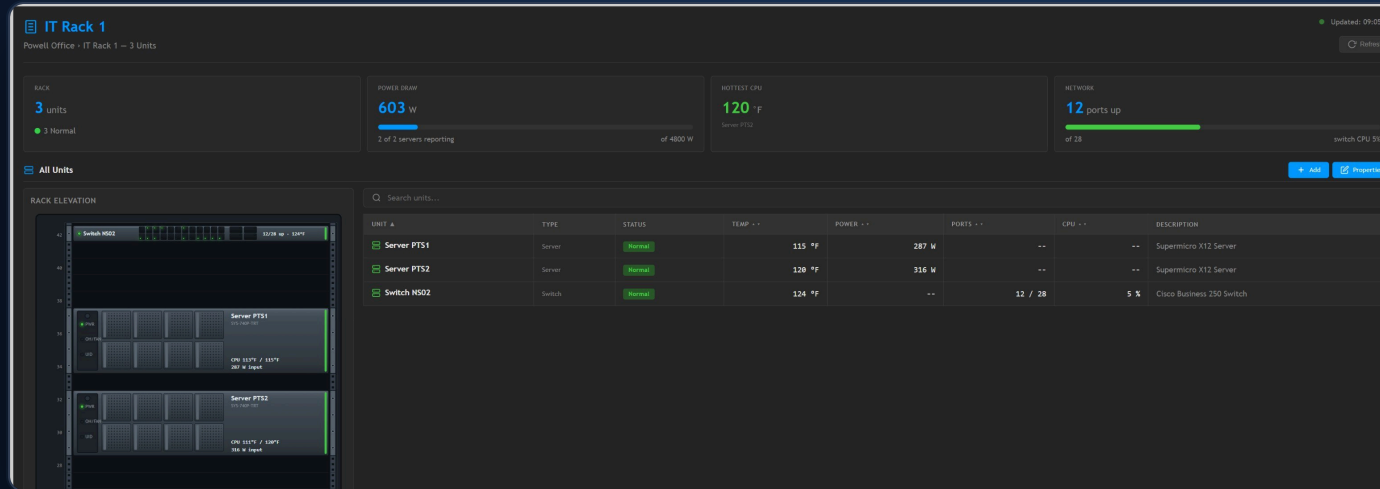
Published to what you already run

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

Running Liebert equipment? The Smart Panel IGM brings Liebert UPS, power centers and static transfer switches onto the same DM over the IGM wiring already in place. And the same DM runs on a server in the rack, a redundant pair, a Smart Panel on the electrical room wall, or a dedicated cloud VM.

THE END OF THE PATH

And at the end of every feed, the server.



Both supplies, both feeds

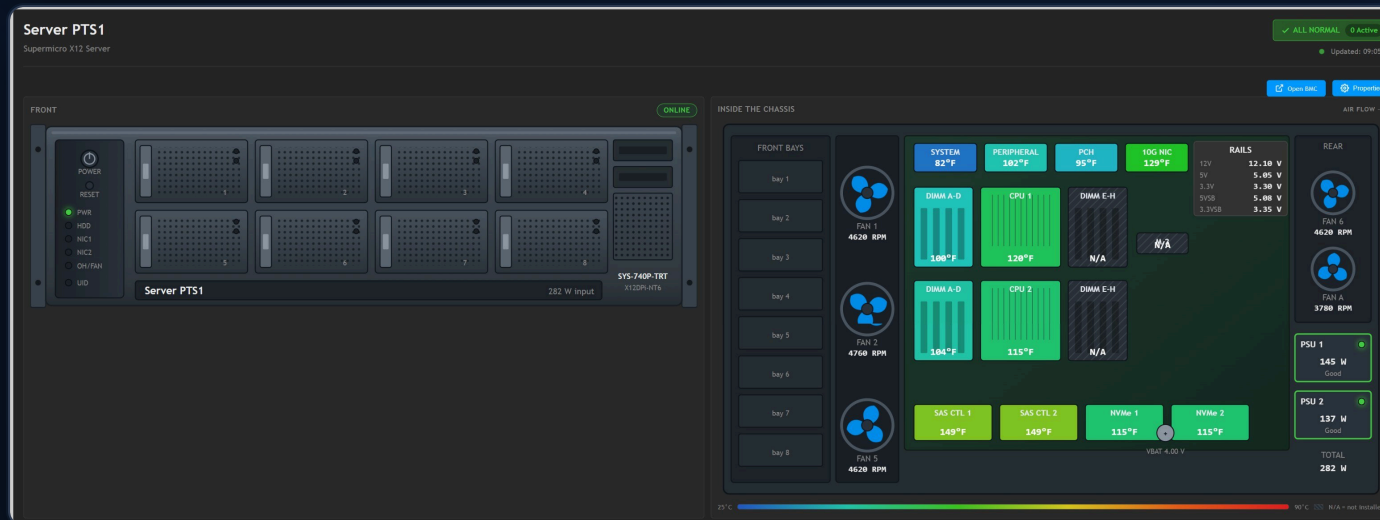
A server with one power supply at 0 W is running on one feed. The DM shows it the moment it happens, not when the other feed is lost.

Watts at the plug

Server and rack watts add up to the IT load the UPS and generators must carry, and the heat the cooling must remove.

Controls held back

Power on, off and reset through the management controller are there, but disabled until an operator enables them, so nobody switches a server off by accident.



Rack elevation with live temperature, power and status, and inside each server: each power supply's watts and status, temperatures, fans and voltage rails, read from its management controller.

ALARMS AND ANSWERS

Alarms that match the risk. Answers when you ask.

Category	Examples	Typical response
Critical	Utility lost · generator failed to start or shut down · UPS on battery · UPS output off or on bypass · transfer switch with no source · server power supply failed	Immediate email and trap to facilities and IT.
Major	UPS redundancy lost · generator not in auto · battery test failed · static switch off its preferred source · one feed lost to a dual-corded rack	Same-shift response: still powered, but the margin is gone.
Minor	Load above its watch line · fuel below its reorder level · battery temperature high · voltage or frequency out of band · sensor fault	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. Transfers, generator starts and breaker operations stay with each piece of equipment's own controls.

DM AI CONNECTOR

Ask the power system a question.

If UPS B fails, can UPS A carry the whole load?

Yes. UPS A would carry 2,588 kW, 76% of its 3,400 kW rating, below the 80% watch line. All six of its battery cabinets are fully charged.

Which servers are running on one power supply?

Three of 1,870. SRV-0218 in R2-11 and SRV-0507 in R5-03 show 0 W on power supply B, and SRV-0233 in R2-14 has a failed power supply A.

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

See your power chain in the DM.

Ask for a demo. We'll walk you through the utility, generator, UPS, data hall and power chain pages and show how your whole power system comes together in one console.

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