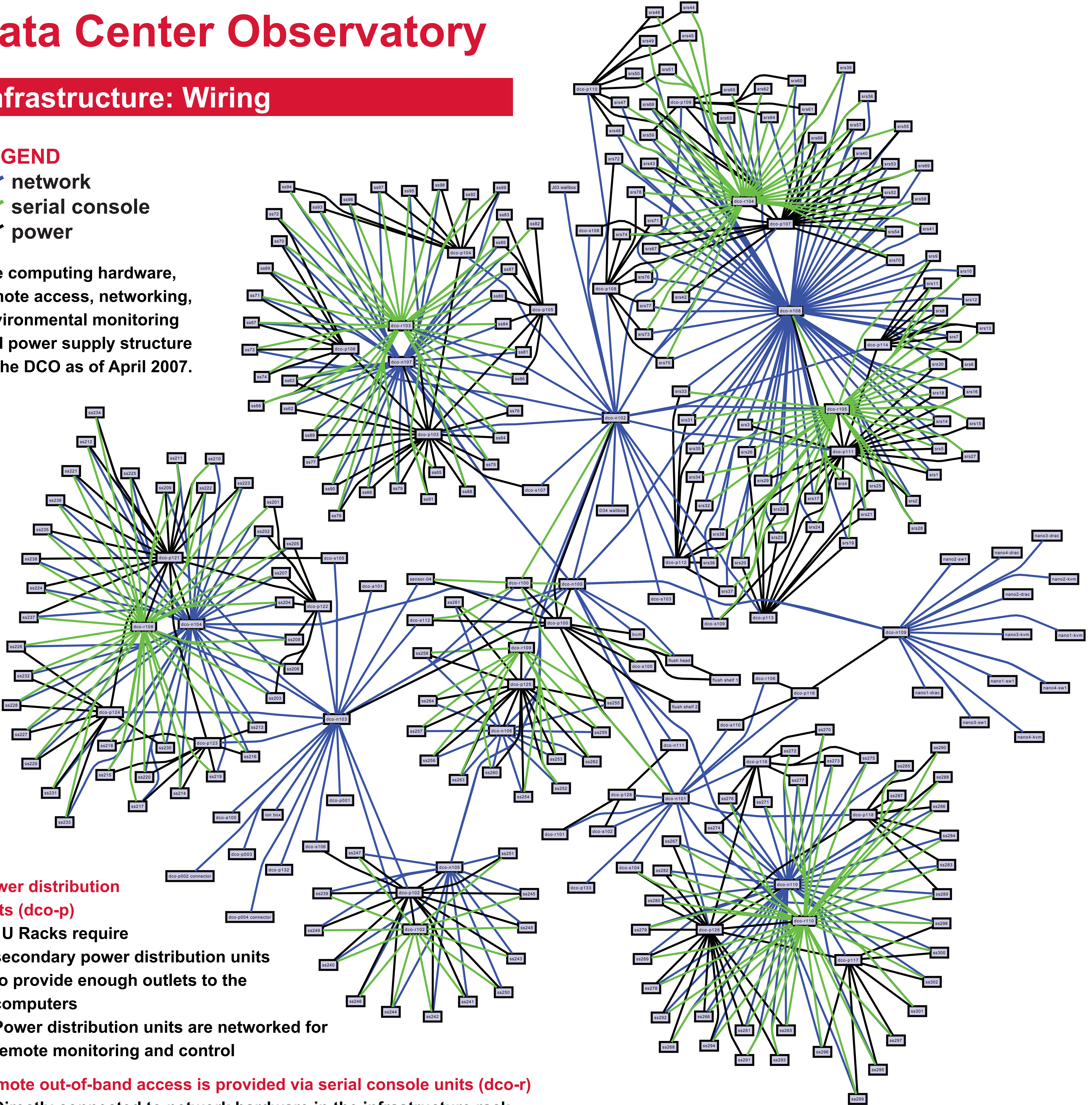# Data Center Observatory

Infrastructure: Wiring

LEGEND
- network
- serial console
- power

The computing hardware, remote access, networking, environmental monitoring and power supply structure of the DCO as of April 2007.

Power distribution units (dco-p)

- 1U Racks require secondary power distribution units to provide enough outlets to the computers
- Power distribution units are networked for remote monitoring and control

Remote out-of-band access is provided via serial console units (dco-r)

- Directly connected to network hardware in the infrastructure rack
- Allows access to machines within a rack in case normal network connectivity is lost.
- Serial traffic is carried over regular CAT-5e cabling

Environmental sensing units (dco-s)

- Sensors monitor temperature, humidity, electrical consumption, network traffic, water pump status and underfloor water leaks
- Out of range conditions trigger administrator page

Network infrastructure devices (dco-n)

- Currently use 48 port 1000base-T switches with trunked uplinks to the head end switch (dco-n100)

- Each wire is individually labeled and recorded, to identify source, destination and purpose
- All wiring within Zone 1 is routed in cable troughs rather than underfloor

Parallel Data Laboratory

PDLSVD07-12

Carnegie Mellon CyLab
CONFIDENCE FOR A NETWORKED WORLD

Carnegie Mellon