Intelligent PDUs and IP addresses:
How to efficiently make the connection to the network

PROBLEM: What is the best way to connect my new highly intelligent PDUs to the network?

Intelligent PDUs are now common within Data Center infrastructure, but the challenge for data center technicians is how to connect PDUs to the network in the most efficient way. Network ports are usually at a premium and switches are often at full capacity; therefore, requesting new IP addresses for each individual PDU or having to install a new switch can be difficult and expensive.

NETWORK CONNECTION

There are 2 ways of connecting new PDUs to a network: use an individual IP address for each PDU by connecting directly to a network switch or connecting via SCHNEIKEL's redundant network cascading architecture.

## Simple Network and POWER SHARE SOLUTION

SCHNEIKEL PDUs can connect 16 PDUs in cascade using a single IP address, allowing users to connect multiple PDUs to the network while only using one network switch port and without the hassle of extra setups. Using standard patch cables and the PDU's cascade ports, data is automatically shared between PDUs, allowing controlled web access from the IP address unit. The new Schneikel IEXv.5 PDU Hot Swap Controller also includes a built-in failover power capability called "Power Share". This new function will allow two PDUs, installed in the same rack, to be linked using a standard patch cable. Power to each IP Controller is maintained, even if one of the PDUs suffers a loss of power, ensuring continued network connectivity to the "lost power" PDU. As a result, receiving alerts, remote access to environmental sensors, and PDU cascading are all maintained. In summary, the new IEXv.5 Controller makes it an extremely simple process to install and connect SCHNEIKEL intelligent PDUs, while the Power Share feature adds extra resilience to installation. You will immediately get power data from your investment plus have the built-in resilience to continue collecting that data when you need it most – when the power fails you!

CONCLUSION

A data center needs all racks to have power and environmental monitoring at the cabinet level. Intelligent PDUs provide this functionality, but they require a network connection to report data remotely. However, connecting each individual PDU to a network switch is both inefficient and expensive. SCHNEIKEL's cascading network architecture and Power Share features solve this problem, making SCHNEIKEL Intelligent PDUs a great solution for any size data center installation.

How to connect my new IP PDUs without requiring expensive switch ports and use a small number of IP addresses?

1- Simple connection one PDU to one Network switch port
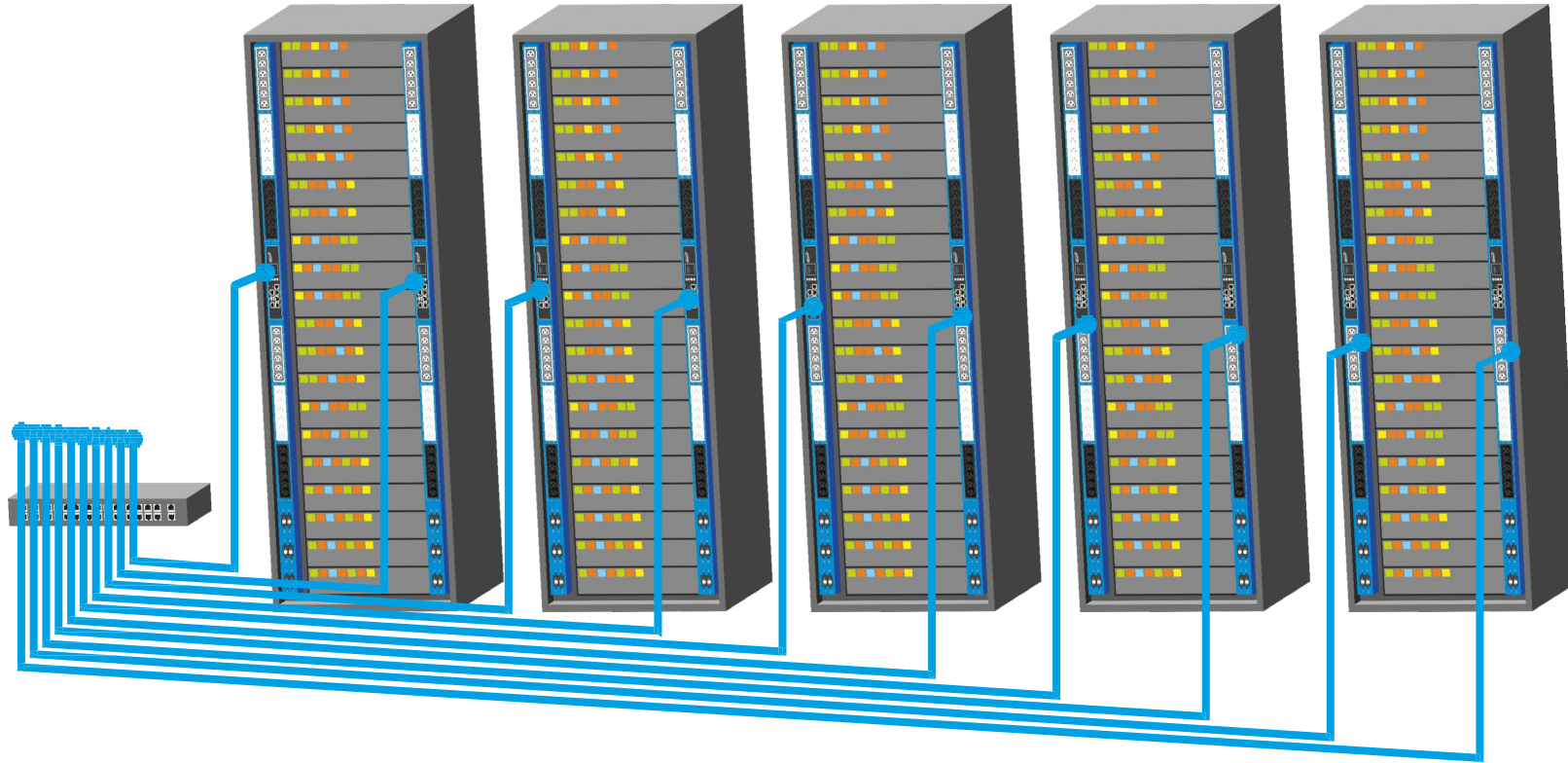
Advantages

If one PDU experiences a power failure, the rest of the PDUs will remain connected to the network.

Disadvantages

- Consumes a large number of network ports
- Requires a higher quantity of longer data cables
- Labor intensive
- Rack expansion is difficult if all switch ports are used

2- PDU Cascading plus power share connection

PDU LINKING **NETWORKING** **POWER SHARING PORT**
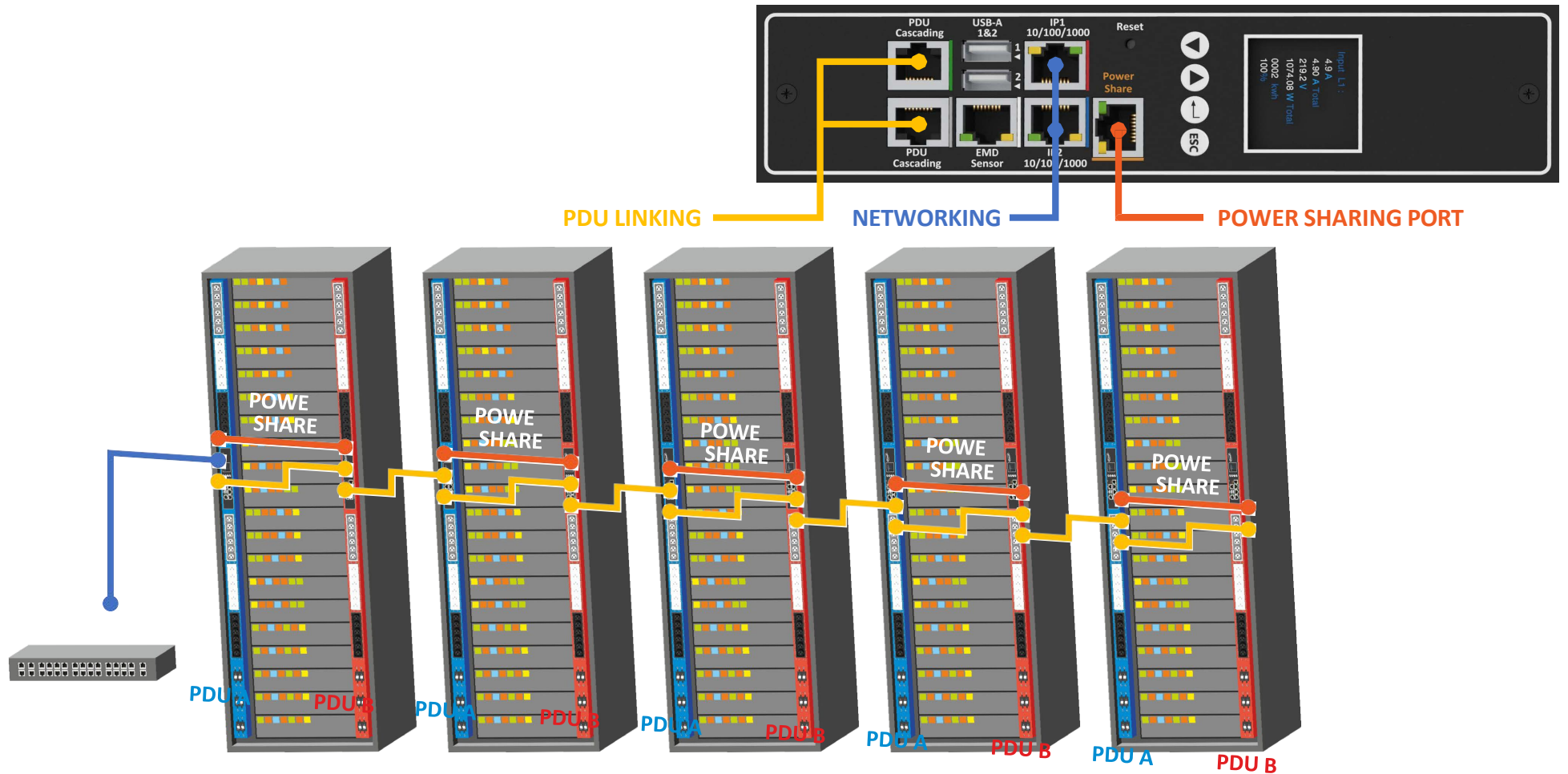
Advantages

Each PDU has network connectivity, using a single Network switch port, In the event a PDU experiences a power failure, the cascade will continue to function and the network controller on the effected PDU will be able to report the breakdown.

Disadvantages

Single network port means single point of failure.