

An abstract graphic on the left side of the image, composed of numerous thin, wavy green lines that swirl and overlap to form a complex, organic shape. The lines are a vibrant green color against the dark blue background.

Open. Together.

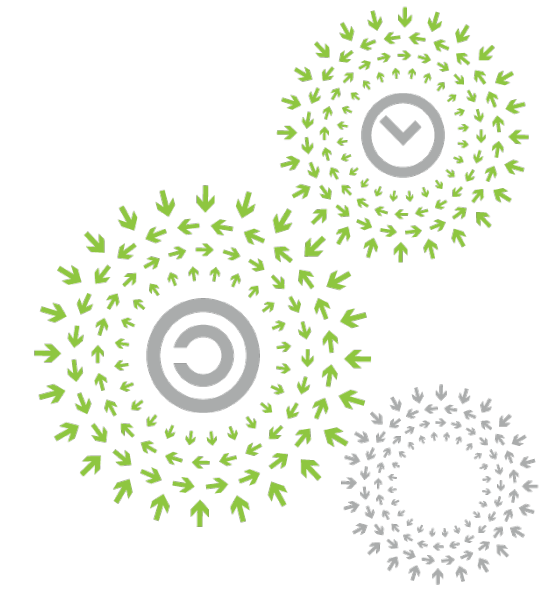


OCP
SUMMIT

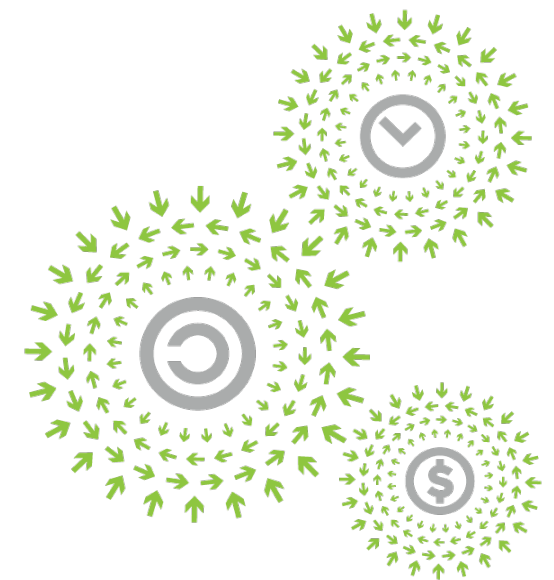
440U Open Rack

Steven Moore, Project Engineer, Rittal

Alex Lin, Sr. Technical Product Manager,
Penguin



OPEN
GOLD®



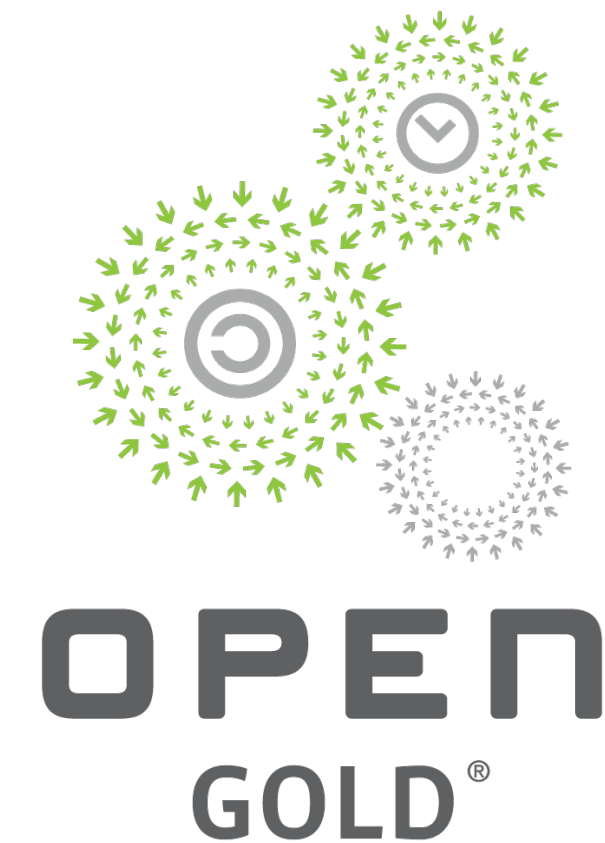
OPEN
PLATINUM™

About Rittal

- Founded in 1961, now with 9300 employees
- Headquartered in Herborn, Germany with 13 Production sites and 58 subsidiaries worldwide
- Rittal solutions can be found in more than 90 percent of all industrial sectors worldwide.

OCP Involvement:

- Gold OCP member
- Caleb Lusk, Open Rack Project Co-Lead

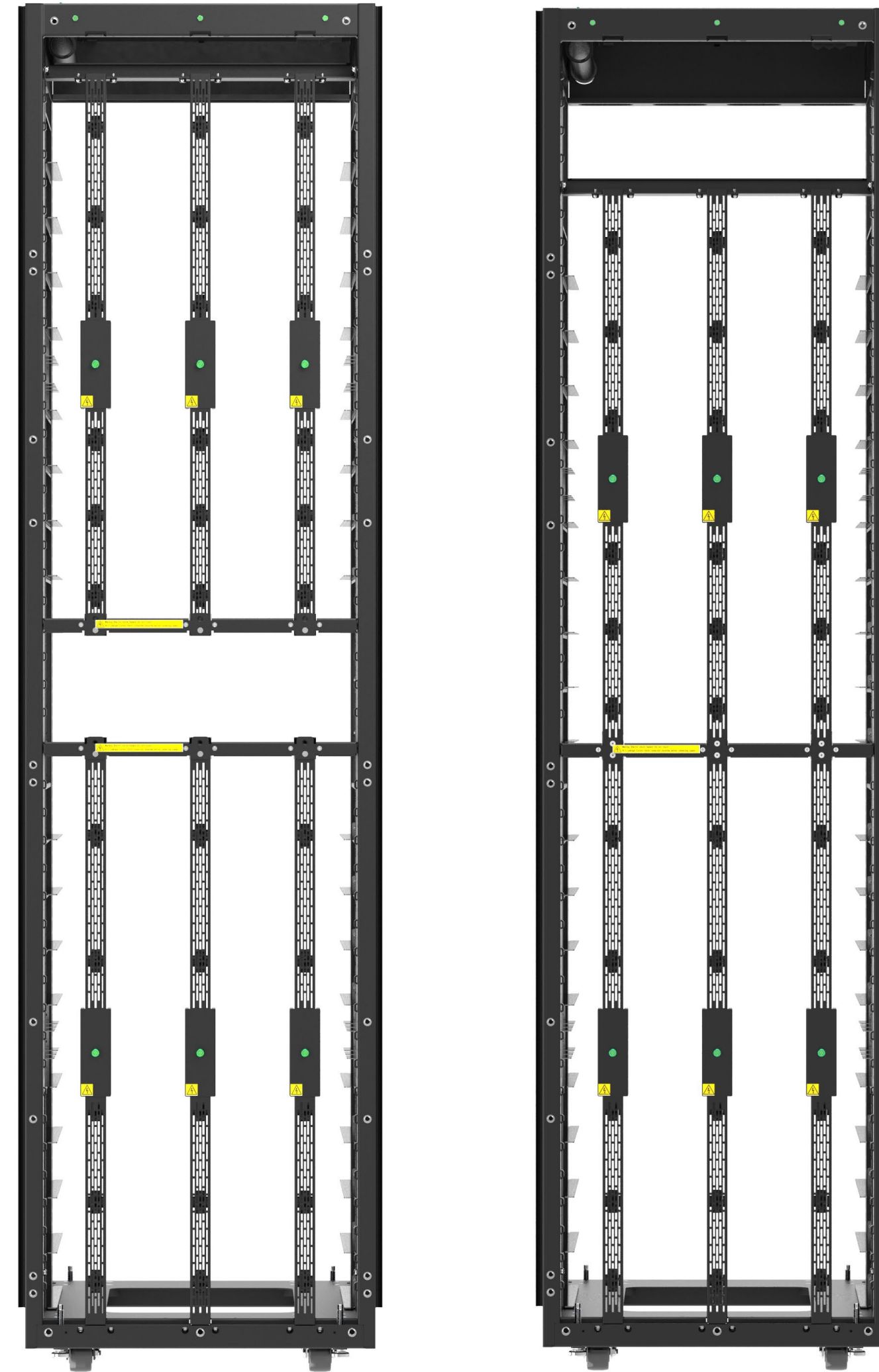


ORv2

440U Open Rack

The 440U high capacity rack was designed to support a combination of network and server equipment. Two easily interchangeable configuration scenario's are supported offering flexibility for all customers.

The 440U rack was developed by Rittal in collaboration with Penguin Computing. This new Open Rack is planned to be contributed to the OCP Rack & Power community by August of this year.



RACK & POWER

Key Features

- 3 x Busbars per power zone
- 440U of equipment space
- Supports 10U power units
- Interchangeable busbar location for network gear location flexibility



Config 1

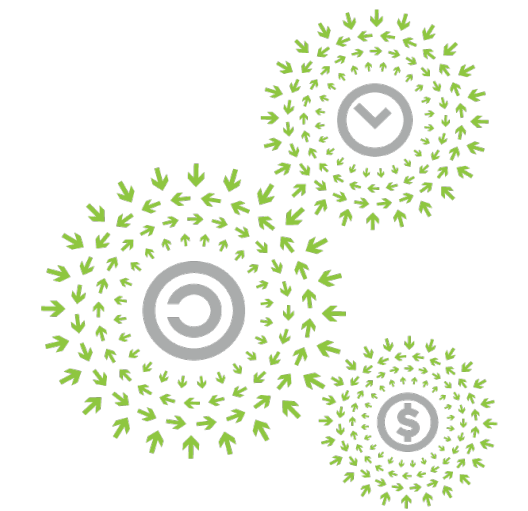


Config 2



RACK & POWER

About Penguin Computing



OPEN
PLATINUM™

- Incorporated in 1999, now with 175 employees, 2,500+ customers in 50 countries
- Headquartered in Fremont, CA with corporate offices in Tokyo and London
- Subsidiary of SMART Global Holdings
- Over 400 Open Racks delivered to date based on Tundra™ Extreme Scale design
- Platinum OCP member, Penguin CTO Phil Pokorny is HPC representative of the OCP Incubation Committee



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Challenges (Why We Need This Rack)



RACK & POWER

Designing for HPC, Penguin has run into following issues:

- Limited power capacity (in a 40OU Open Rack)
 - 26.6 kw for a single zone, and 53.2kw in dual zone design.
- Limited OU space
 - Ex. A 50kw rack requires 6 OU shelf space + 3 OU Network Switches, and leave only 31 OU remaining space.
- Extra space for liquid cooling equipment or AC-power gears is needed
 - Interference of busbar and equipments.

Application Scenarios



OPEN
Compute Project
SOLUTION PROVIDER®

With the new 44OU rack, now we have

- A 70kW or 35kW A+B capable Open Rack
 - Different power solution (Up to 14.4kw or 8.7kw A+B in 10U power shelf)
- More usable and flexible OU space
 - Ex. 1: 4 OU shelf space + 3 OU Network Switches + 33 OU remaining space.
 - Ex. 2: 4 OU shelf space + 3 OU Network Switches + 4 OU InRack CDU + 33OU remaining space.
 - Ex. 3: 4 OU shelf space + 4 AC Network Switches + 36 OU remaining space.

Call to Action

This OCP inspired product is to be submitted by August 2019



Open. Together.

OCP Global Summit | March 14–15, 2019

