

Colocation Facility Guidelines for Open Compute Racks

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Agenda

1. Background & Key Objective
2. Guidelines
 - Definitions, Acronyms, Abbreviations & Units of Measurement
 - Data Center Access
 - Architectural
 - Cooling
 - Electrical Systems
 - Telecommunications Cabling Infrastructure, Pathways & Spaces
 - Appendices
3. Checklist for an OCP Rack
4. Questions?

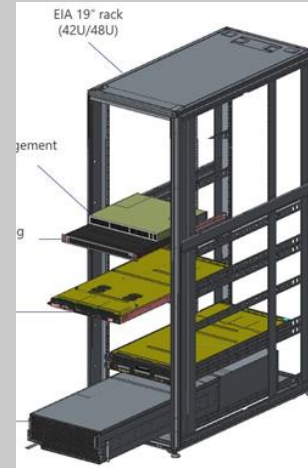
Open Compute Rack Types



Open Rack v2.0



CG-OpenRack-19



Project Olympus

Definitions, Acronyms, Abbreviations and Units of Measurement

OR	Open Rack
OU	<p>OpenU is the Open Rack equivalent of the rack mount spacing found in an EIA-310 19" rack.</p> <p>1 OU = 48mm vs 1 RU = 44.5mm</p>
Out Of Band (OOB)	Is the use of a dedicated channel typically Ethernet for managing network switches, servers and storage devices.
PDU (V2)	<p>The AC power distribution unit is designed to accept an input voltage of 3-phase WYE wiring 230/400VAC RMS voltage (4 wires + ground). The five wires will be split into two outputs via a terminal block, which will then be terminated via a Positronic connector with a custom over-molding. There will be no fuses or other secondary safety devices</p>

Data Center Access



Delivery Pathway



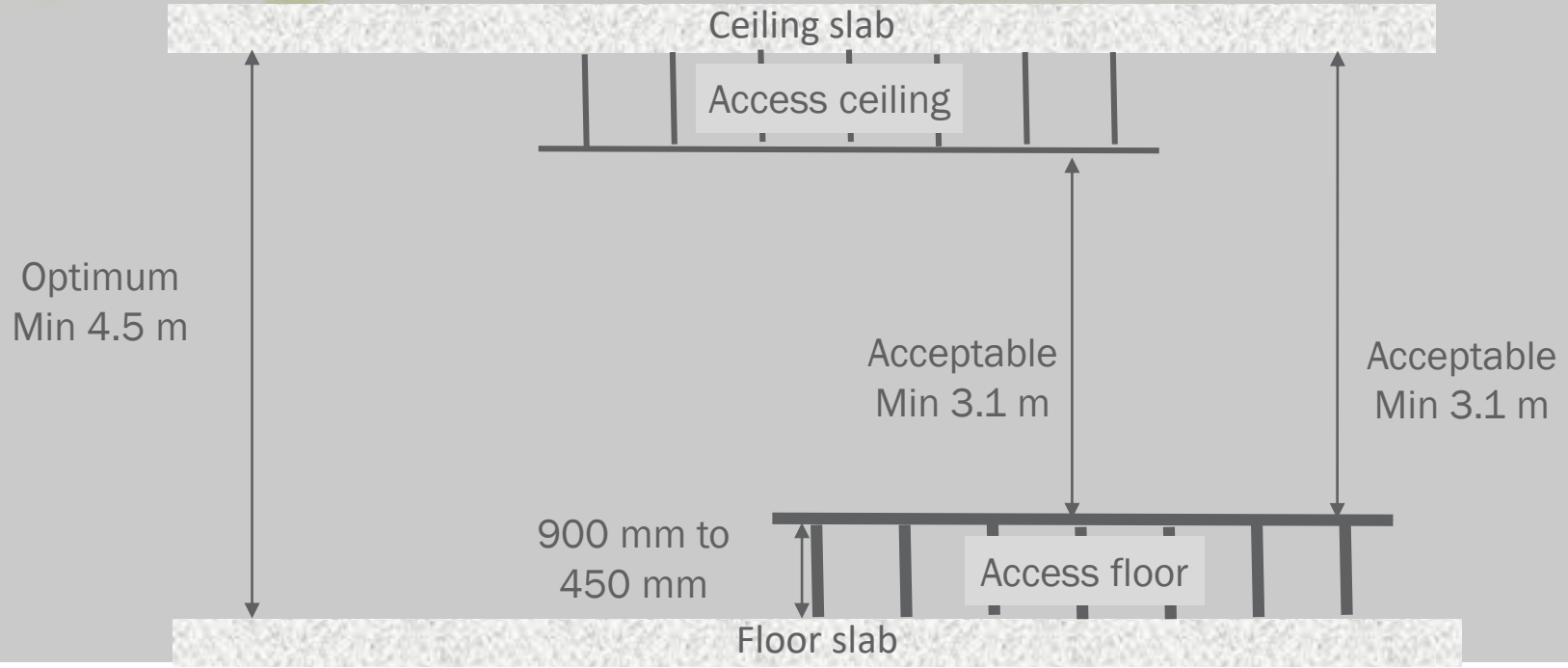
Delivery Clearances

Data Center Access: Delivery Pathway



Architectural: White Space

White Space slab to slab and ceiling heights



Architectural: Floor Loading

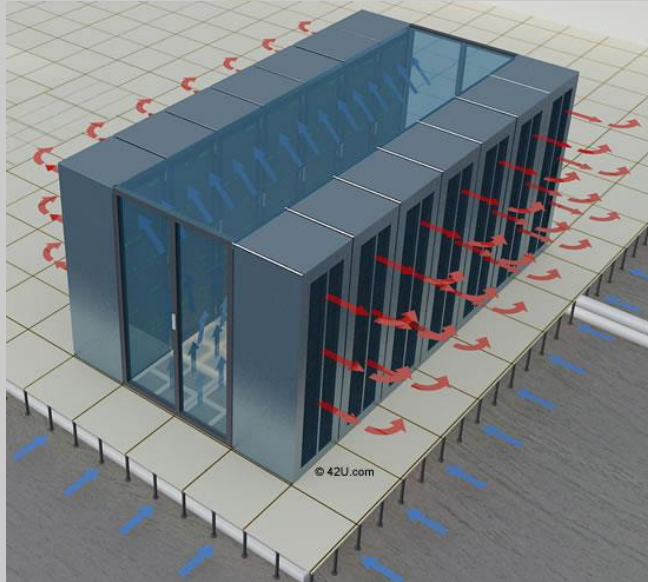


A full OCP rack can weigh more than traditional IT equipment



Spreader plates can be used to increase rolling load capacity

Cooling



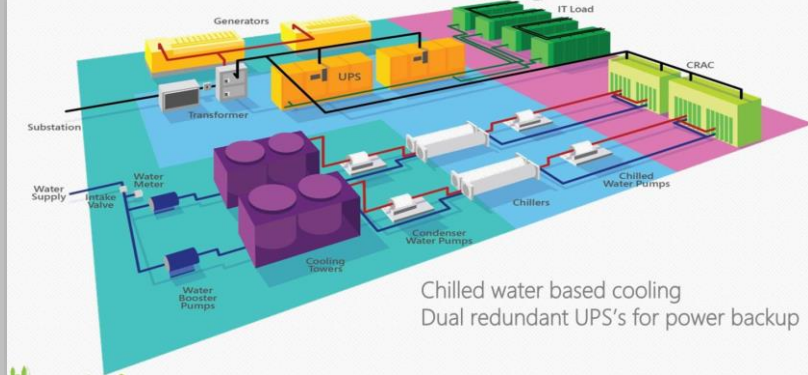
Acceptable



Optimal

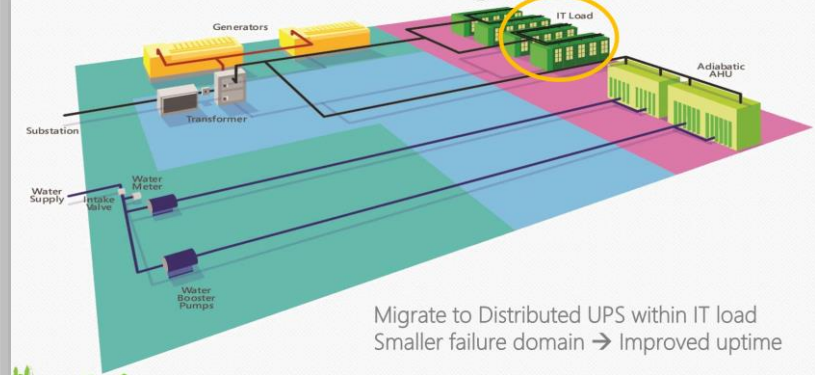
Electrical Systems

Traditional Datacenter Design



Acceptable

Modern Datacenter Design with LES



Optimal

Telecommunications Cabling Pathways & Spaces



Pathways



Spaces

Appendices: OCP Principles

- Efficiency
- Scale
- Openness
- Impact

Appendices: Checklist for an OCP Rack

Data Center Subsystems	Attribute	Acceptable	Optimum
Data Center Access	must-have		
Data Center Access	Access routes from loading dock to Goods in Area (Storage)	Road level, step and threshold free access	loading dock with lift or leveller
Data Center Access	Access routes from loading dock to Goods in Area (Storage) delivery pathway	2.7m High x 1.2m Wide unobstructed access and threshold free	2.7m High x 2.4m Wide x 2.4 m Deep unobstructed access and threshold free
Data Center Access	Ramps - Gradient	1:12	None
Data Center Access	Ramps - Width	1.2m	1.5m
Data Center Access	Ramps - Landing area	1.2m X 1.2m	1.5m X 1.5m
Data Center Access	Ramps - Railings	900mm - 1000mm	900mm - 1000mm
Data Center Access	Corridor floor rolling load	567Kg (1250lb) (5.56kn)	680Kg (1500 lb) (6.67kn)



Questions?

OCP Web Links and more information

Website

<http://www.opencompute.org/>

Data Center Project Wiki

http://www.opencompute.org/wiki/Data_Center

Colo Facility Guidelines for OCP Racks v1.0

<https://tinyurl.com/y9byx7ya>

Colo Facility Guidelines – Checklist v1.0

<https://tinyurl.com/ya3tuy3r>

Data Center Project Mailing List

<http://lists.opencompute.org/mailman/listinfo/opencompute-datacenter>

Ask

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THANK
YOU



OPEN
COLLEGE