

OCP Ready COLO Facility Assessment	maincubes AMS01			
Self Assessment Status:	COMPLETE-MEETS REQUIREMENTS			
Data Center Location Name	maincubes AMS01			
Data Center Location Address	Capronilaan 2, 1119NR Schiphol-Rijk			
Site Description: White Space Area	Total built White Space area of 4,400 sqm			
Site Description: Critical IT Power	4.7 MW			
Site Description: Network Provider Availability	AFIBER, BT, CenturyLink, Cogent, Colt, Coolwave, Eunetworks, Eurofiber, Fiberring, GTT, Interoute, KPN, NL-IX, Relined, Tele2, Verizon, Vodafone-Ziggo			
	Rooms of various sizes (100 sq m to 1,100 sq m), 4,7 MW IT-Load Flexible IT load/cooling capacity per IT room Standard rack dimensions: 600 mm x 1,000 mm x 42 and 52 U Optional: security cages to separate customers in larger IT rooms Consistent cold-aisle containment PUE ▼ 1.6 Minimum power and cooling redundancies: N+1 Hot spots up to 20 kw per rack SLA availability: 100 % Temperature and relative humidity: 18 °C - 27 °C @ 20 - 80 % Service desk and service portal (planned) 24/7 access with security staff-- on-site Contracts under Dutch/German law Colocation customer data remains auditable in NL / EU			
Site Description: Facility Features	Carrier-neutral data center Connectivity to NL-IX and AMS-IX Internet services via partners Redundant supply via Cross Connect Access to the maincubes secureexchange platform which provides: - Connectivity to global Datacenters - Connectivity to global Cloud Providers (Azure, AWS, Google, IBM, Alibaba, Oracle)			
Site Description: Other Services				
Date Original Assessment is Completed	08/13/2020			
Re-Assessment Date:	12/13/2020			
REQUIREMENTS - Attribute (Must have an Optimum or Acceptable result)	Parameter		Result	Notes
ACCESS				
Building Access	2. Road level with step and threshold free access		Acceptable	The truck must have a tail lift to offload the racks.
Delivery pathway, Loading dock to Goods in	2. ≥2.3m (90in) H x ≥.9m (36in) W unobstructed access and threshold free		Acceptable	Access throughout the facility is ≥ 2.30m.
Delivery pathway, Goods in to White space	2. ≥2.3m (90in) H x ≥.9m (36in) W unobstructed access and threshold free		Acceptable	White space door clearances are height : 2.30m, width: 1.00m. It is possible to roll OCP OR V2 type racks into the white spaces without any difficulties. Door clearances can be increased subject to customer requirements.
Corridor floor rolling load	1. ≥680kg (1500lb) (6.67kN)		Optimum	Although the floor rolling load is as high as mentioned, we on top use plates for rolling over possible weak points (eg corridor to room) to ensure the safety of the equipment 100% when rolled in.
Unboxing/pre-staging/storage area floor uniform load	1. ≥1221kg/m2 (250lb/ft2) (11.97kN/m2)		Optimum	12kN / sqm
Unboxing/pre-staging/storage area floor concentrated load	2. ≥567kg (1250lb) (5.56kN)		Acceptable	6kN / sqm
RAMPS				
Gradient	1. ≤1:12		Optimum	Angle of the ramp is 4 degrees, which equates to a gradient of 1:14.3
Width	1. ≥1.5m (60in)		Optimum	3m
Landing area	1. ≥1.5m x 1.5m (60in x 60in)		Optimum	Goods landing area is flat and comfortably large.
Railings	1. Not Applicable - No Railings Required		Optimum	Not applicable
LIFTS / ELEVATORS				
Weight loading	1. ≥1500kg (3300lbs)		Optimum	The maximum weight the lift can carry is 2,000kg.
Door height	2. ≥2.3m (90in) Lift /Elevator door opening height (not internal cabin)		Acceptable	The lift door measures 2.3m (height) x 1.8m (width)
Width	2. ≥1.2m (48in) Unobstructed door opening width		Acceptable	Pls see above
Depth	1. ≥1.5m (60in) Unobstructed cabin depth		Optimum	The lift is deeper than 2mtrs, so that all OCP racks will fit in comfortably.
WHITE SPACE				
Floor rolling load	1. ≥680kg (1500lb) (6.67kN)		Optimum	Although the floor rolling load is as high as mentioned, we on top use plates for rolling over possible weak points (eg corridor to room) to ensure the safety of the equipment 100% when rolled in.
Floor uniform load	1. ≥1221kg/m2 (250lb/ft2) (11.97kN/m2)		Optimum	12kN / sqm
Floor concentrated load	2. ≥567kg (1250lb) (5.56kN)		Acceptable	6kN / sqm
Finished floor to ceiling height	2. <3.1m (124in) (notes required)		Acceptable	Ceiling height is 2.9m but this is sufficient to run and cool OCP installations due to dedicated cooling designs.

Access floor clearance	2. <900mm (36in) (if used for cooling notes required)	Acceptable	Access floor clearances vary between 0.4m and 0.9 m but this is sufficient to run and cool OCP installations due to dedicated cooling designs.
ELECTRICAL			
Number of independent circuits to the rack	1. 2N (A+B)	Optimum	We usually provide 2 feeds at each rack derived from a distributed redundant central UPS.
Maximum circuit capacity	1. 3 ϕ 32A/230V	Optimum	We can provide 16A / 230V, 32 A / 230V, 16A 400V and 32A / 400V outlets, with monitored power and usage-based power billing. As a standard we provide our basic Rack-PDUs.
Circuit voltage	1. 400/230 VAC nominal	Optimum	Please see above
Circuit frequency	1. 47-63 Hz	Optimum	Nominal 50Hz +/- 0.3 Hz
Power receptacle / WIP Type	1. IEC60309 532R6W	Optimum	As standard we provide IEC 60309, but all connector types can be accommodated as long as they are in line with EU regulations
Circuit receptacle location	1. Overhead	Optimum	Several options possible, preferred is overhead to not obstruct the airflow in the raised floor
Upstream UPS options	1. UPS and non UPS feeds available	Optimum	All feeds will be covered by redundant n+1 UPSs as a standard. If needed we can also provide non-critical feeds.
Rack-based batteries permitted	1. Allowed	Optimum	We do allow for Lithium-Ion batteries within the racks.
Generator load acceptance time	1. <60 seconds	Optimum	Generator load acceptance time is less than 40 seconds, acceptance time will be covered by battery backup.
COOLING			
Rack airflow direction	1. Front to Back	Optimum	Front of rack (cold-aisle) to back (rest of room).
Air containment methods	2. Hot/Cold aisle containment for all cabinets in white space	Acceptable	Standard design is cold-aisle containments with down-blow units delivering the cold air through the raised floor.
Maximum rack density	1. \geq 12kw	Optimum	Depending on room load. All high density setups will be calculated, designed and built individually to make sure there will be no cooling issues during operations.
Minimum cold aisle width	2. \geq 1200mm (48in)	Acceptable	Standard design is 1200mm, anyway based on cooling requirements and individual design this can be varied so that the power density will be covered.
Minimum free width cold aisle (Inside cage)	1. \geq 1200mm (48in)	Optimum	We don't use less than 1200mm cold-aisles to always cover the cooling requirements, also the warm rows will never be less than 1200mms.
Minimum hot aisle width	1. \geq 1200mm (48in)	Optimum	Please see above
Inlet air conditions	1. ASHRAE Class A1 Allowable	Optimum	We've designed our SLA to be in line with the ASHRAE recommendations and guarantee 100% to stay within them.
Air quality	2. Other (Notes required)	Acceptable	The air quality is guaranteed by G4 filtering.
Temperature rise	2. \geq 8 Deg C DeltaT	Acceptable	The Delta T has been designed at 10 Deg C.
Cabinet blanking of open space	1. Mandatory	Optimum	Blank Panels are mandatory in all racks to keep the cooling efficient and always stay inside the borders of our guaranteed SLA.
CABLING			
Cabling infrastructure pathways	2. Top and Rear of rack fed	Acceptable	We usually feed from top and rear of the rack because of the cold-aisles.
Overhead Network Infrastructure containment levels	2. 2 Levels (Intra-Pod cabling; Inter-Pod cabling)	Acceptable	This can be built towards the customers needs depending on the installation.
Fibre Type (if installed)	2. Installed Per Customer Requirements	Acceptable	We always have the flexibility to implement exactly whatever the customers would require.
Fibre connection presentation (if installed)	2. Installed Per Customer Requirements	Acceptable	We always have the flexibility to implement exactly whatever the customers would require.
CONSIDERATIONS (For information only)	Parameter	Result	Notes
SERVICE			
Replacement PSU Modules	2. Other (Notes required)	Acceptable	Can be stocked onsite in our storage, then a replacement service would be possible
Replacement BBU Modules	2. Other (Notes required)	Acceptable	Same as for the PSU modules.
Option to monitor PSUs and BBUs	2. No	Acceptable	Can be put in place for each customer individually at cost if required.
Remote hands for PSU and BBU replacement or expansion	1. Yes	Optimum	We provide remote hands to our customers depending on the depth of IT knowledge needed. PSU and BBU replacements will be possible.
Remote hands for OCP IT hardware replacement or expansion	1. Yes	Optimum	We provide remote hands to our customers depending on the depth of IT knowledge needed. Depending on the kind of replacement to be done, replacements or expansions will be possible.
EFFICIENCY			

Site Operations Standards	2. Other (Notes required)	Acceptable	All relevant IEC, DIN, EN, ISO and NEN regulations and standards will be followed. These include at least the corresponding parts of the EN50600, ISO27001, ISAE 3402, ITIL or the regulations specified therein. maincubes has been certified with: EN50600 ISO27001 ISAE3402 In Q3/2020 we will also be certified with ISO9001.
Site PUE Monitoring	2. Periodically measured	Acceptable	We monitor our PUE based on the power measuerements.
Site Design PUE	2. Other (Notes required)	Acceptable	Guaranteed PUE <1.6
Site Annualized PUE Current Achievement	2. Other (Notes required)	Acceptable	Guaranteed PUE <1.6
Site WUE Monitoring	2. Other (Notes required)	Acceptable	As our cooling system is a closed circuit, we don't lose any water for cooling. Humidification is almost never necessary, therefore the WUE is close to 0.
Site CUE Monitoring	2. Other (Notes required)	Acceptable	The data-center is run carbon-neutral through buying the according certificates
OPENNESS			
PUE Published	2. Available upon request	Acceptable	We provide the PUE to our customers on request and based on our power measurements.
Facility Design Drawings & Files	2. Available to view upon request	Acceptable	The facility design and the relevant drawings can be reviewed on site or under NDA