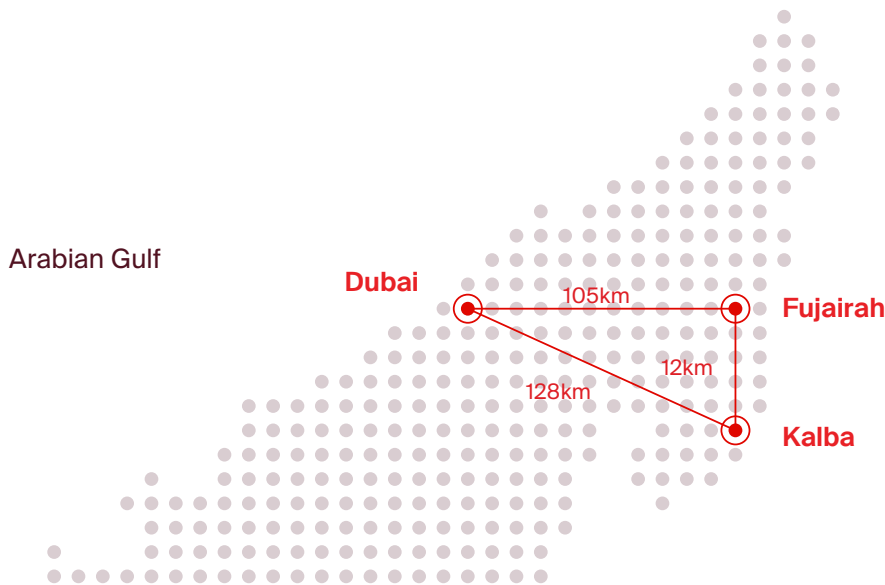




# SmartHub Datacenter Kalba





In line with e&'s vision to be the leading regional Hub, the newly launched SmartHub Kalba is now hosting global customers with enhanced capabilities and global capacity to meet the evolving needs for infrastructure across Asia, Africa, Europe, the Middle East and the Americas.

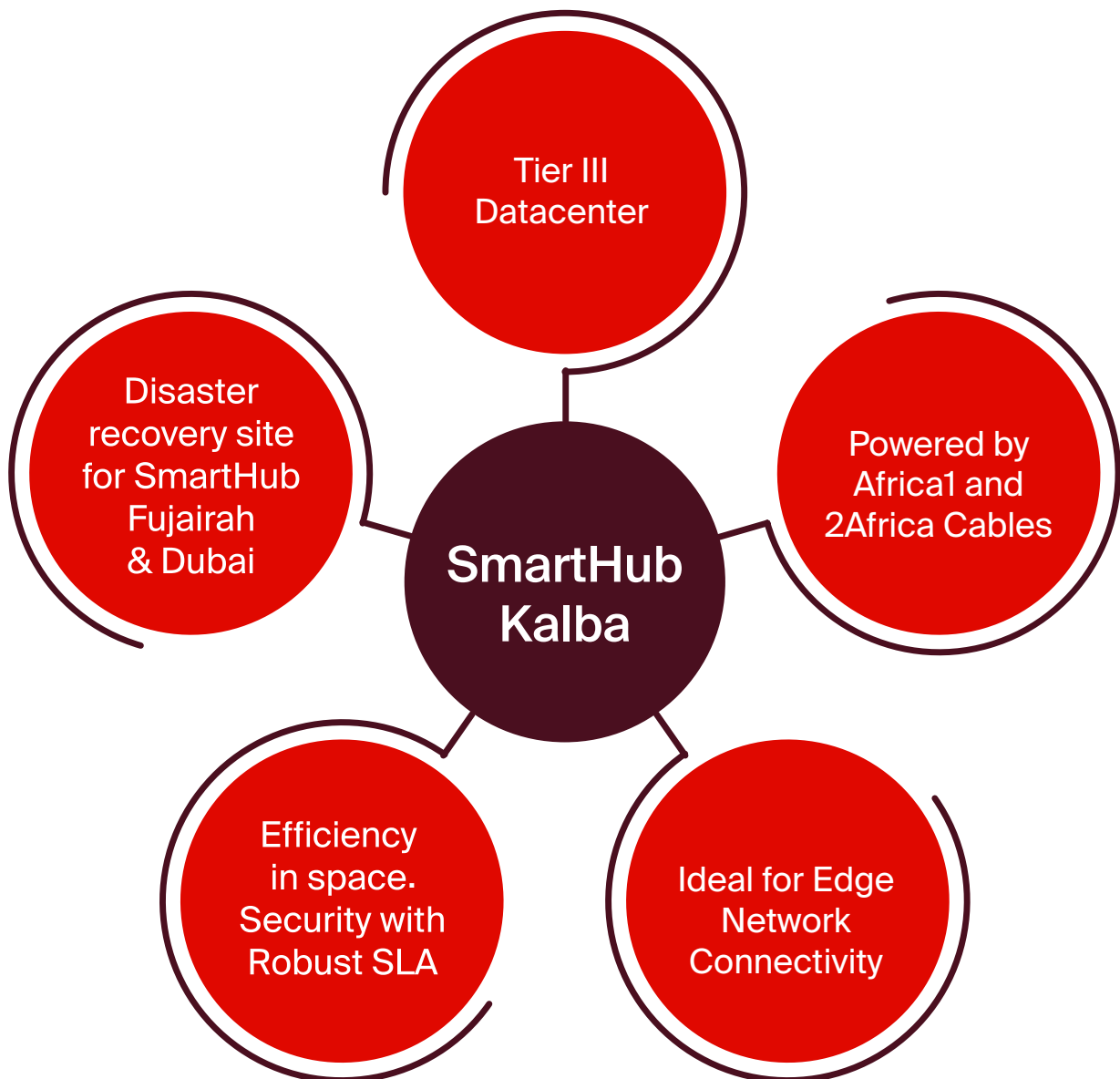
Since 2010, SmartHub datacenter, acknowledged as 'The Carrier Hotel', has successfully evolved and has been recognised as one of the best innovations, winning many industry accolades.

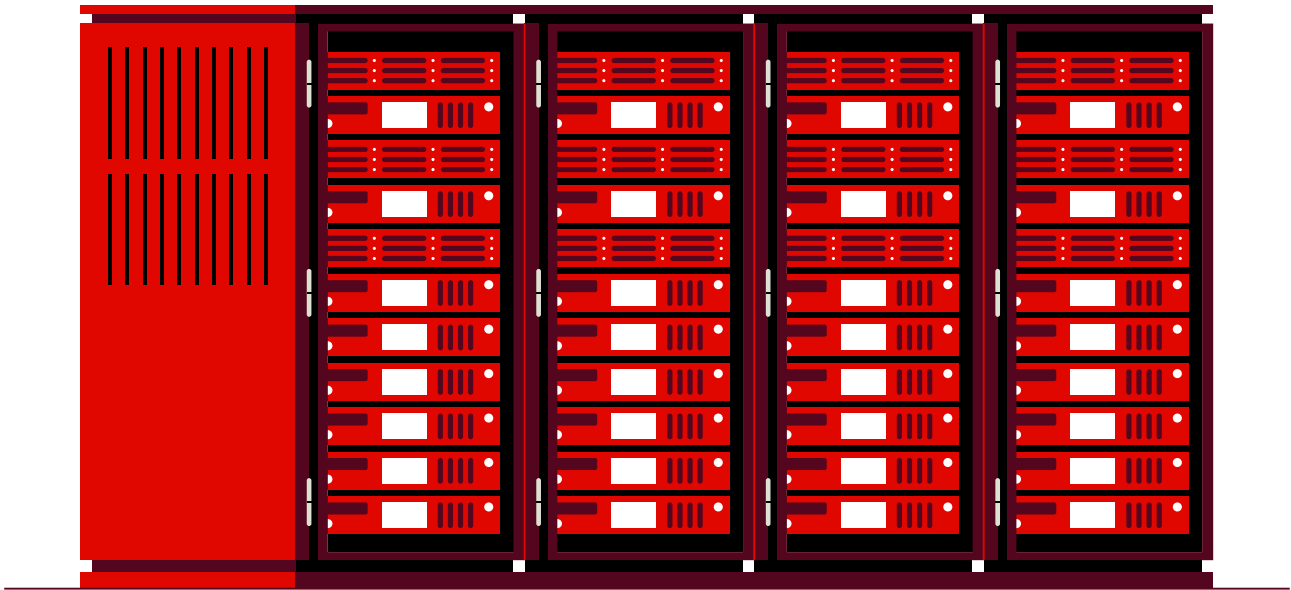
Established with a vision to be a potential landing station for submarine cables, SmartHub Kalba is a state-of-the-art Datacenter that has empowered Africa1 and 2Africa cable systems.

Strategically located at 3.8km from the sea with direct access to the enhanced connectivity for critical business requirements and loaded with N+N power configuration, it's a location of choice for Carriers, Cloud Service providers, Internet Exchanges and Global players looking for a trusted Datacenter partner to expand their regional presence in a reliable, geo-redundant ecosystem.



## Future Telecom Hub and Potential Landing Station for Submarine Cables





## Architecture

### White Space

- Total DC Built-up area: 1150Sq.Mtr
- Total IT area: 650Sq.Mtr
- G+1 modular structure with 200nos. IT Racks serving 1.0MW IT Load
- 36 units of IT Racks and LV room on the ground floor & 164 units on the First floor

### Raised Floor

- Floor loading Capacity: 1500kg/m<sup>2</sup>
- Finished floor height 800mm
- High quality MERO raised floor, manufactured in Germany
- 56% opening grills with air director and damper
- Panel Concentrated Load: 4,500N (at Center of Panel)
- Uniform Distributed Load: 20KN/m<sup>2</sup>

### Rack size

- 600x1200mm 42 U Racks
- Flexibility: Provision for hosting customisable

### Rack clearance

- The minimum rack front clearance: 120cm
- The minimum rack rear clearance: 120cm

### Loading Bay

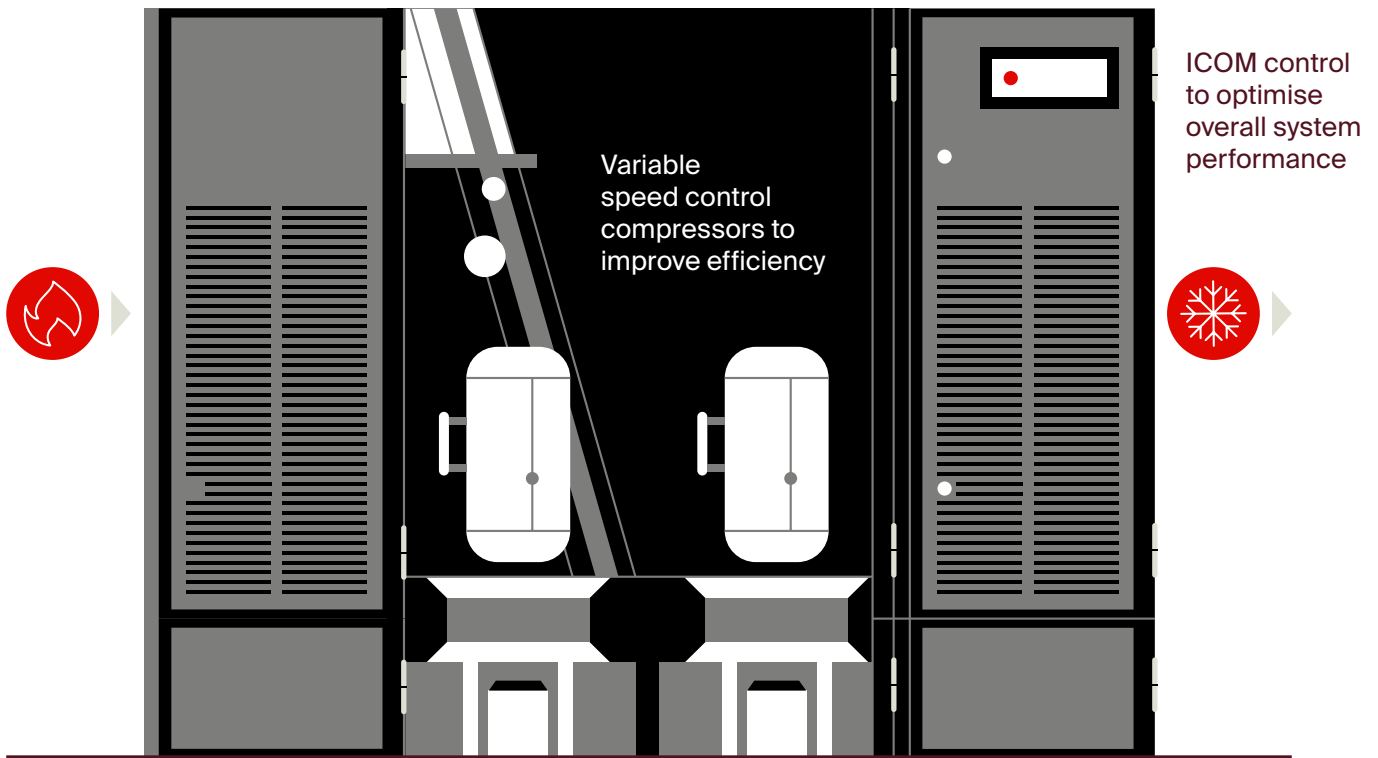
- Loading/unloading bay convenient for receiving equipment packages from trucks
- Cargo lift available

### Emergency exit

- 2 emergency doors in the facility

### Fuel storage

- Inbuilt container tank capacity: 2000 Liters
- Day tank - 5500 Liters for each generator
- Fuel storage to run generators upto 24 hours



High efficiency AC Fans for precise control of air flow & temperature

## Design

### Structural

- The structure for G+1 Datacenter has been modelled as 3D space frame using STAAD Pro structural software
- The Datacenter of size 18m x 37m has been modeled. Module is resting on raft foundation

### Mechanical

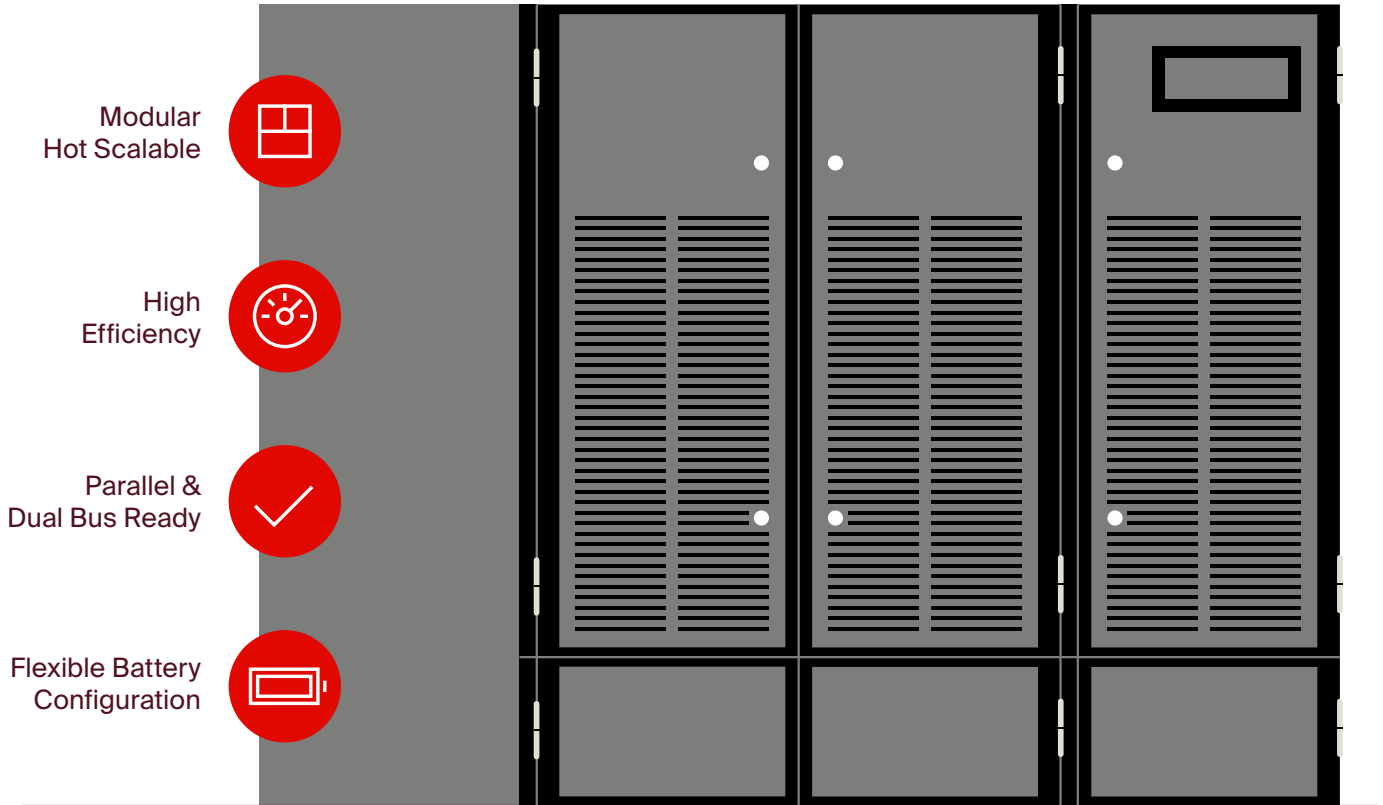
- DX type CRAC units with inverter compressors for Data Hall & UPS room
- NOVEC1230 clean agent system provided for Datacenter
- VESDA system provided in the GF & FF Data Halls

### Power

- 2x1500KVA 11KV/0.4KV Transformers for the Utility power feed
- 3nos. UPS system distributing power to the IT Racks via Smart PDUs conforming N+1 redundancy
- Individual UPS systems for each DX type CRAC unit (Fans & Controllers), ensuring cooling continuity during power failure scenarios.
- 2nos. DC rectifiers provided for 45KW DC load

### PDU

- Floor Mount Smart PDU by VERTIV LIEBERT Rx
- Suitable for 16,32,40,63TP or SP breakers
- Compact cabinet conserves valuable floor space



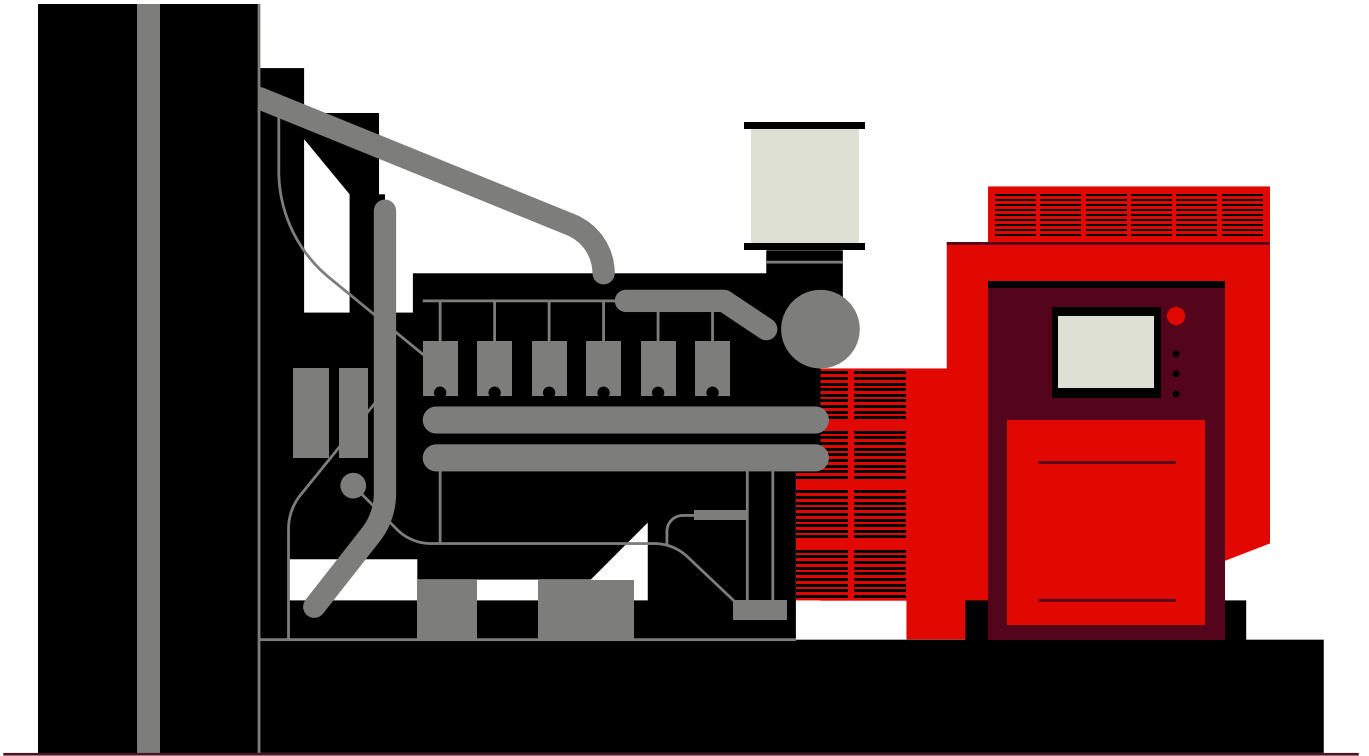
## UPS System

### The Liebert®APM

- Modular and scalable configuration hosts both power and battery modules inside the same UPS cabinet
- Guarantees maximum adaptability in terms of footprint, power and runtime
- Liebert APM's architecture is scalable with high availability, reliability and efficiency
- High power density reduces system footprint in either row or room applications

### Double conversion efficiency - up to 96.3%

- Flat efficiency curve
- High power density
- Modular and scalable
- Hot-swappable power modules
- Independent module control system
- Unitary output power factor and symmetrical power factor diagram
- Integrated parallel and load bus synchronisation

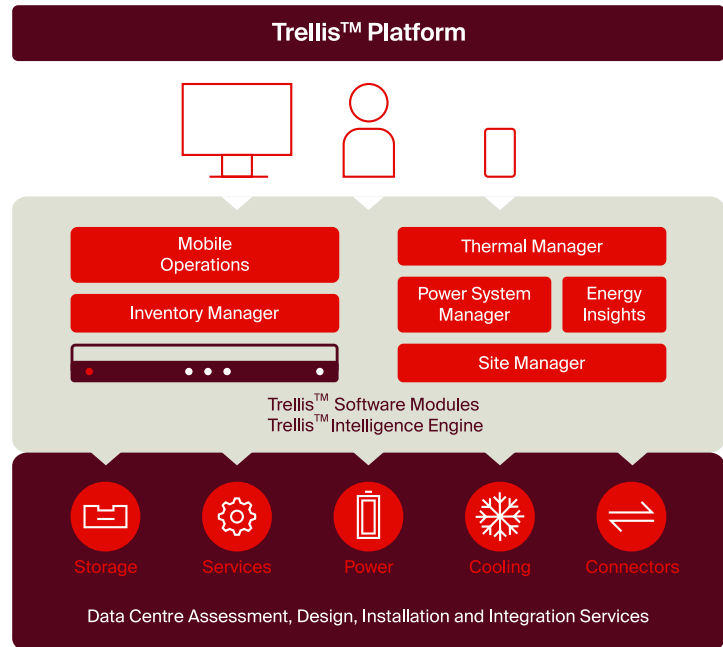
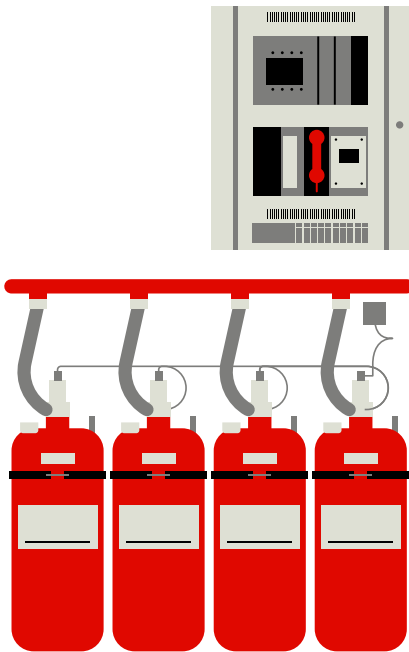


## Generator

### KOHLER SDMO, FRANCE

Datacenter Rated Diesel Generator as per Uptime Tier III

- 3x1500KVA Generator conforming N+1 redundancy
- Fuel tank capacity of 24hrs as per Uptime Tier III requirements
- ISO8528-5 performance class G3
- Built with a class H insulation and IP23 Alternator
- A compact and complete solution using a mechanically-driven radiator fan
- New APM 403 Controller
- Built-in ACB breaker
- Cooling Units



## Safety

### Datacenter Fire Protection system

- Clean Agent NOVEC 1230 for the data hall and the LV rooms
- Low pressure and environment-friendly
- Fire rated Stopper for openings
- UAE Civil Defense approved
- All zone protection
- Bell, Flasher, Control Panel, Sounder, Warning Sign, etc.
- Commissioning by Civil Defense approved personal
- Generator room shall be protected with Aerosol based protection

### Monitoring system (DCIM)

- TRELLIS™ ENTERPRISES
- BMS platform enables Control Room staff to monitor the functioning of all electrical, HVAC, security, fire, access and CCTV systems 24x7 for fault alerts, monitoring, water leakage detection sensors, maintenance and management of regular operations
- Holistic, real-time, distributed architecture
- Real-time inventory of every asset's floor or rack position with detailed status
- Infrastructure management processes that bridge across IT, power, thermal and space domains
- Easy integration with other systems such as workflow, ERP and Building Management Systems
- Complete monitoring, reporting and alarm management for the entire mechanical chain from chillers and cooling towers to CRAC and CRAH cooling units





## Environment

### Cooling

- Total DC Cooling capacity: 1045KW
- Cooling density per Rack: 5KW
- Humidity control: ASHRAE TC 9.9, 40% relative humidity
- Temperature: 27C to 32C as per ASHRAE standard

## Network & Connectivity

### Network Meet Me Room

- Fully diversified cabling into Datacenter
- Cables entry into building: 3 way (One way to MMR Room & Two way to GF data hall)
- Fiber cable infrastructure
- Fully redundant network setup
- Diversified MMR facility

### Carrier Neutral facility

- Multiple and diverse fibre feeds
- Meshed Internet connectivity
- Diverse and high-capacity fibre infrastructure
- Adaptable cross-connect of standard media types
- Access to submarine and beach manhole in same complex

## Security

### Security & Building management system (BMS)

- All access to the facility is recorded in the entrance logs that are maintained by on-premises guard 24x7
- 24x7 site accessibility with facilities designed for handling large/heavy equipment
- Security camera recording period (30 days)

## Certification

### Certifications & Standards

- Uptime Institute certified Tier III
- TCDD & TCCF
- ISAE3402 Type II
- ISO/IEC 22301
- ISO/IEC 27001

## Customer experience

- 24x7x365 on-site support
- Customer hot seats (Optional)
- Refreshing areas



### Datacenter Services

- RHS
- Customised Colocation services
- AC/DC Power

### Telco Services

- IX/IPX services
- Diverse connectivity platform complimenting SmartHub Ecosystem

### Connectivity Services

SmartHub Kalba DC offers direct connectivity with SmartHub Fujairah. Connectivity requests by clients at SmartHub Kalba to other locations in UAE or for transit from CLS/Border will be routed via SmartHub Fujairah.

### Certifications





## About e&

The Carrier & Wholesale division of e& has received global acclaim as a Best Wholesale Provider several times in a row because of the extended reach to the subscribers and for acting as a catalyst for innovatively agile solutions.

### WE

- Operate with the vision of “driving the Digital Future to empower societies”
- Offer comprehensive global solutions for wholesalers and OTTs worldwide (Mobile, Data, Voice, and Satellite)
- Are the No 1 Telecoms Portfolio Brand in the MENA region\*
- Exceed \$14 Billion Telecoms Portfolio brand value\*
- Are TOP 3 strongest telecoms brand globally\*

Connecting with us means a service provider can support its universal communication essentials and access the incomparable Tier I network reach.

\*(Brand Finance Global 500 Report 2023)