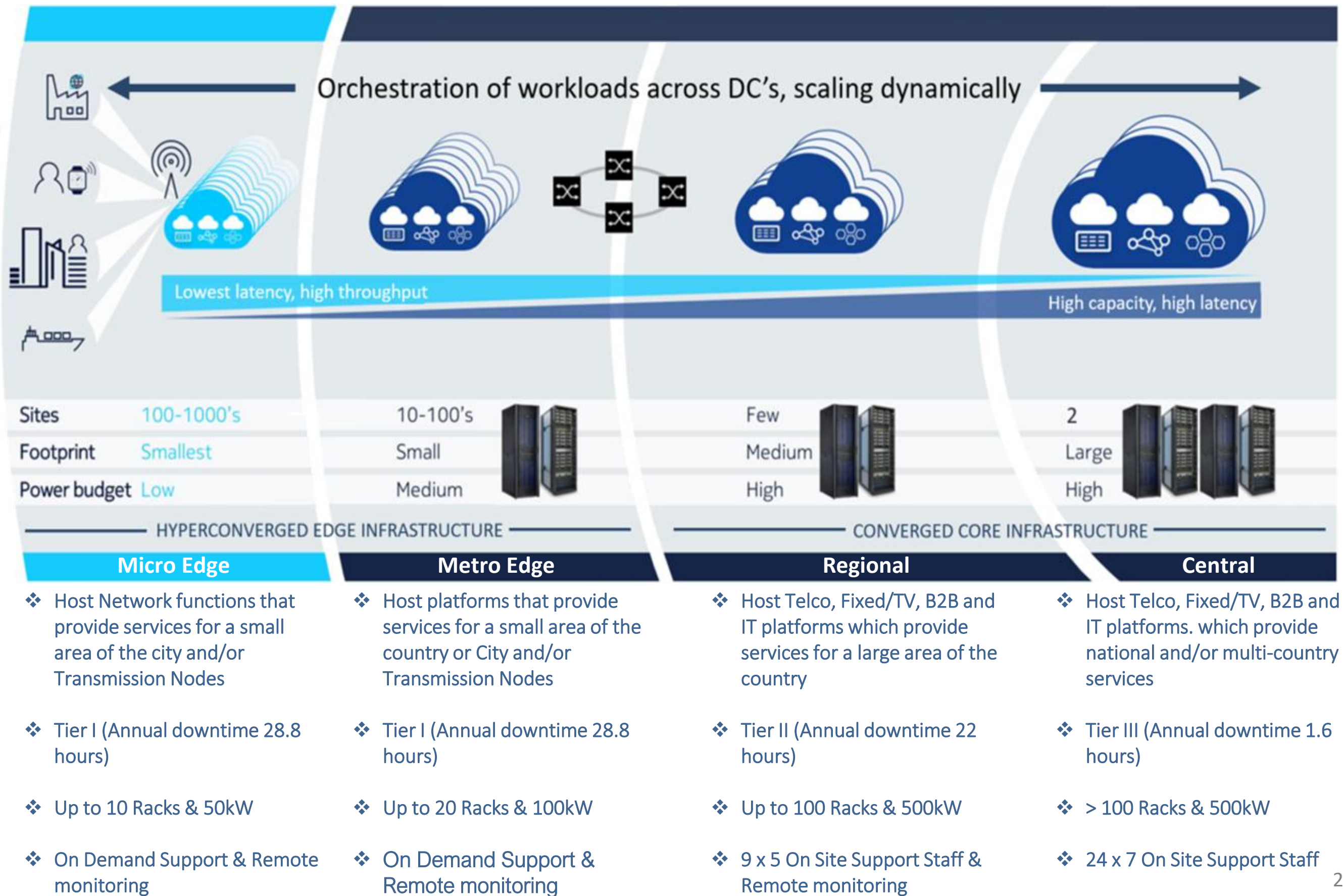




Data Center Classification Criteria

Data Center Classification



Data Center Classification

Central Data Center

Definition

- Main site and/or DR Site for Telco, Fixed/TV, B2B and IT platforms. which provide one or more national and/or multi-country services

Main Features

- The Facility should have a Tier III configuration (N+1 Fault Tolerance)
- Availability: 99.982% (Annual downtime 1.6 hours)
- Capacity: More than 100 Racks and 500kW in the white area
- Autonomy: 1 (one) hour on Battery and at least 24 hours on Genset
- Efficiency: PUE range 1.5 to 1.8



Operational Presence and Monitoring

- 24 x 7 On site Facilities Support Staff
- Centralized monitoring with a DCIM Solution



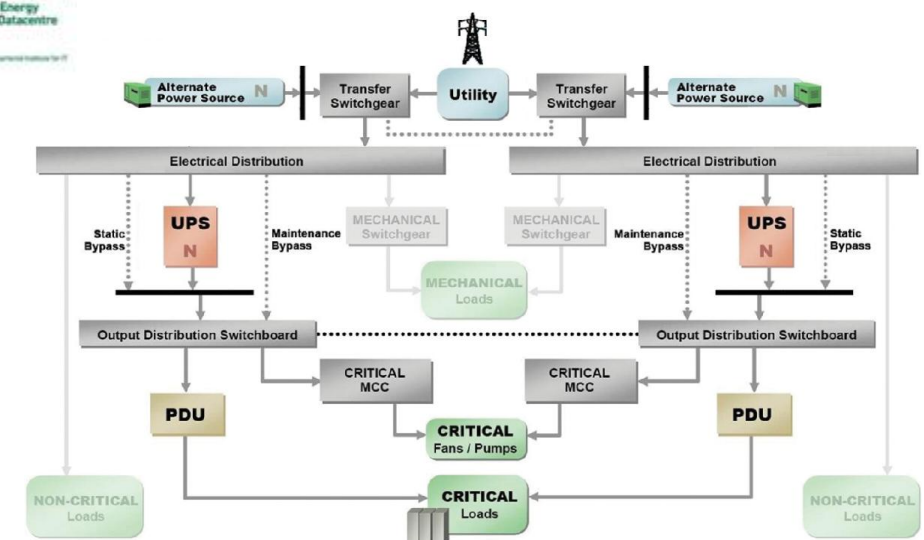
Cloud Services

- Main Iridium Management and Resource for local and Regional platforms



Connectivity

- Direct link to 1N w/DWDM connectivity, at least 2 geo-redundant routes to 2 regional nodes
- Maintain current latency for mobile and fixed as it is in PNF environment <50ms
- Direct access to local ISP Node. It may have ISP deployed in facility or Direct link via 1N.



Regional Data Center

Definition

- Sites that host Telco, Fixed/TV, B2B and IT platforms that provide multiples services for a large area of the country or Region.

Main Features

- They can be an either Tier III facility or a rearchitected Central office facility classified as Tier II configuration (N+1, single path)
- Availability: 99.741% (Annual downtime 22 hours)
- Capacity: Up to 100 Racks and 500kW in the white area
- Autonomy: 1 (one) hour on Battery and at least 24 hours on Genset
- Efficiency: PUE range 1.5 to 1.8

Operational Presence and Monitoring

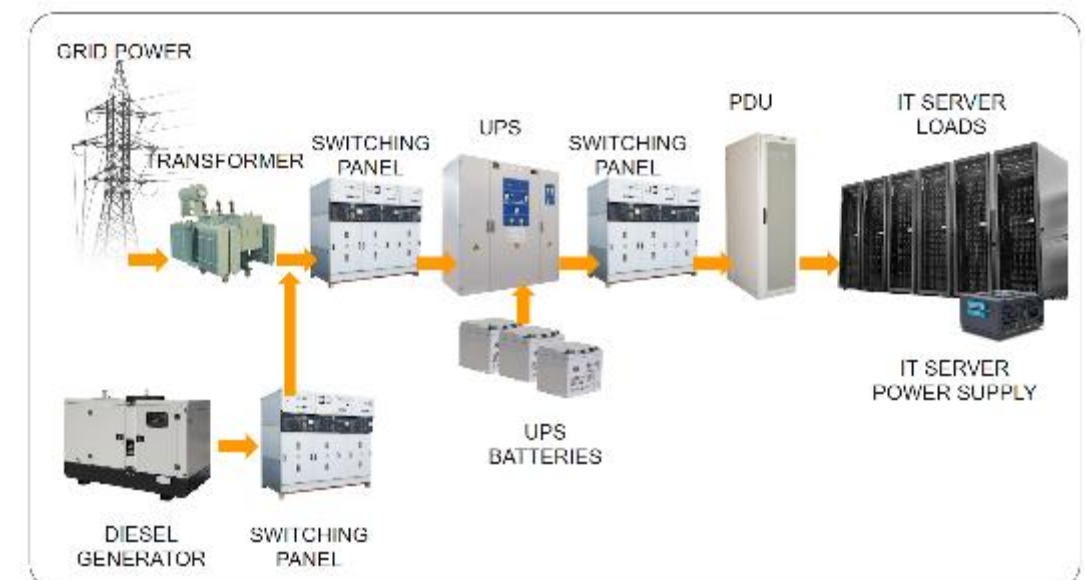
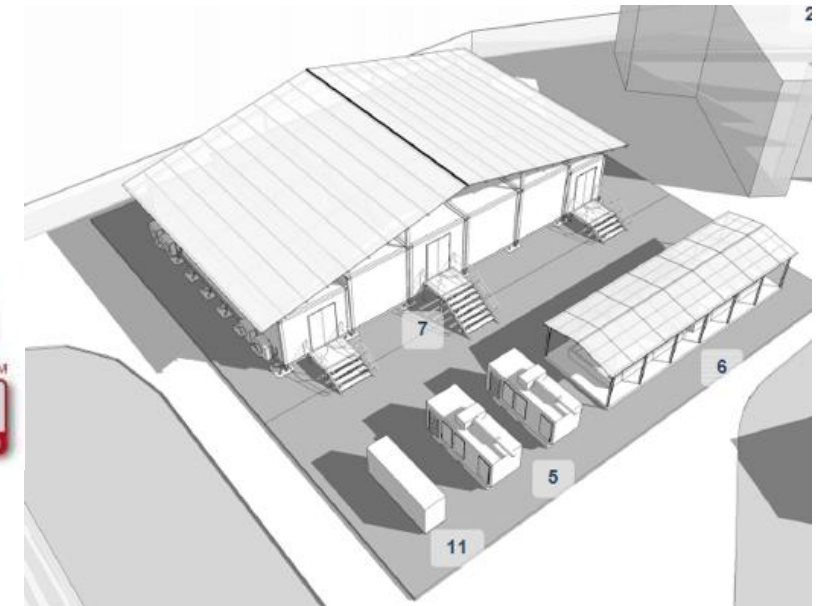
- 9 x 5 On site Facilities Support Staff
- Remote Monitoring with a DCIM Solution

Cloud Services

- Iridium Resource/Edge for local platforms (SOX, latency sensitive, etc.)

Connectivity

- Direct link to 1N w/DWDM connectivity, at least 2 geo-redundant routes to 2 regional nodes
- Maintain current latency for mobile and fixed as it is in PNF environment <50ms
- Direct access to local ISP Node. It may have ISP deployed in facility or Direct link via 1N.



Metro Edge

Definition

- Sites that host Network functions that provide services for a small area of the country or City and/or Transmission Nodes Usually a Fixed and Mobile converged sites with CMTS, RNC, User Plane of EPC or IMS, etc.

Main Features

- They can be an either Tier II facility or a Tier I
- Availability: 99.671% (Annual downtime 28.8 hours)
- Capacity: Up to 20 Racks and 100kW in the white area
- Autonomy: 1 (one) hour on Battery and at least 12 hours on Genset
- Efficiency: PUE range 1.6 to 1.9

Operational Presence and Monitoring

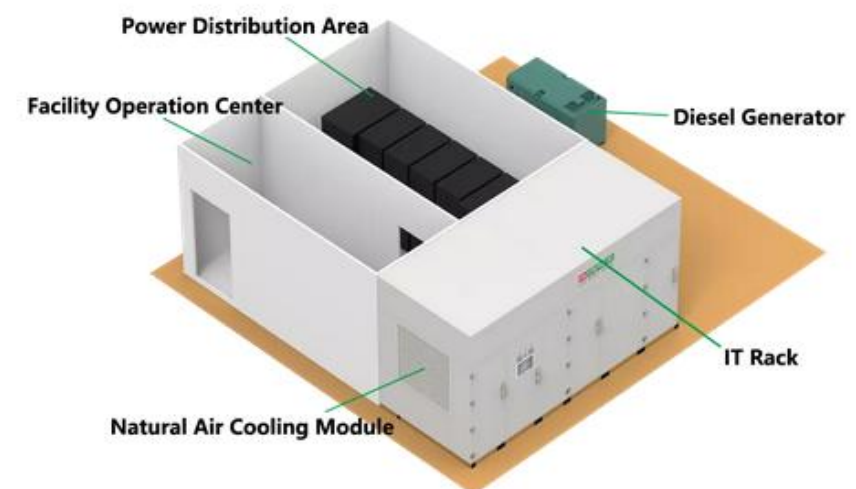
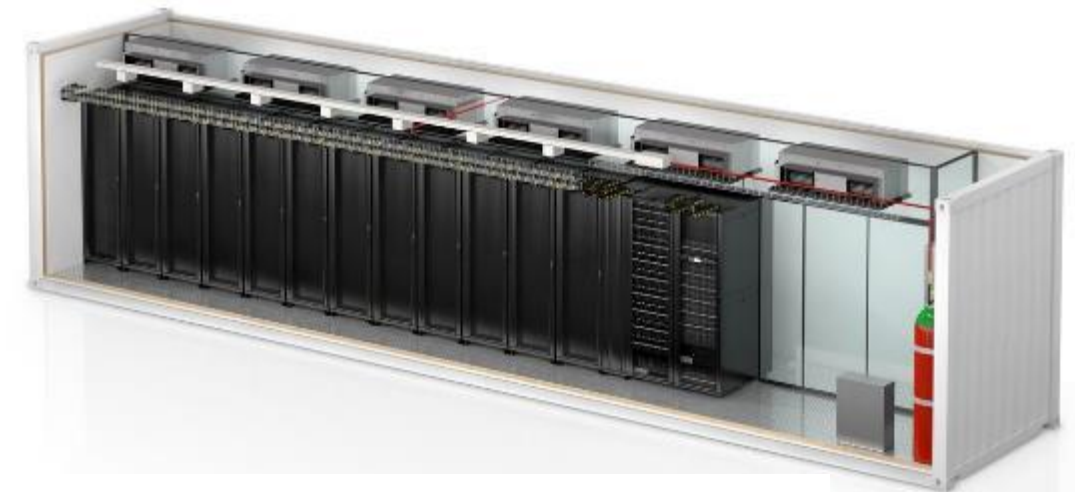
- On demand support
- Remote Monitoring with a DCIM Solution

Cloud Services

- Potential location for MEC nodes or Edge applications requiring <30ms

Connectivity

- Site is placed few nodes to next regional 1N via local IP/D
- Reduce current latency for mobile and fixed as it is in PNF environment <30ms
- Site is placed multiple nodes from central ISP. If local breakout is needed, ISP must be deployed locally as mixed of PNF & VNFs



Micro Edge

Definition

- Sites that host Network functions that provide services for a small area of the country or City and/or Transmission Nodes Usually a Fixed and Mobile converged sites with CMTS, RNC, User Plane of EPC or IMS, etc.

Main Features

- A Tier I Facility
- Availability: 99.671% (Annual downtime 28.8 hours)
- Capacity: Up to 10 Racks and 50kW in the white area
- Autonomy: 1 (one) hour on Battery and at least 12 hours on Genset or > 4 (four) hours on Battery (in case of not having a generator)
- Efficiency: PUE range 1.6 to 1.9

Operational Presence and Monitoring

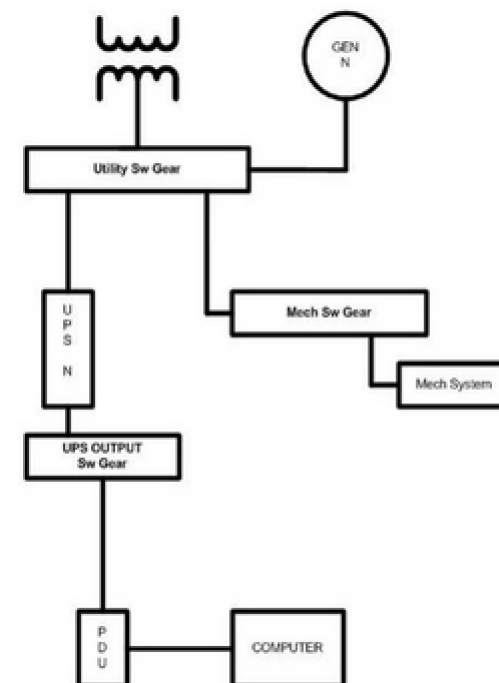
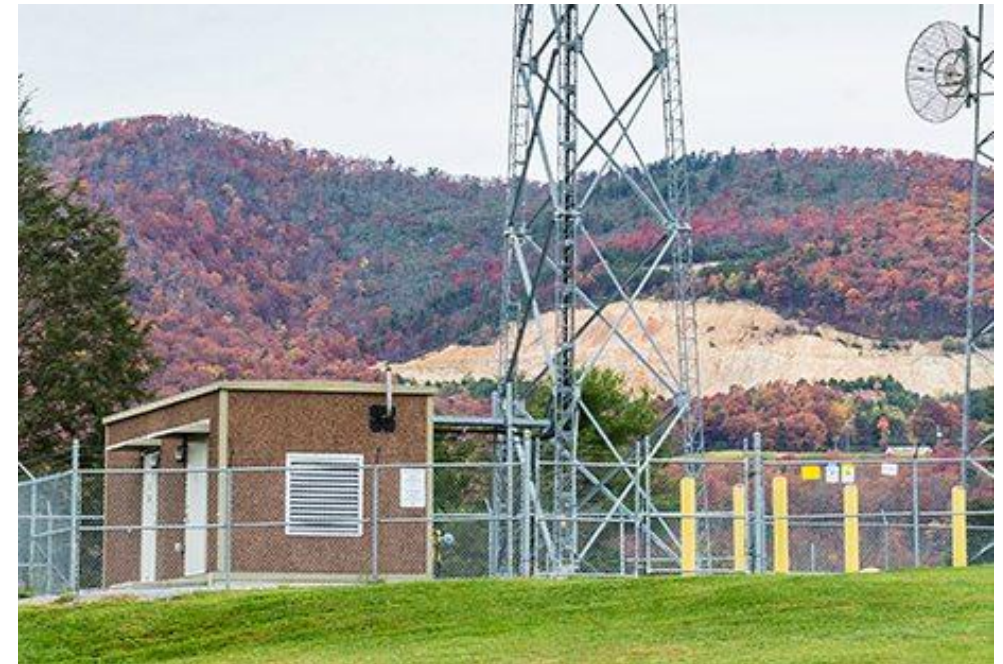
- On demand support
- Remote Monitoring with a DCIM Solution

Cloud Services

- Future Cloud services for 5G type of applications sensitive to latency .
Potential location for MEC nodes running ultra-low latency apps

Connectivity

- Indirect or indirect link to 1N at least 2 geo-redundant routes to 2 regional nodes
- Site is placed multiple nodes from central ISP



Data Center Classification

Summary

Site Role	Definition	Main Specs	Form Factor	Cloud Services	Latency from cell sites or Wifi AP	Operational Presence	Monitoring	Regional Access	ISP Access	Notes
Central Data Center Type-1	Main site and/or DR Site for Telco, Fixed/TV, B2B and IT platforms. which provide one or more national and/or multi-country services	Tier III. 99.982% uptime (Tier III uptime) No more than 1.6 hours of downtime per year N+1 fault tolerant providing at least 24 hours power outage protection	More than 100 racks and 500kW (industrial zone), <10s in Latam.	Main Iridium Management and Resource for local and Regional platforms	Maintain current latency for mobile and fixed as it is in PNF environment <50ms	Local 24 x 7	DCIM	Direct link to 1N w/DWDM connectivity, at least 2 geo-redundant routes to 2 regional nodes.	Direct access to local ISP Node. It may have ISP deployed in facility or Direct link via 1N.	New DC built to host all BU's or existing Central Office rearchitected as Tier III facility
Regional Data Center Type-2	Sites that host Telco, Fixed/TV, B2B and IT platforms that provide multiples services for a large area of the country or Region.	They can be an either Tier III facility with 99.982% uptime or a rearchitected Central office facility classified as Tier II. 99.741% uptime (Tier II uptime). No more than 22 hours of downtime per year	Up to 100 racks and 500kW (industrial zone)	Iridium Resource/Edge for local platforms (SOX, latency sensitive, etc.)	Maintain current latency for mobile and fixed as it is in PNF environment <50ms	Local 9 X 5. Remotely monitored from a central location	DCIM	Direct link to 1N w/DWDM connectivity, at least 2 geo-redundant routes to 2 regional nodes.	Direct access to local ISP Node. It may have ISP deployed in facility or Direct link via 1N.	Existing building upgraded in capacity and power to meet minimum Tier II standards
Metro Edge Type-3	Sites that host Network functions that provide services for a small area of the country or City and/or Transmission Nodes Usually a Fixed and Mobile converged sites with CMTS, RNC, User Plane of EPC or IMS, etc.	They can be an either Tier II facility with 99.741% uptime or a Tier I facilities with 99.671%. No more than 28.8 hours of downtime per year	Up to 20 racks and 100kW (commercial zone) +100kW (industrial zone) - 10 nodes per country, - 100 nodes per regions (CAM/LATAM) - white space ~180m2	Potential location for MEC nodes or Edge applications requiring <30ms	Today's latency reduced by 20ms	Remotely monitored from a central location	DCIM	Site is placed few nodes to next regional 1N via local IP/DWDM network	Site is placed multiple nodes from central ISP. If local breakout is needed, ISP must be deployed locally as mixed of PNF & VNFs	Existing BSC/RNC site or HUB (CMTS) site where future local Internet breakout is needed, or Multi-access Edge Compute is needed for specific applications.
Micro Edge Type-4	Sites that host Network functions that provide services for a small area of the city and/or Transmission Nodes Potential location for C-RAN or CCAP nodes.	Tier I facilities with 99.671%. No more than 28.8 hours of downtime per annum or outdoor cabinets deployed to compute resources	Up to 10 racks and 50kW (commercial zone) - 100 nodes per country, street cabinets, white space ~35M2	Future Cloud services for 5G type of applications sensitive to latency . Potential location for MEC nodes running ultra-low latency apps	To comply with 5G Ultra low latency requirements, nodes must be deployed no later than 5ms of latency from cell sites and WiFi Aps.	Remotely monitored from a central location	DCIM	Indirect or indirect link to 1N at least 2 geo-redundant routes to 2 regional nodes	Site is placed multiple nodes from central ISP.	Existing CCAP site or Cell site where Multi-access Edge Compute is needed for specific applications.