

PORTLANE

Nacka Station

Background

Given the name Nacka Station it is the latest addition of data centers in Sweden, a process which began in summer 2010 and was completed in mid-March 2012.

Nacka Station is located inside a former power substation that supplied Nacka and Värmdö with electricity in the 50 - and 60's, but has for many years been unused and become transformed into one of the most spectacular data centers today.

The building itself is located deep in the bedrock, and which with its unusually strong perimeter security, environment-friendly cooling and PSAP creates an unique data center you never seen before.

Structure

The Data center is located in a former transformer station, which in turn is a 1700sq.m. big brick house, which is interspersed deep in the bedrock, in order to create a moisture cell, thus eliminating the problems arising when the warm air condensating.

The space on 1700sq.m is divided into four floors where PSAP, cooling systems, switchgear, diesel, UPS, network equipment and data centers are strategically located to reduce the risk of any interruption of the specific part affects the other.

The current data center has an area of 170sq.m. where we can colocate approximately 2500 servers in a total of 60 cabinets. We can replicate this in an additional 16 rooms with different surface from 25sq.m. to 250sq.m. and thus place more than 600 cabinets in total throughout the facility and also rent out parts of, or dedicated whitelable data centers if requested.

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Security

The data center is secured by a monitoring station that is guarded by two security guards around the clock all year round, where they handle all access to and from the data center with the help of video cameras and remotely operated locks on all doors leading into the data center. In this way we can ensure that no unauthorized person can get into the data center at any time of day.

The entire facility also possesses state of the art fire and flood controls, which together with the perimeter security certified the center with below stated security certifications.

SSF 136:4
SSF 200
SBF 110

Cooling

By taking advantage of the natural cooling that exists inside the mountain where our data center is located and send the cold air throughout the facility via valves will we simply do not need to consume the electricity needed to power an unit of commonly used cooling systems.

In the same way we avoid having to generate electricity to take care of the hot air since it is pressed out of the facility outside the moisture cell and naturally cooled down again by the moutain. This also means that we do not have to worry about moisture or condensation inside the facility.

All this results in that we generate 95% less electricity for our cooling system compared to a standard cooling system and thus creates a very attractive eco-friendly hosting environment.

Power

We have dug in a dedicated high-voltage cable directly from Nacka Energi straight into the mountain which goes directly to our switchboard where the 3.3 mW large high-voltage grid is converted to 3 low-voltage power grids of 1.1 mW each. In this way we exclude the spikes that can be present in a commercial grid as we move directly from the source and converts the electricity ourself.

The risk of power cuts all though persist and we have therefore equipped the facility with diesel generators that can supply the entire facility with electricity for 72 hours. Which will take over from our state of the art UPS systems from APC Symmetra that, with its modular properties allows us to expand as the electricity consumption rises, eliminating the risks of the UPS not being able handle the pressures it is subjected to during a power outage.

Network

The data center is provided with two separate fiber links, one from Stokab and one from Skanova which in turn are connected to two separate routers, which are disposed in two physically separate rooms. This have been created to ensure maximum availability to our customers.

The network is directly connected to Portlanes backbone that with its global infrastructure provides high connectivity throughout Europe and the globe which can be connected with everything from 100Mbps up to 10Gbps multiple dedicated ports.