



Enterprise within a Colocation

PROBLEM

A global technology provider occupied about 30,000 sq-ft of floor space within a large colocation. Throughout their time there they had seen their footprint grow very rapidly and the demands of that growth put the colo under serious pressure from a facility standpoint. The colo was built with traditional data center construction methods using a raised floor as a supply air plenum with an open return air plenum. They also used an overhead structural grid to support the remaining middle infrastructure. As the tech company's footprint grew their rack densities were reaching close to 20kW/rack and the colocation could not increase their cooling system's CFM to a point where the raised floor supply plenum could provide the necessary cooling capacity to meet those 20kW/rack demands. Outside of the cooling issues, the colocation was having a tremendous amount of trouble delivering power to the racks as well. Typically colos will operate on a stranded capacity model where they assume their customers will only use a fraction of the power they are given. This allows them to "oversell" their "face capacity". They did not misunderstand that this company was going to be using every bit of the capacity requested, but because they had been "overselling" power to other customers within the colo they had no physical breaker space within their RPPs to provide power to this customer. This created extremely long lead times for the colo to bring additional power to this customer which crippled their compute production. This is an example of how the colo model and traditional data center construction cannot adapt and evolve with modern IT growth. ***How would the tech company grow any further with these constraints and how could the colo company retain one of their largest anchor tenants?***

SOLUTION

Subzero Engineering identified the above-mentioned issues through a consultative discussion with both the tech company tenant and the colocation.

Before these discussions the colocation had proposed that the tech company take a 45,000 square foot unused white space within an adjacent data hall. The colocation proposed to dedicate this space and all of its facilities to the tenant. The issue is that it was built out with the same traditional data center construction methods as the space they were currently occupying thus they were going to experience the same issues. Subzero proposed a Data Center Solution utilizing AisleFrame as an anchor product that would allow the tech company to standardize on their middle infrastructure which would eliminate their dependence on the colo and allow them to deliver it in a timely manner. It also allowed them to create easy to manage pods that could be deployed as needed because of the stability they now had through standardization. InfraLinq allowed for the deletion of the raised floor, which eliminated the CFM issue by letting them flood cool the space and direct cooling to the front of the racks by aligning the pods with the supply air discharge locations. Not having to use CRAC unit capacity to statically pressurize the floor allows for the entire CRAC capacity to be used to remove heat from the IT load.

SUMMARY

Subzero's Data Center Solution eliminated the tenant's dependence on the colo for middle infrastructure deployment.

It eliminated the inherent limitations created by the use of traditional data center construction. It created standardization and allowed the tenant to plan capital outlays and future deployments in a more standard fashion. The solution also created an environment in which the colo could properly support and retain