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CASE STUDY

NETWORKING HARDWARE GIANT IMPROVED POWER BI PERFORMANCE BY 18X AFTER OPTIMIZATION

THE CLIENT

The client is the global leader in IT, networking, and cyber security solutions with offices across the world.

THE CHALLENGE

During the Covid-19 pandemic, the client needed to conduct a complex analysis of office building usage by its worldwide workforce to determine which building/locations to close or continue operating, and the financial impact of those decisions. The analysis included not only operational cost data and building usage data, but also criticality of job types, and worldwide Covid-19 hot spot data in real time.

However, the complexity of the calculations, sheer volume of data, and the inefficiency of the data model caused serious performance issues. The report became unusable because of the prolonged time required to render all the visuals.



THE SOLUTION

The client found Beyondsoft through the Microsoft Power BI partner program. Beyondsoft's Power BI experts helped the client implement a series of optimizations using the most up-to-date tools. Leveraging Microsoft Power BI, Oracle Server, Smartsheet, Excel and R Scripting, the most pivotal optimizations included the following:

- The size of the data load was reduced by millions of rows to improve data refresh and data transformation times
- Oracle SQL code was tuned to improve and filter unneeded data elements
- The data model was updated to create a reduced memory-footprint of the analytics engine
- New and updated data relationships were created to allow enhancement of additional metrics and KPIs
- Calculation code was re-written to decrease complexity
- A query plan optimization analysis was completed to find and resolve query inefficiencies.

THE RESULT

All the optimizations significantly shortened the report rendering time from 6 minutes to 20 seconds per report, which represented a 18X increase in speed. The vast improvement in the reliability and rendering efficiency of the reports allowed the senior level executives to make proactive decisions that saved millions of dollars in operational and real estate costs.



