

# Predicting and thwarting network degradation

## Improving network performance



### Goal

A leading network service provider wanted to increase the overall performance of its network.

The company's goal was to see if it could predict states of network performance degradation using historic network and fault management data.

### Insight and Action

QuantumBlack ingested more than 250 GB of data (more than 200 million rows) from distinct internal and external sources—spanning network performance data to local weather data.

We measured overall network performance using a combination of multiple KPIs. Based on this metric, we defined periods of network degradation using dynamic thresholds.

We built a predictive model that could forecast network degradation up to six hours before it occurred.

### Results

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# 40x

Improved prediction capabilities from “random guess” baseline

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# 279x

Improved prediction capabilities from the baseline on the rarest, most severe cases of network degradation

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# 60%

Of degradation events detected