

### **Advanced Algorithms**

**Description:** *The ability of the database to support a flexible paradigm that can support complex queries, where intermediate tables may be many times larger than the source table(s).*

### **Benchmark Results**

Cloud-Edge simulated one of its healthcare networking algorithms where patient/provider collusion fraud was identified. The source table contained 50 million rows of healthcare claims. All unique combinations of patients and providers were combined, resulting in a 3.9 billion row intermediate table. This table was aggregated and sorted to find the patient/provider combinations occurring most frequently. Running on the DL980, this algorithm ran in less than 26 minutes.

### **Cloud-Edge Advantage**

Many complex data analyses, similar to the healthcare fraud investigation above, are difficult to develop and implement because sophisticated, domain-level knowledge has to be translated into a series of database queries (often in SQL or a programming language). Cloud-Edge provides a unique graphical development environment to allow analysts to create complex queries in an intuitive speed-of-thought paradigm. The tool, called Cloud-Edge Studio, provides a feature-rich yet easy-to-use interface, that facilitates the rapid development of any type of database query, from the simple to the extremely complex, all without writing any SQL or programming code.

### **Business Advantage**

The ability to speedily run advanced algorithms against detail data, allows for the identification of fraud trends that are otherwise difficult, if not impossible to detect. Cloud-Edge has used similar approaches to identify Correct Coding Initiatives (CCI), Procedure Code Combinations, perform Provider/Consumer Cluster Analysis and Static Code (Diagnosis/Procedure) Analysis.

