Overview
Simpli.fi is the leader in localized programmatic advertising. It works with the largest buyers of localized advertising, including multi-location brands, agencies, local media groups, networks, and trading desks. These companies utilize Simpli.fi to localize targeting and content, to deliver performance on high volumes of localized campaigns, and to provide deep insights on their dynamic audiences.

Challenge
From soon after its inception in 2010, Simpli.fi has leveraged the Vertica Analytics Platform to empower customer decision making with key metrics such as impressions, clicks, cost, and measurement. The company’s growth is reflected in the fact that data grew by 300 percent in two years and has now reached annual levels in the high terabytes. This attracted the attention of a capital investment firm interested in providing the funding required for organic growth initiatives, as well as potential acquisitions.

With this expected acceleration of their business, Simpli.fi needed to expand their Vertica capacity, as Jeff Swanner, Senior Data Engineer for Simpli.fi explains: “We were really pleased with Vertica’s performance, scalability, and flexible tuning options, and could see the potential of advanced analytics capabilities. We love how it integrates seamlessly into our infrastructure, and wanted to explore with Vertica how we could create a flexible transaction structure.”

Solution
To deliver performance on high volume localized campaigns, and deep insights into dynamic audiences, the Simpli.fi platform enables marketers to extract value from unstructured data in real-time bidding (RTB) advertising exchanges. Advertisers can target, bid, optimize, and report at the data element level.

At a Glance
- **Industry**: Business Services
- **Location**: Texas, USA
- **Challenge**: Manage explosive data growth and expected company acceleration by expanding the Vertica footprint to increase transaction flexibility

**Results**
- High performance columnar data processing
- 85% data storage reduction thanks to column compression
- Data granularity and transparency gives customers crucial insight
- Key data metrics enable faster decision making

“Vertica’s data granularity and transparency enables our customers to measure and compare their campaign performance against individual costs components, such as video costs and third party segment costs. This elemental insight helps them understand their audience behavior and optimize their campaigns accordingly.”

JEFF SWANNER
Senior Data Engineer
Simpli.fi
In an on-premise model, Simpli.fi hosts 24 nodes in a production cluster. The Simpli.fi data ecosystem consists of Apache Kafka where hundreds of millions, up to even billions of real-time bid messages enter the system. These flow in an extract, transform, and load (ETL) process through Apache Airflow with asynchronous execution. A filtered eligible subset of millions of records are loaded each hour to Vertica tables via a custom optimized data loader. Vertica also integrates with Hadoop, Spark, and PostgreSQL as data sources. The Vertica tables roll up into summary tables with live aggregate projections (LAPs) applied to them to optimize query performance. As these are loaded, the new data becomes available to view and report on through Looker as visualization and presentation solution.

Swanner comments: “Vertica’s data granularity and transparency enables our customers to measure and compare their campaign performance against individual costs components, such as video costs and third party segment costs. This elemental insight helps them understand their audience behavior and optimize their campaigns accordingly.”

**Results**

The Vertica team worked closely with Simpli.fi to propose a licensing structure that provides the flexibility Simpli.fi needs and allows for future growth. Swanner is pleased with the outcome: “Vertica is very user-friendly, even when you come from a row-based data store background like myself. It gives us great out-of-the-box performance for our high-volume columnar data. We appreciate the flexible tuning options; query specific projections (QSP) and LAP. The ease and flexibility in defining projection segmentation supports our customers directly, and the encoding and compression process ensures high performance at all times. The database designer is user-friendly and the entire set-up is easy to manage.”

He concludes: “Our reason for being is to serve the right digital ad to the right person, at the right time, at maximum value. Vertica’s excellent integration with Kafka, Spark, Airflow, and Looker supports the effective flow of high-volume, real-time data, and helps us provide deep insights to our customers.”