

# Hands-On with Vantage Native Object Store (NOS) Training

## Course Outline

### Module 01 – Exploring External Data in Place

- Three Authorization Object types
- The basic techniques needed to explore NOS data
- The READ\_NOS table operator SAMPLE\_PERC function
- A very simple foreign table definition that includes a security clause that references an authorization object
- A view over a foreign table

### Module 02 – Simplified Data Load

- A persistent copy of data from external NOS sources
- And describe three different approaches to bringing external data inside the database
- JSON\_TABLE and TD\_JSONSHRED table operator to decompose a JSON object file with a two-level nested structure

### Module 03 – Performance Considerations

- Path filtering and the benefits over payload filtering
- A Manifest file with Create Foreign Table
- Why casting column types can improve performance
- Some considerations with MAX/MIN/AVG or ORDER BY
- An explanation and examples for VIEWS on top of Foreign tables and how you can use them for path and payload filtering

### Module 04 – Comparing JSON, CSV, and Parquet Formats

- And describe JSON, CSV and Parquet formats
- A foreign table with CSV
- A foreign table with Parquet
- JSON, CSV and Parquet NOS data and compare using EXPLAIN plans
- To a foreign table that is JSON, CSV or Parquet data formats

### Module 05 – Row Headers and Schemas for CSV Objects

- View schemas with READ\_NOS
- Foreign tables easily with the aid of NOS schema discovery
- The importance of understanding location structure and schema definition

- whether a schema discovery results need to be changed before you attempt to access CSV objects through a foreign table

### **Module 06 – Write Data to S3**

- How the WRITE\_NOS table operator works
- Write data to an S3 bucket
- And describe some of the options you can use with WRITE\_NOS such as Partition By, Hash by and Order by
- The external file naming
- A Manifest file