Overview
This working example provides a great overview of streaming sensor data into a small low cost Vertica single node database. Live data feeds are captured in real-time. Depending on setup location expect to receive hundreds up to thousands of data rows per second! In the provided examples data is batched into 10,000 row chunks and loaded into Vertica continually. Enhancements to the raw flight data include the FAA aircraft registration database, flight arrival and departure data for historical purposes. Use the built-in Vertica geospatial functions to calculate distance, airspeed and routing.

Bill of Materials
- (5) Raspberry Pi 3 Kit, with case and power supply $49.00
- (4) USB 3.0 Extension Cable -1 Foot $5.59
- (3) FlightAware Pro Stick ADS-B USB Receiver $18.00
- (2) RF pigtail cable SMA male to N male RG58 5M $18.00
- (1) 1090MHz ADS-B Antenna - 66cm / 26" $39.00

Flights that are currently airborne often report their position using an automated process known as Automatic Dependent Surveillance-Broadcast (ADS-B). ADS-B is different from radar and does not depend on high power radars, instead aircraft self-report GPS positions in a networked centralized controllers watching radar scopes. Instead, ADS-B RAW data is transmitted on 1090MHz every second.

Vertica SQL
create table dump1090 (record_type_number integer, record_type varchar(3), sg_flight_id integer, sg_aircraft_id integer, sg_session_id integer, create table dump1090 (Vertica SQL

For more information www.vertica.com/iot