



PSQL IoT

Desmond Tan, Director of PSQL Product
Engineering

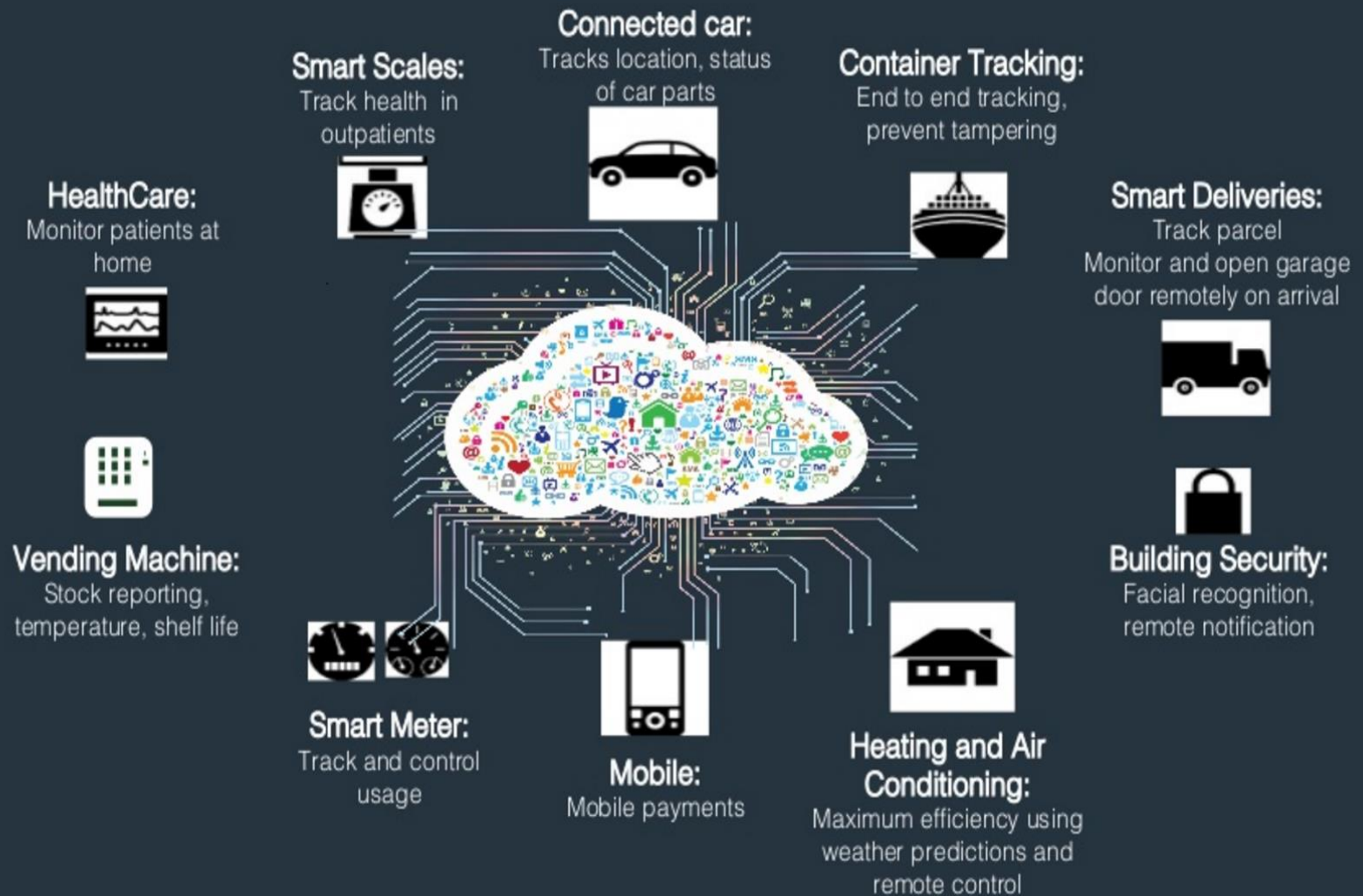
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The Internet of Things connects the world around us...



What makes PSQL v13 an IoT Gateway Database?

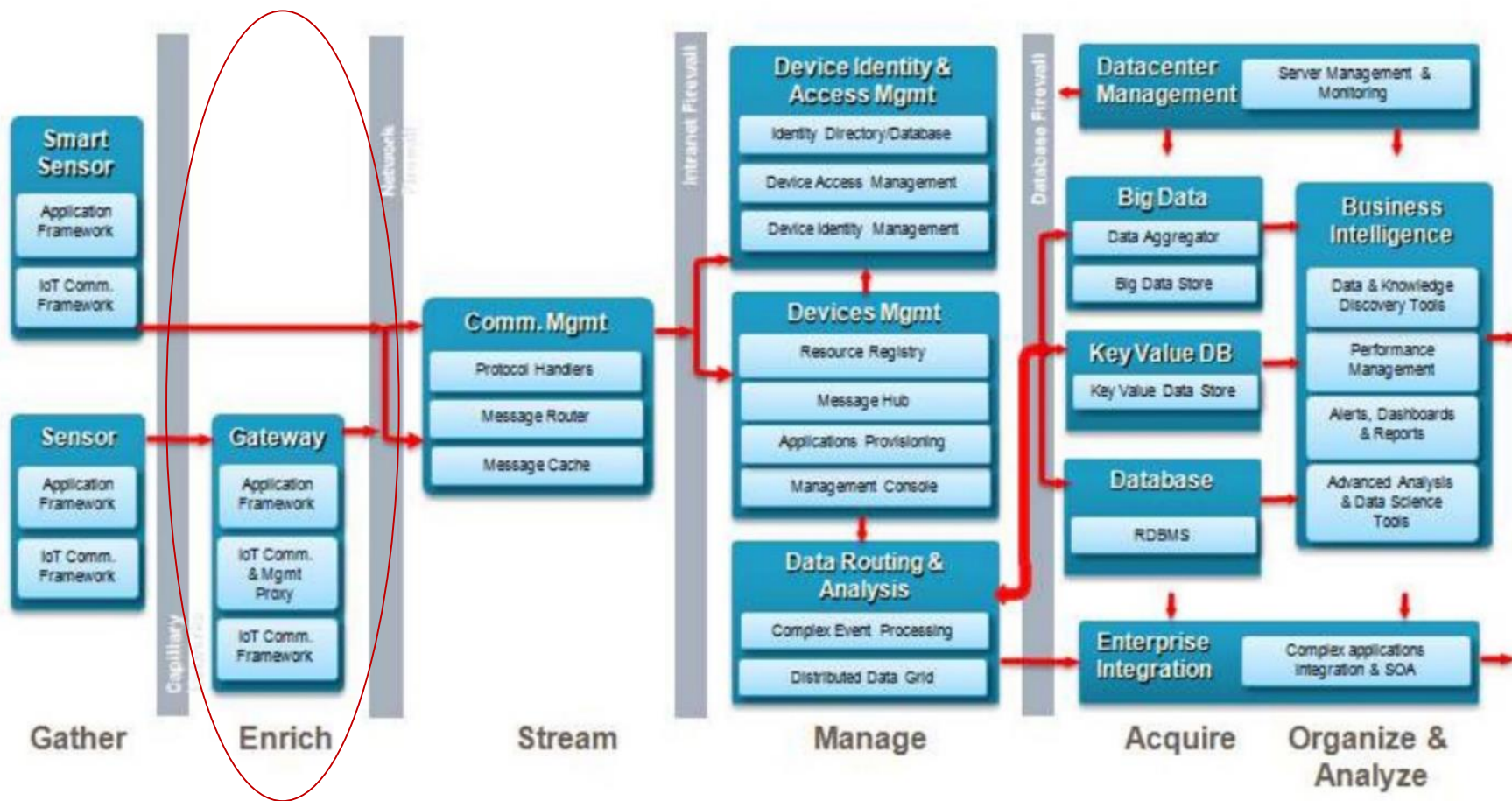
→ PSQL is a DBMS that is:

- Small install footprint, **less than 30 MB**
- Run with low memory requirements – **could be less than 256 MB**
- Uses **lossless compression**
- Simple application development support **both NoSQL and SQL**
- Require **absolutely no administration**
- Able to **network multiple gateways** together
- Supports **ARM** and **Intel CPUs**
- Supports **Raspbian** and **Windows IoT Core (Intel and ARM)**

PSQL is powerful enough to **ingest, process and aggregate data in real-time!**

PSQL fits in the Enrich Column

Oracle IoT Data Reference Architecture



What are “Things”?

1. Embedded devices – SoC (System on Chip)

- Example : microchip size of a shirt button for wearable devices for movement tracking and gesture recognition

2. Mobile devices

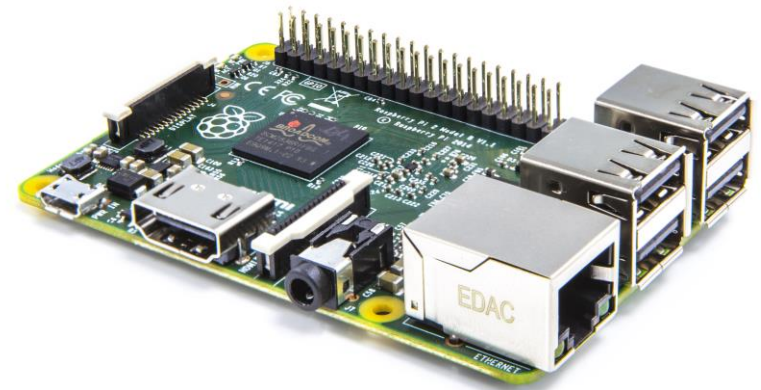
- Example : mobile phone, iPad

3. “Things” with microcontroller board

- Example : smart refrigerator uses microcontroller to read real-time temperature, control buzzer for alerts, LCD display.

4. Mini 32/64 bit computing platforms

- Example : Raspberry Pi

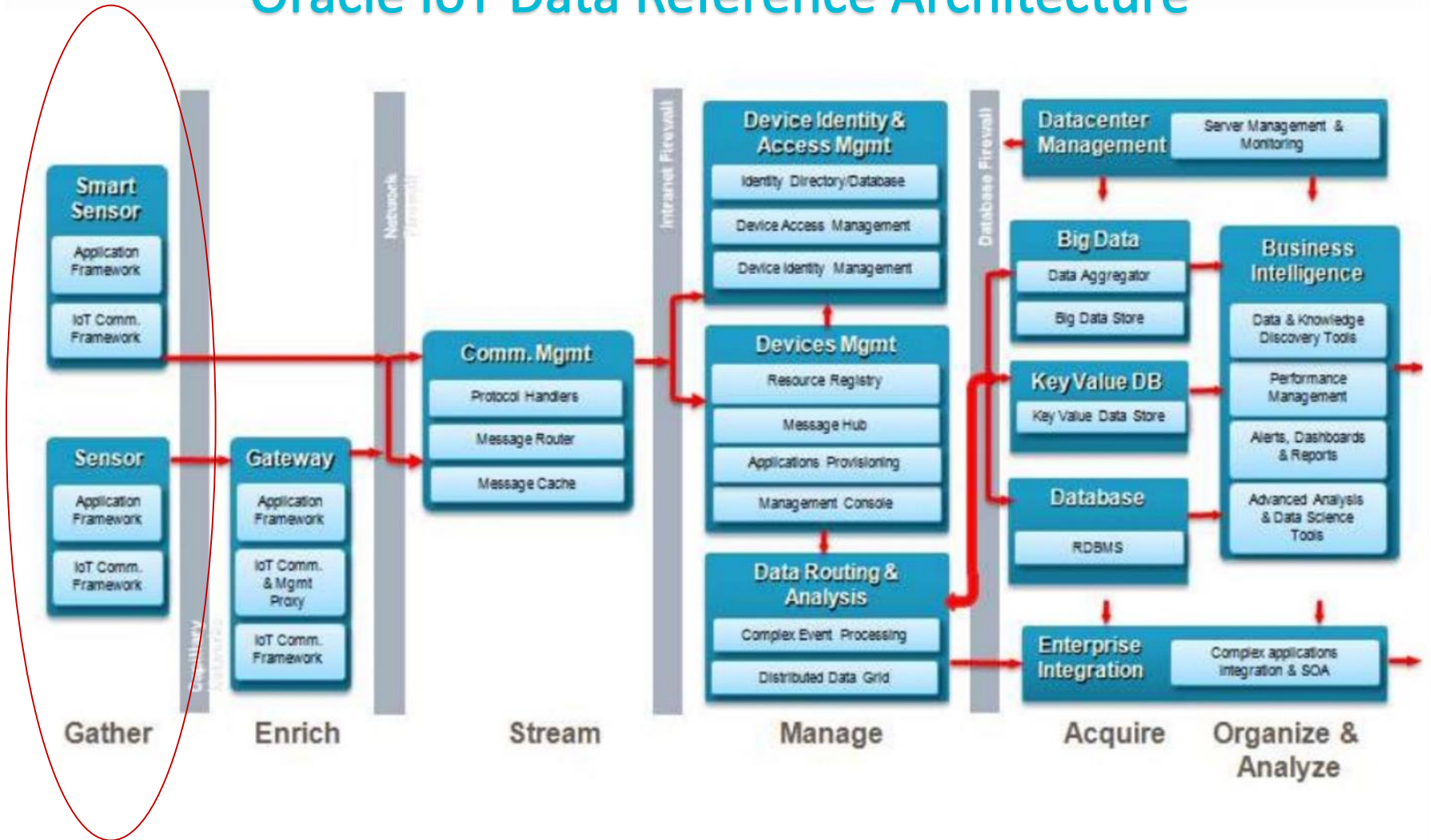


What did I learn?

1. These “Things” are small, therefore if a database is needed, it needs to be small and embeddable and zero administration.
 - PSQL can be small but we are not embeddable and not zero administration.
2. The devices tend to be design using the ARM architecture or running OSes compiled using the ARM architecture because of (1).
 - PSQL v13 will be ready
3. These devices are almost incapable of handling relational data structure (SQL) and the data handled will be in various structures.
 - PSQL supports both Key-Value (NoSQL) and SQL
4. IoT application developers are most likely into rapid development and like programming languages like Python.
 1. PSQL v13 SWIG support and docker enables these developers

Can PSQL also fit in the Gather Column?

Oracle IoT Data Reference Architecture



OPEN DISCUSSIONS



Thank You!

A ship in port is safe, but that's not what ships are built for. – Grace Hopper

There are no secrets to success. It is the result of preparation, hard work, and learning from failure. – Colin Powell

