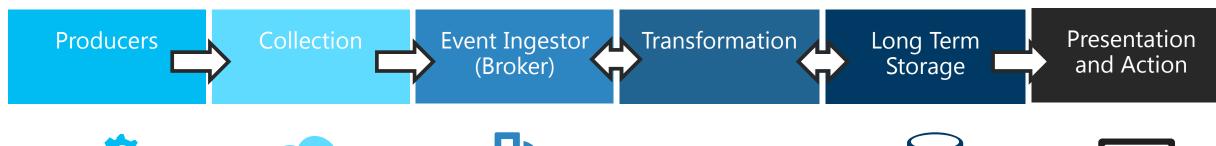
DATA INGESTION WITH EVENT HUB

Phuc Duong



Typical Event Processing





Applications



Cloud Gateways (WebAPIs)



Scalable Event Broker



External Data Sources



Web/Thick Client Dashboards

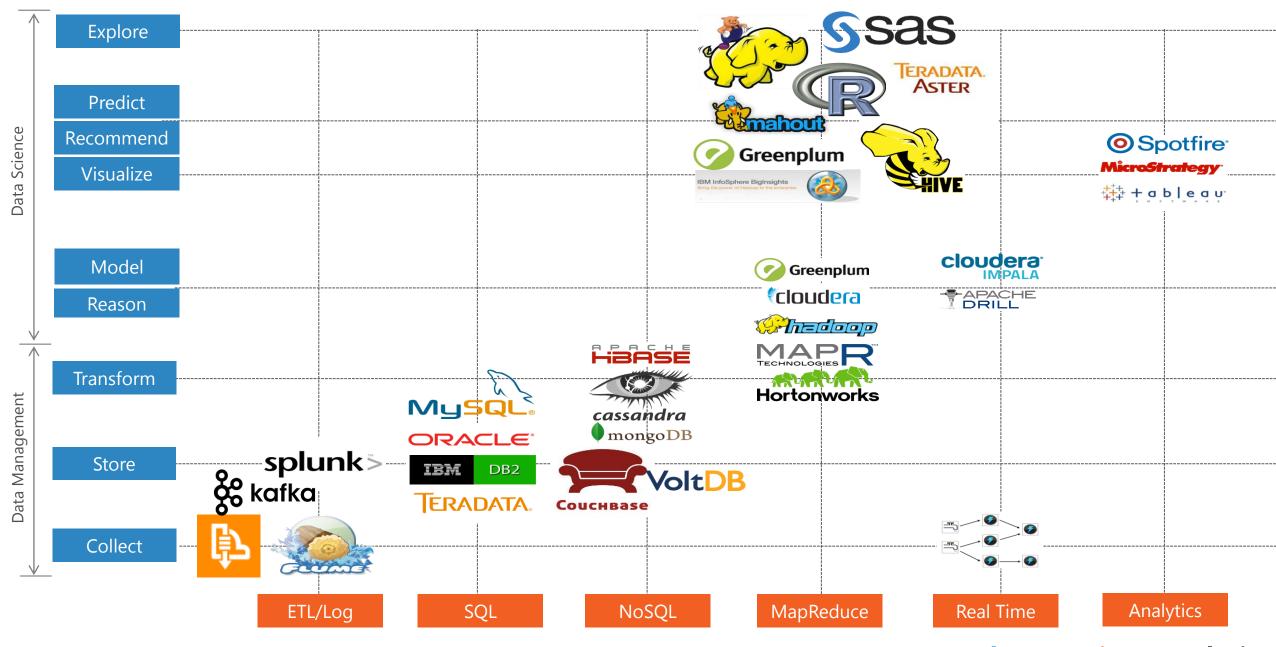












Hypothetical Scenario





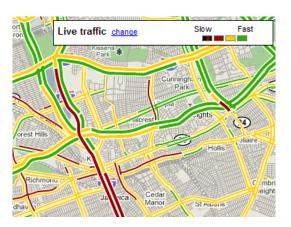
Sends Traffic Data



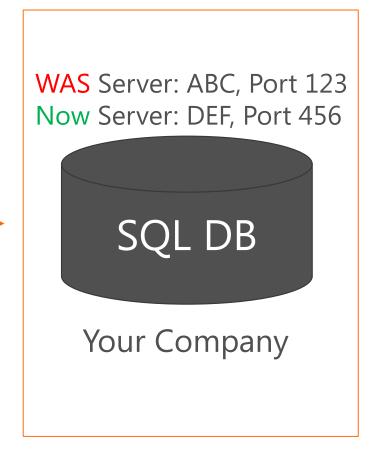


Things Change





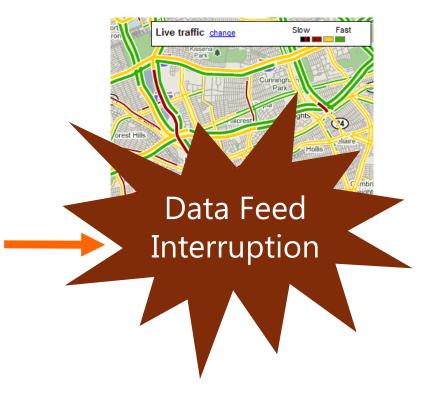
Sends Traffic Data

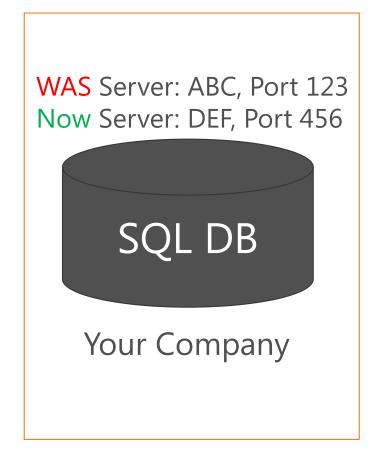




Interruption Occurs





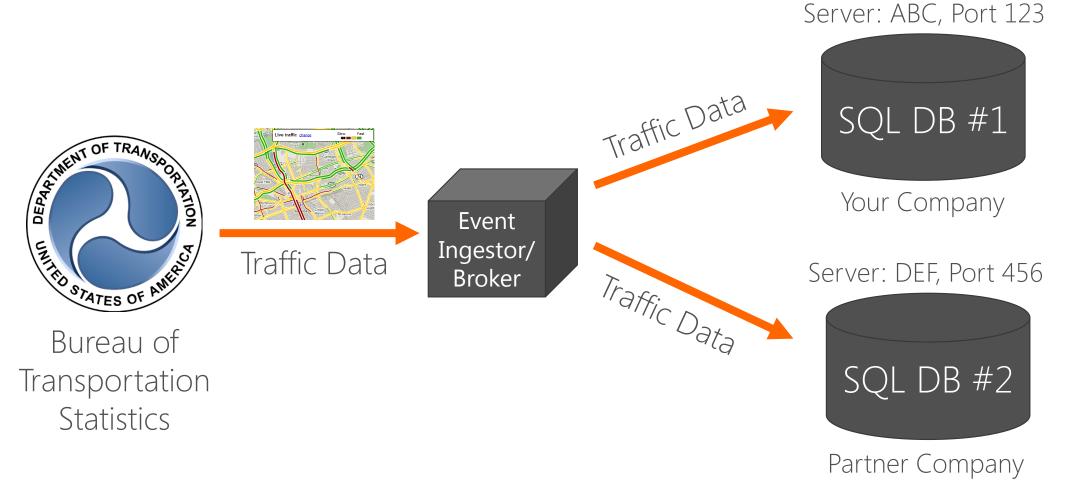


Reactive Remedy

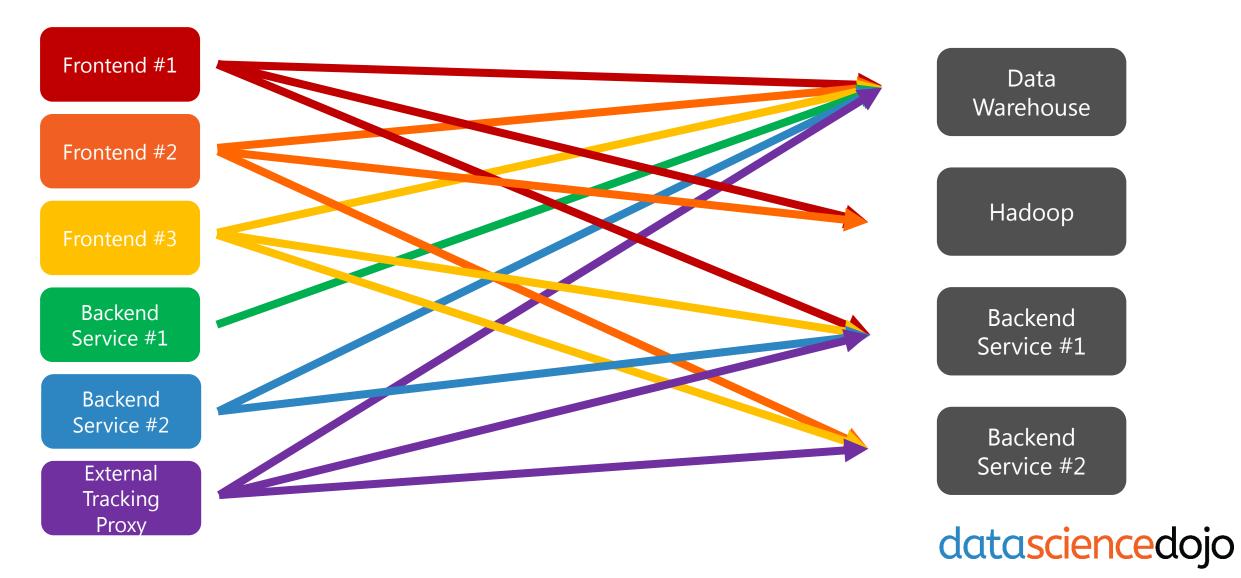
- Call Bureau of Transportation
 Statistics to change their outbound data to funnel into server DEF and port 456
- Bureau makes support ticket
 - Your request enters their task queue
- 4 days later... ports are changed



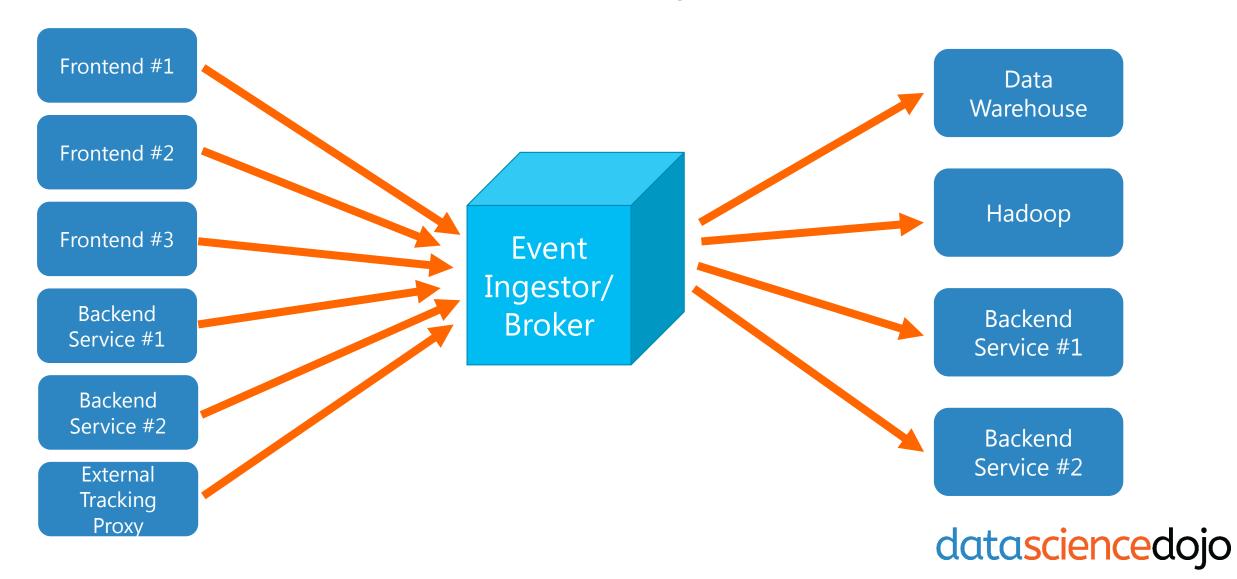
Preventative Solution: Middleware



Data Pipeline Complexity at LinkedIn



Data Pipeline Complexity at LinkedIn



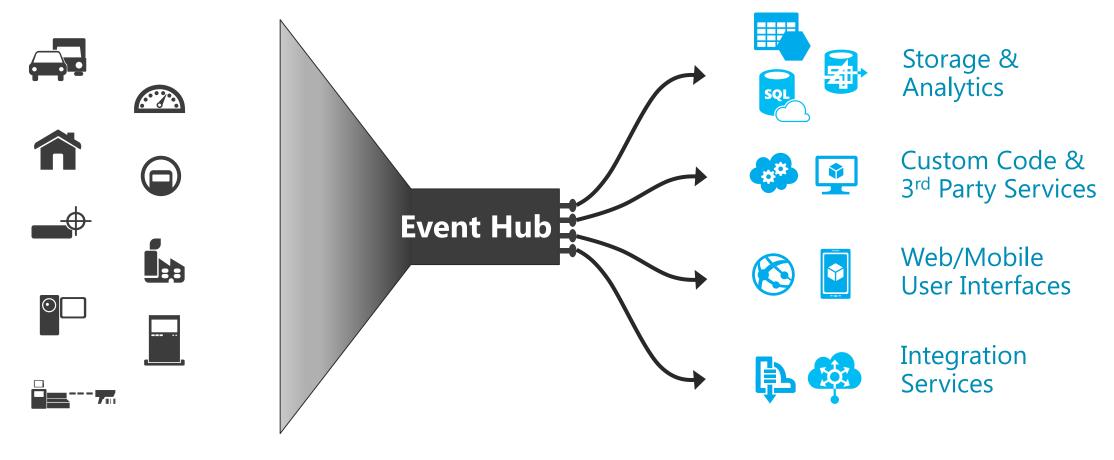
Popular Event Brokers

Habolit MQ_{TM}





Event Hub for IoT: Big Data Ingestion



Event Sources

Cloud Services

Server Down

Frontend #1

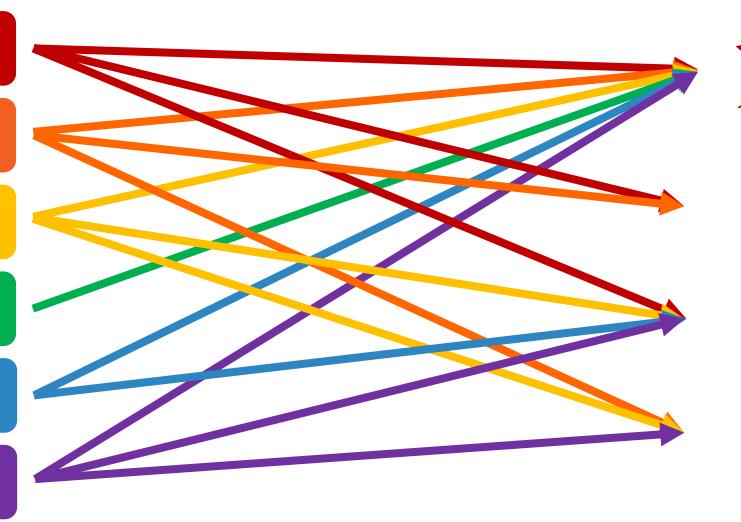
Frontend #2

Frontend #3

Backend Service #1

Backend Service #2

External Tracking Proxy

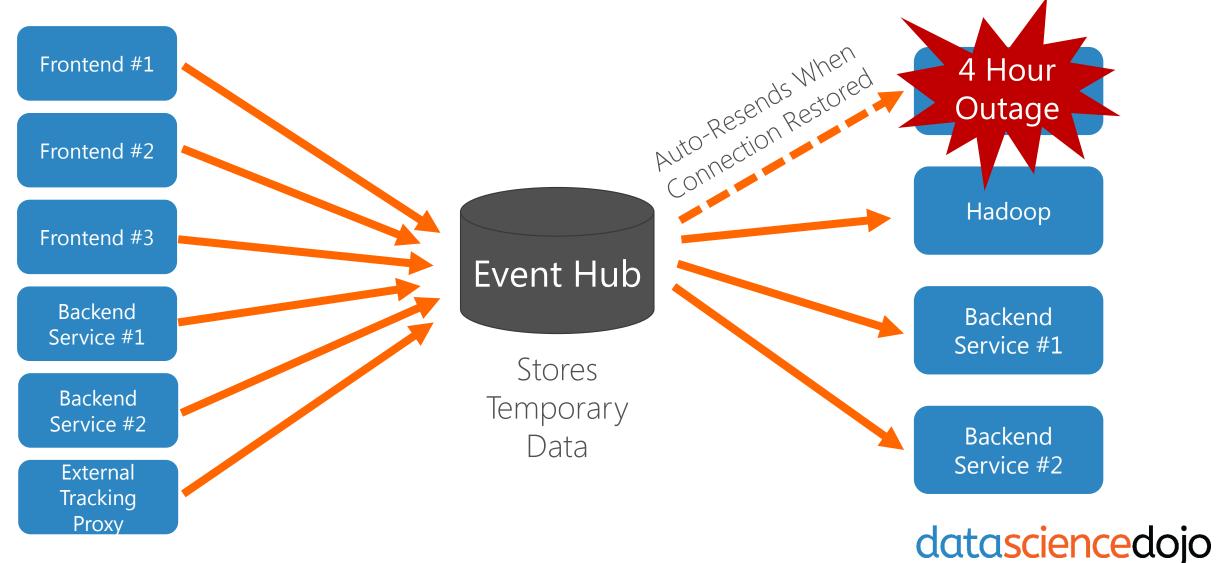




Backend Service #1

Backend Service #2

Temporary Storage



The Post Office

- Tracks address changes
- Tries again tomorrow if send failed
- Holds packages in short term
 - Too many failed deliveries
 - Vacations
- Reduces complexity through specialization

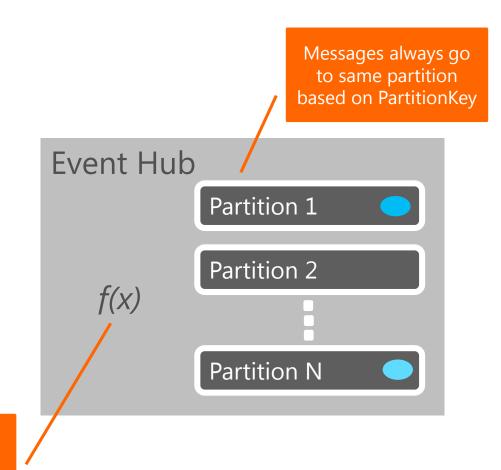


Event Hub Consumers

Device Sets
PartitionKey
to its ID

A

Event Hub uses a static hashing function to map PartitionKey to partition



Reader 1
Reader 2
Reader N
Consumer Group

Hadoop

Reader 1

Reader 2

Reader N

Consumer Group

Data Warehouse

Supported Languages

Documentation Available







Supported But Documentation Still Pending







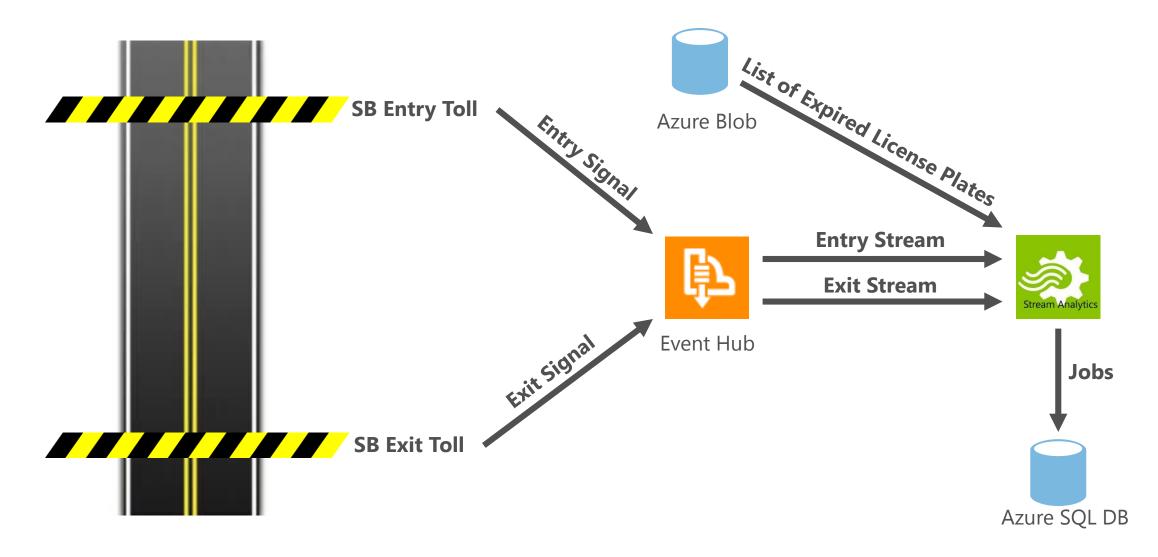




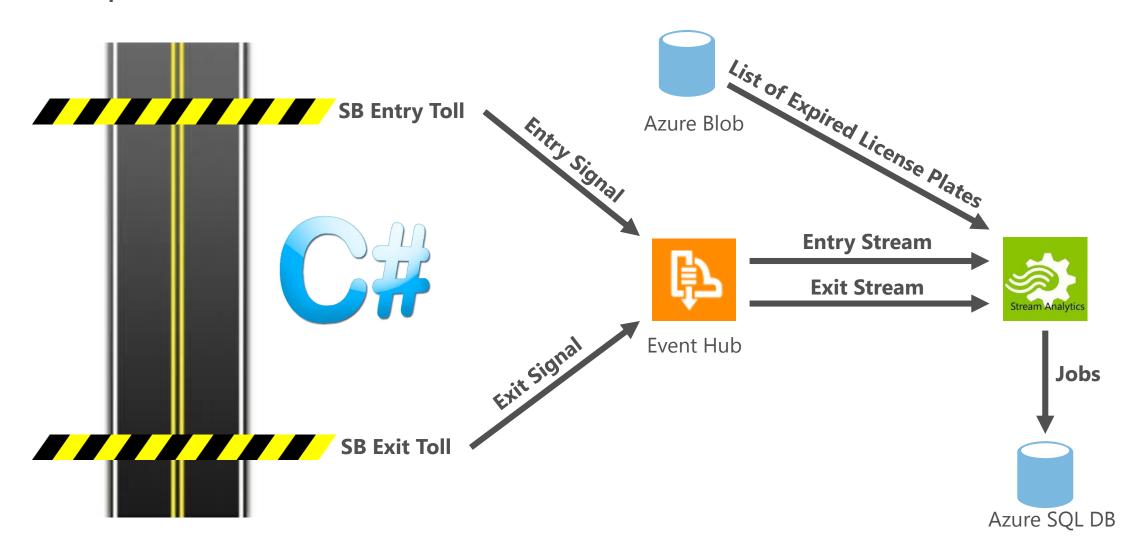




Automated Tolled Road Demo



Setup File



Questions?

