DATA INGESTION WITH EVENT HUB



Typical Event Processing





Applications

Q

Devices



Cloud Gateways (WebAPIs)

Field Gateways



Scalable **Event Broker**



External **Data Sources**

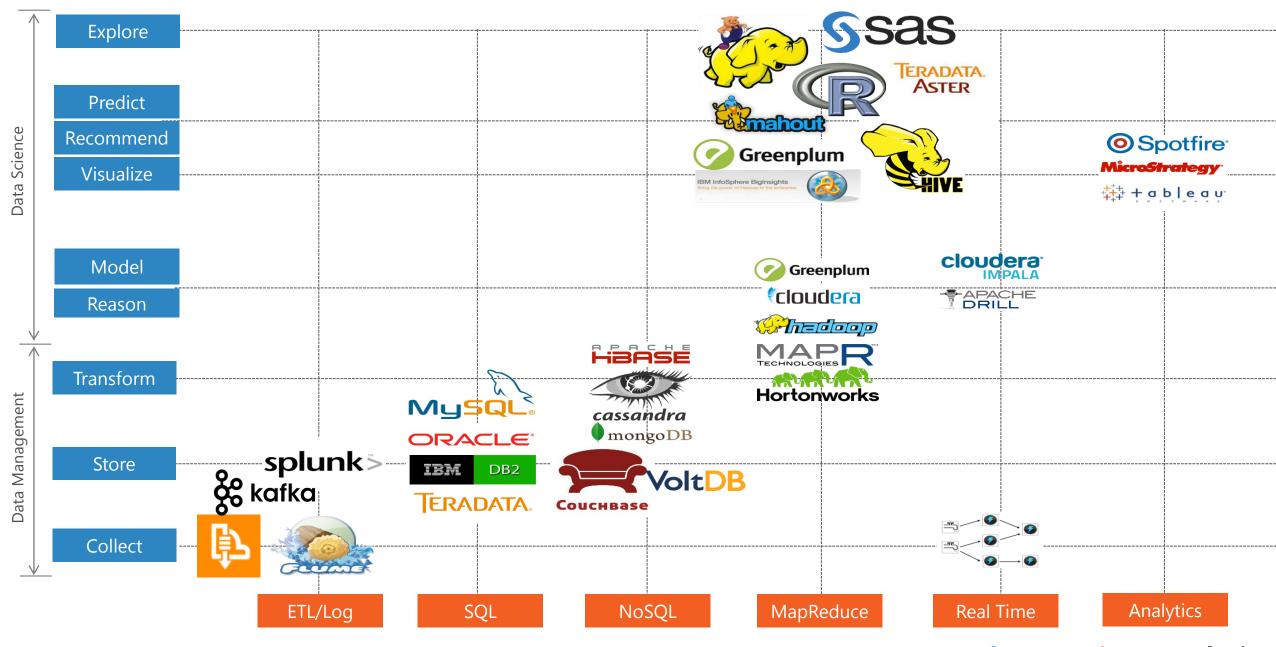


Web/Thick Client Dashboards







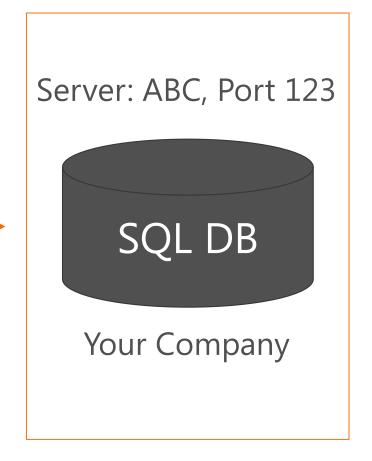


Hypothetical Scenario





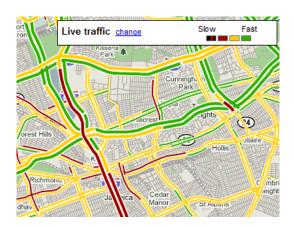
Sends Traffic Data



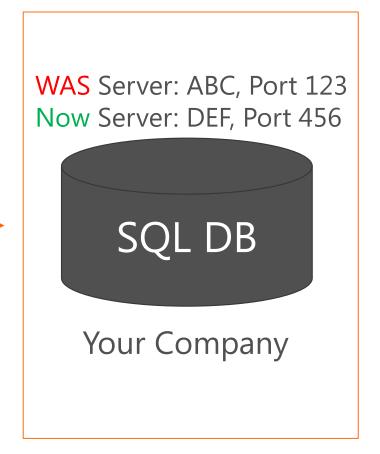


Things Change





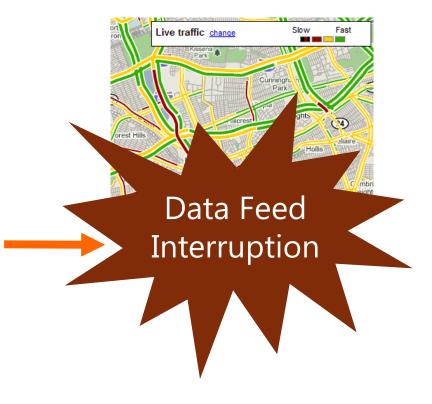
Sends Traffic Data

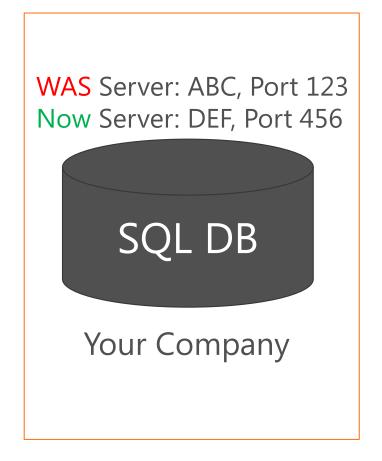




Interruption Occurs





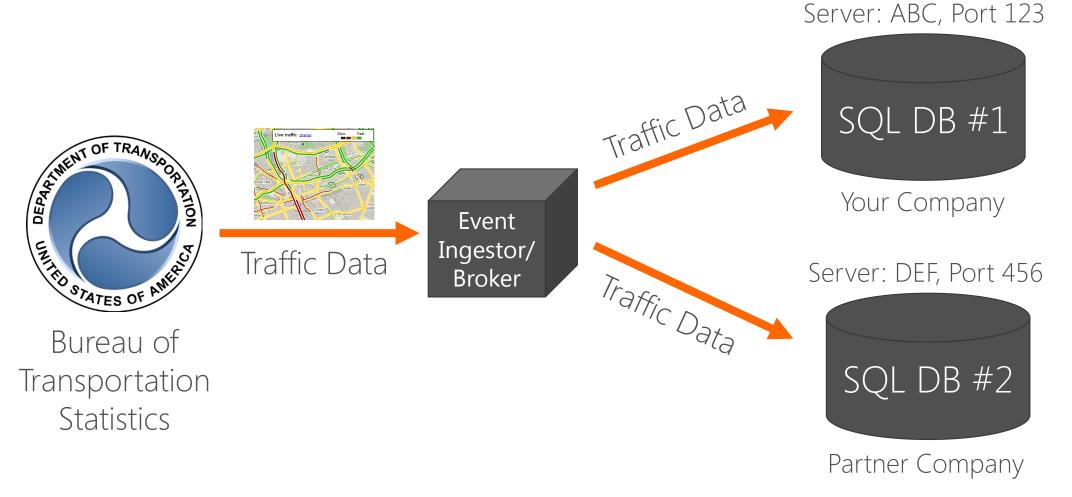


Reactive Remedy

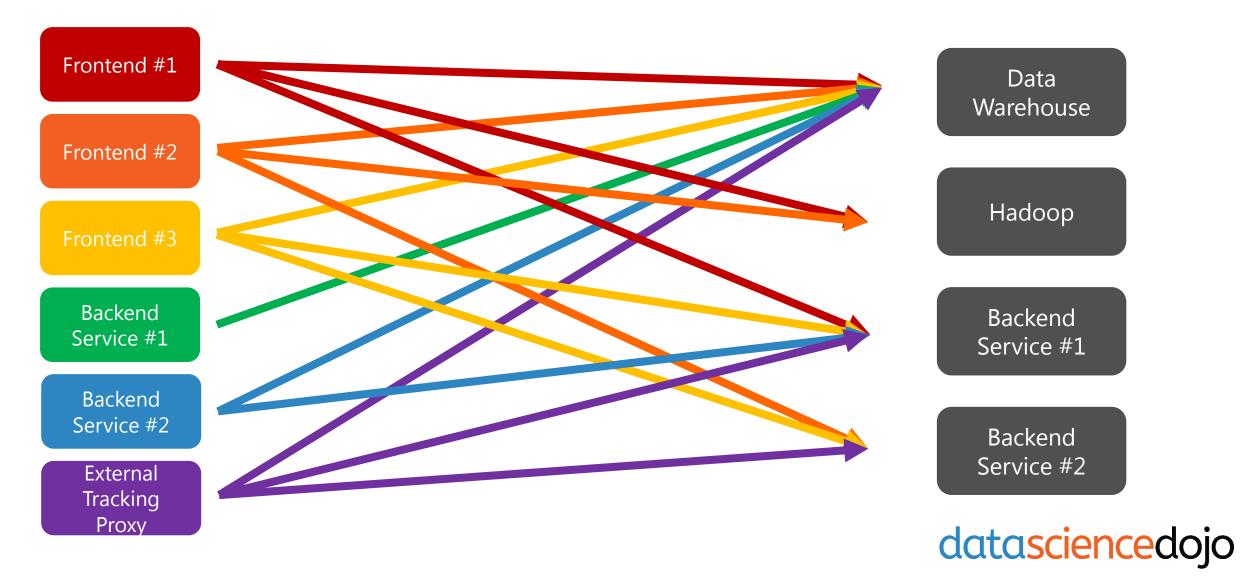
- Call Bureau of Transportation
 Statistics to change their outbound data to funnel into server DEF and port 456
- Bureau makes support ticket
 - Your request enters their task queue
- 4 days later... ports are changed



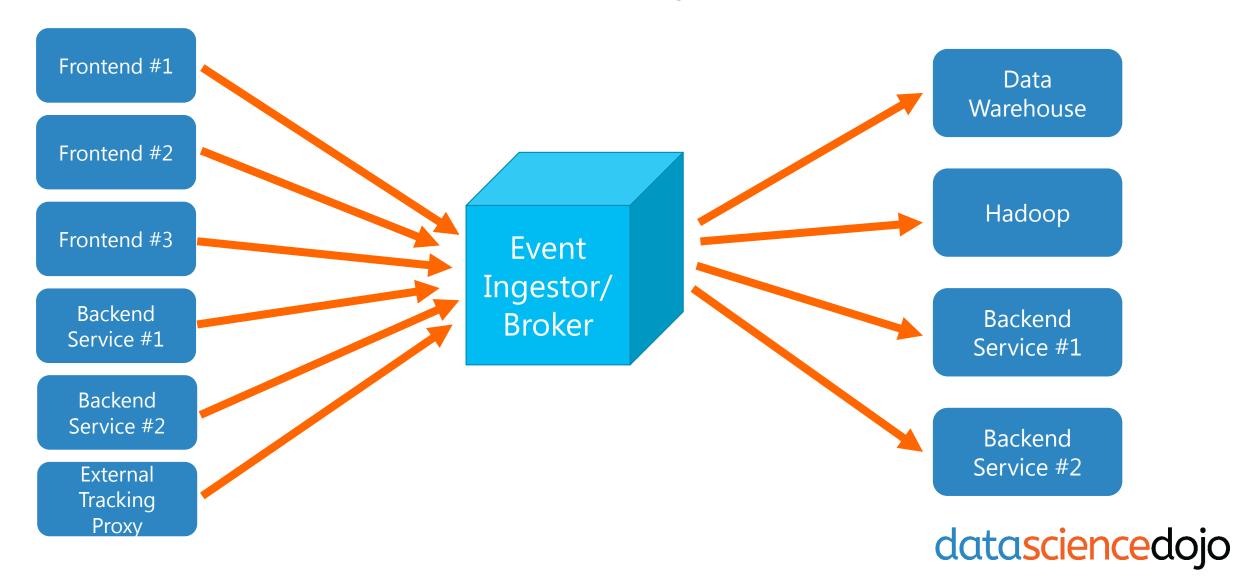
Preventative Solution: Middleware



Data Pipeline Complexity at LinkedIn



Data Pipeline Complexity at LinkedIn



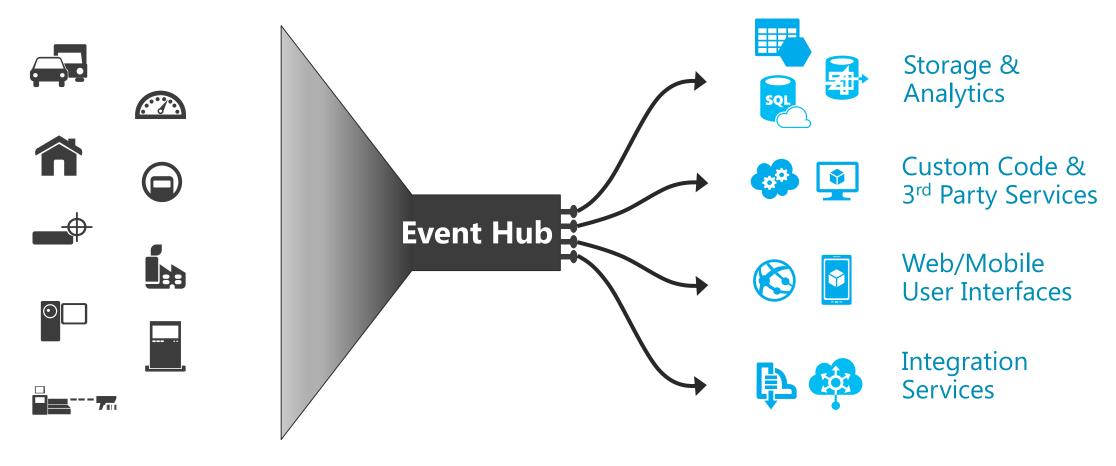
Popular Event Brokers

Habolit MQ_{TM}





Event Hub for IoT: Big Data Ingestion



Event Sources

Cloud Services

Server Down

Frontend #1

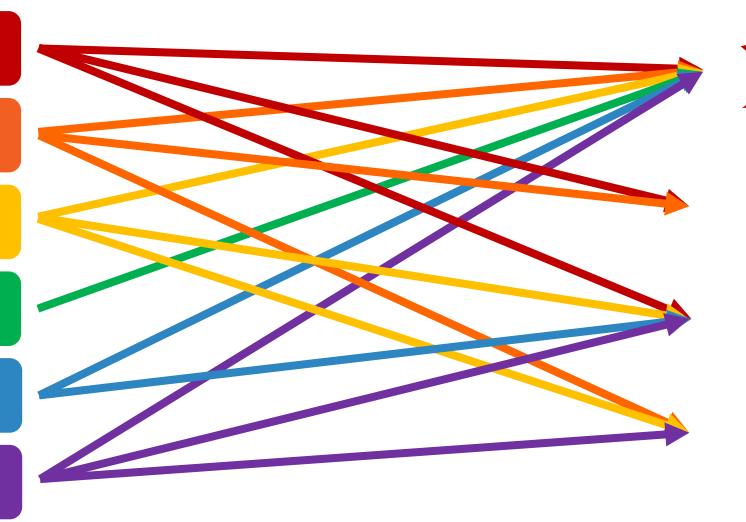
Frontend #2

Frontend #3

Backend Service #1

Backend Service #2

External Tracking Proxy

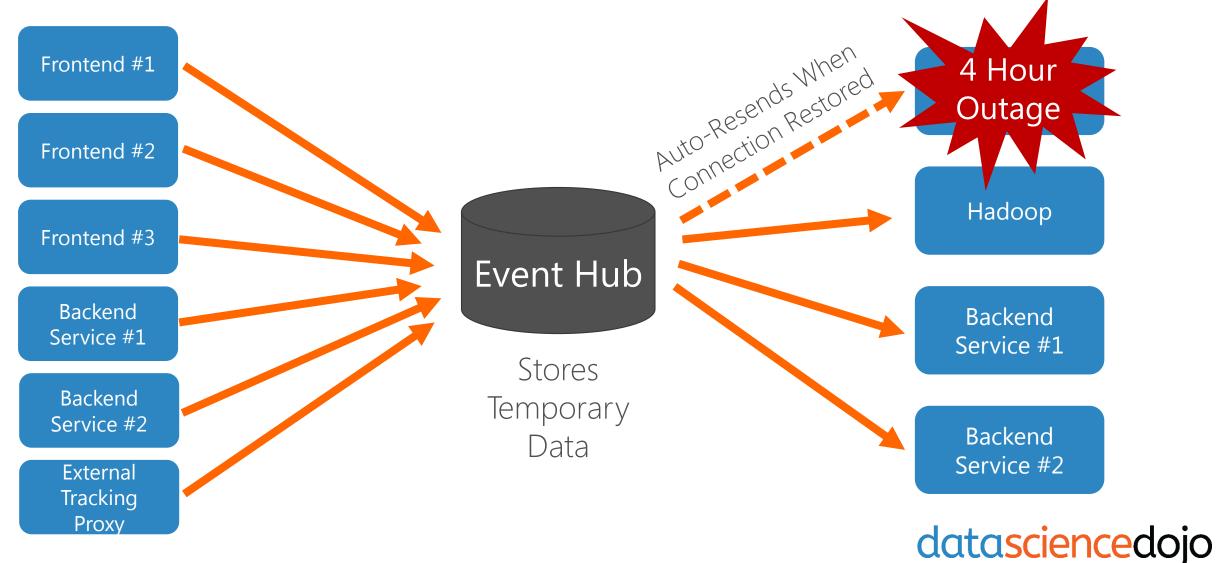




Backend Service #1

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

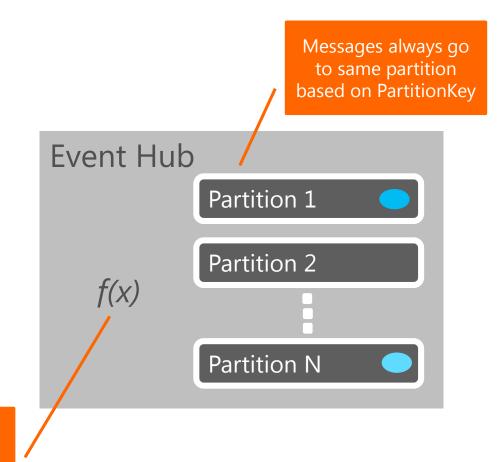


Event Hub, Stream Management

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

Output 1

Hadoop

Reader 1

Reader 2

Reader N

Output 2

Data Warehouse

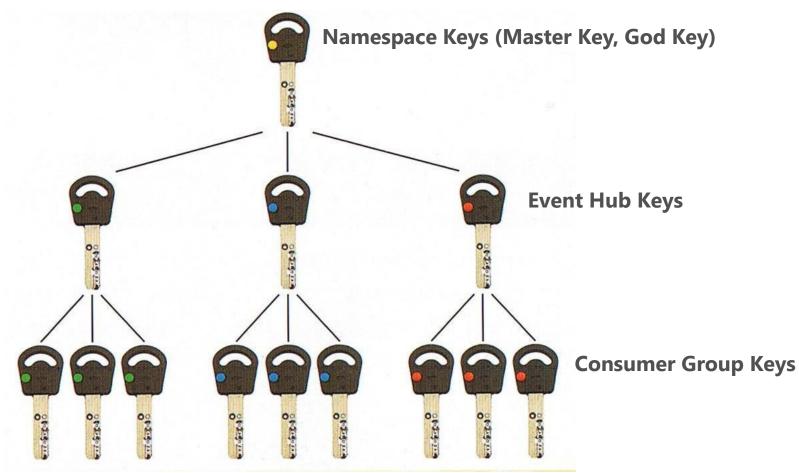
Service Bus Namespace

Service Bus Namespace

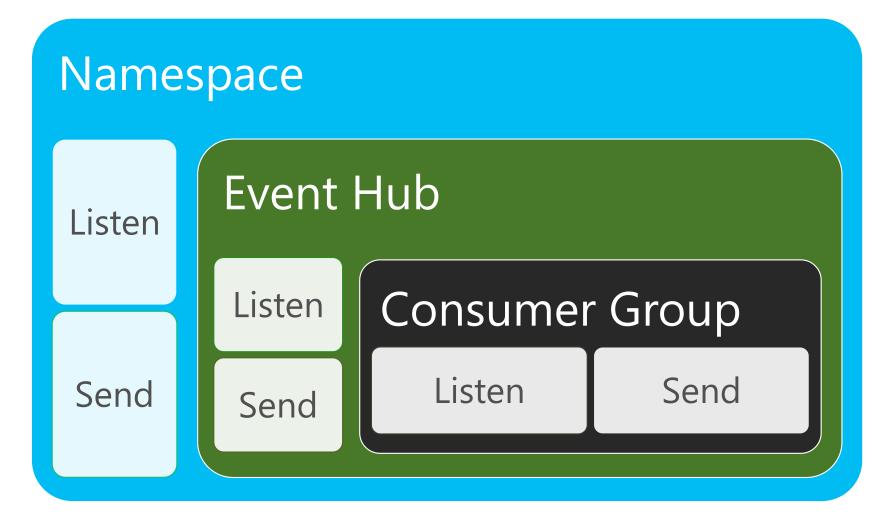
Event Hub

Event Hub

Access Rights, Policy, Keys



Access Rights



Supported Languages

Documentation Available







Supported But Documentation Still Pending















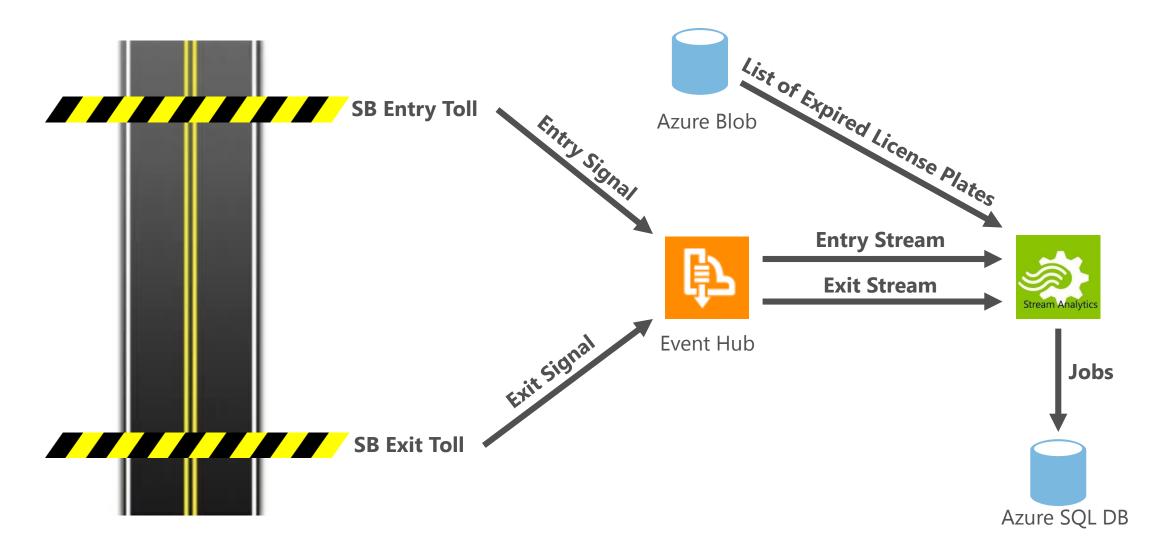
Hands on Lab

Tolls on I-405

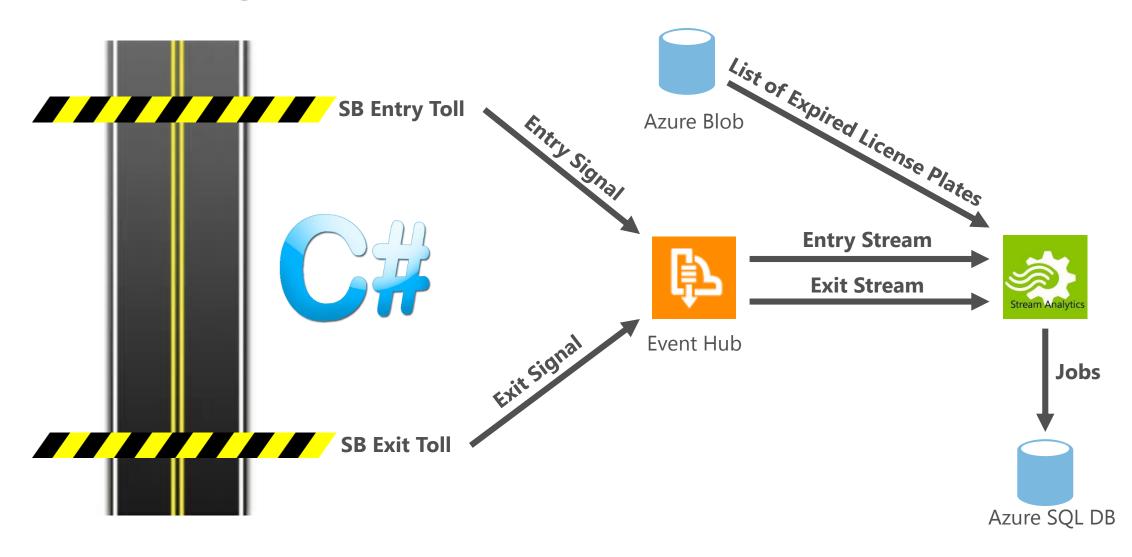




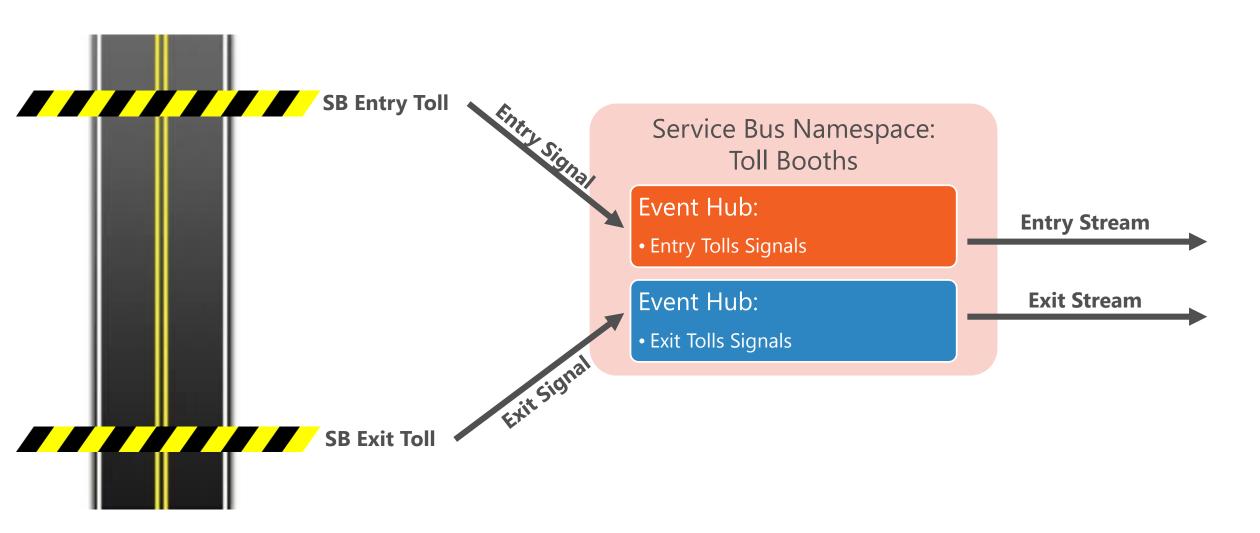
Automated Tolled Road Demo



Streaming to Event Hub



Inside the Event Hub



Questions?

