Data Ingestion With Event Hub

Data Science Dojo



Typical Event Processing

Producers Collection Event Ingestor Transformation Long Term And Action Presentation and Action







Cloud Gateways (WebAPIs)



Scalable Event Broker



External Data Sources



Web/Thick Client Dashboards



Devices

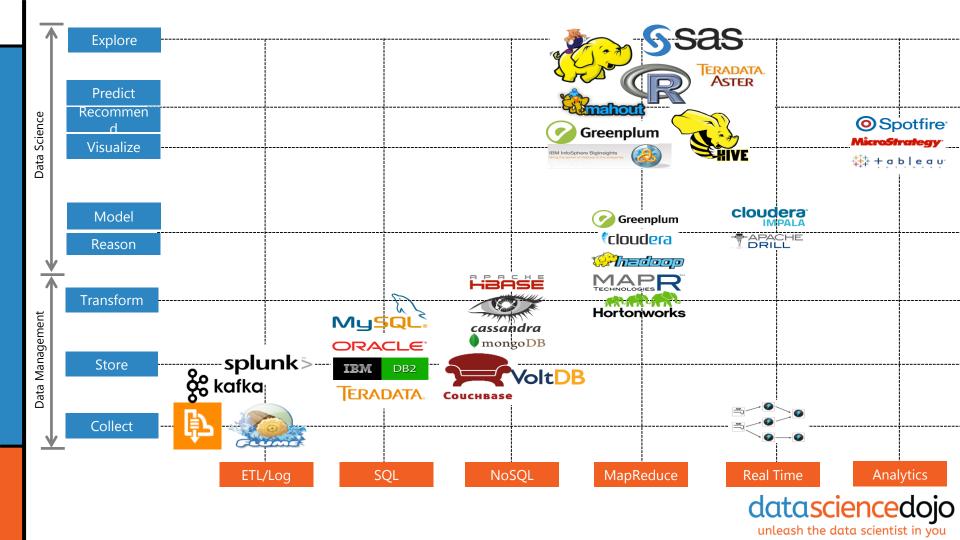


Field Gateways



Search and Query





The Post Office & Shipping Centers

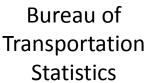


- Tracks address changes
- Tries again tomorrow if send failed
- Holds packages in short term
 - Too many failed deliveries
 - Vacations
- Reduces complexity through specialization
- Optimized to send, receive, and temporarily house packages



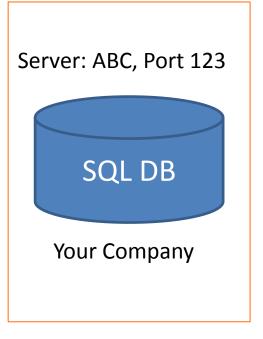
Hypothetical Scenario







Sends Traffic Data





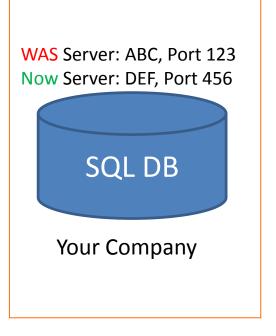
Things Change



Bureau of Transportation Statistics



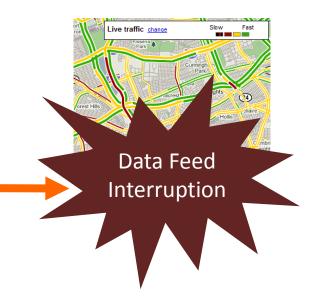
Sends Traffic Data

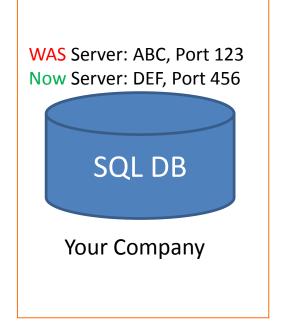




Interruption Occurs









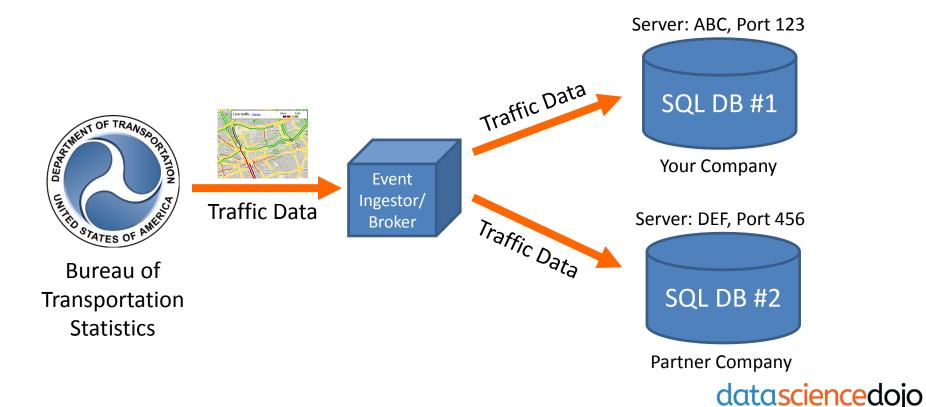
Reactive Remedy

- 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



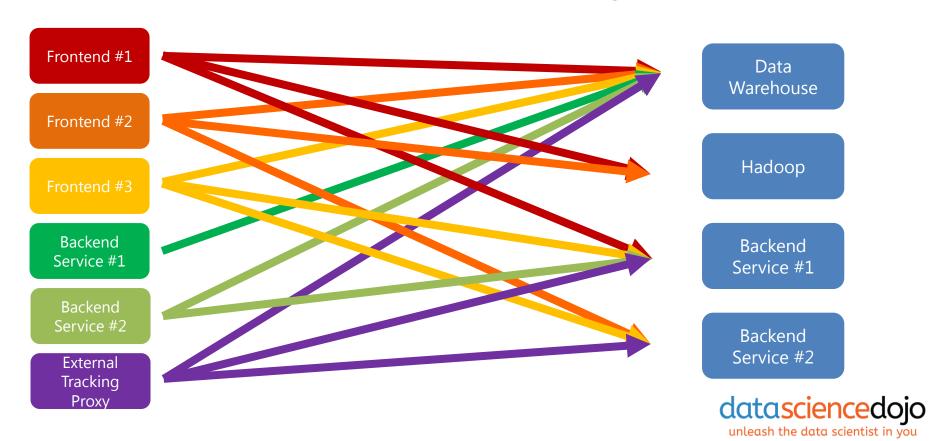


Preventative Solution: Middleware

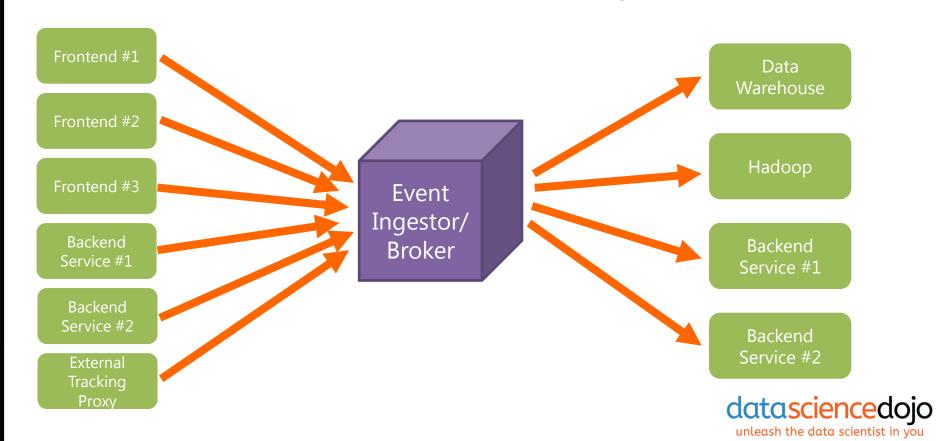


unleash the data scientist in you

Data Pipeline Complexity at LinkedIn



Data Pipeline Complexity at LinkedIn



Popular Event Brokers

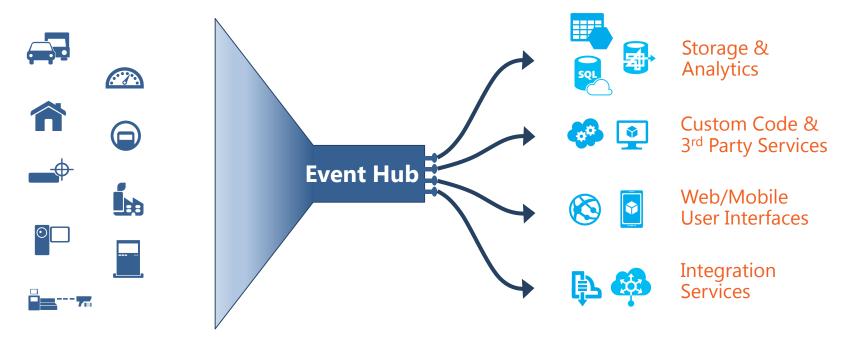
LRabbitMQ_{TM}







Event Hub for IoT: Big Data Ingestion



Event Sources

Cloud Services



Server Down

Frontend #2

Frontend #3

Backend
Service #1

Backend Service #2

> External Tracking Proxy

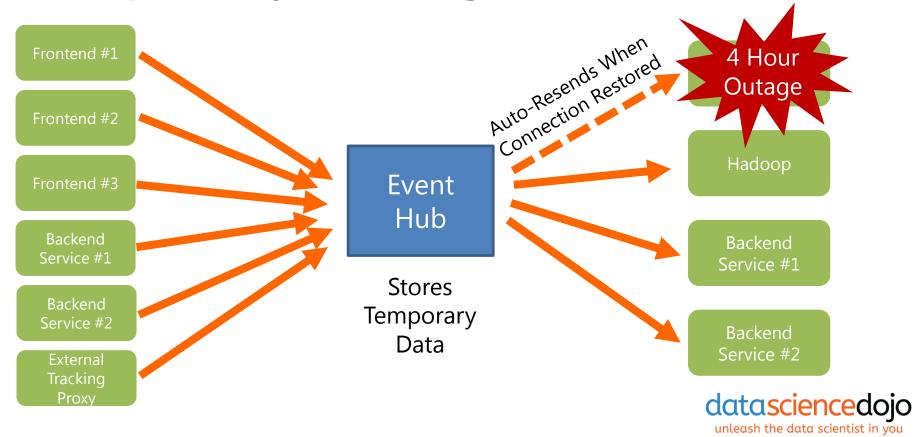
4 Hour Outage

> Backend Service #1

> Backend Service #2



Temporary Storage

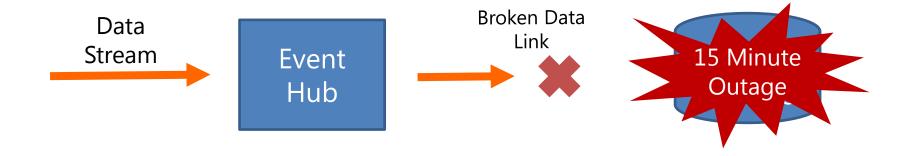


Demo: Normal Scenario



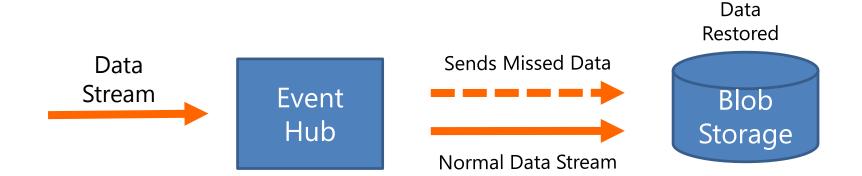


Demo: Output Downage





Demo: Output Restored





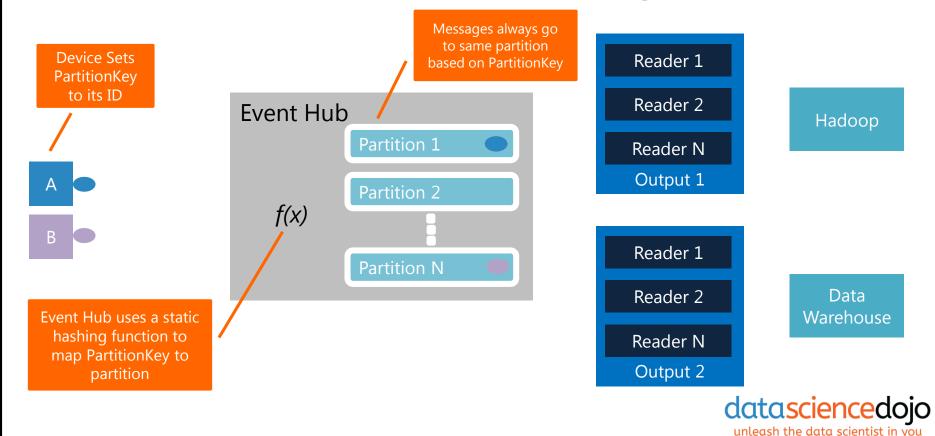
The Post Office



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Event Hub, Stream Management



Service Bus Namespace

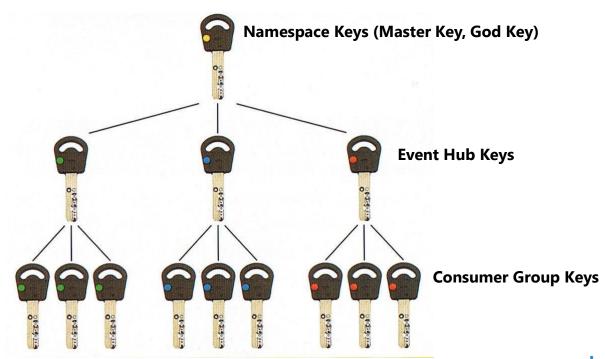
Service Bus Namespace

Event Hub

Event Hub

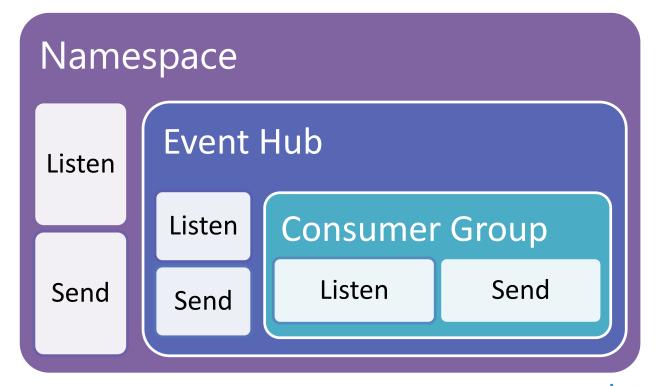


Access Rights, Policy, Keys





Access Rights





Access Rights

Device Send Event Hub Listen Consumer



Hands-On Lab



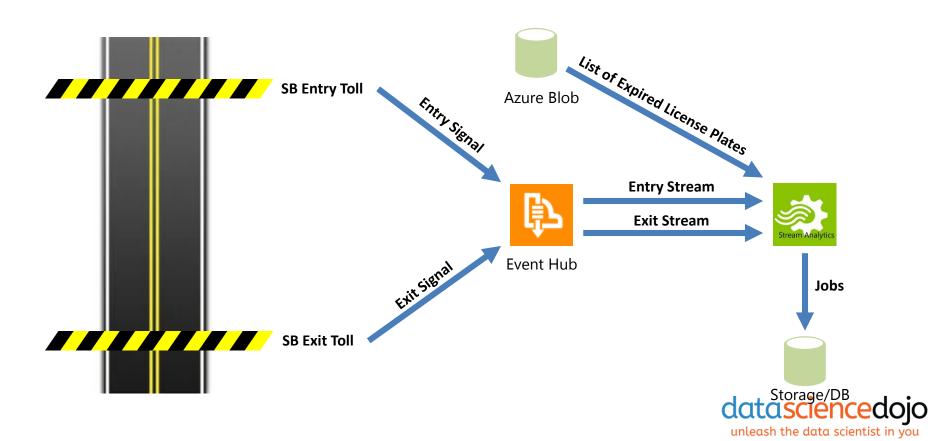
Tolls on I-405



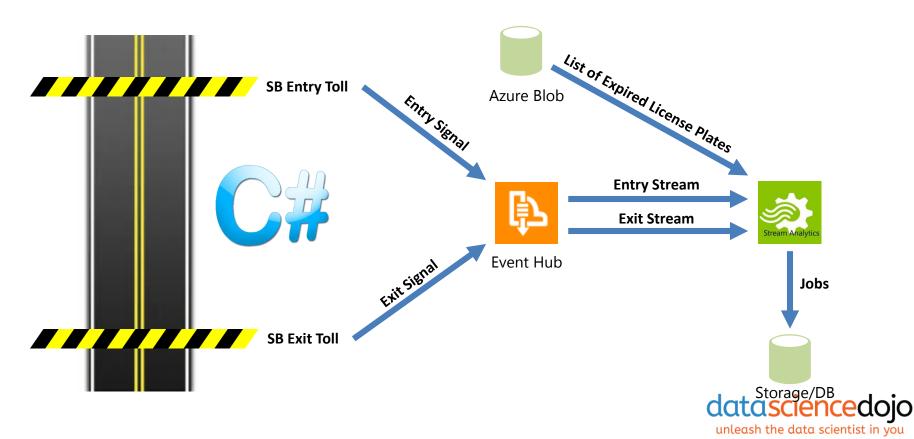




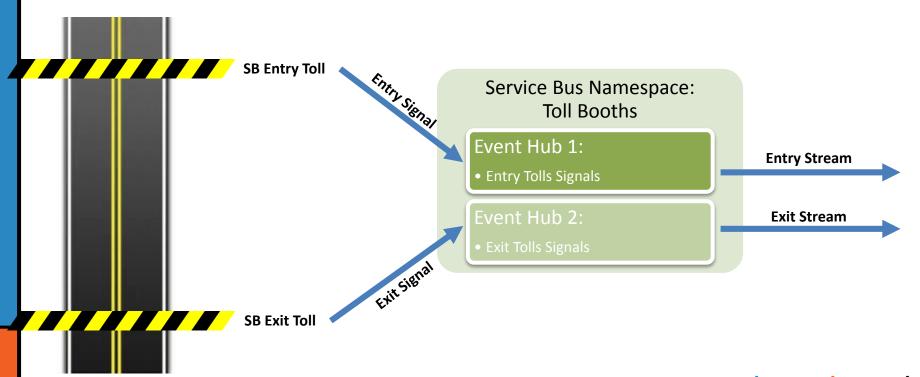
Automated Tolled Road Demo



Streaming to Event Hub



Inside the Event Hub





QUESTIONS

