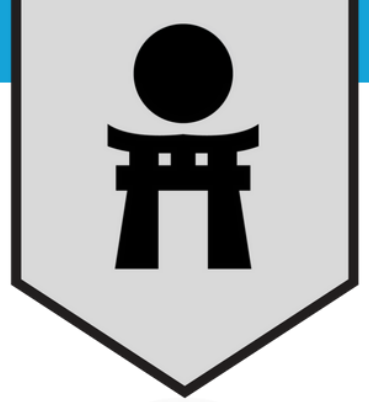
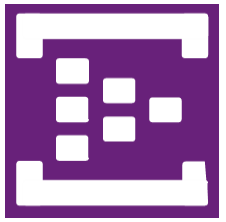




Internet of Things (IoT)

datasciencedojo
data science for everyone

What is the Internet of Things?

- Connecting any device with an on and off switch to the Internet (and/or to each other)
  - Examples: cell phones, coffee makers, washing machines, headphones, lamps, wearable devices, and almost anything else you can think of
  - This also applies to components of machines, for example a jet engine of an airplane or the drill of an oil rig

Gartner predicts that by 2020 there will be over 26 billion connected devices

The IoT is a giant network of connected "things" (which also includes people).

Scenario

- You are on your way to a meeting
  - Your car accesses your calendar and already knows the best route to take
  - If traffic is heavy, your car might send a text to the other party notifying them that you will be late

Potential Impact of IoT

- Your alarm clock wakes you up at 6 am and then notifies your coffee maker to start brewing coffee for you
- Your office equipment knew when it was running low on supplies and automatically re-ordered more
- The wearable device you use in the workplace tells you when and where you were most active and productive and shares that information with other devices that you used while working

Consumer Packaged Goods – Amazon Dash

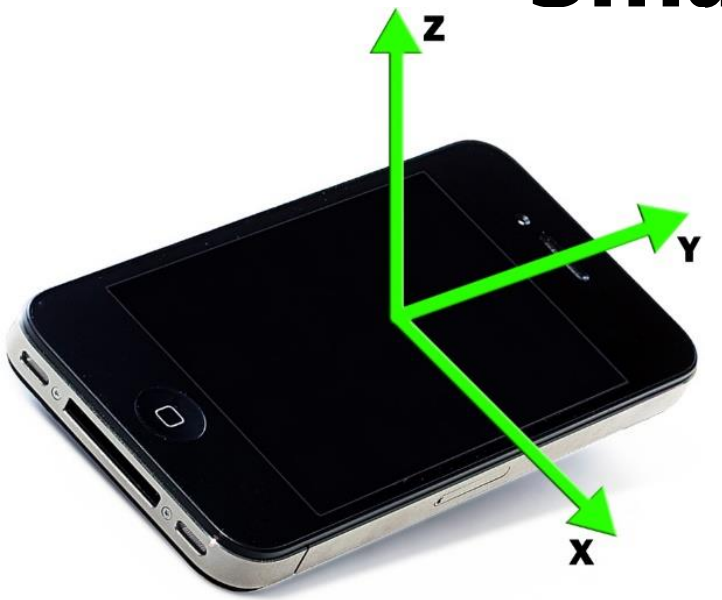
Consumer Packaged Goods – Amazon Dash

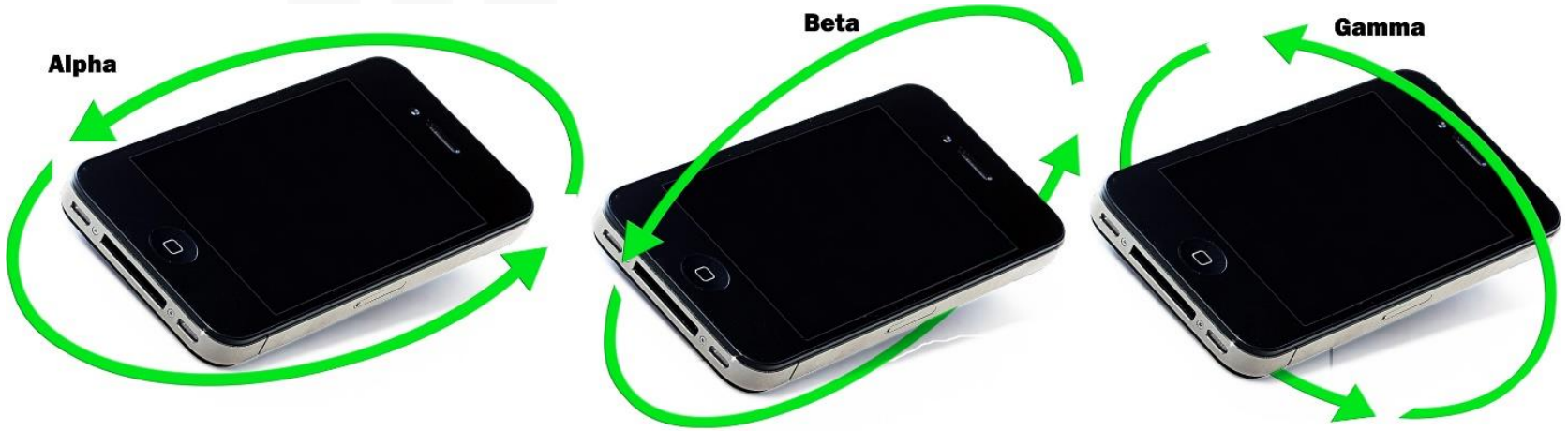
Consumer Packaged Goods – Amazon Dash

Consumer Packaged Goods – Amazon Dash

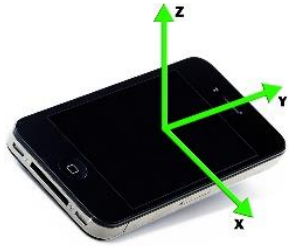
IOT HACK DAY PROJECT

Smart Device Orientation





Pipeline



Orientation

Device Orientation Data

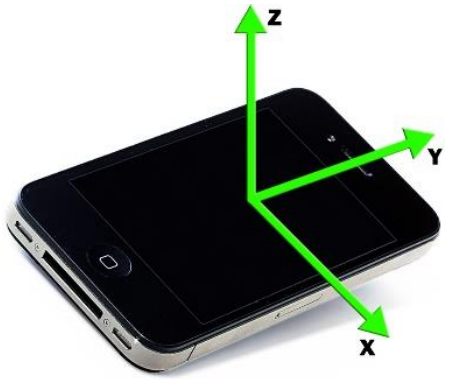
Message Broker (DataScienceDojo's Webpage)

Data Ingestor (Azure Event Hub)

Stream Processor 1 (All Data)

Long-term Storage (Azure Storage)

Inside the Event Hub



Orientation

Device Orientation Data

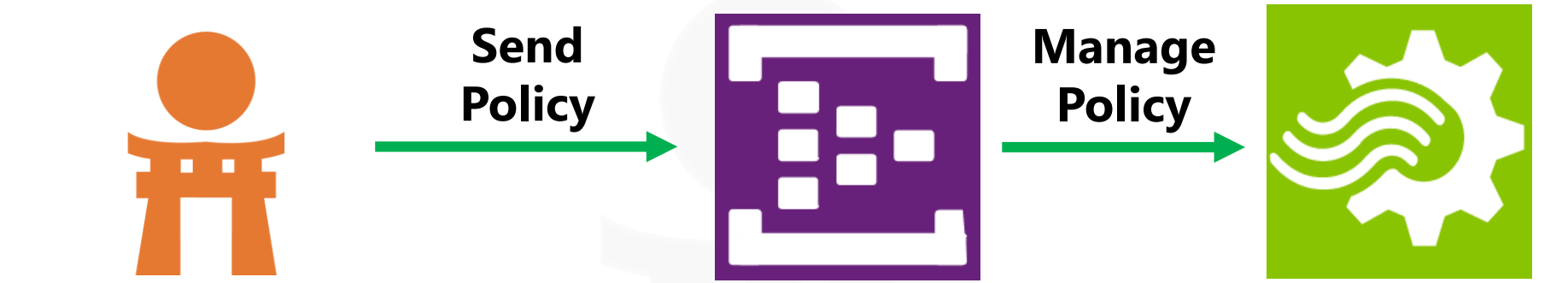
Message Broker (DataScienceDojo's Webpage)

Service Bus Namespace:
YourNameSpace

Event Hub 1:

- Orientation Data

Setting Policies



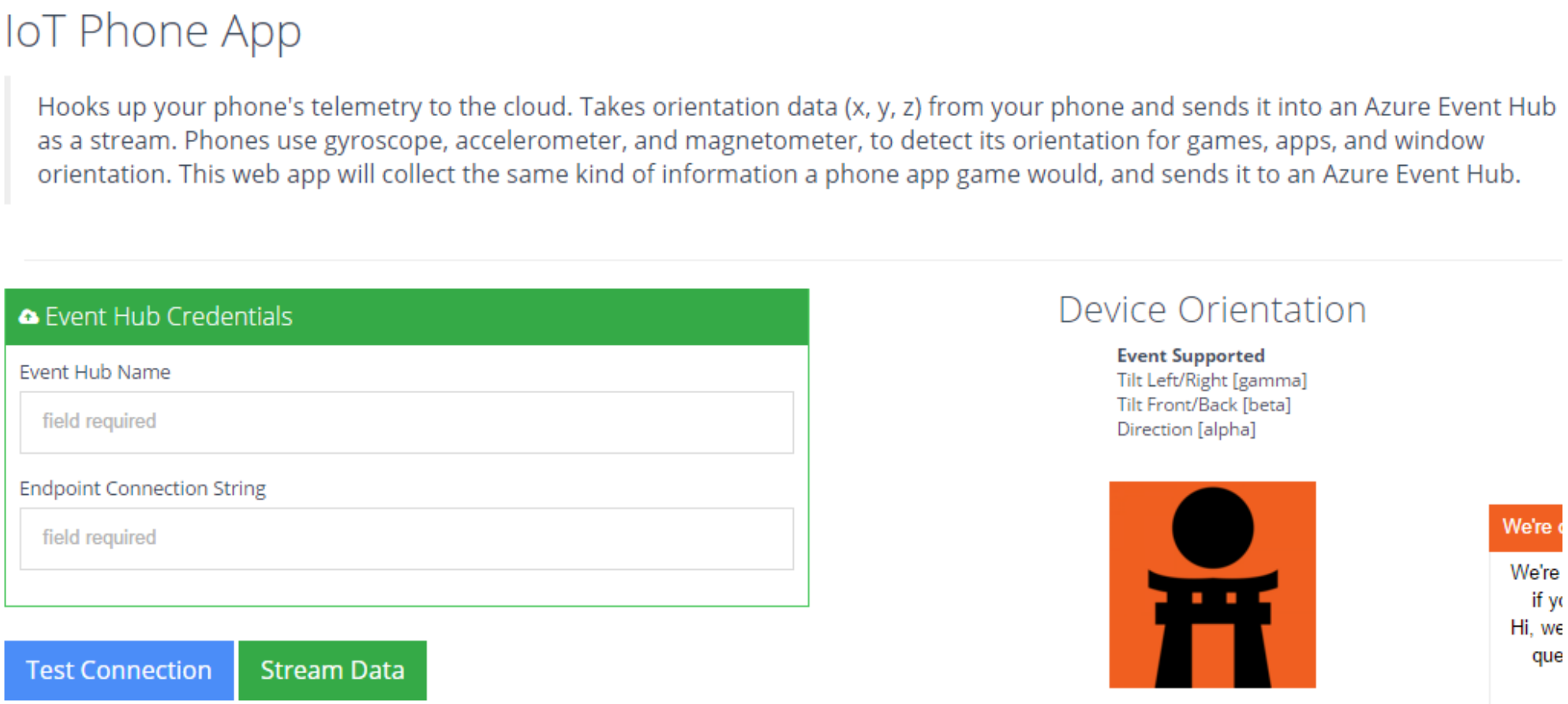
Message Broker (DataScienceDojo's Webpage)

Data Ingestor (Azure Event Hub)

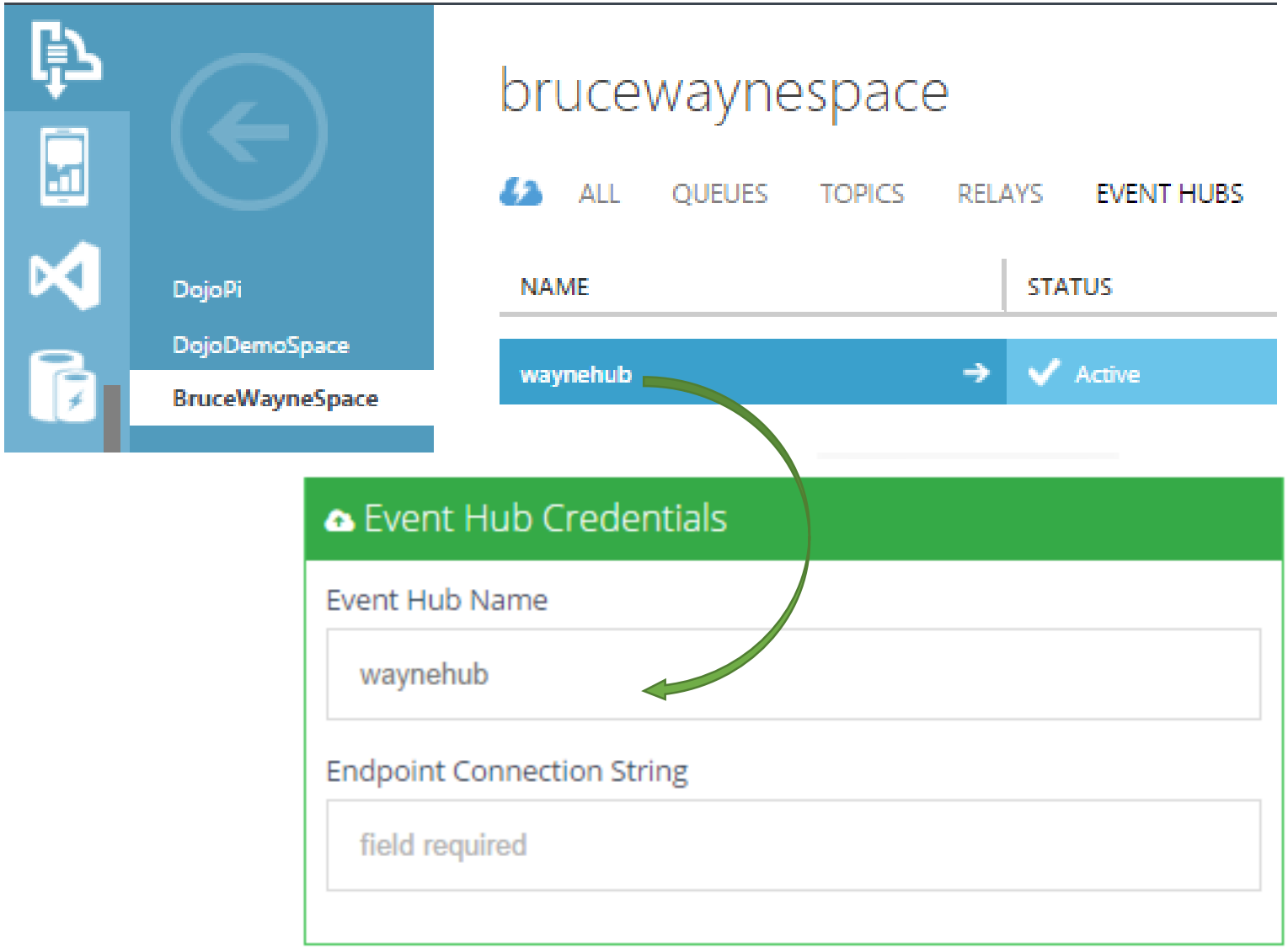
Stream Processor (Azure Stream Analytics)

The Streamer

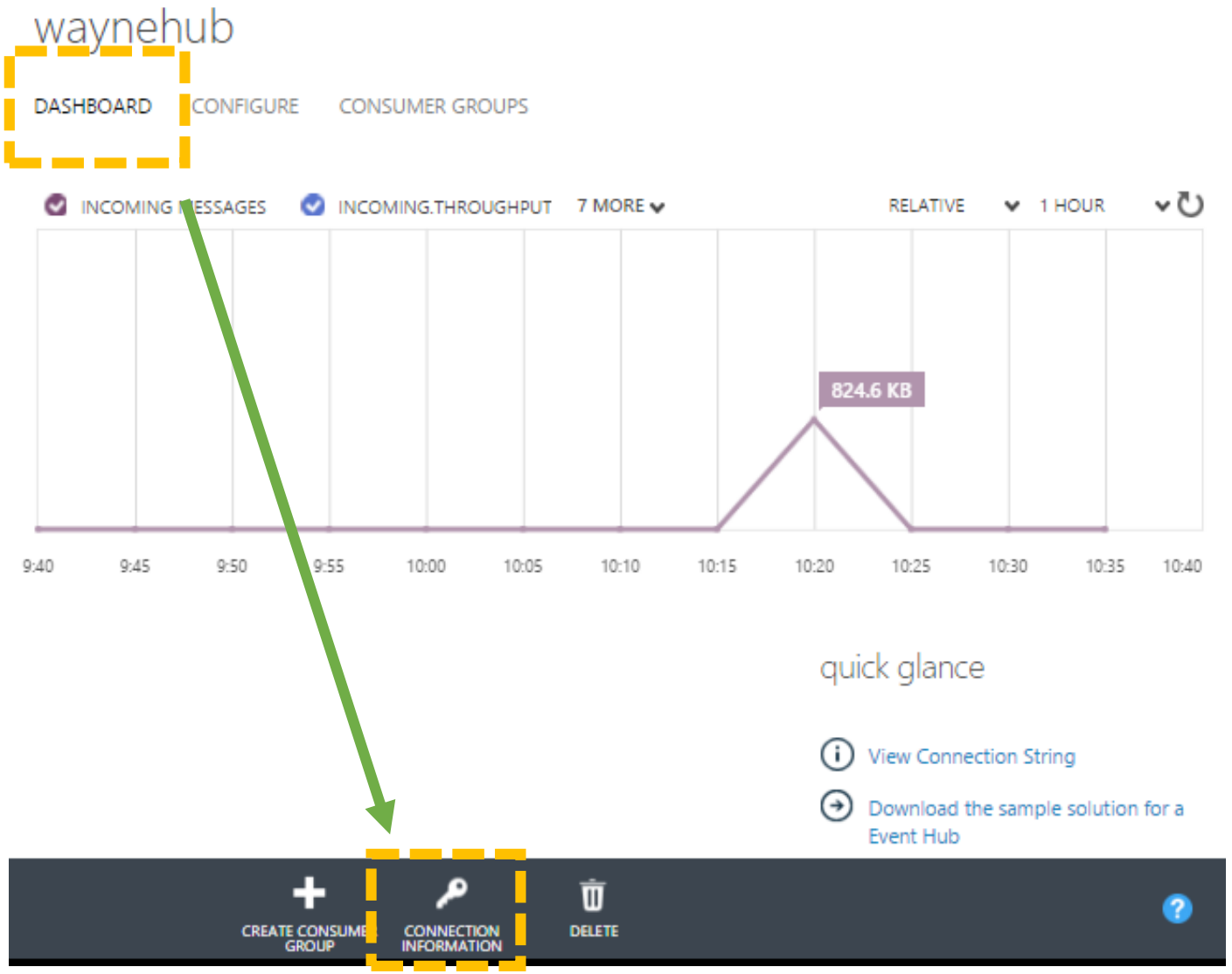
- http://demos.datasciencedojo.com/app/iot/



Event Hub Name



Connection String



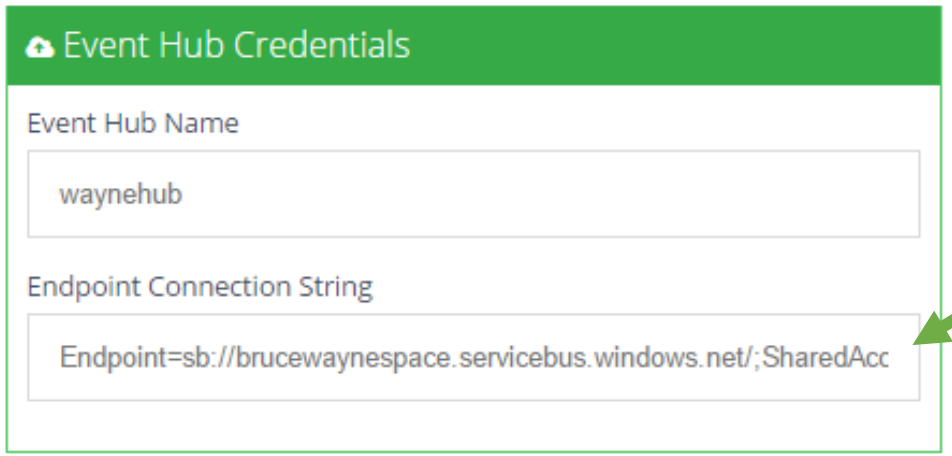
Connection String

Access connection information

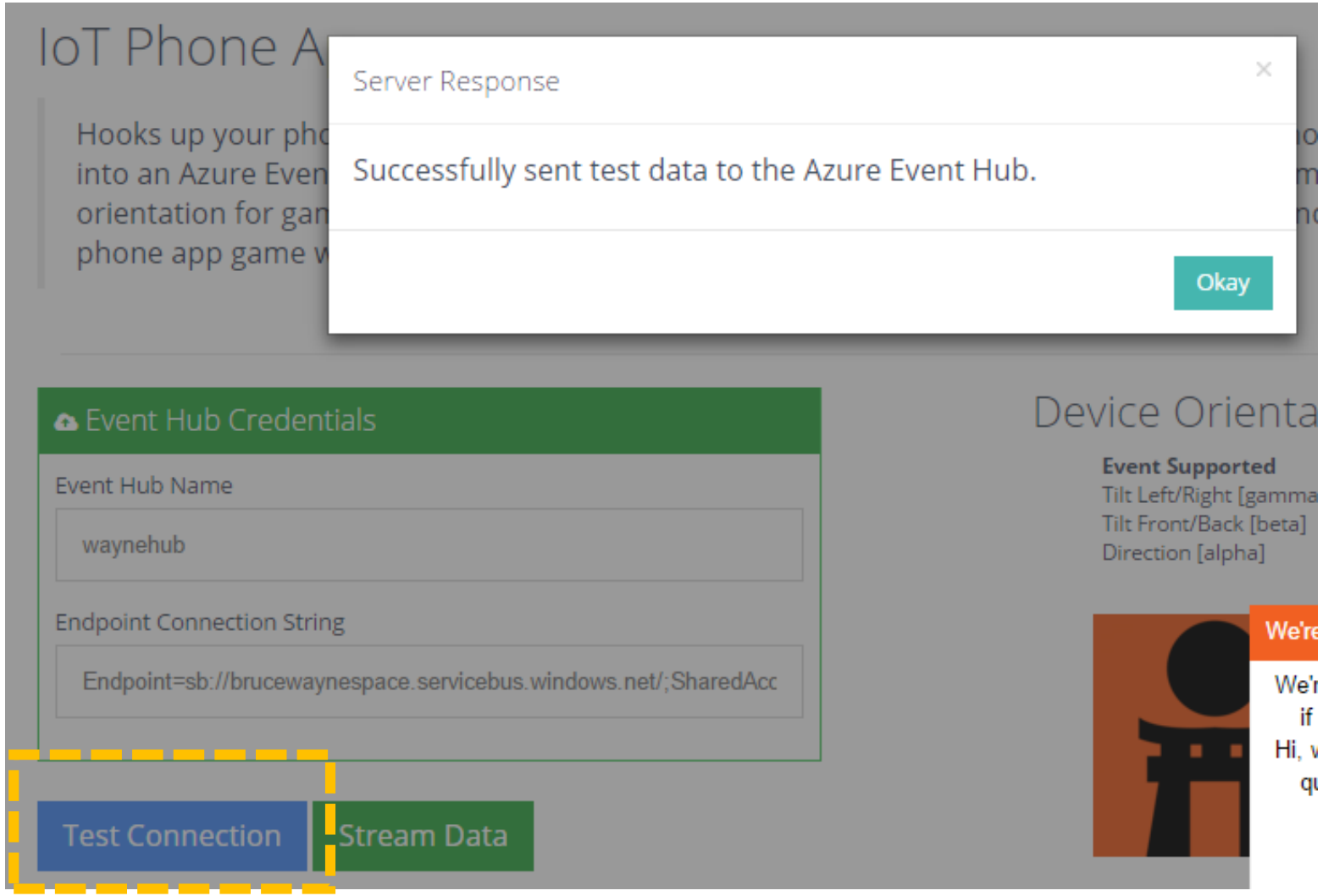
Use this connection information to connect to event hub 'waynehub'.

SAS

NAME	CONNECTION STRING
sendkey	Endpoint=sb://brucewaynespace.servicebus.windows.net/;SharedAccessKeyName



Testing Connection



QUESTIONS