Consuming Data Through Event Hubs

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What's in this module?

Event Hub Fundamentals

Creating an Event Hub
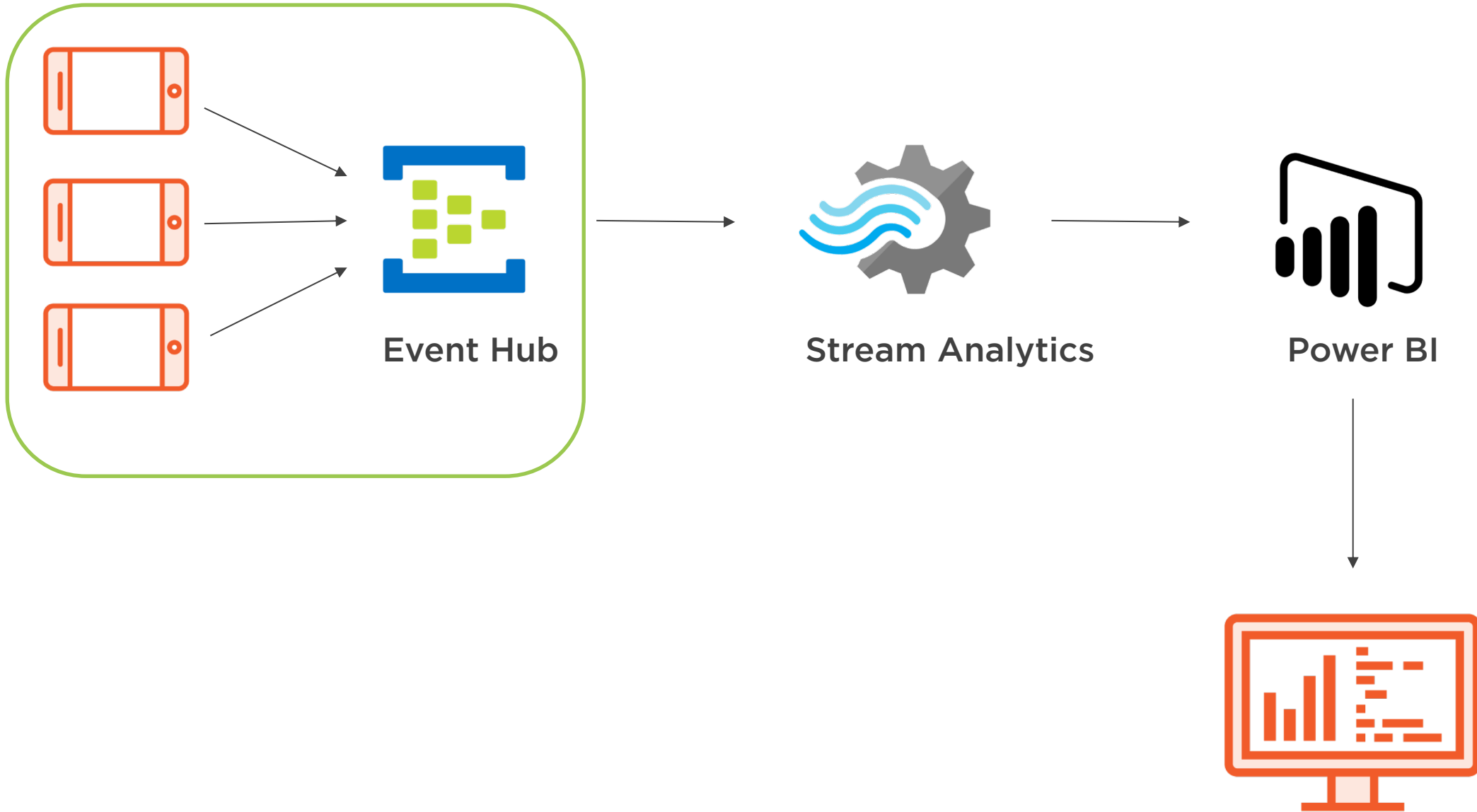
Pushing Data to an Event Hub
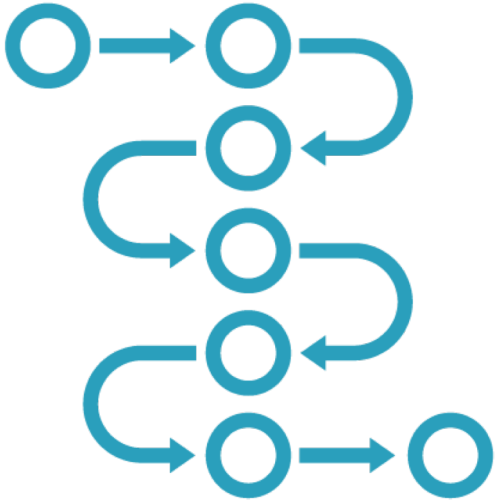
1. Azure Event Hubs

The landing pad to Azure

Event Hub   Stream Analytics   Power BI

Why would I use an Event Hub?

Event Hub Advantages

Flexibility

Scalability

Cost

How do we get started?

Provisioning Event Hubs
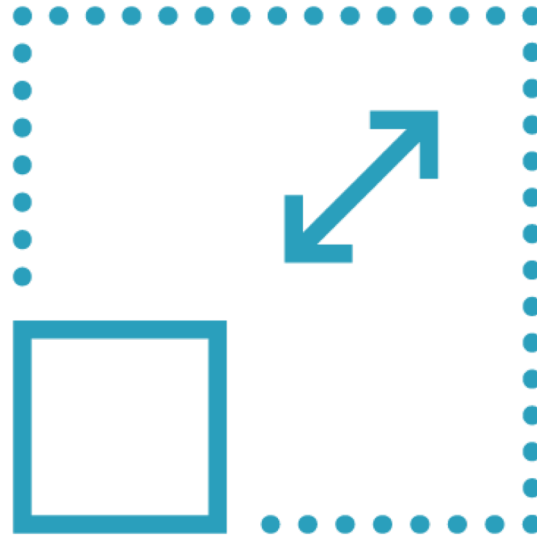

Azure Region

Event Hubs Namespace
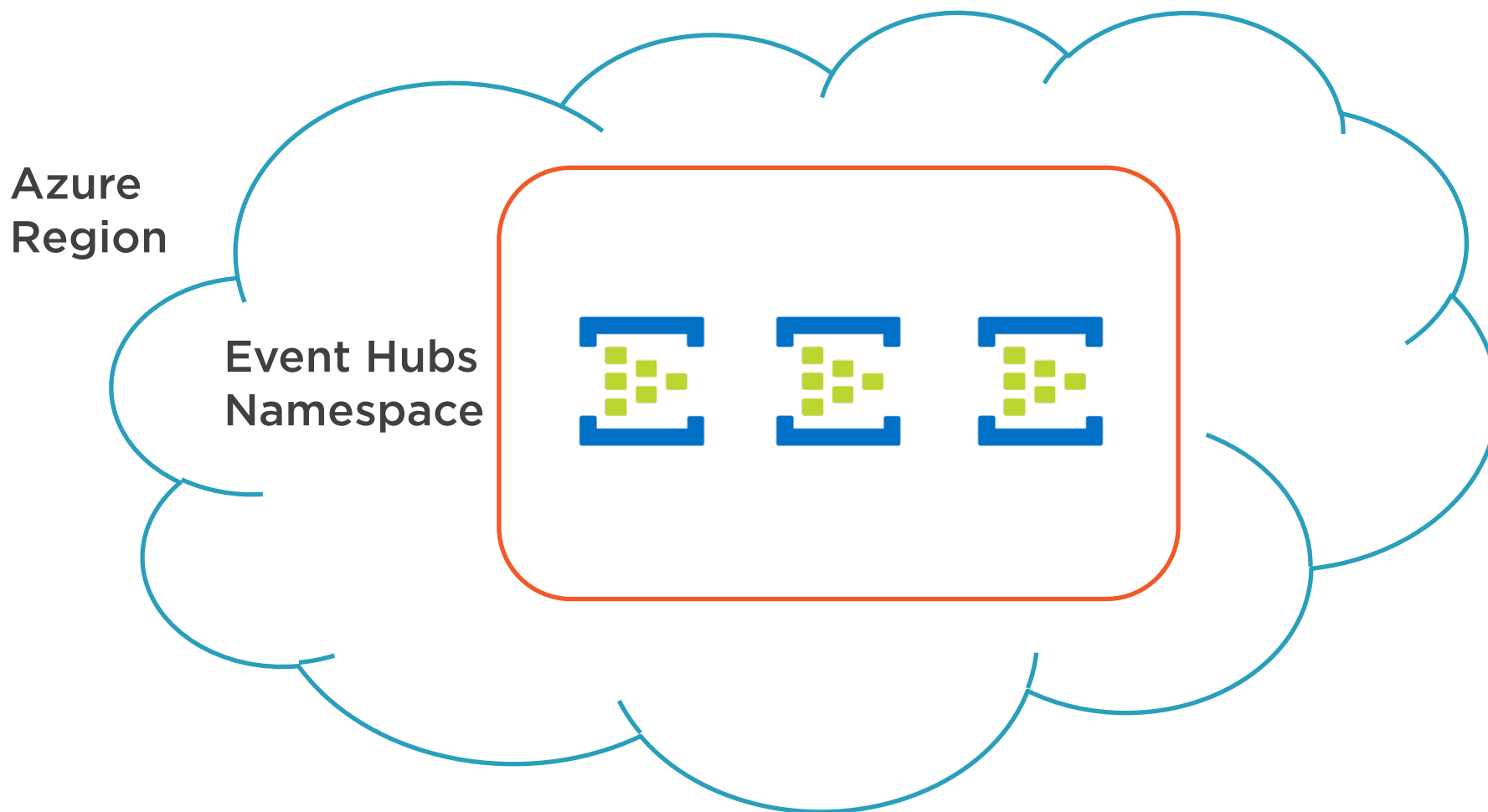
Throughput Units

TUs are variable reserved capacities assigned to the namespace

A single TU entitles you to 1MB/second or 1000 events/second ingress and 2MB/second or 2000 events/second egress

TUs can be increased up to 20 units

Auto-Inflate

Event Hubs can automatically increase your TUs up to a configurable limit.

Auto-inflate will automatically increase your Throughput Units but it will not automatically decrease them.

Creating an Event Hub Namespace
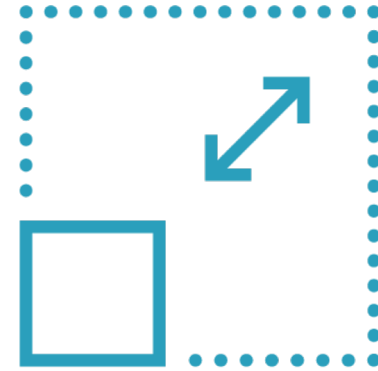
Pick a name

Pick a region

Creating an Event Hub Namespace
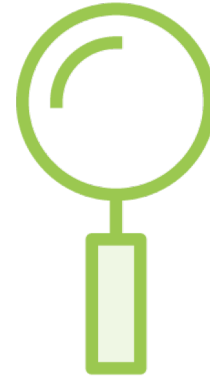
Pick Throughput Units

Enable Auto-Inflate if desired

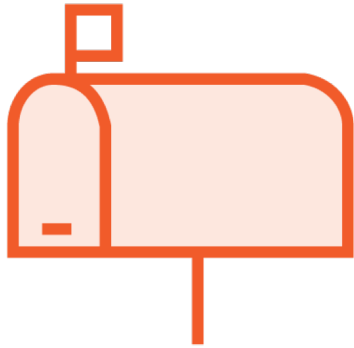# Creating an Event Hub

Pick a name

Pick a partition count
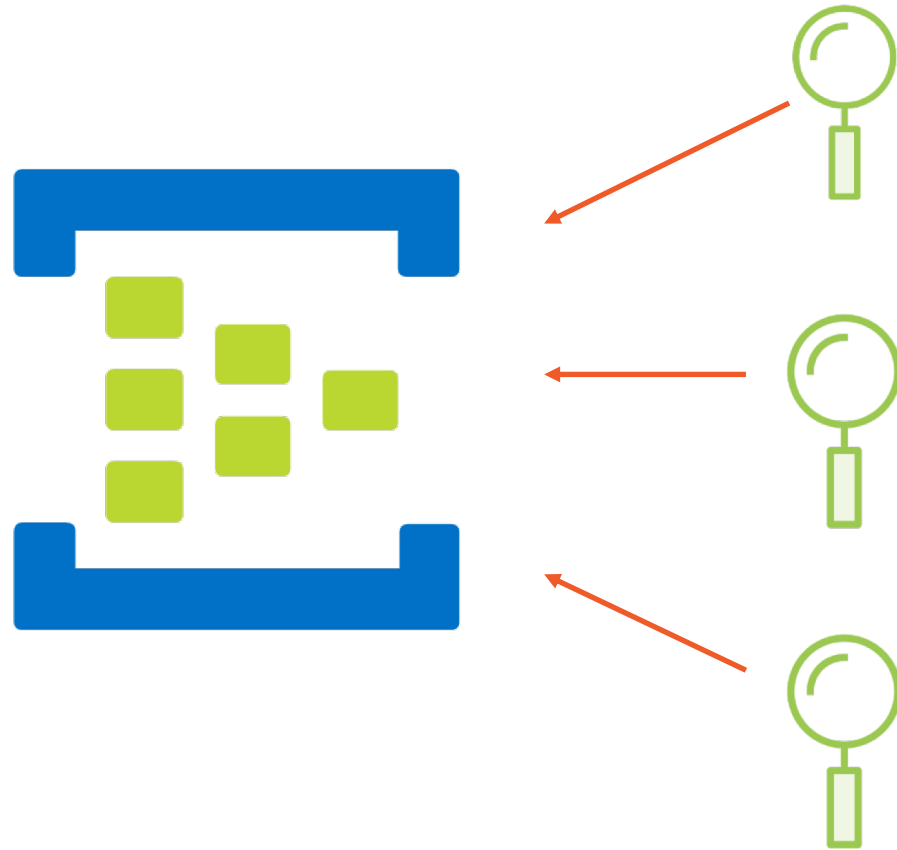
Creating an Event Hub

Set message retention

Enable event capture if desired

Event Hub Partitions

It is a data organization mechanism related to the number of concurrent Hub readers you will have.

Demo
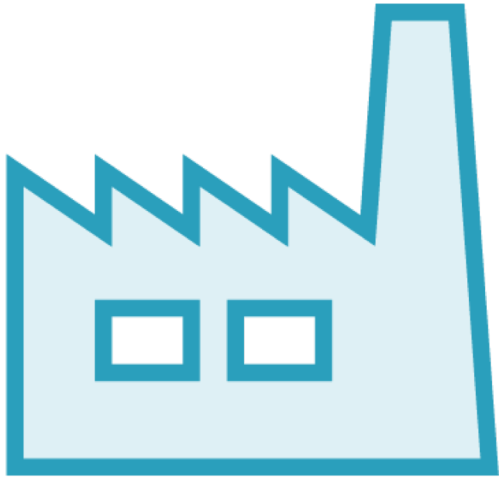
Creating an Event Hub through the Azure portal

Let's start building our solution!

Machinery Temperature Monitoring

We have a warehouse connected to Azure

We stream the machines temperature readings multiple times per second to Azure

Machinery Temperature Monitoring

We are going to have 6 machines push their temperature readings twice per second to Azure.

Machinery Temperature Monitoring

Windows 10 Virtual Machine

C# program to simulate the machines' temperature

The code has dependencies on two packages: WindowsAzure.ServiceBus and Newtonsoft.Json

Demo

Pushing the machine temperature data to Event Hubs

Summary

Event Hubs is an scalable, cost-effective data ingestion service

TUs are assigned to a Namespace that contains the Hubs

Event Hubs provides client libraries for .NET, Java, Node.js and C

At this point in our solution, we have machines successfully pushing data to our Event Hub

Next Module:
Analyzing Data on-the-fly with Stream Analytics