

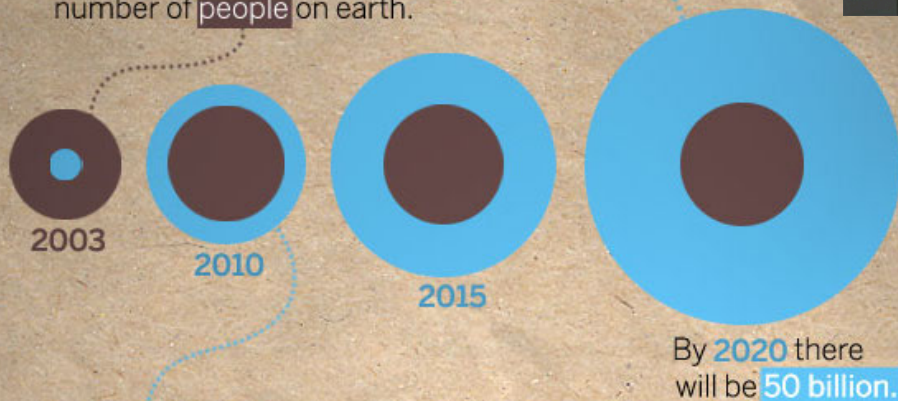
# Castaway: An IoT Story

504654554

# The Internet of THINGS



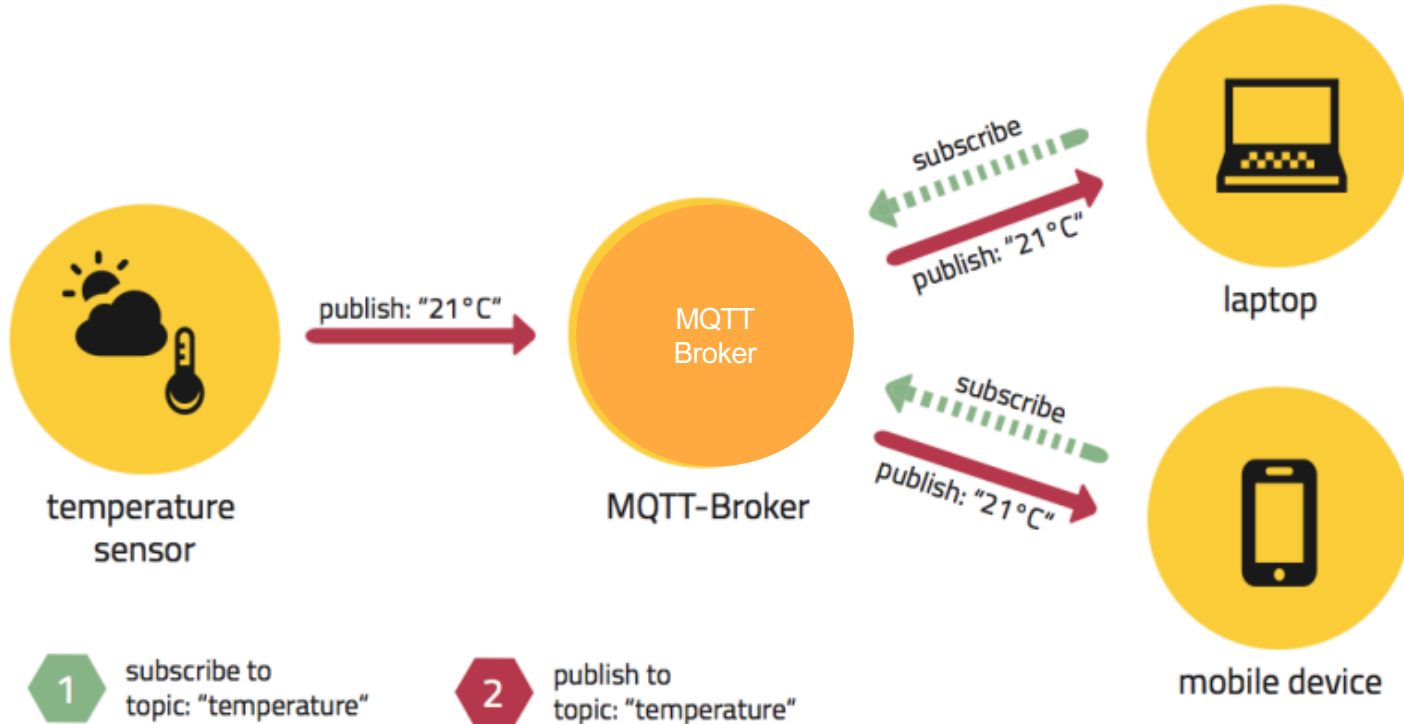
During 2008, the number of things connected to the Internet exceeded the number of people on earth.



representation></AdaptationSet></Period></MPD><?xmlversion="1.0" encoding="utf-8" ?><MPD xmlns="urn:mpeg:DASH:schema:MPD:2011" http://standards.iso.org/ittf/PubliclyAvailableStandards/MPEG-DASH\_schema\_files/MPD/2011" xsi:schemaLocation="urn:mpeg:DASH:schema:MPD:2011 http://standards.iso.org/ittf/PubliclyAvailableStandards/MPEG-DASH\_schema\_files/MPD/2011" ><Period start="PT0.0S" duration="PT5.0S" suggestedPresentationDelay="PT6S" availabilityStartTime="2019-03-07T06:00:00" ><AdaptationSet contentType="video" segmentAlignment="true" bitsPerSecond="1280" height="720" frameRate="30000/1001" ><SegmentTemplate timescale="1000000" duration="6000000" availabilityStartTime="2019-03-07T06:00:00" startNumber="1" ><Representation ID="1" mimeType="video/mp4" bandwidth="96000" audioSamplingRate="48000" ><AudioChannelConfiguration schemeIdUri="urn:mpeg:dash:23003:3:audio\_channel\_configuration:2011" ><AdaptationSet contentType="audio" segmentAlignment="true" bitsPerSecond="6000000" availabilityStartTime="2019-03-07T06:00:00" ><Representation ID="1" mimeType="audio/mp4" ><AudioChannelConfiguration schemeIdUri="urn:mpeg:dash:23003:3:audio\_channel\_configuration:2011" ></AdaptationSet></Period></MPD></?xml>

VISION 2020

# Pub/Sub messaging, mediated by MQTT Broker





# Can be as featherlight as a few bytes



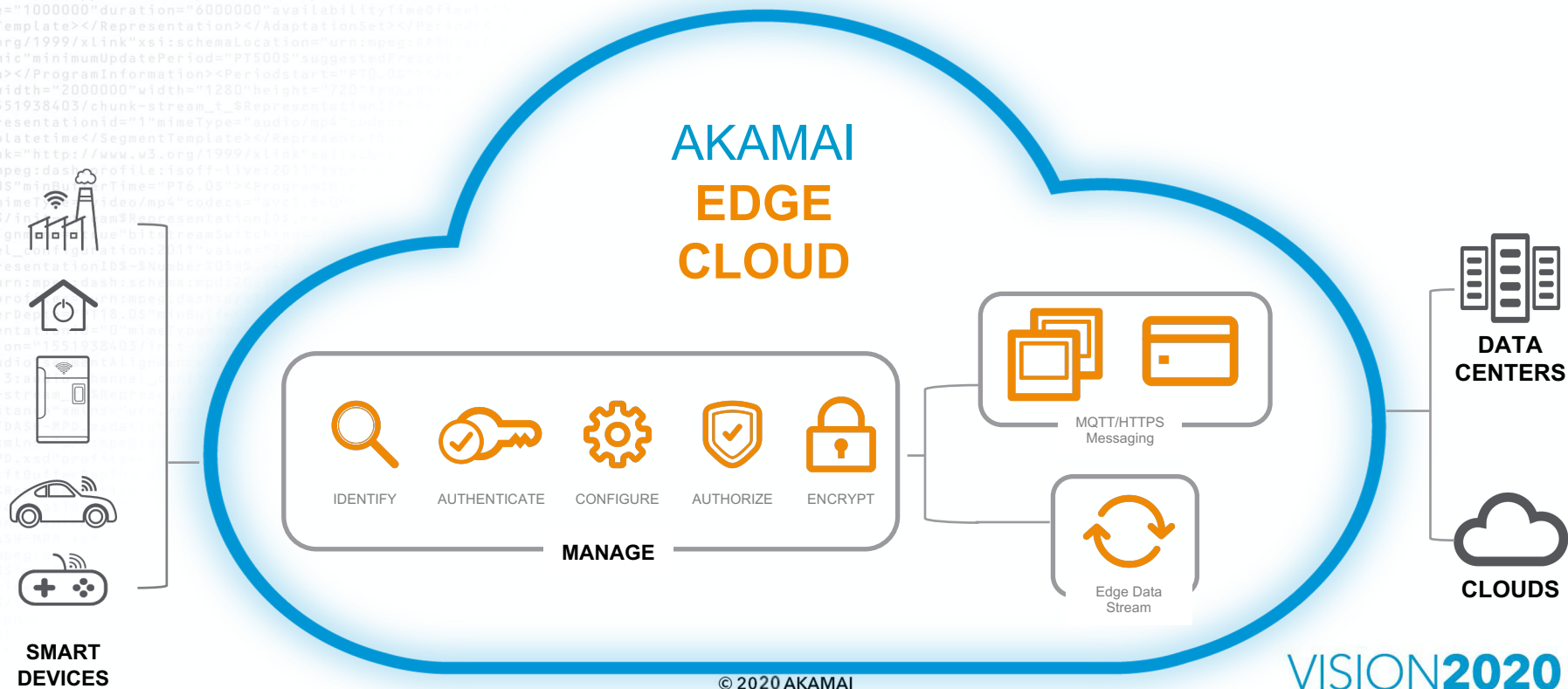
Message Type	Description
CONNECT / DISCONNECT	Client connect and disconnect from the broker
SUBSCRIBE / SUBACK	Subscribe to a topic
UNSUBSCRIBE / UNSUBACK	Unsubscribe to a topic
PUBLISH / PUBACK	Publish message to a topic
PUBREC / PUBREL / PUBCOMP	Publish received, release and complete for assured delivery
PING REQ/RESP	Ping Request & Response

## MQTT vs HTTPS

- 93x faster throughput
- 11.89x less battery to send
- 170.9x less battery to receive



# Billions smart devices, assisted by the closest Edge



# Three golden keys for IoT Success



# Fanning in: collecting metrics from South Pacific sensors

Humidity

99

↓0%

Barometer Pressure  
(Pascal)

101.3K

↓0%

Temperature °C

33

↓0%

Brightness (Lux)

111.0K

↓0%



Likelihood (%) that someone look like Chuck appears  
in the past 5 second?

80

↓0%



# Fanning out: turning on remote surveillance camera



## TEST PLAYER FOR CHUNK-ENCODED CHUNK-TRANSFERED DASH (v3.1.3)

Enter the mpd to test:

Target latency in seconds:

Maximum catch-up rate (%):

START

2020-09-24 22:57:20



**Latency estimate:** 2.781 secs

**Buffer level:** 3.534 secs

**Startup time:** 0.8 secs

**Playback rate:** 1

**Current representation:** [1280x720](#), 30 fps, 500 kbps

Live stream latency in milliseconds

