



# Eenvoudige en bruikbare toepassingen van IIOT Cloud platforms voor machinebouwers en hun klanten



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# Industrie 4.0 en IIOT?

- Een belangrijk onderwerp in de vakbladen
- Vertaling naar toepassingen in de praktijk is wat moeilijker
- Iedere leverancier heeft zo zijn visie en functionaliteit
- Verlegenheid tussen IT en OT wereld
- Industry 4.0 en IIOT

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# Open IIOT Platforms

- IBM, Microsoft, Google, Alibaba en Amazon
- Serverruimte, Clouddiensten, Data analyse, Virtual machines en complete Software ontwikkelpakketten, PaaS, SaaS.
- Open standaarden voor communicatieprotocollen



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# Open Communicatieprotocollen

- Drie open standaarden

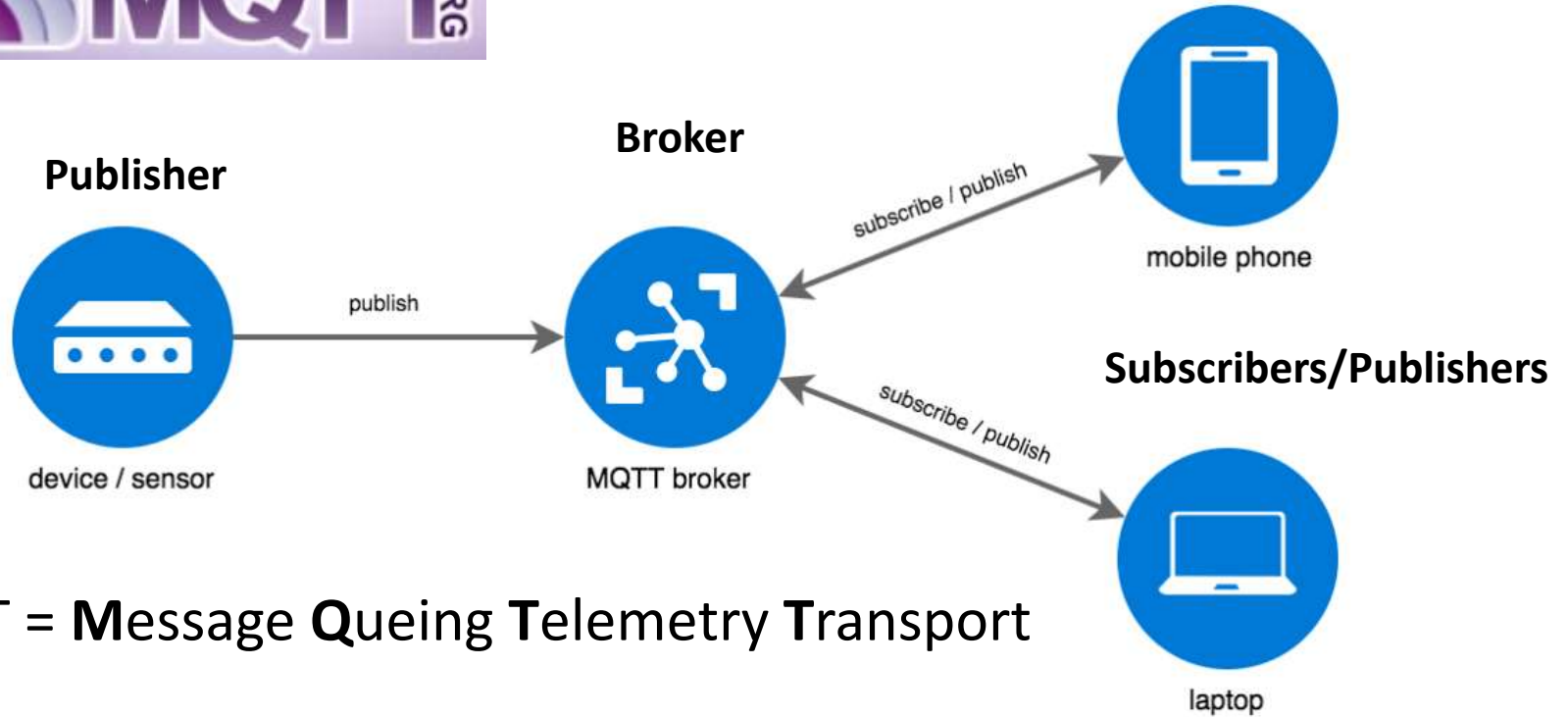
{ REST }



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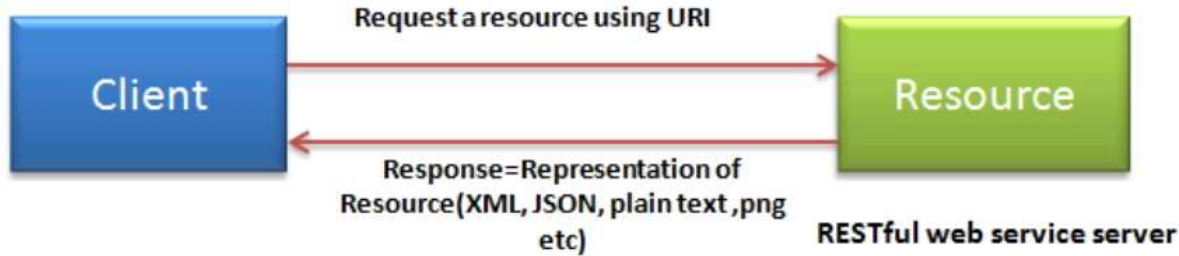
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MQTT = **M**essage **Q**ueing **T**elemetry **T**ransport

# { REST }



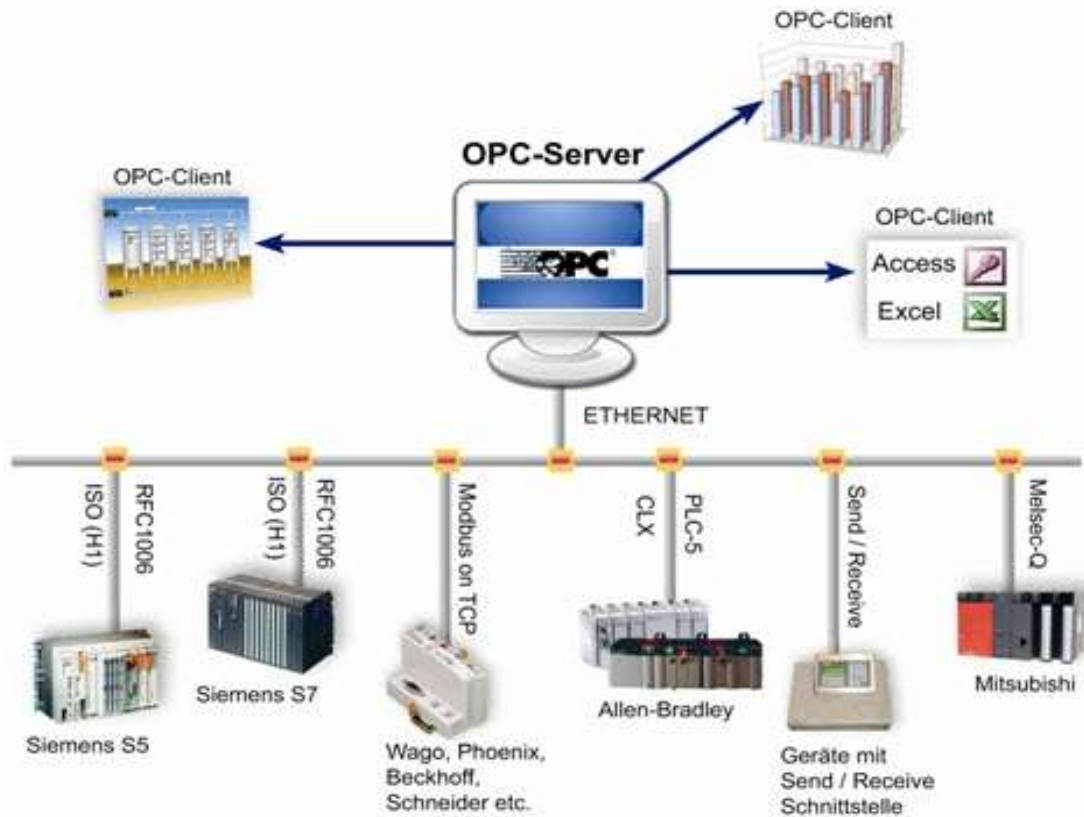
Voorbeeld: GET [http://10.0.0.1/di\\_value/slot\\_index](http://10.0.0.1/di_value/slot_index)  
Geeft het volgende antwoord in JSON formaat



```
{
  DIVal : [
    {
      Ch : 0,
      Md : 1,
      Val : 0,
      Stat : 1,
      Cnting : 1,
      OvLch : 0
    },
    {
      Ch : 1,
      Md : 0,
      Val : 0,
      Stat : 0,
      Cnting : 1,
      OvLch : 0
    }
  ]
}
```

REST = REpresentational State Transfer





**OPC-UA = Open Platform Communications- Unified Architecture**

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# Hoe nu verder?

- IOT platform voor iedereen bereikbaar
- Vrij in de keuze hardware en software
- Edge Gateways als Data- concentrator



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# Wat is een Edge Gateway?



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# Solution Ready Platform

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# Gateway zonder Cloud platform

## Punching Machine Monitoring

**WISE-4050**  
4x DI, 4x DO



Tower Light    On / Off    Counting

## Factory Environment Monitoring

**WISE-4220-S231**  
Built-in Temp. and Humidity Sensor



Temperature    Humidity

## Facility & Equipment Monitoring

**WISE-4470-S250**  
6x DI, 2x DO,  
1x RS-485



Temperature    Humidity



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# Conclusie Edge Gateways

- Data Concentrator
- Merk onafhankelijk
- Snelle implementatie
- Geen diepgaande ICT kennis nodig
- Vrije keuze voor een Cloud oplossing
- Veilig
- Altijd up to date

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# Praktijk Case

- Management vraag
- Data bronnen
- Oplossing binnen twee maanden

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# Stap 1 Edge gateway



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# Stap 2 Instellingen

Flexy Home > Tags > Values

Filter tree Values

MODE **SETUP**

Q Filter

			Name	Type	IO Server	Topic	IO Address
✓	✓	✓	Output_1	Boolean	EWON		DO2
✓	✓	✓	Temperature	Floating po...	MODBUS	A	40500
✓	✓	✓	Humidity	Floating po...	MODBUS	A	40502
✓	✓	✓	FlowA	Floating po...	MODBUS	C	41117F
✓	✓	✓	Controleregis...	Floating po...	MODBUS	C	40131F
✓	✓	✓	Heartbeat	Floating po...	MODBUS	C	40002W
✓	✓	✓	FlowVelocityA	Floating po...	MODBUS	C	41101F
✓	✓	✓	TotalizerPosA	Floating po...	MODBUS	C	41133F

TAG GROUPS

Group A  Group C  
 Group B  Group D

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# Stap 3 IIOT Platform



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# Stap 4 Internet of Things

The screenshot shows the Microsoft Azure portal interface for managing IoT Hub endpoints. The main area is titled "mygateway - Endpoints" and contains two sections: "Built-in endpoints" and "Custom endpoints".

**Built-in endpoints table:**

NAME	ENDPOINT
Cloud to device feedback	messages/servicebound/feedback
Events	messages/events

**Custom endpoints table:**

NAME	ENDPOINT TYPE
No results	

The right-hand pane shows the "Properties" for the selected endpoint, including "Device-to-cloud settings" with a "Days" slider and a list of endpoints: "Default", "mygateway", and "stream".


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# Stap 5 Device aanmaken

### Device Connection

Scope ID 

Device ID


 

#### Credentials


[Shared Access Signature \(SAS\)](#)   [Certificates](#)


SAS security tokens are an attestation mechanism for devices to connect to IoTCentral. The group SAS keys for this device are shown below. Use them to register your device with IoTCentral. [Click to learn more.](#)

Primary Key

Secondary Key





# Stap 6 Tokens invullen

**Connect your Flexy to the Azure IOT platform**

**Configuration Page**

Device Credentials

Enter the connection parameters:

Device Id:

IoT Hub Name:

SAS Token: 

```
SharedAccessSignature sr=dp-10thub-0.azure-devices.net;sig=...;se=157113178
```

Timing Settings

Change Push Time:  Push changed tags every "Change Push Time" (in sec)

Full Push Time:  Push all tags every "Full Push Time" (in sec)

Select the Tag groups to send

Group A:

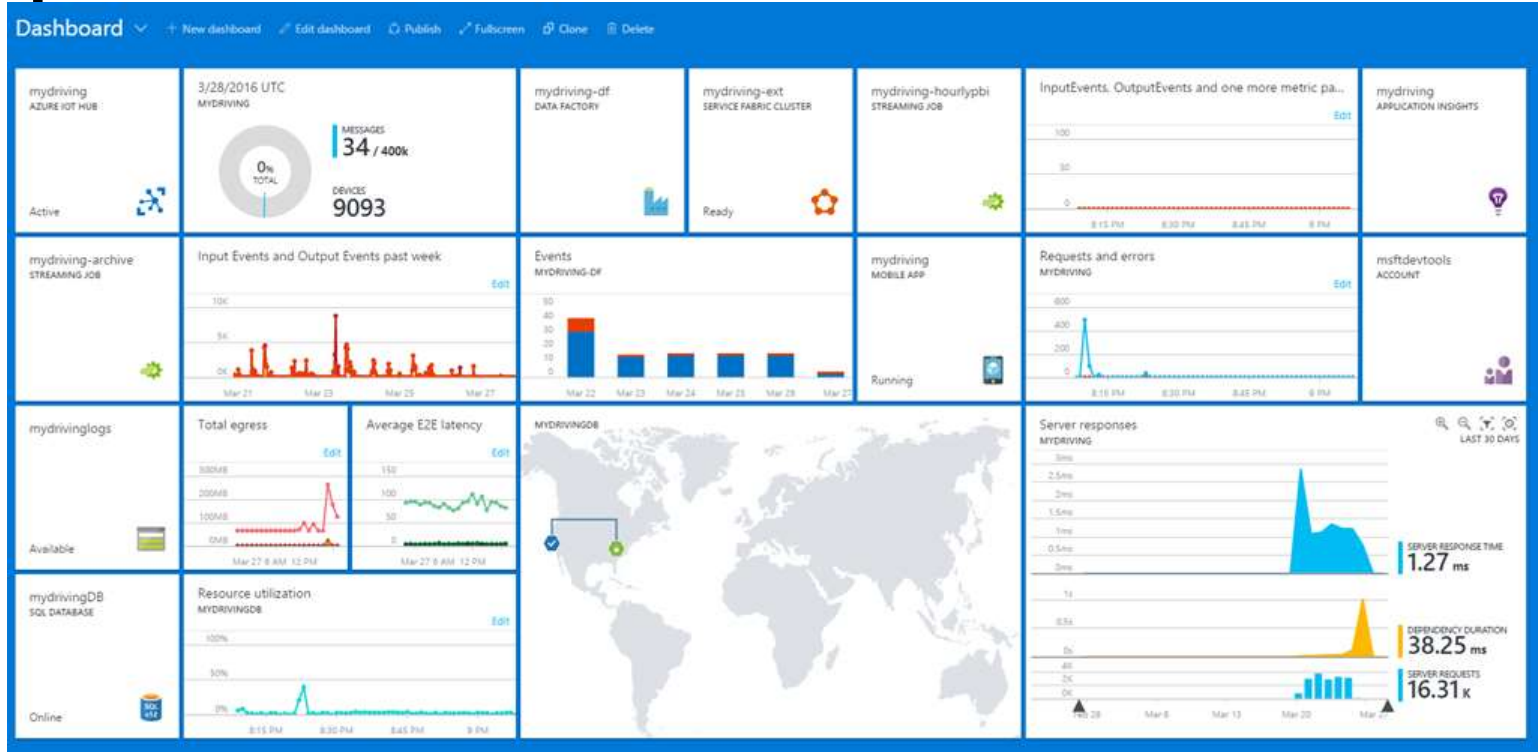
Group B:

Group C:

Group D:



# Stap 7 Dashboard maken

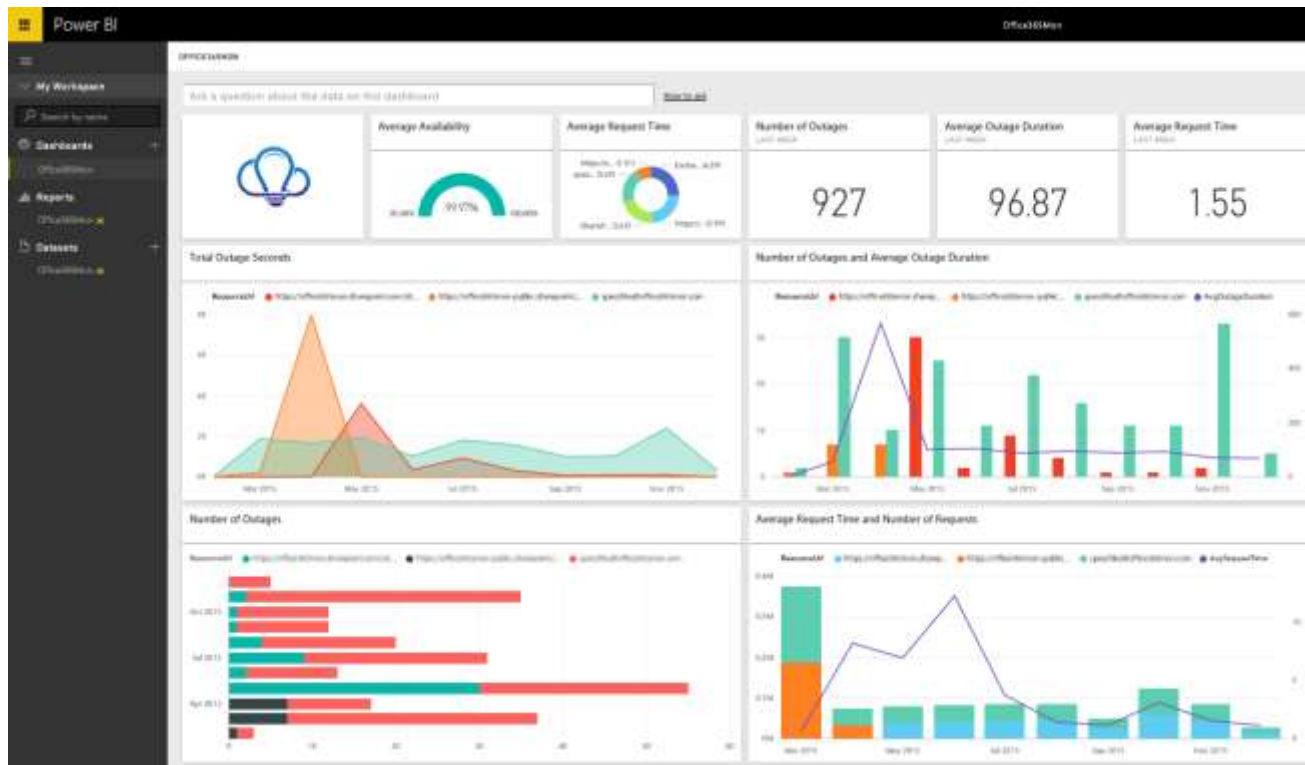


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# Data Analyse



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# Welkom op onze stand!

- Als er nog vragen zijn overgebleven kunt u straks even langlopen op onze stand of ons een mail sturen.
- Technisch: [support@duranmatic.nl](mailto:support@duranmatic.nl)
- Commercieel: [industrial@duranmatic.nl](mailto:industrial@duranmatic.nl)
- Tel 078-6310599

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