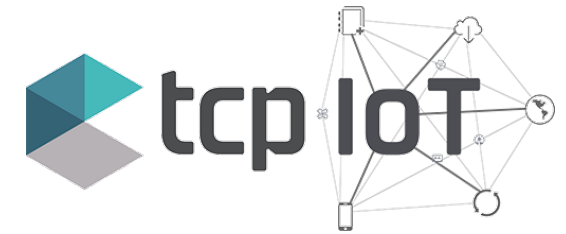




# Universal IoT Platform

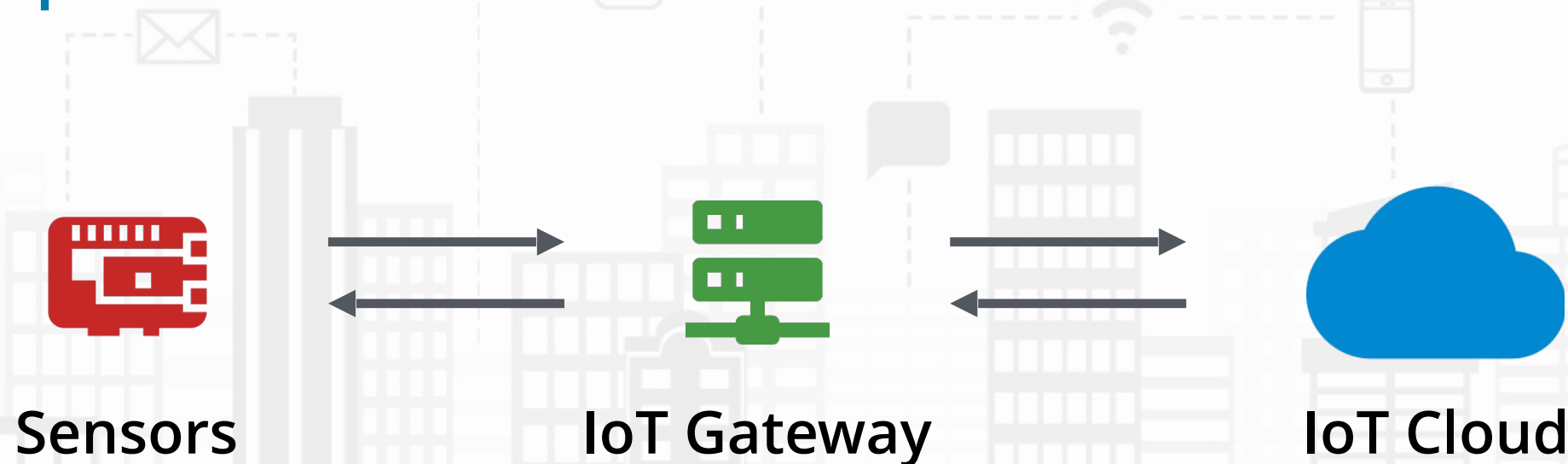
Jiří Hýbek & Jan Pokorný

# About IoT Team

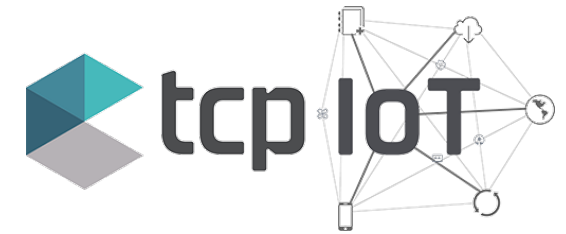


- ◆ IoT department of TCP
- ◆ Building universal platform for Internet of Things
- ◆ Creating user-friendly tools for device integrators

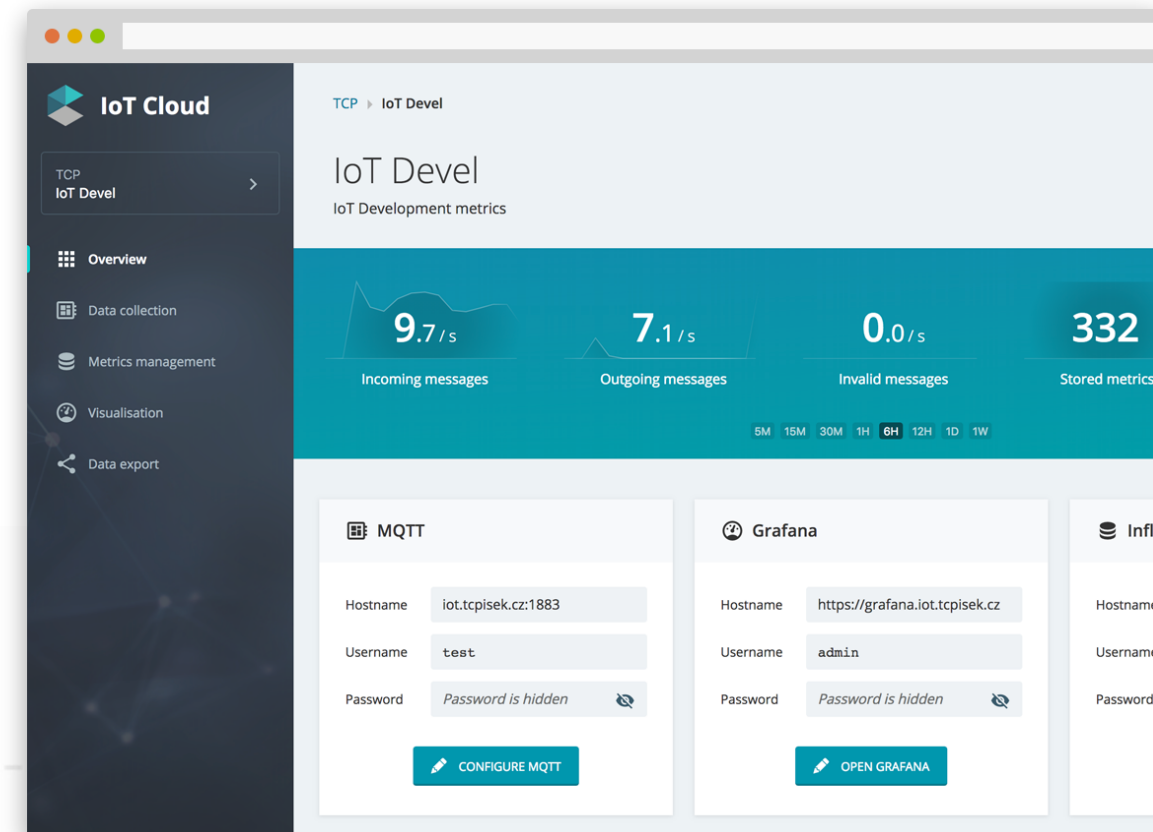
Unique solution from data collection to cloud services.



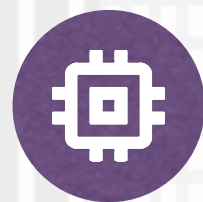
# About IoT Platform



- Cloud-native built on Docker
- On-premise deployment
- High availability & scalability
- Multitenancy
- Performance & security
- Built-in private LoRaWAN



Connector



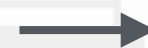
T-Core



Metrics Storage

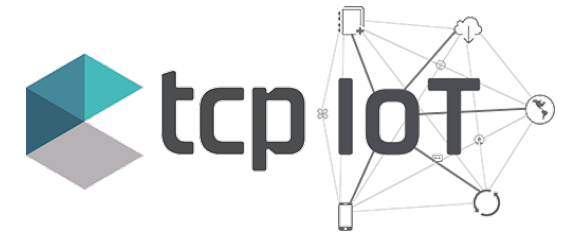


API Services

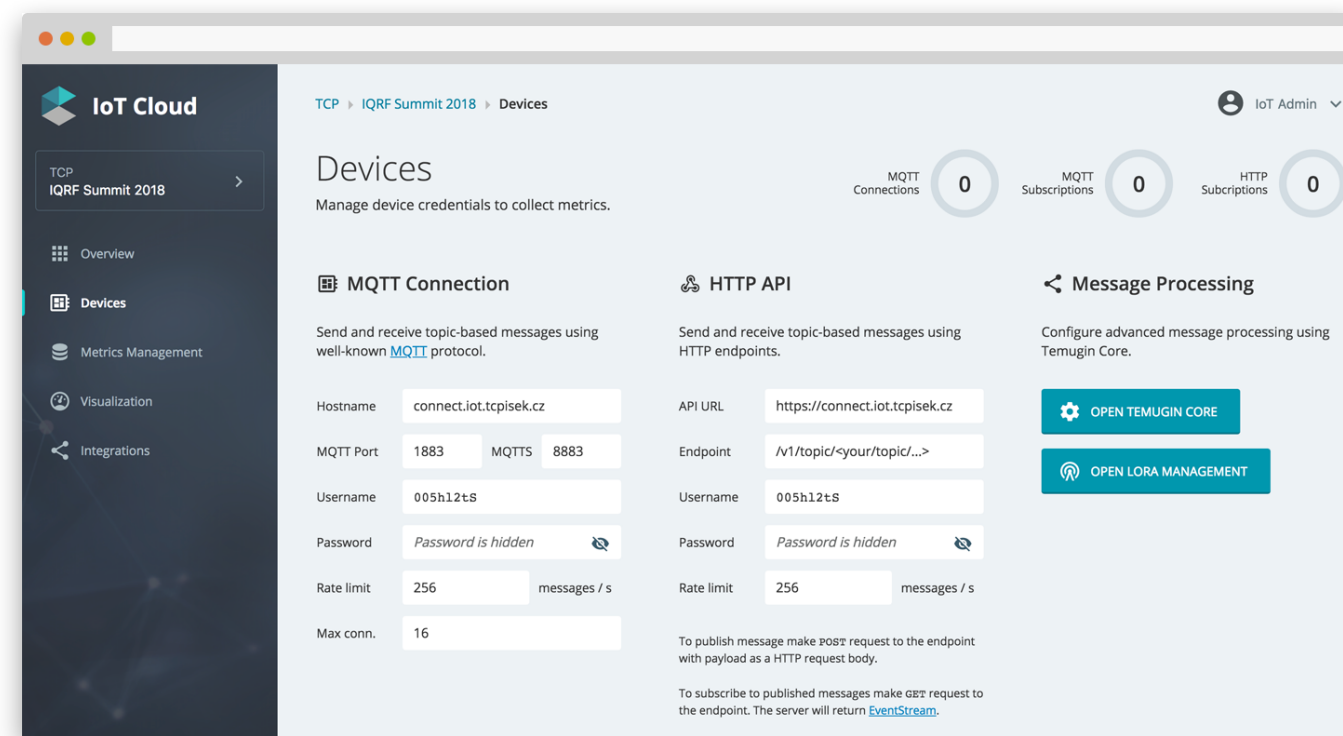


Visualization

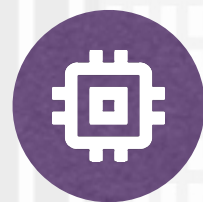
# IoT Platform Features



- Data collection (MQTT, HTTP, LoRa, SigFox, IQRF)
- Message processing
- Data retention
- Open integration API
- Data visualization
- Two-way communication



Connector



T-Core



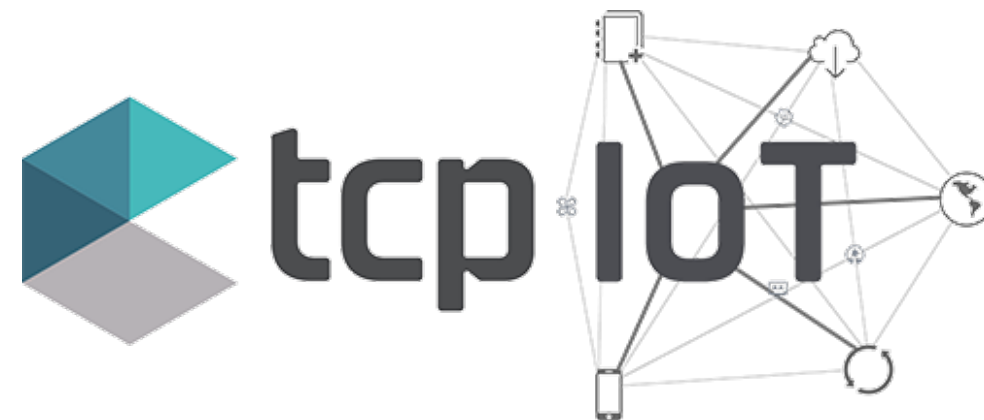
Metrics Storage



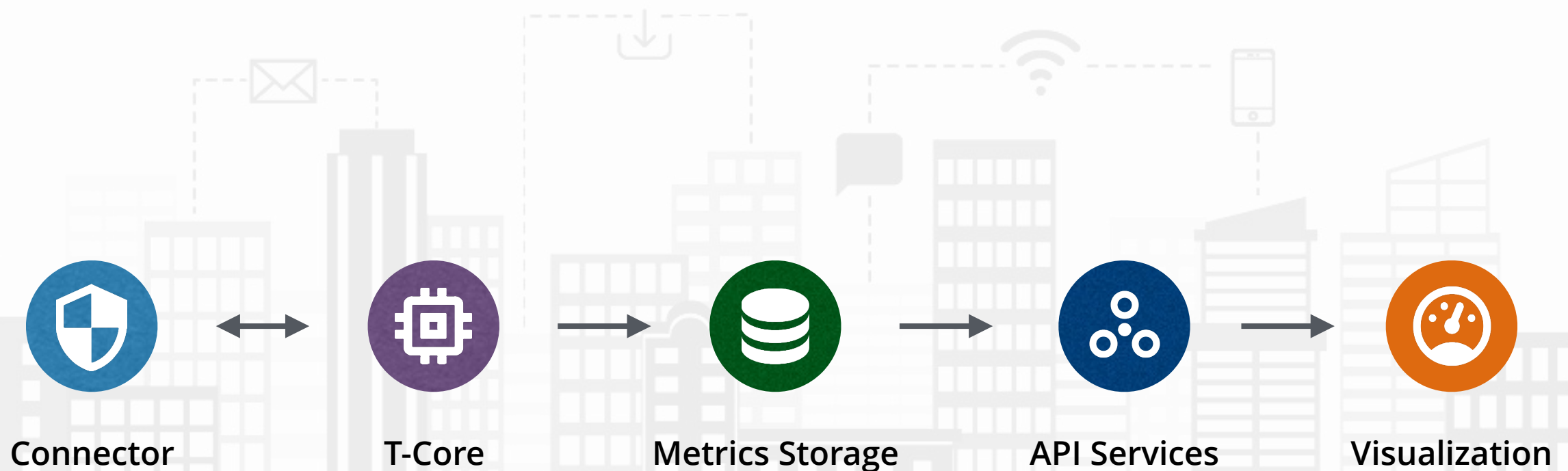
API Services



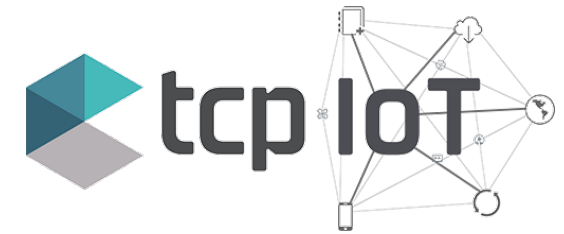
Visualization



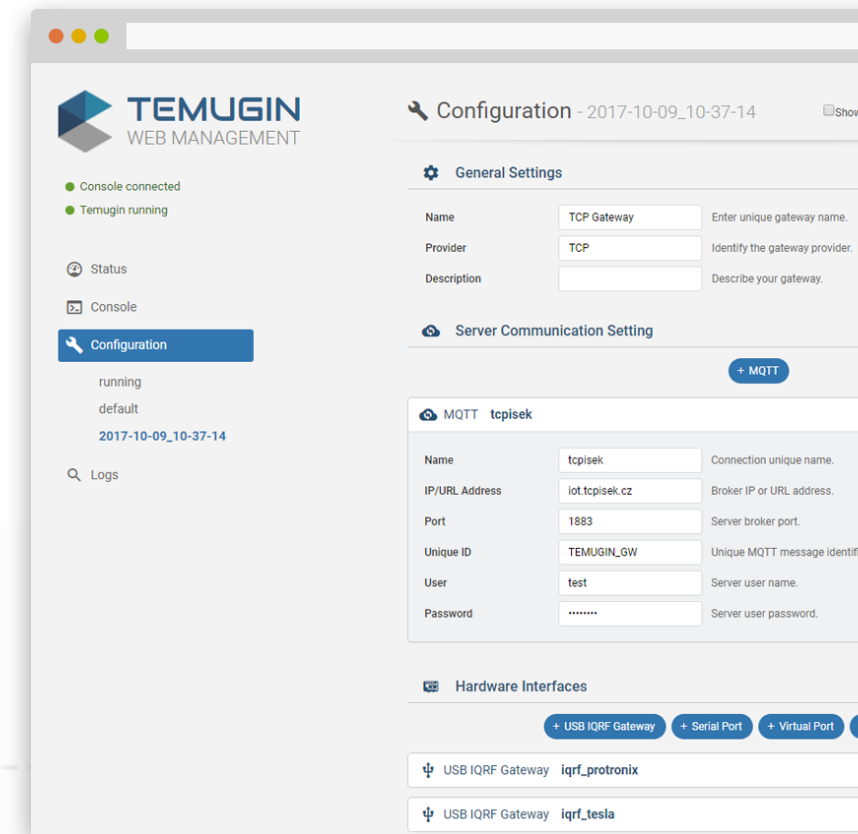
# Platform Demo



# T-Core Technology



- Part of IoT Cloud & IoT Gateway
- Protocol translation & payload parsing
- Supported interfaces
  - MQTT & HTTP
  - IQRF
  - LoRa (CRA, private LoRaWAN)
  - SigFox

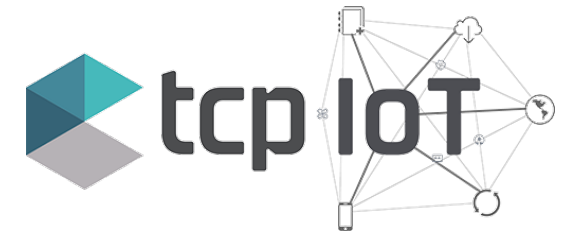




# Live Showcases



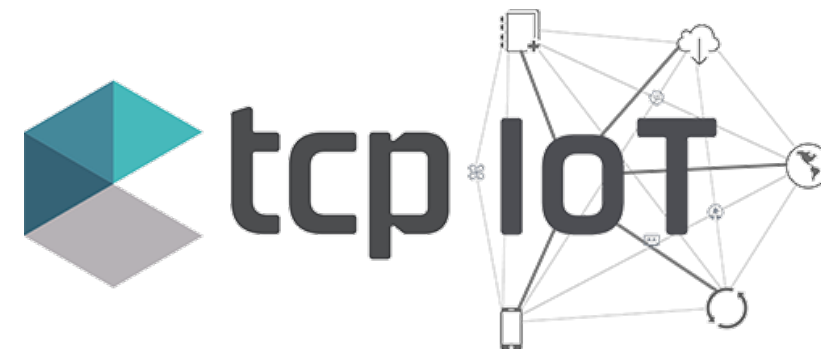
# Performance Analysis



- Data flow benchmark - 5-server cluster
- MQTT, SenML with numeric value
  - ~ 9000 messages per second
  - ~ 770 mil. messages per day
  - ~ 23 bil. messages per month
- ~ 540 000 devices sending 1 message per minute







# Thank you for your attention

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