

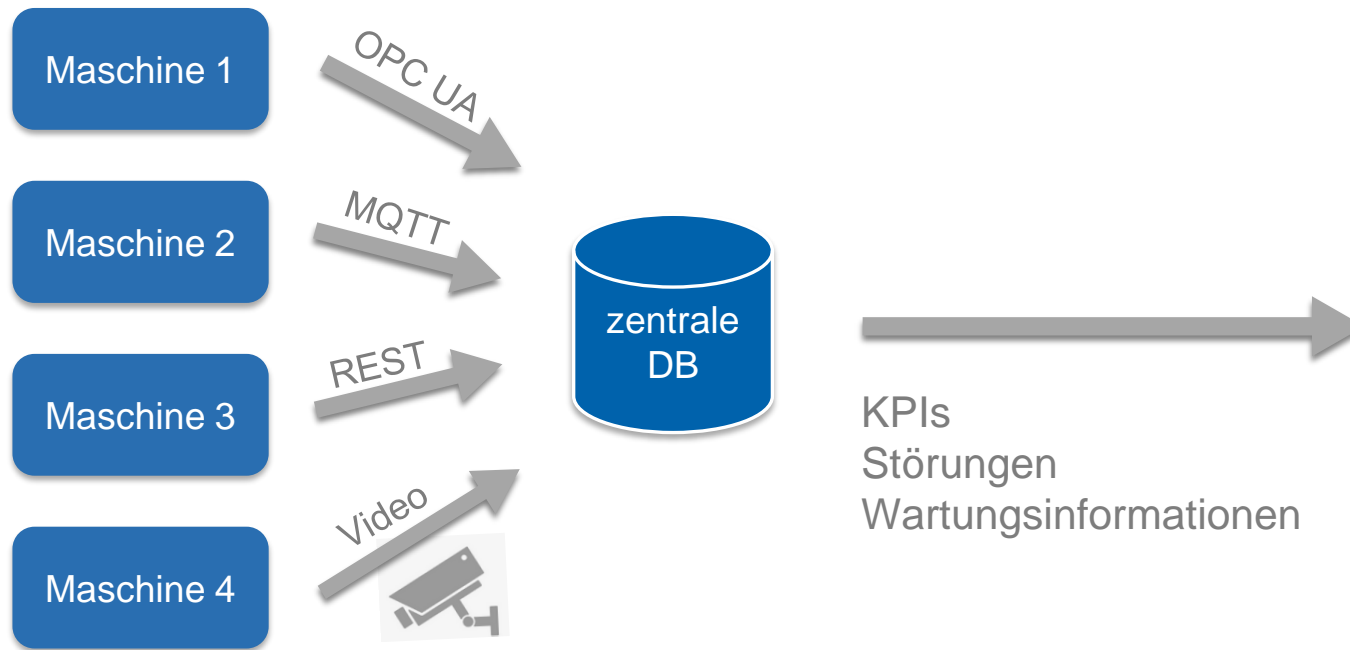


OT meets IT

Wo bekomme ich meine Daten her?



Was ist das Ziel?



Icon	Message	Status	Time
🔴	Wartungsinformation	🔴	12:27:33 PM
🟡	Störung	🟡	12:27:33 PM
🟢	Information	🟢	12:27:33 PM



Die Realität

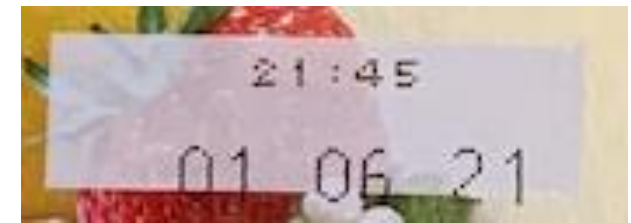
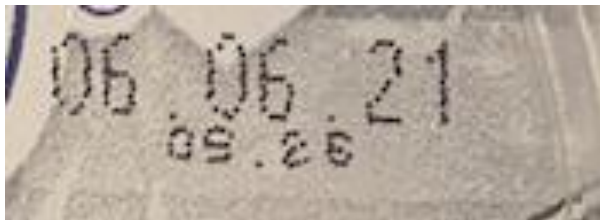
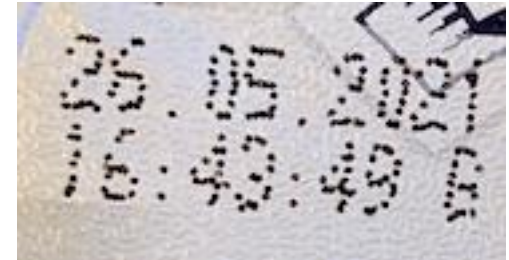
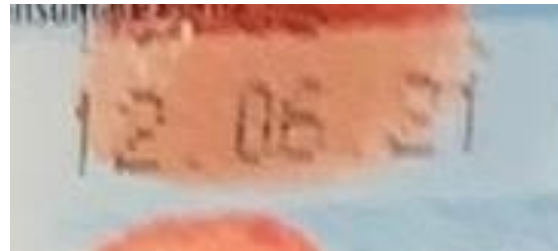
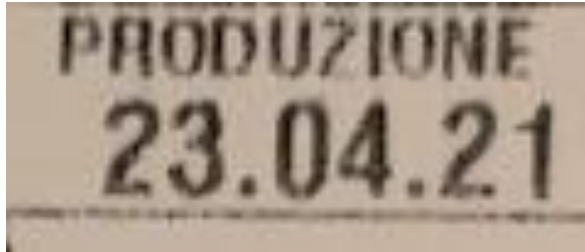
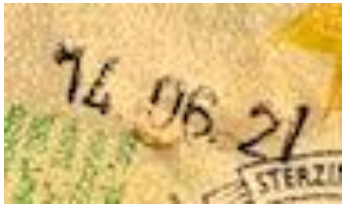


Video-
erkennung

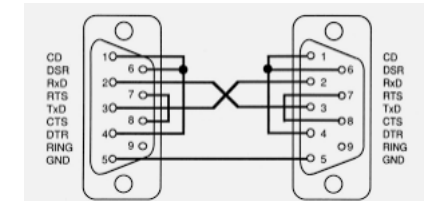
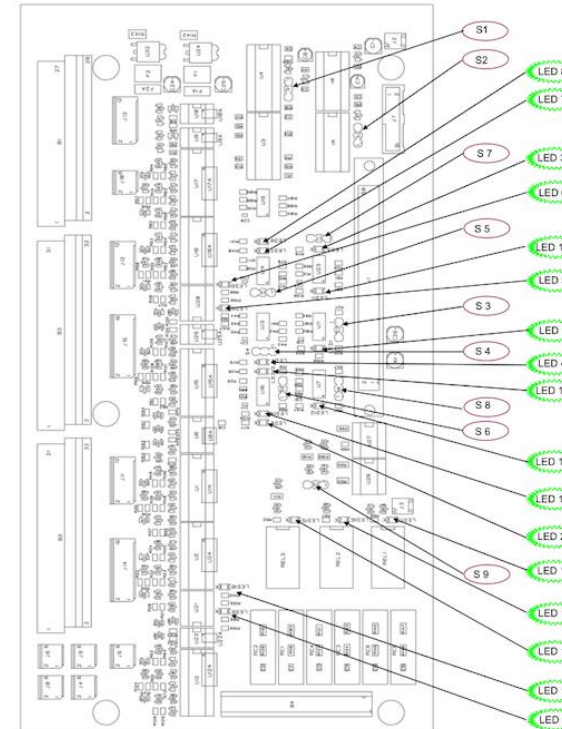
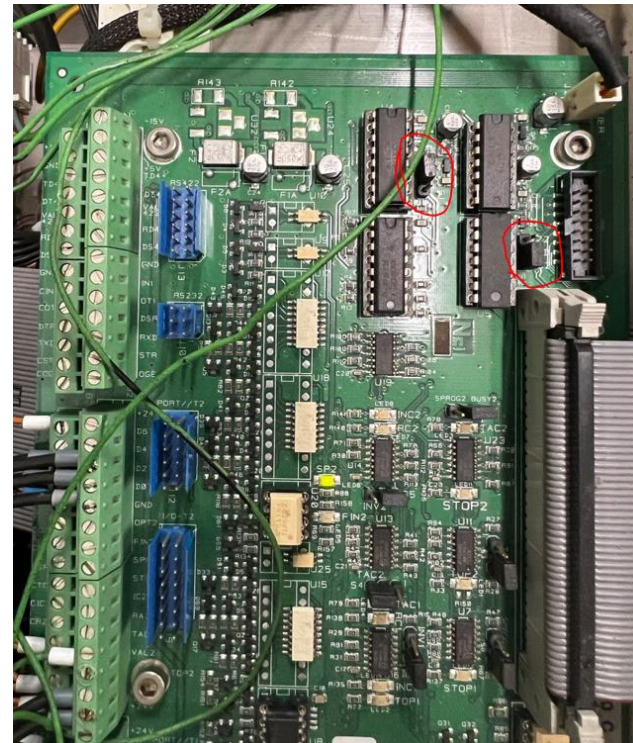
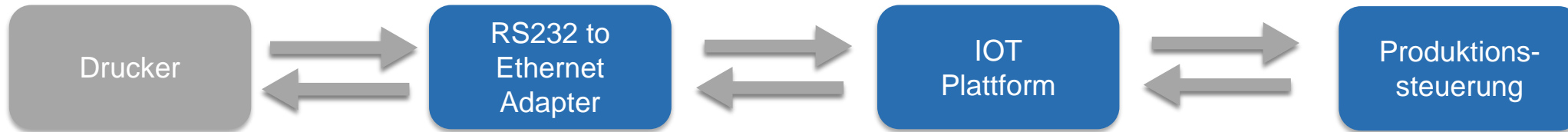


MHD-Prüfung

„Das Mindesthaltbarkeitsdatum sieht immer fast gleich aus“



Die Realität



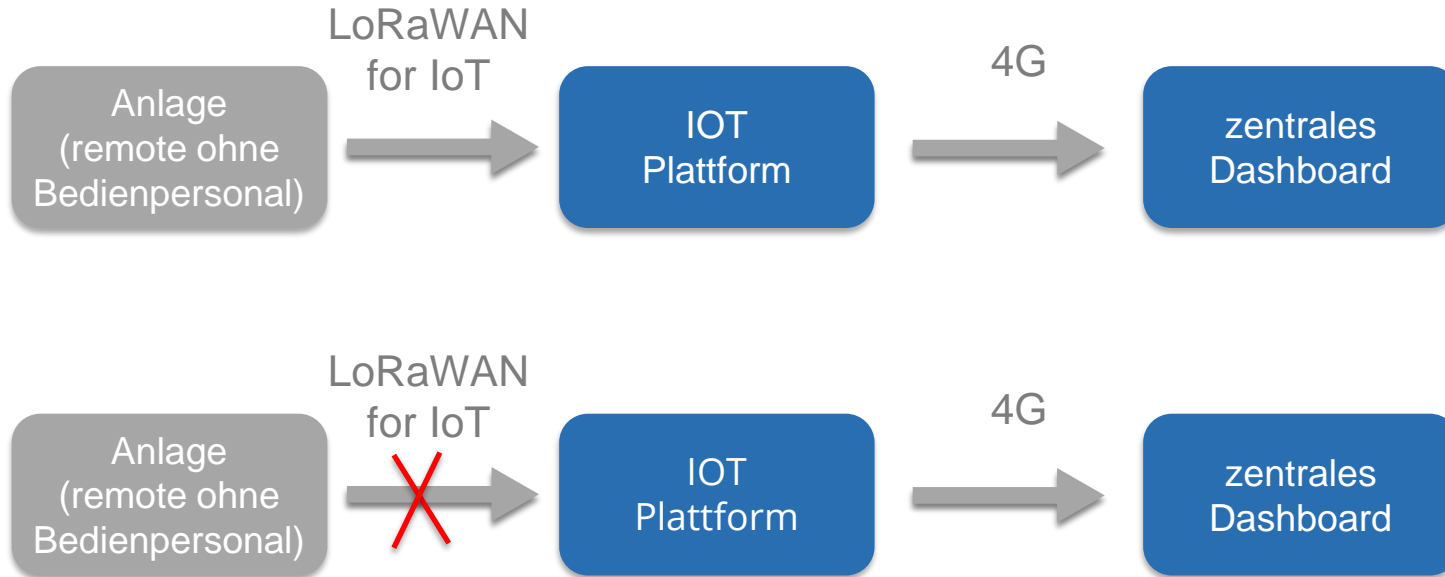
Jumper positions

The jumpers located on the industrial interface board are used to configure the serial link.

Standard positions	NAME	MARKED	POSITION	FUNCTION/COMMENTS
1	S1- 1	VAL	VAL	Point-to-point RS422 link (only one printer on the link).
3	S1- 3	VAL	not VAL	Multipoint RS422 link (printer selected with VALID422).
1	S2- 1	RXD	232	RS232 mode selected for serial link.
3	S2- 3	RXD	422	RS422 mode selected for serial link.
3	S3- 3	TOP2	TOP2	DTOPIMP2 signal taken from DTOP2 (not used in this test).

- Unzahl von Jumpers auf verschiedenen Platinen
- Unterschiedliche Kabel
- Adapter-Einstellung basieren auf Trial and Error
- Keine Dokumentation

Die Realität



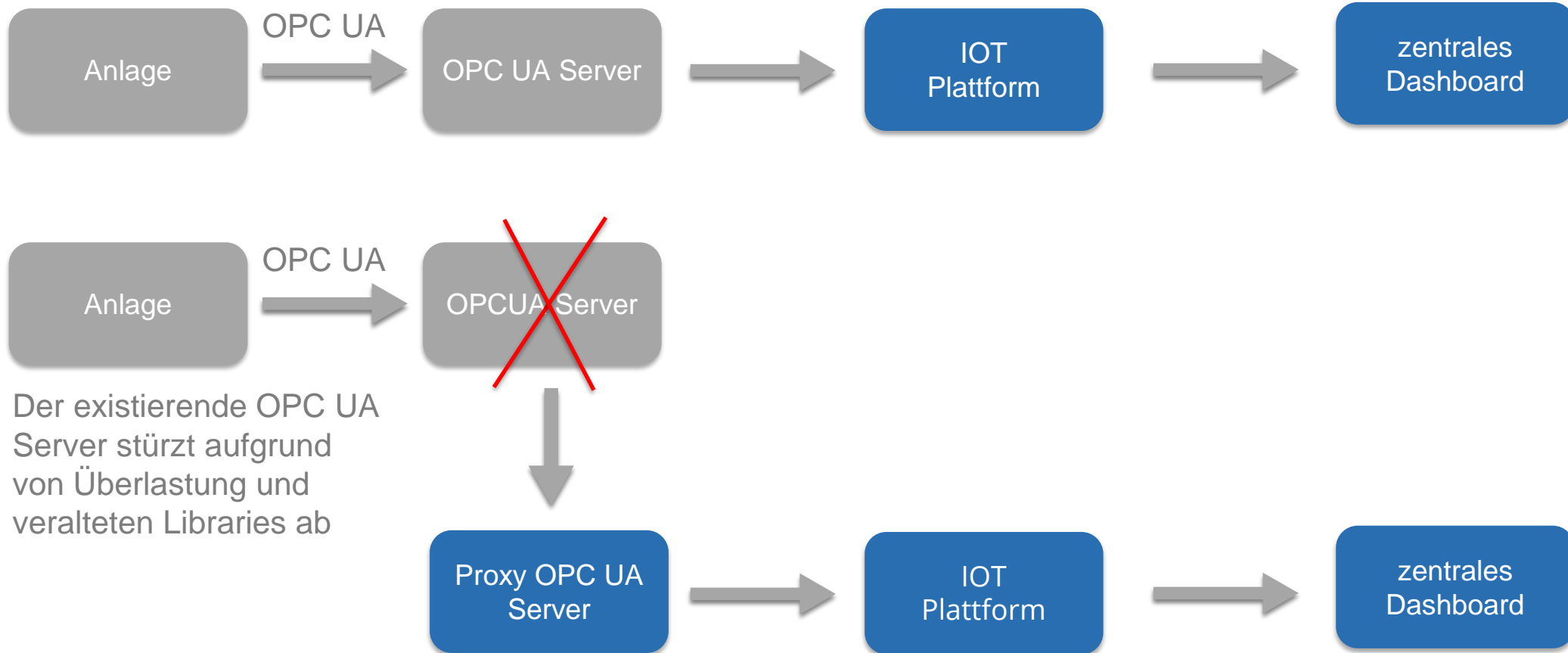
LoRaWAN bricht aufgrund von externen Störsignalen ab



Abhilfe Revolution PI für Reset

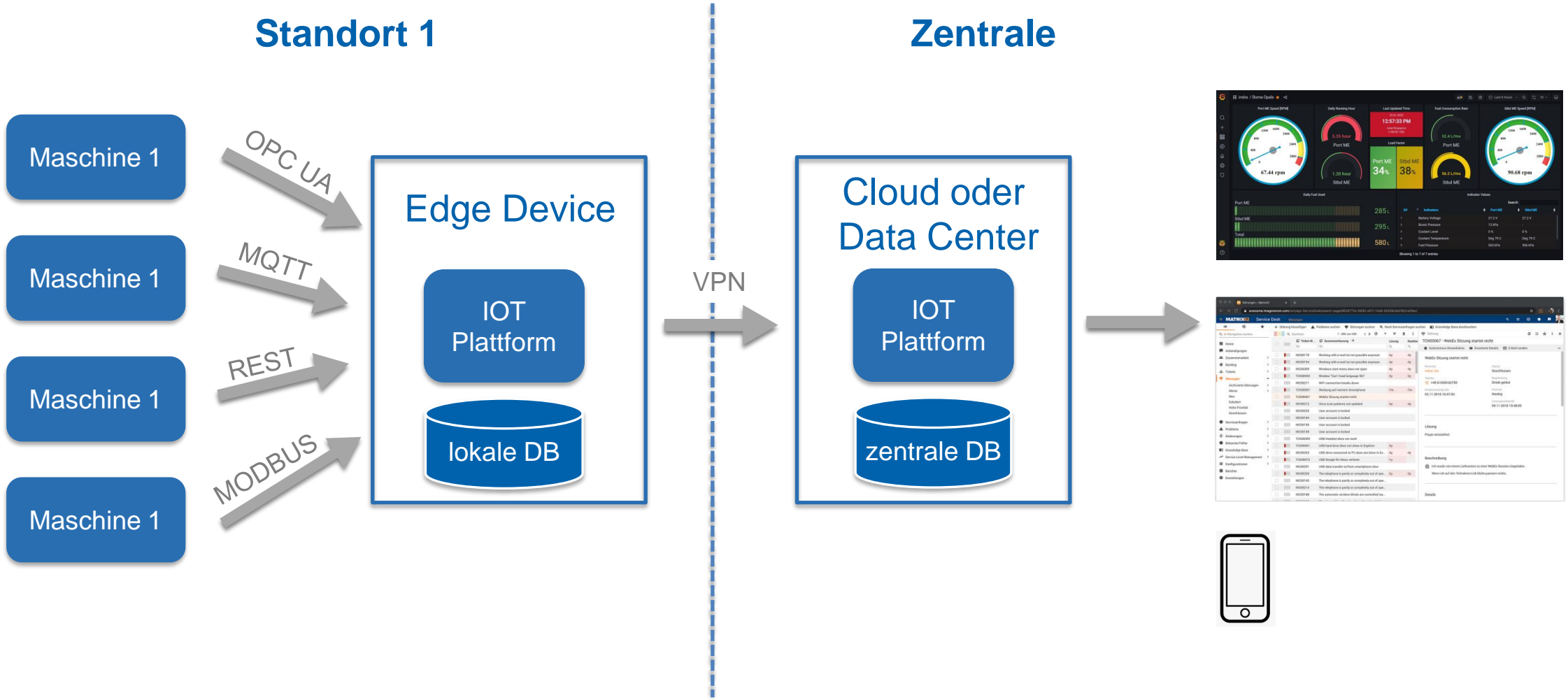


Die Realität



- Instabile oder langsame Netzwerkverbindungen
- Umwelteinflüsse (Schmutz, Feuchtigkeit, niedere oder hohe Temperaturen)
- VPN-Zugriff in die Produktionsumgebung des Kunden
- Firewall-Einstellungen
- Die Verfügbarkeit von Testgeräten ist sehr oft nicht durchgehend gegeben
 - Weil sie anderswertig verwendet werden
 - Weil sich Konfigurationen ändern
- Verfügbarkeit von Mitarbeitern
- Verfügbarkeit von Hardware (Lieferengpässe)

Die Lösung - IOT Middleware



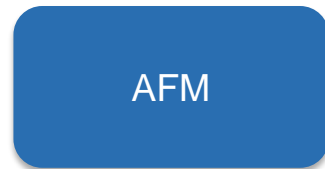
Die Lösung – IOT Middleware

Processes and rules for automated troubleshooting



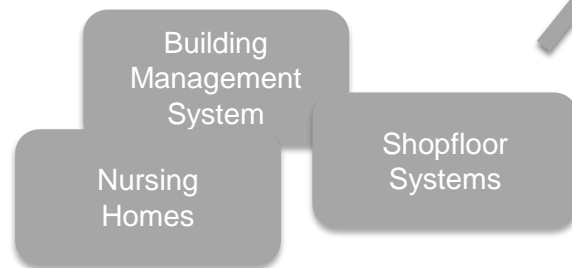
Machine learning is used for video and error analysis

Connectors continuously monitor devices (sensors, video, etc)

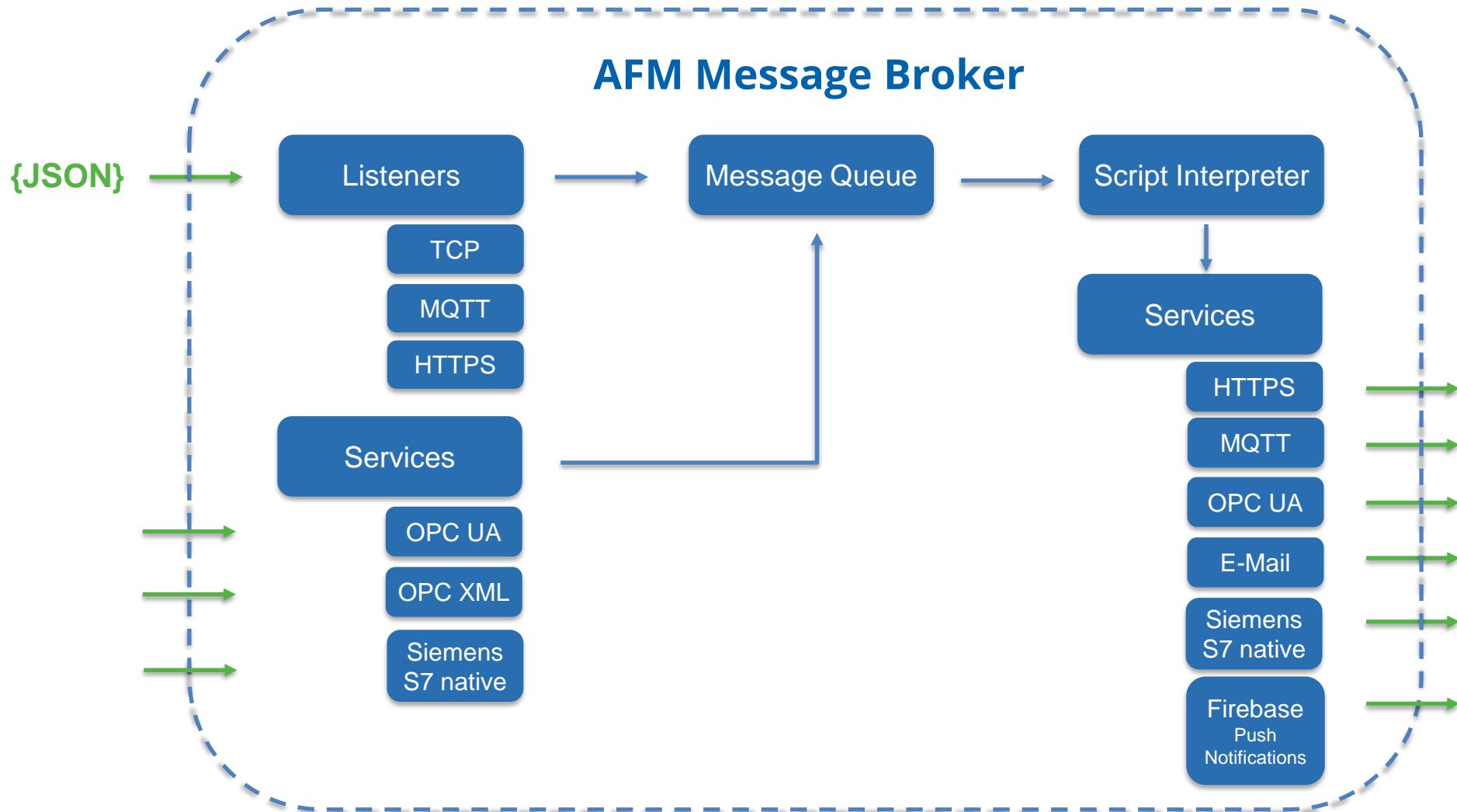


Operators and users interact and monitor

Existing systems can be integrated using industry standard interfaces



Integrates in service desk systems





THANK YOU

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