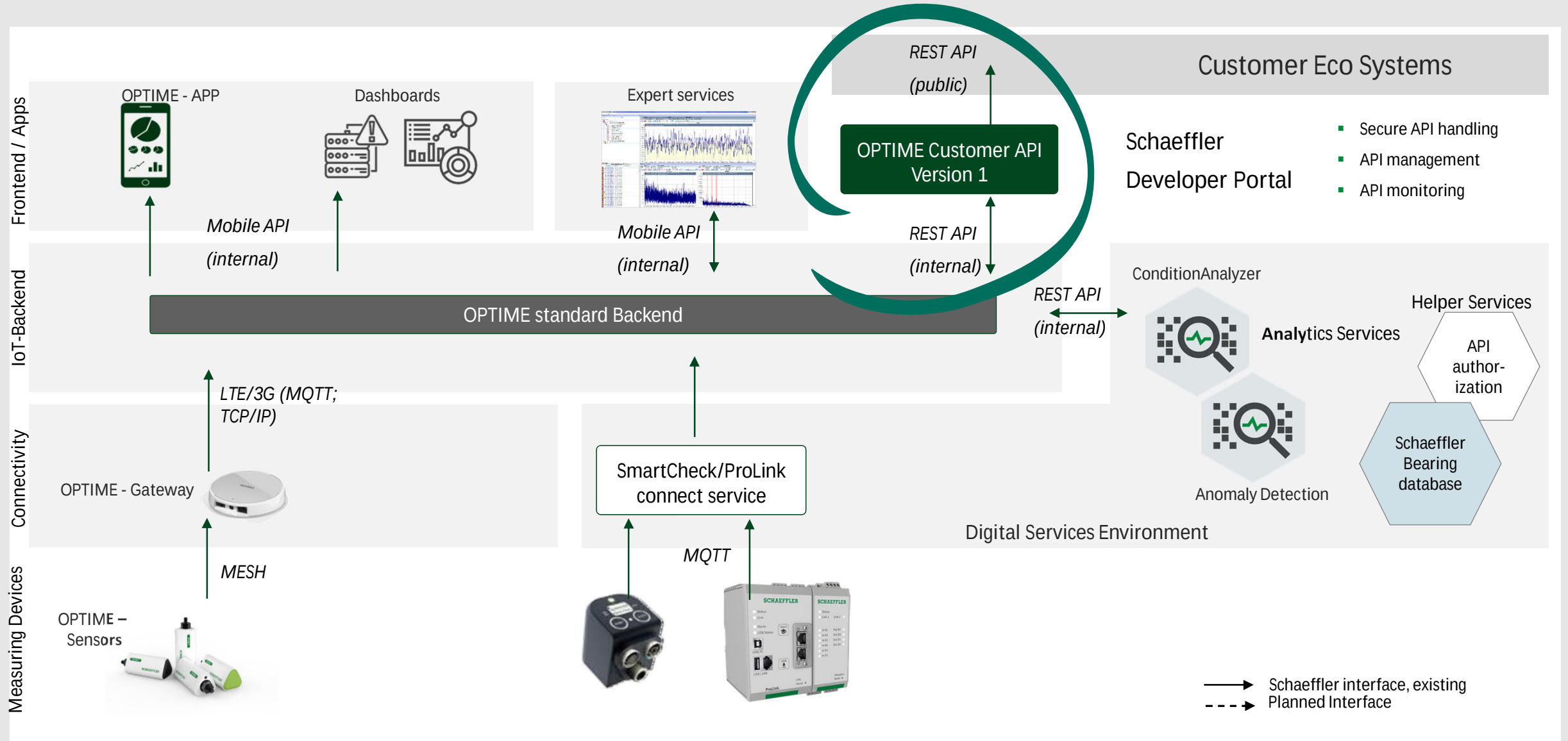


OPTIME Customer API - Version 1

26.08.2021





Productive version (EU/AP/US target release 08/2021, CN under planning)

- Data available:
 - Machine level:
 - Aggregated Condition Monitoring (CM) State
 - Probable root cause (if available)
 - latest alarms, alarm history
 - Sensor level: raw vibration signal and KPIs per measurement point
- secure and sustainable OAuth2-based machine-to-machine (m2m) authorization
- Service Availability 98%
- Poll-API for now (push-functionality under planning)

Sandbox version (EU/AP/US released, CN under planning)

- Quick test sandbox: simple key user credential-based authorization
- Full test sandbox: OAuth2-based authorization to prepare and test productive API usage
- no customer data involved, but test data from a Schaeffler test installation
- Service Availability can be less than 98%
- functions same as productive version

Why using an API Portal like Schaeffler Developer Portal?

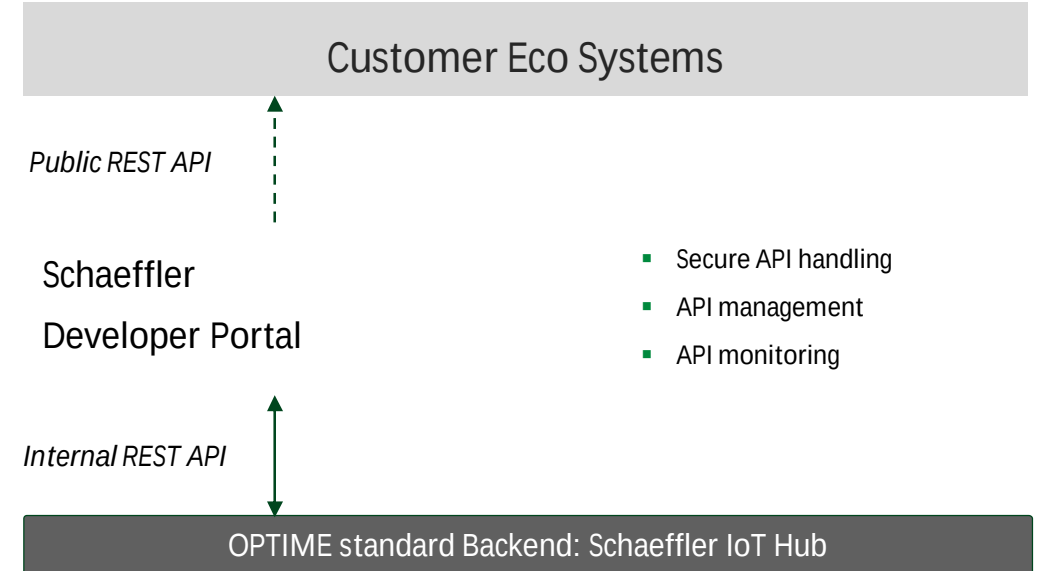
- to onboard and manage API access with customers easily
- to provide a machine-to-machine access without personal credentials
- to provide state of the art security
- to limit traffic and protect the systems behind it (OPTIME)

Schaeffler Developer Portal D

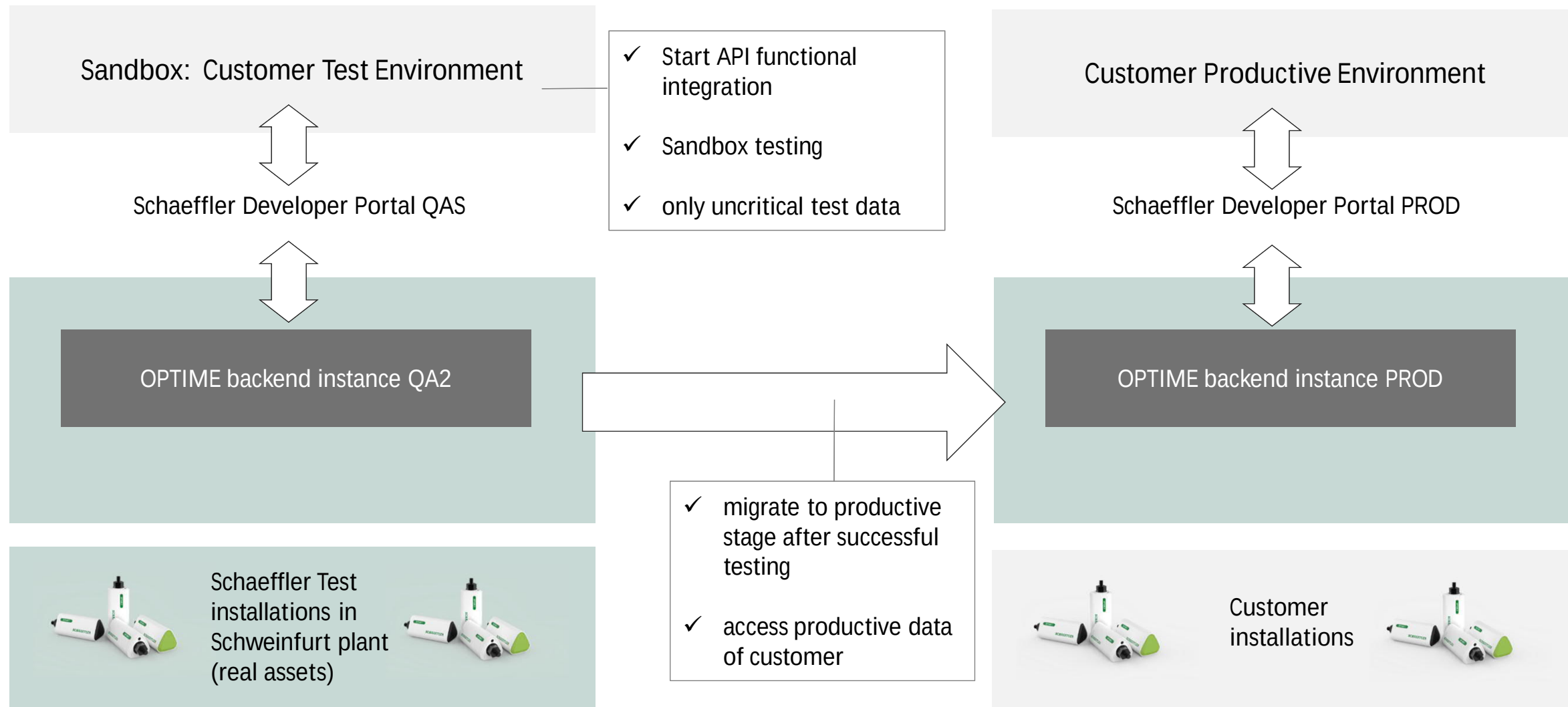
Discover Consume and Monitor Schaeffler APIs

The screenshot shows the Schaeffler Developer Portal D interface. At the top, there is a search bar with the text 'optime' entered. Below the search bar, it says '5 Results'. The first result is 'Schaeffler Optime Customer API' with a description: 'The Schaeffler Optime Customer API grants Customers can retrieve machine and sens meta data and alerts. Please consider end dev/.default'. Below this, there is a 'Download SDK' button. The second result is also 'Schaeffler Optime Customer API' with the same description. Below the results, there is a table of API endpoints.

Method	Endpoint	Action
GET	/machine/{id}/alarms-history getOpenAlarms	Try out Code Snippet
GET	/machine/{id}/alarms-open getOpenAlarms	Try out Code Snippet
GET	/machine/{id}/cm-state getCMState	Try out Code Snippet
GET	/machines getMachines	Try out Code Snippet
GET	/measurement_point/{id} getSensorInfo	Try out Code Snippet
GET	/measurement_point/{id}/kp1(name) getSensorKp1Values	Try out Code Snippet
GET	/measurement_point/{id}/kp1s getSensorKp1s	Try out Code Snippet
GET	/measurement_point/{id}/vibration_raw getVibrationValues	Try out Code Snippet
GET	/measurement_points	Try out Code Snippet



Staging procedure for reliable API integration



Case 1: Adhoc testing of API (simple authorization)?



Customer's Key Developer
(the technical API integrator, must not be the OPTIME Key User)

Key Developer: full name, email adress, Company with full adress
(can be supported by sales)

Invite Key Developer to Schaeffler Guest network
Provide adhoc sandbox access + Manual

Does always EC check,
if person not known!



cm_api_onboarding@schaeffler.com



Schaeffler IoT Delivery Manager

Case 2: Full testing of API with preparation for productive usage?



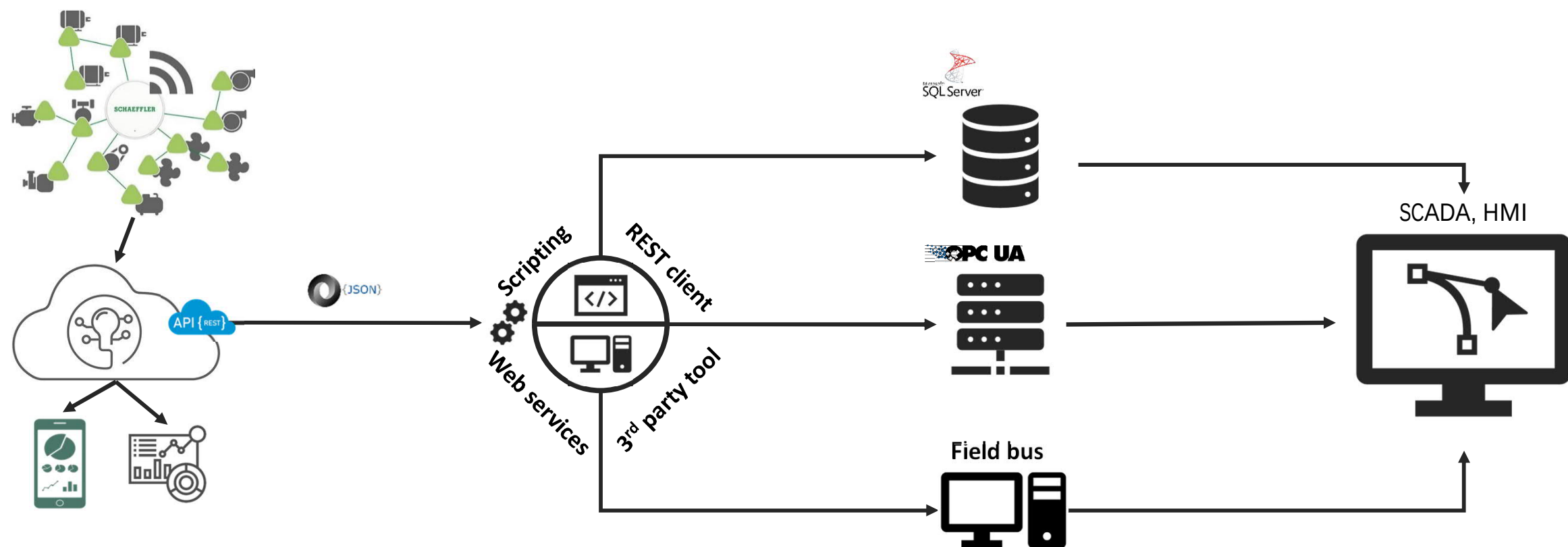
Customer's Key Developer

Key Developer: full name, email adress, Company with full adress or
mention existing OPTIME Tenant (can be supported by sales)
provide Enterprise ID of OPTIME Tenant, if already available

Invite Key Developer to Schaeffler Guest network
Provide SDK + Access information + Manual
Offer Onboarding support (typ. 1h-2h online)

Process OPTIME data to your industrial solution

Cloud-to-Cloud integration might be the easiest way to integrate OPTIME data, but not the only one! Find other ideas below:



1. Data from OPTIME cloud are accessible via the REST API interface and respond in a JSON format.

2. Read and convert the data with programming or a REST client, every common industrial service solution has implemented.

3. Write the data in the format of your designated internal service solution.

4. Provide the data to your SCADA or HMI system to monitor the current state of your machines.

Subscription Models



OPTIME Customer API Corporate License

€ 500 / month

Valid for all OPTIME tenants of one corporation

Data access to all tenants of a corporation

Month-to-month subscription

No minimum duration

Ordering Information
OPTIME-DIGSERV-APIFEE
095259732-0000

 Requirement
Min. 1 tenant with OPTIME base-fee subscription
OPTIME-DIGSERV-BASEFEE

Features

- ✓ Works with data from OPTIME & "OPTIME-ready" hardware
- ✓ Easy access to raw sensor data
- ✓ Easy access to aggregated Condition Monitoring state and alarms
- ✓ Nearly adhoc Sandbox access possible without OPTIME tenant

Requirements

- Acceptance of the updated OPTIME Digital Service terms of use
- Minimum 1 active OPTIME or OPTIME-ready device to provide data to access
- Minimum one active OPTIME base-fee subscription by Corporate
- Corporate needs to name main tenant for API subscription billing!
- If API product is offered later: align API order with Key User of OPTIME Tenant! (independent of Key Developer, who is only the technical integrator)

Cancellation Policy

- Cancellation possible on a monthly basis
- The OPTIME Customer API subscription automatically ends with a cancellation of the OPTIME base-fee & digital service subscription of the main tenant, where the API subscription is added for billing purposes

Thank you very much!

Please find more and latest
information always at

www.schaeffler.de/optime

