



Welcome

Arquitectura y posibilidades con la nube

PROFICLOUD 2.0



Webinars

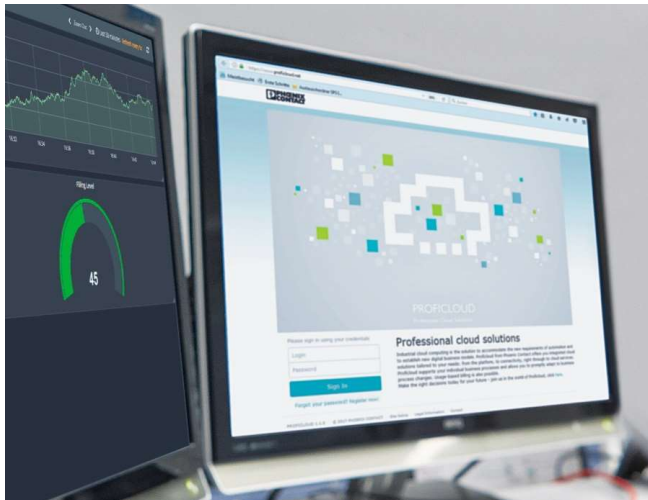
Agenda

- Beneficios de la tecnología CLOUD
 - Proficloud 1.0
 - PROFICLOUD 2.0
 - Arquitecturas
-



Webinar IMA Enero 2021

Arquitectura y posibilidades con la nube PROFICLOUD 2.0



Fecha	13 Enero 2021
Hora	9:00
Hora	
Duración	1 hora
Costo	gratuito

Lograr mayor conocimiento de PROFICLOUD y sus aplicaciones en nuevas arquitecturas industriales

Durante esta sesión tendremos mayor profundidad de ejemplos de como instalar, aplicar y desarrollar la utilización de la nube PROFICLOUD con los retos de comunicación ya desarrollados a productos Phoenix Contact y a nuevos equipos que formarán parte de la digitalización prevista para ayudarle en la necesidad de almacenamiento, análisis y cálculos diversos en la nube con enfoque de eficiencia para sus aplicaciones en su planta industrial y/o su solución.

Cloud

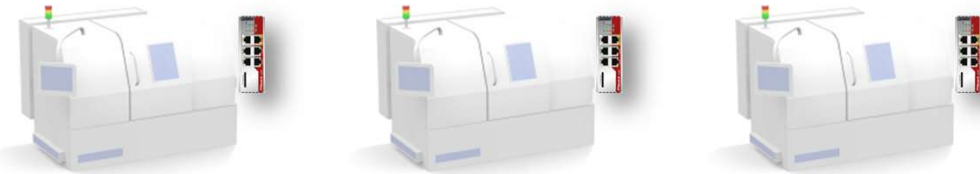
Beneficios

- **Remote access;** Using cloud services it is very simple to log into a remote machine
- **Dashboards;** when all the data is in a cloud service you can create a graphical interface that can be accessed globally
- **Users;** Since the data exists in the Cloud granting access to new users is not restricted to limits on the control hardware in the field
- **Historical Data;** The cloud can store data for several years to keep in compliance with any regulations
- **Services;** Many clouds offer different services from predictive analytics to machine learning there are many functions that might help
- **Simplicity;** Allows companies to focus on their core business (hardware changes)



Cloud

Remote Access



- Outbound Connection ensure that port forwarding is not used.
- Cloud connection used as a gateway to pick the machine that needs service
- Uses strong AES encryption
- Limited to no IT knowledge required by end user

Cloud

Dashboards



- Data is pushed from the end device into a server sitting on the Cloud.
- Anyone with the right credentials can log into the cloud service and view the data
- 1 way connection can be enabled for security

Cloud

User Management



Cloud

Historical Data

Think of the cloud as being a server. You can quickly get more storage if needed and keep your files for a long time. No need to worry about regulations the data is managed off site and backed up in multiple locations.



Cloud

Services

More services can be added at the click of a button. Many cloud providers are looking at adding features such as

- Weather tracking
- Predictive maintenance
- AI or Machine learning
- Data Analytics and optimization



Cloud

Simplicity

The cloud can offer agile development. Rely on the experts to take care of your data and **save yourself from:**

- Staffing in house IT experts
- Having hardware that needs upgrades every 3-5 years
- Updating and patching the software regularly; IaaS, SaaS, PaaS



Cloud

Parts of Services

What are the differences between IaaS, PaaS and SaaS?

IaaS (Infrastructure as a Service) offers the highest level of flexibility in hosting custom applications and a common data center for data storage.

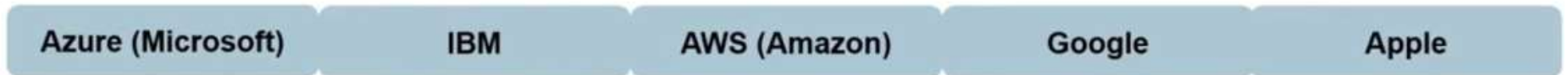
Platform as a Service (PaaS) is typically built on an IaaS platform to reduce the need for system administration. It allows you to focus on application software development rather than infrastructure management.

SaaS (Software as a Service) provides out-of-the-box solutions that meet business needs (e.g. website or email). Most modern SaaS platforms are based on IaaS or PaaS platforms.

Cloud

Examples of everyday use

Generic Cloud Provider



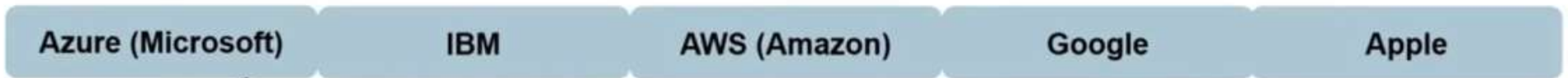
Service IT



Cloud

Examples of everyday cloud functions

Generic Cloud Provider



Service IT



Proficloud 1.0



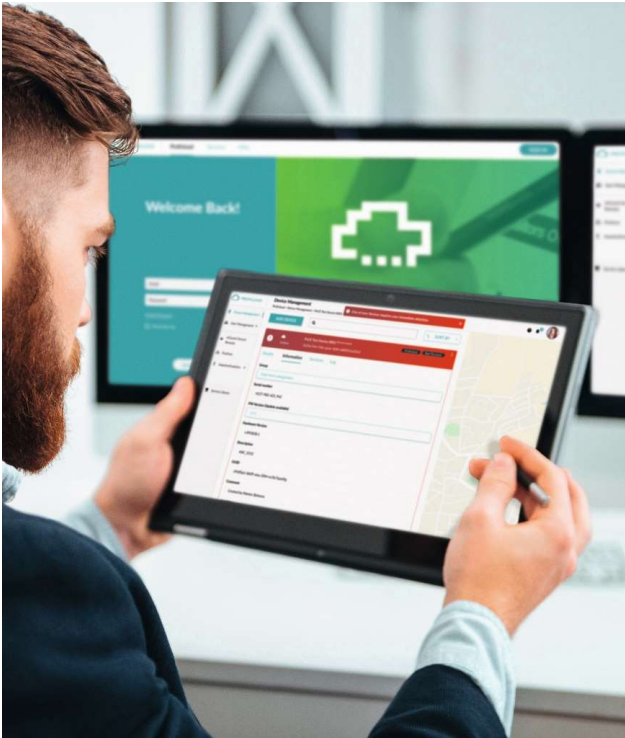
- Complete offering for Industry 4.0
 - **Impulse Analytics:** Multi-site manager
 - **Community:** Blog/ news for the PLC Next, PC Worx Engineer and Proficloud Solution
 - **PLC Next Store:** Apps store for the PLC Next
 - **Community:** Blog/ news for the PLC Next, PC Worx Engineer and Proficloud Solution
 - **Profinet:** Communication of Profinet over Internet
 - **TSD Analytics:** DashBoard solution
 - **TSD Device Manager:** Connection and Data base solution.



PROFICLOUD 2.0

Smart Services@Phoenix Contact

Agenda



About Us



IoT-Plattform Proficloud



Smart Services for Smart Devices



Applications

Corporate structure



Group Functions

Core Business Areas



Device
Connectors



Industrial Components
and Electronics



Industry Management
and Automation

New Business Fields



New Business Fields

Identify, develop and establish new
future-oriented business fields

Incubator for new business models, promoting an
innovation und start-up culture

Creating freedom for entrepreneurship and learning curves



Additive
Manufacturing



E-Mobility



Smart
Services



Sensor
applications



Corporate
Venture
Capital



Platform
Business



New Business Fields



New Business Fields

PHOENIX CONTACT Smart Business



Center of expertise for smart service and data science



2020 PHOENIX CONTACT Smart Business GmbH was founded



Berlin, Germany
Bad Pyrmont, Germany



IoT-based cloud solutions

Smart Business

Our priorities for 2020



Sales and process

Installation of sales and administration processes for recurring revenues

Smart Services

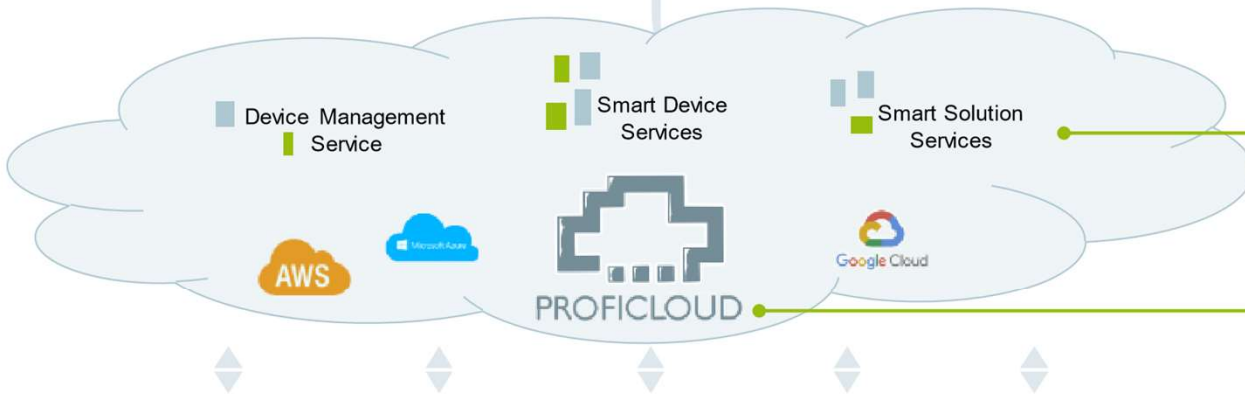
Scalable smart services based on our component and industry know-how

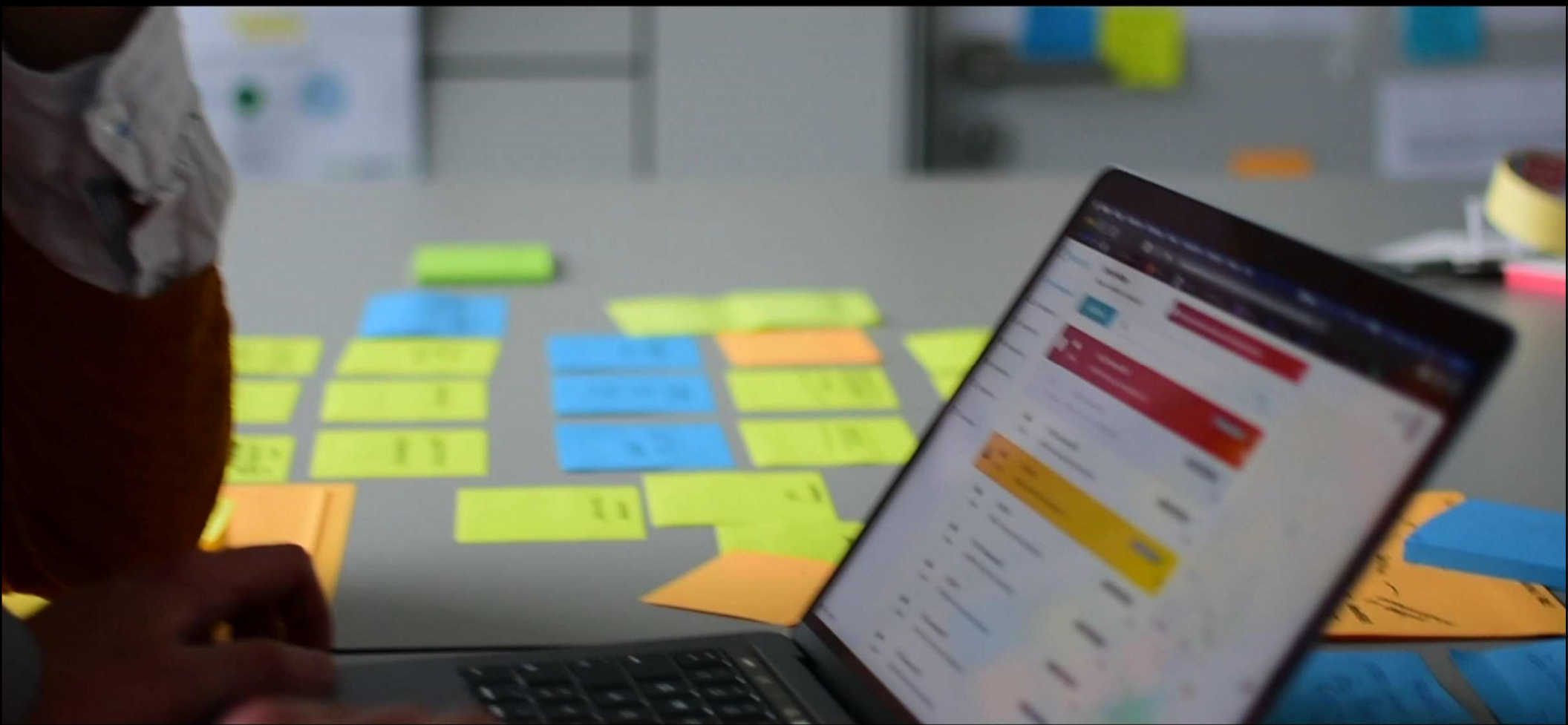
PROFICLOUD

Update of PROFICLOUD to be the SaaS Platform of Phoenix Contact

Smart Device Connectivity

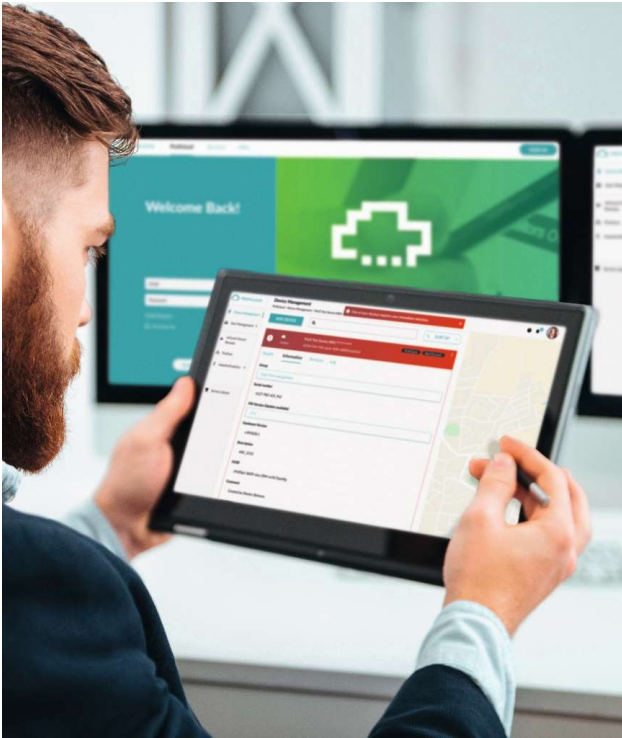
PROFICLOUD & Any Cloud connectivity for our smart devices





Smart Services@Phoenix Contact

Agenda



About Us



IoT-Plattform Proficloud



Smart Services for Smart Devices



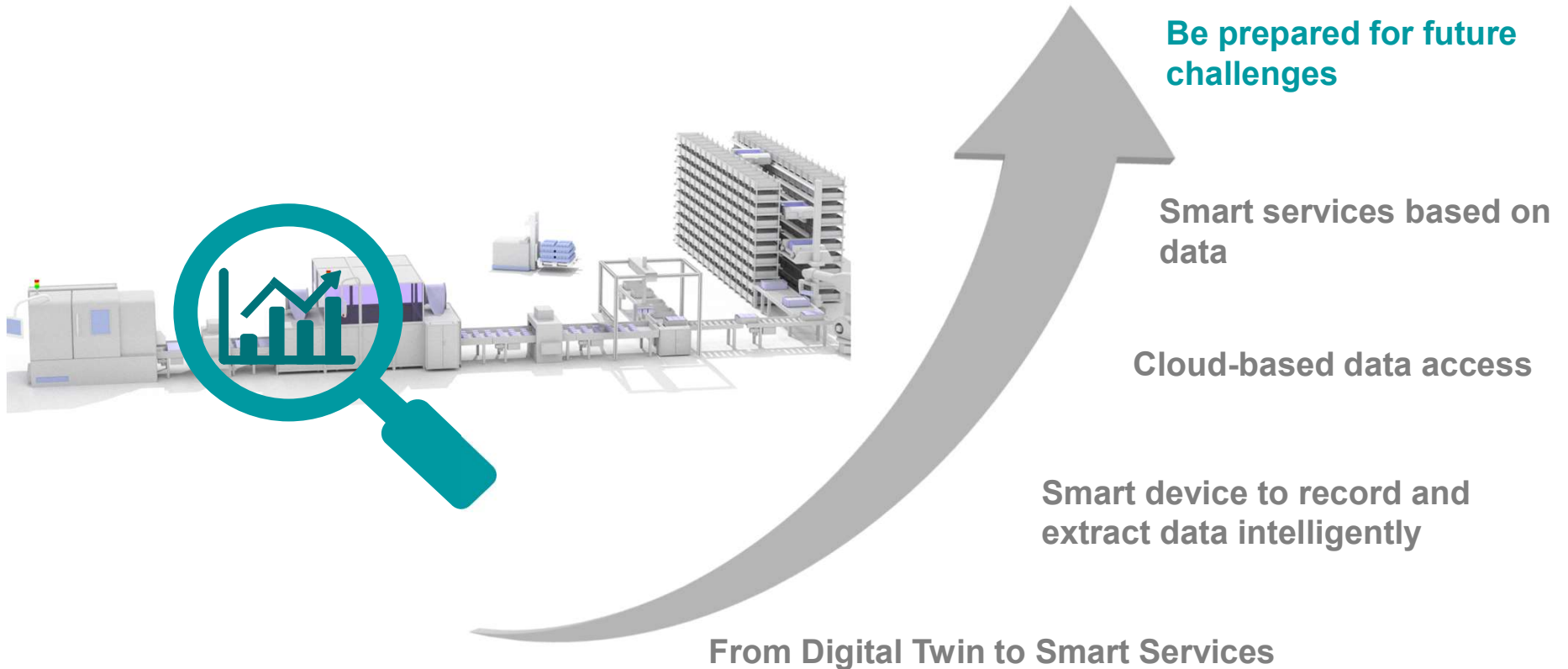
Applications

Proficloud.io enables state of the art Smart Services



Proficloud.io enables state of the art Smart Services

Every Smart Service starts with a Smart Device



Proficloud.io enables state of the art Smart Services

Every Smart Service starts with a Smart Device



Smart networking

- Smart services from Phoenix Contact are simple and standardized Software-as-a-Service solutions.
- Smart devices are ready for sending data to the cloud – safely and easily.

Smart management

The service portfolio on the IoT platform comprises for example

- Secure device management
- Real-time measurement
- Cloud-based analysis
- State of health
- Predictive maintenance
- Energy management

Proficloud.io enables state of the art Smart Services

Proficloud.io Advantages of our IoT Platform

Secure

- From the sensor to the cloud
- Hosting (IaaS) at the market leader with server location in Frankfurt

Connective

- SDK for PHOENIX- and 3rd party devices
- Data normalization for common protocols

Powerful

- Unlimited memory and computing power
- Access and user management
- Build-In Visualization/Dashboard

Intuitive

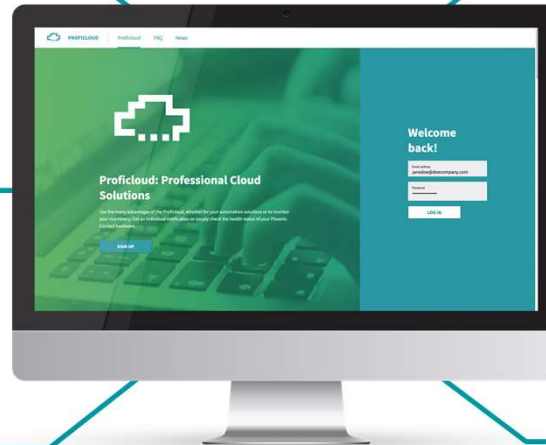
- Easy user interface
- Single-Sign-On for all Services related to Software at PHEONIX CONTACT

Extendable

- Connectivity to AWS, AZURE, Alibaba, ...
- REST API

Flexible

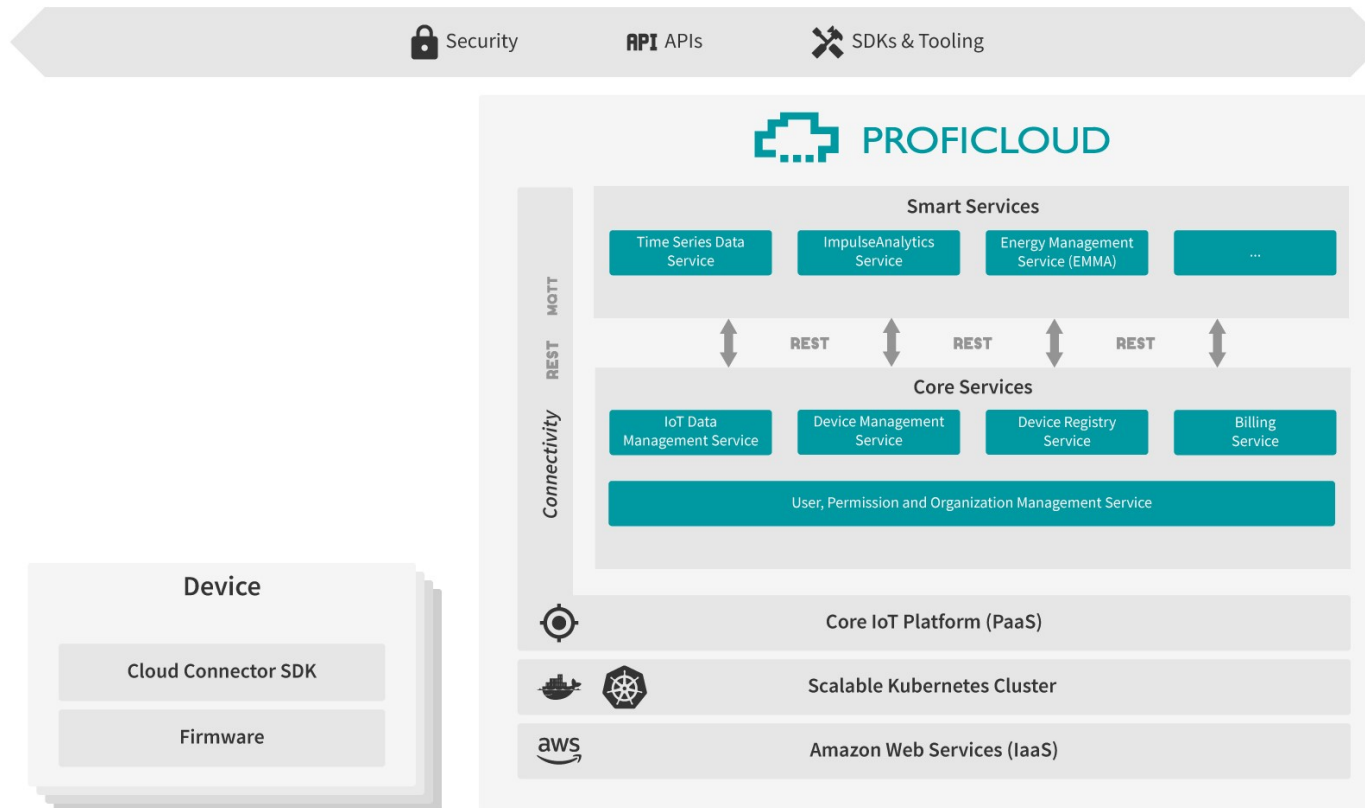
- Different IaaS applicable e.g. AWS, Alibaba, ...(later relocation possible)
- Comprehensive support of recurring revenue streams, e.g. subscription fees



Proficloud.io enables state of the art Smart Services

Proficloud.io is based on a flexible microservice architecture

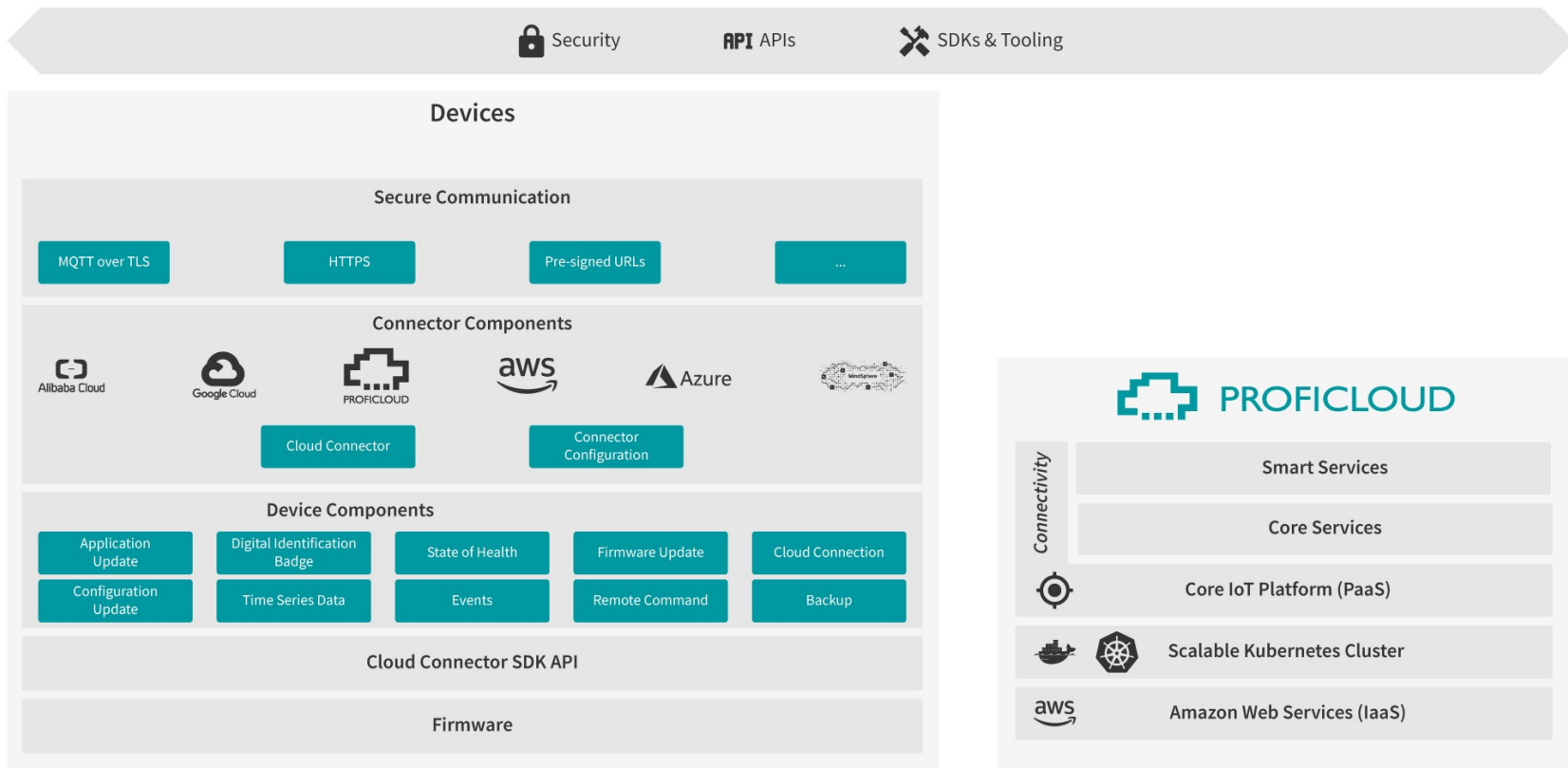
Proficloud Architecture



Proficloud.io enables state of the art Smart Services

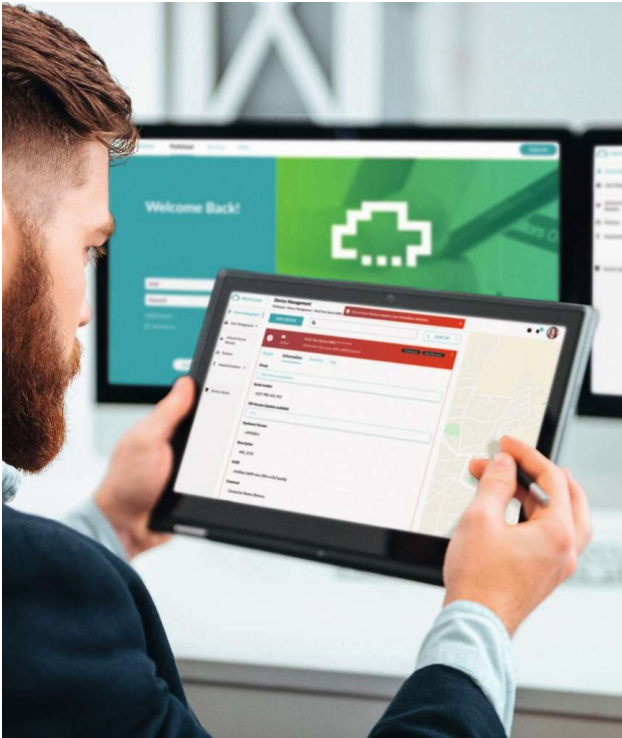
Proficloud.io is based on a flexible microservice architecture

Proficloud Architecture



Smart Services@Phoenix Contact

Agenda



About Us



IoT-Plattform Proficloud



Smart Services for Smart Devices



Applications

All smart COMPLETEline products support Proficloud by 2023



Block Modular I/O System



Energy Measurement



Power supplies with highest functionality



Highly compact relay modules



Industrial Ethernet And Security



Isolating amplifier with functional safety and explosion protection



PLCnext Controls



Assistance system for surge protection devices



DC UPS with IQ Technology



Hybrid motor starter/machine manager



Telecontrol and remote maintenance

Automate

Monitor

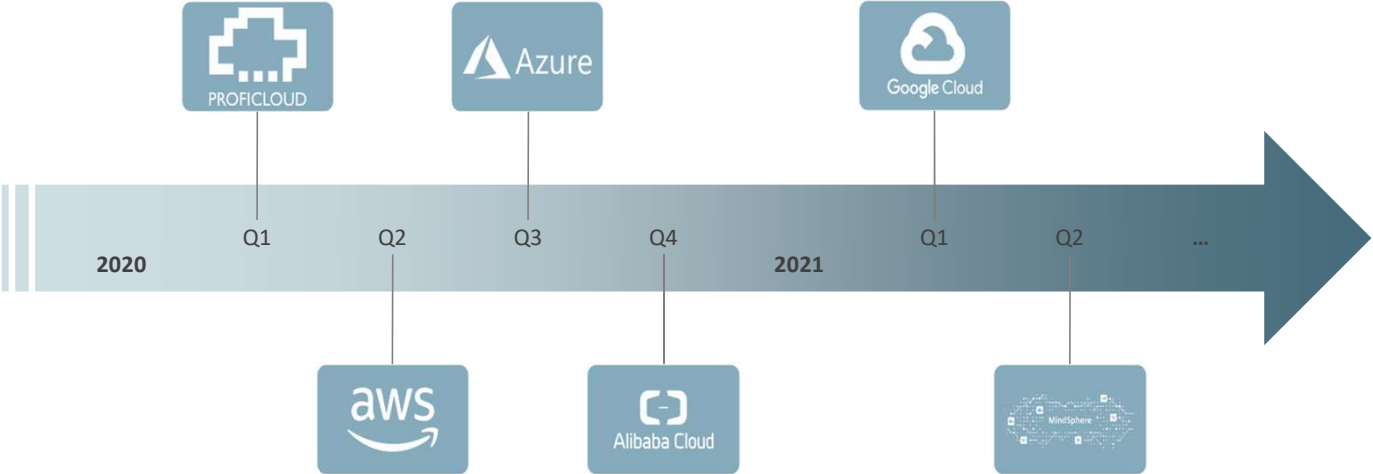
Supply + Protect

Switch

Communicate

Disconnect

Easy networking in Proficloud up to Any Cloud



Software Development Kit (SDK)
Roadmap

Smart Devices connected to Proficloud

Trabtech - Impulsecheck



Status:

- Launch at HM 2019
- First experiences and learnings from working with customers.
- GIT* Award 2020

Interface - EMpro



Status:

- EMpro launched at HM 2019
- Becomes smart HM 2020
- REST API and Web Versions support integration of Smart Services into customer environm.

Interface – Machine Manager



Status:

- Use case shown at HM 2019.
- First digital service “anomaly detection” developed and further discussed with customers.

Power Supplies – Quint UPS



Status:

- Since 2017 UPS with e.g. State of Health Capability (VOC: these snapshots are decisive...)
- 2021 launch of Quint with Anomaly Detection

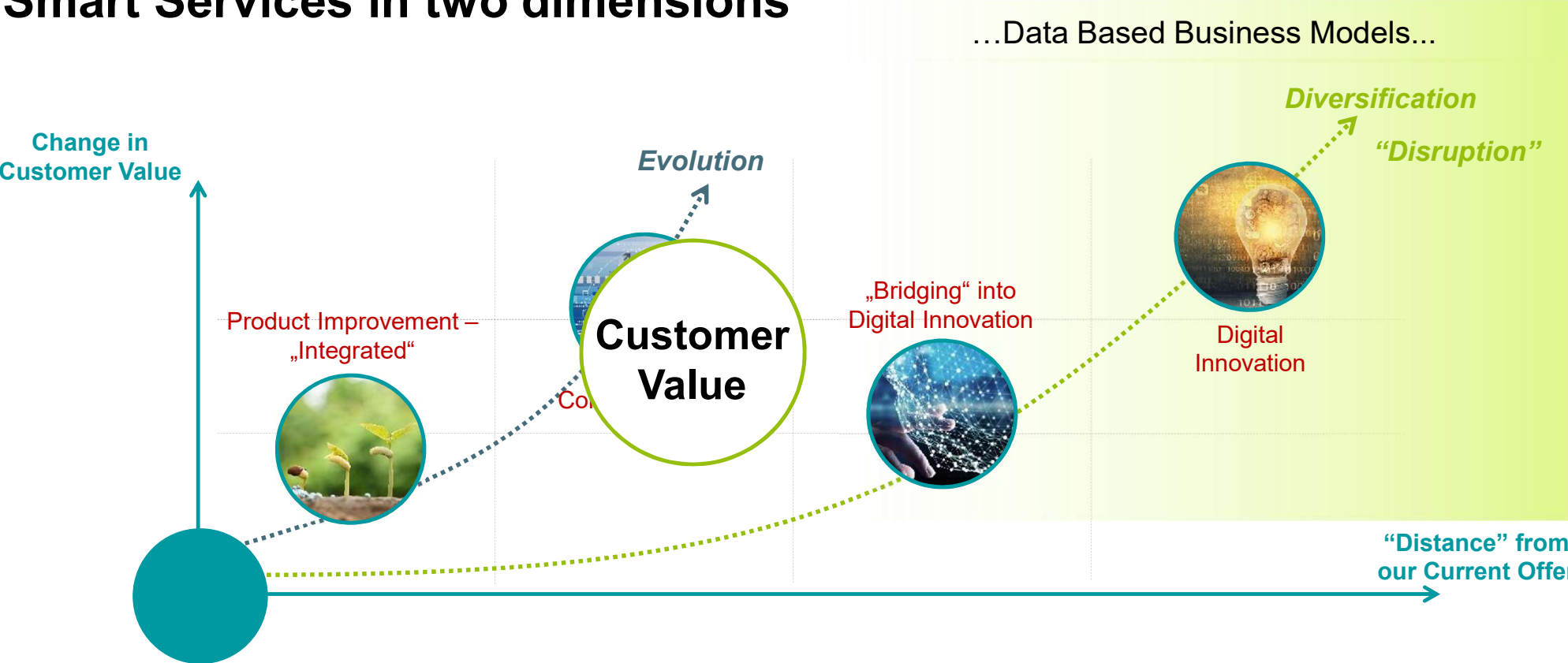
*German Publisher, famous for B2B professional journals belonging to the Wiley Group, a US Publishing House

We basically distinguish three types of Smart Services

	DEVICE MANAGEMENT SERVICE	SMART DEVICE SERVICES	SMART SOLUTION SERVICES
DEFINITION	Minimal standard for all PROFICLOUD-compatible products	Standardized value-added service for different industries / applications	Industry or application-specific value-added service
	Standardized, application-independent device information in real time	Direct linkage to one or more PROFICLOUD-capable products	Combination of Smart Device Services
	Fulfillment of minimum requirements for industrial products in the digital age	High data value added and additional features for our customers	



Smart Services in two dimensions*



* With reference to VDMA = Mechanical Engineering Industry Association

Smart Services on Proficloud.io

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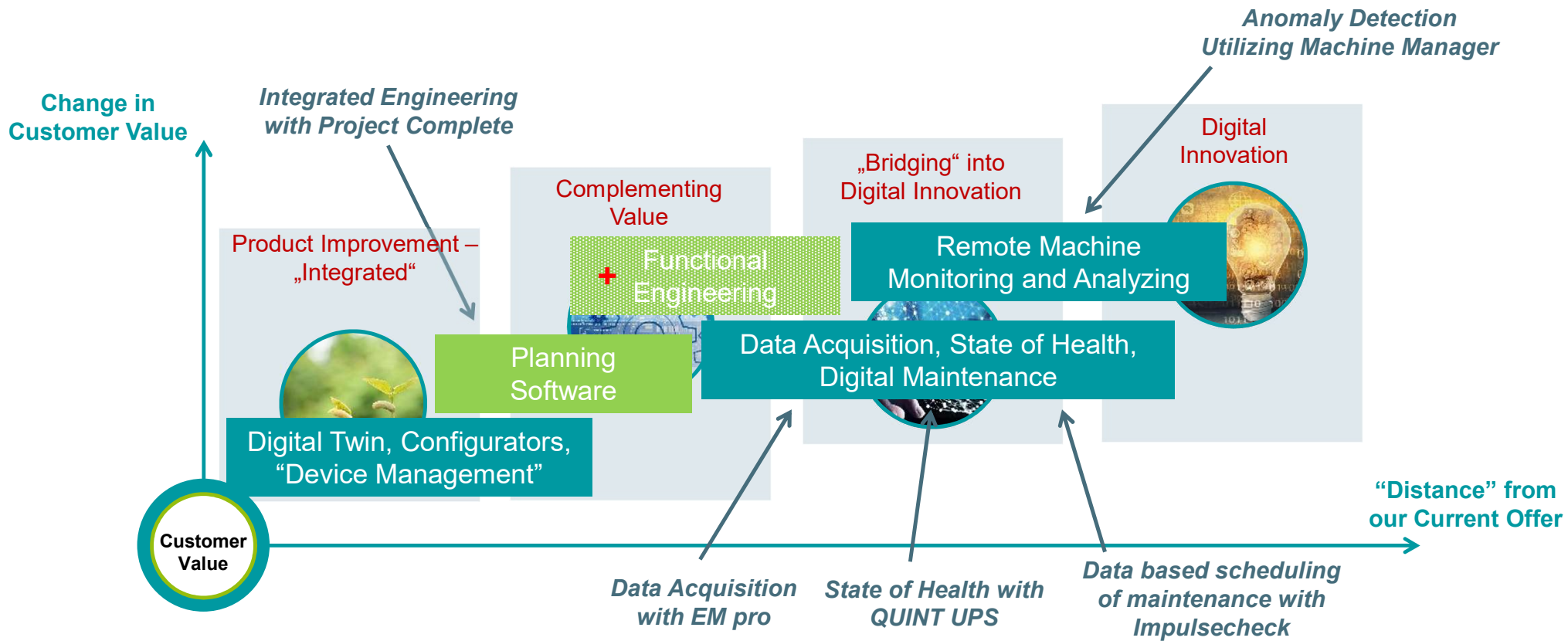


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Evaluation of Smart Services in two dimensions

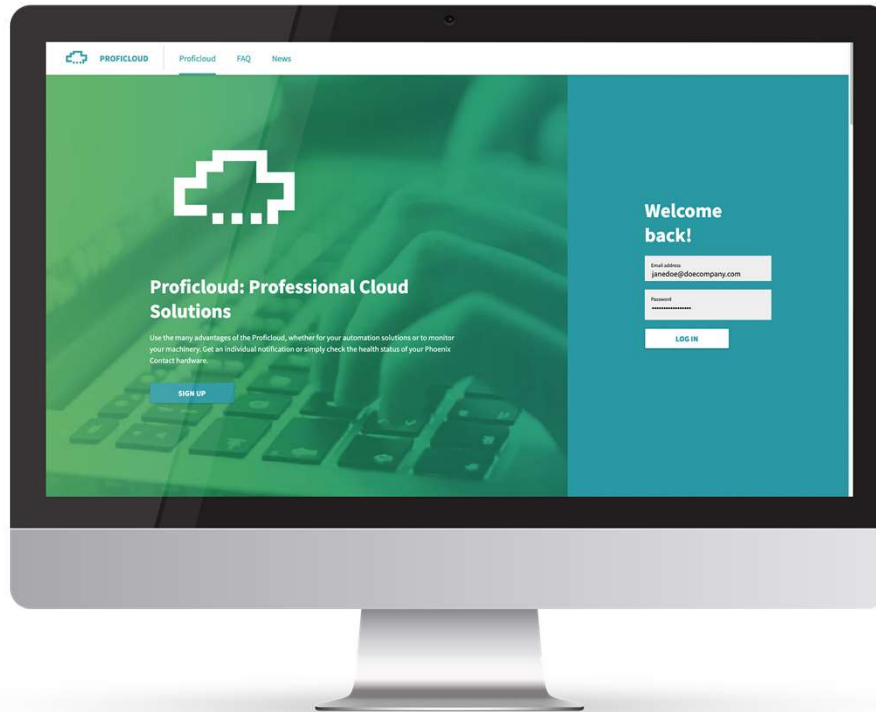


Proficloud.io

Proficloud Smart Services

Proficloud FAQ

Proficloud Dashboards



Proficloud Advantages

Proficloud News

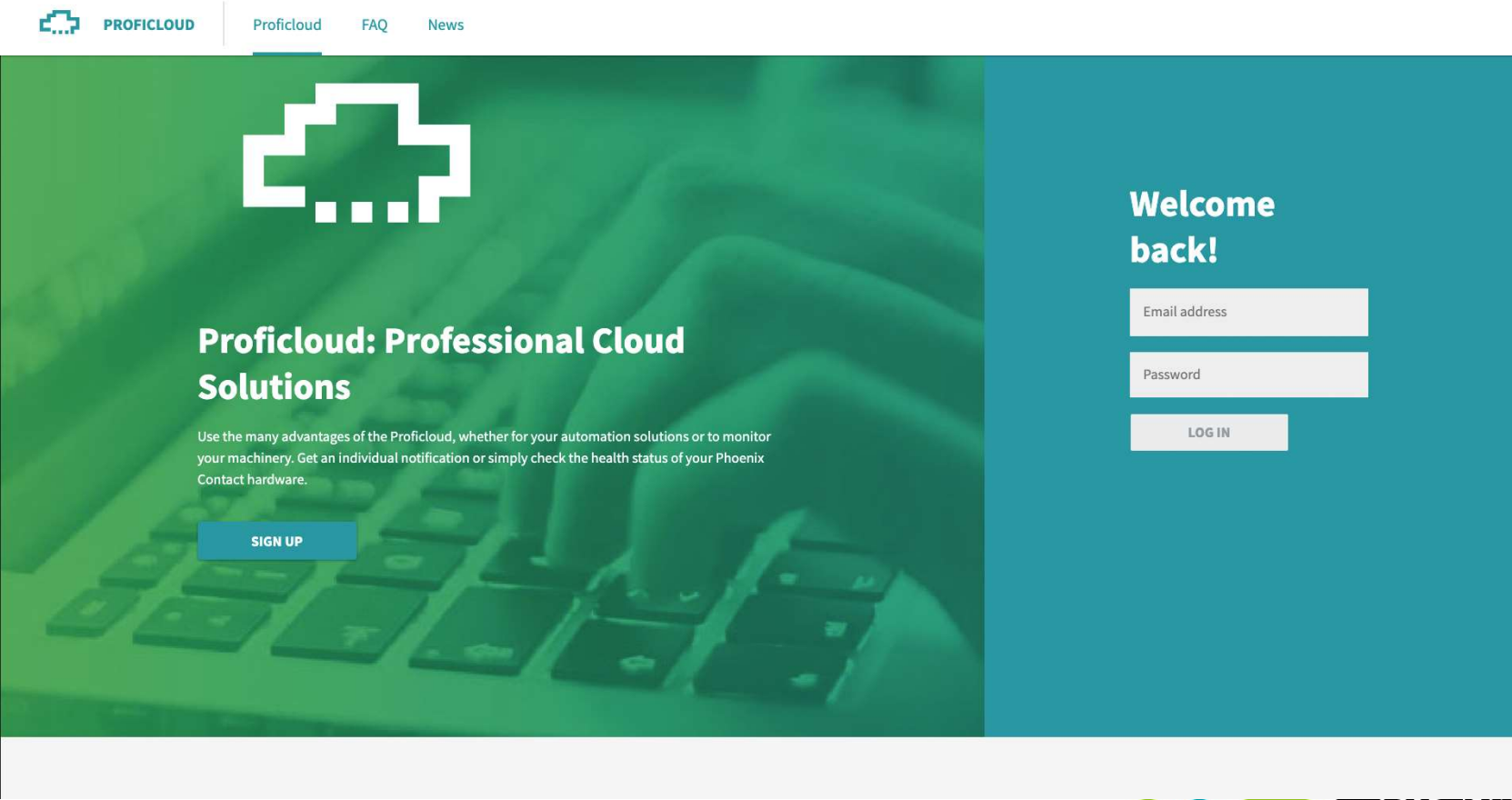
Proficloud Payment*

Proficloud User Management*

Release Q1/2021*



Proficloud.io - Landing Page



The landing page features a green and teal color scheme. The left side has a background image of hands typing on a keyboard with a white pixelated cross icon. The right side is a teal panel with a login form.

PROFICLOUD | Proficloud | FAQ | News

Proficloud: Professional Cloud Solutions

Use the many advantages of the Proficloud, whether for your automation solutions or to monitor your machinery. Get an individual notification or simply check the health status of your Phoenix Contact hardware.

SIGN UP

Welcome back!

Email address

Password

LOG IN

Proficloud.io - Landing Page | FAQ & News

Search...

Device Management Service

- ✓ [How do I add a device to the Proficloud?](#)
- ✓ [How do I change the meta data of my device?](#)
- ✓ [How do I delete a Device?](#)

General

- ✓ [What do I need to take care of during device installation prior commi:](#)
- ✓ [What do I do, if I have access problems to Proficloud?](#)
- ✓ [How does Proficloud pricing work?](#)
- ✓ [Where is the data/Proficloud located?](#)
- ✓ [Is my data secure?](#)
- ✓ [How do I change my e-mail address?](#)
- ✓ [How do I add a name to my Proficloud-profile?](#)

Public News

Check out the new Proficloud with demo devices

News, Public News / April 20, 2020

Try the Proficloud Demo Account now and see the new Device Management Service and Time Series Data Service with demo devices. Get a real insight... [Read More >](#)

Device Management Service – minimal standard for all Proficloud-compatible devices

News, Public News / March 5, 2020


Digital twin for Phoenix Contact Device Management Service – minimal standard for all Proficloud-compatible devices in the cloud The device management service for Pheonix Contact... [Read More >](#)

Phoenix Contact pools business from smart services and cloud technology

News, Public News / January 1, 2020

As of January 1, 2020, Phoenix Contact is pooling its digital service portfolio in Phoenix Contact Smart Business GmbH, its new subsidiary in Berlin. It... [Read More >](#)

Proficloud.io - Landing Page | FAQ & News

 PROFICLOUD

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[Overview](#)

[General](#)

[Device Management Service](#)

[Time Series Data](#)

[Internal FAQ](#)

Frequently asked questions



Device Management Service

^ **How do I add a device to the Proficloud?**

1. Visit proficloud.io/info and log into your account
2. The first page you will see is the *Device Management Service*, click on "Add Device"
3. Fill out the UUID (required) that can be found on your hardware
4. Optionally fill in name, location and a comment
5. Click on "Add Device to Proficloud"

You have successfully added a device to your Proficloud

Did you find this FAQ helpful?

 4  1

[Permalink](#)

^ **How do I change the meta data of my device?**

^ **How do I delete a Device?**

General



Proficloud.io - Landing Page | FAQ & News



PROFICLOUD

Proficloud

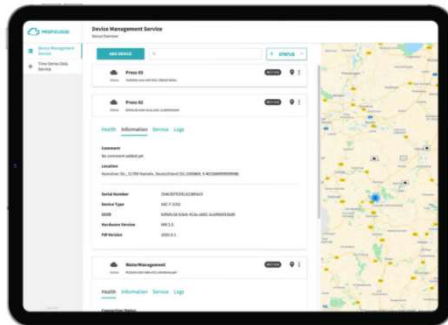
FAQ

News

Proficloud > News > Check out the new Proficloud with demo devices

Check out the new Proficloud with demo devices

News, Public News / April 20, 2020



Try the Proficloud Demo Account now and see the new Device Management Service and Time Series Data Service with demo devices. Get a real insight into the services and see for yourself that the Proficloud is the right step into digitization for you too.

With one click on the button you will be automatically logged into a demo account.

For the Time Series Data Service you need these credentials: **Username:** demoHMI2020@phoenixcontact-sb.io

Password: GoDigital2020!

TRY THE NEW PROFICLOUD

Tags: [Device Management Service](#) [Proficloud](#) [Time Series Data Service](#)

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INSPIRING INNOVATIONS

Proficloud.io – SIGN UP

PROFICLOUD | Proficloud | FAQ | News

Proficloud: Professional Cloud Solutions

Use the many advantages of the Proficloud, whether for your automation solutions or to monitor your machinery. Get an individual notification or simply check the health status of your Phoenix Contact hardware.

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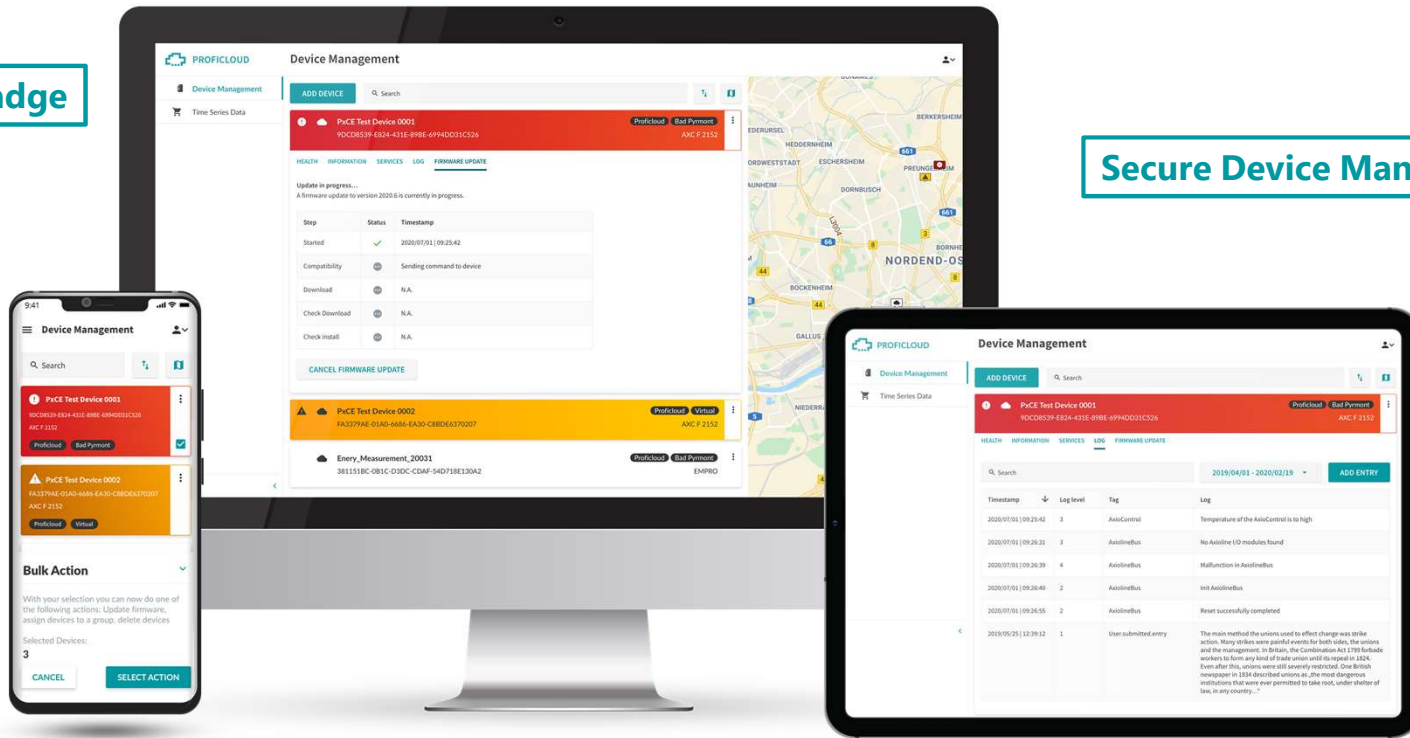
LOG IN

Proficloud.io - Device Management Service

Digital identification badge

Secure Device Management

State Of Health



Proficloud.io - Device Management Service

Device Management Service - minimal standard for all Proficloud- compatible devices

The Device Management Service for Phoenix Contact devices offers a standardized, application-independent device information in real time on Proficloud. In the digital age for industrial products this is the fulfillment of minimum requirements for smart devices.

In this way, health statuses and general information can be called up from anywhere in the world.

No more wasting time having to visit your facilities with personnel to assess the health status of the facility. A quick look into the Device Management of the Proficloud is enough. Each status message of each hardware device is translated into plain text, so you don't need expert knowledge to understand it. Save resources, time and nerves.

Furthermore, Device Management allows you to keep your hardware up to date, so you can be sure that the devices are always provided with the latest firmware security updates. You can quickly and easily get an overview of several locations and plan measures based on Device Management.

The Device Management Service within the Proficloud is free of charge and thus offers a perfect cost/benefit calculation.



Proficloud.io - Device Management Service | HEALTH



Device Management Service

Device Overview



Device Management Service

ADD DEVICE

Search

Time Series Data Service

PxCE Test Device 0001 Proficloud Bad Pyrmont AXC F 2152

9DCD8539-E824-431E-89BE-6994DD31C526

HEALTH INFORMATION SERVICES LOG FIRMWARE UPDATE

Connection Status
Online

Device Status
Device defective. Battery faulty.

Notifications
Firmware Update available

PxCE Test Device 0002 Proficloud Virtual AXC F 2152

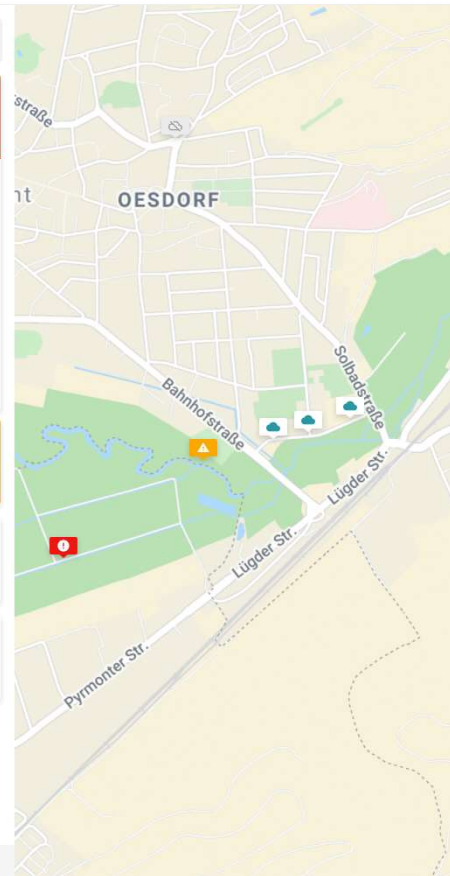
FA3379AE-01A0-6686-EA30-C8BDE6370207

Energy_Measurement_20031 Proficloud Bad Pyrmont EMPRO

381151BC-0B1C-D3DC-CDAF-54D718E130A2

Energy_Measurement_20032 Energy Bad Pyrmont EMPRO

CBE57A25-A381-7BA9-CC1B-C00F88CC97EA



INSPIRING INNOVATIONS

Proficloud.io - Device Management Service | INFORMATION



Device Management Service

Device Overview



Device Management Service

ADD DEVICE

Search

Time Series Data Service

PxCE Test Device 0001 Proficloud Bad Pyrmont AXC F 2152

9DCD8539-E824-431E-89BE-6994DD31C526

HEALTH **INFORMATION** SERVICES LOG FIRMWARE UPDATE

Description

Sensors and instrumentation are nowadays driving the central forces of innovation, not only for Industry 4.0, but as well for other "smart" megatrends, such as smart production, smart mobility, smart home, smart city and smart factory.

Tags

Proficloud Bad Pyrmont

Location

Dringenauer Str. 10, 31812 Bad Pyrmont, Deutschland (51.9779698, 9.278241399999999)

Serial number 248789GGJW9341DGJKVLG
Device Type AXC F 2152
UUID 9dcd8539-e824-431e-89be-6994dd31c526
Hardware Version HW 2.0

PxCE Test Device 0002 Proficloud Virtual AXC F 2152

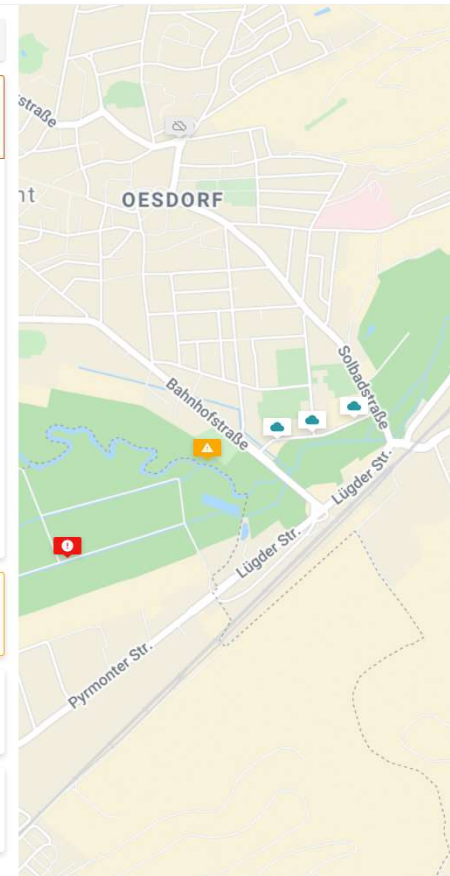
FA3379AE-01A0-6686-EA30-C8BDE6370207

Energy_Measurement_20031 Proficloud Bad Pyrmont EMPRO

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Energy_Measurement_20032 Energy Bad Pyrmont EMPRO

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INSPIRING INNOVATIONS

Proficloud.io - Device Management Service | SERVICES



Device Management Service

Device Overview



Device Management Service

ADD DEVICE

Search

Time Series Data Service

PxCE Test Device 0001 Proficloud Bad Pyrmont AXC F 2152

9DCD8539-E824-431E-89BE-6994DD31C526

HEALTH INFORMATION **SERVICES** LOG FIRMWARE UPDATE

TIME SERIES DATA

PxCE Test Device 0002 Proficloud Virtual AXC F 2152

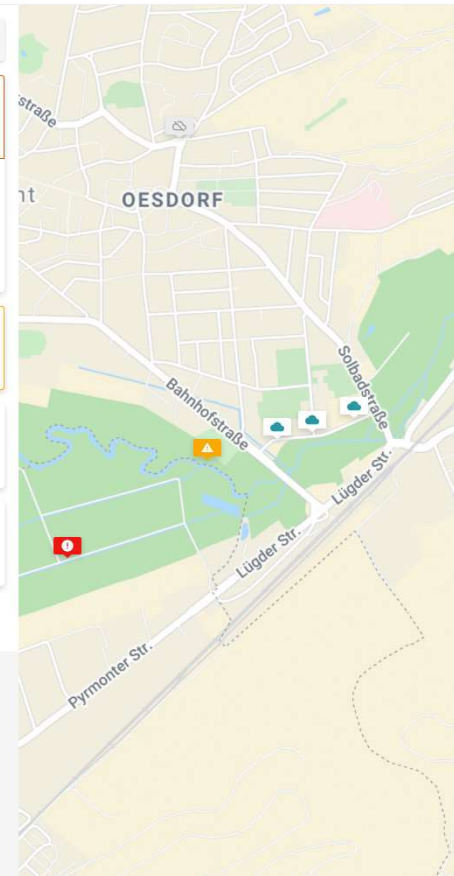
FA3379AE-01A0-6686-EA30-C8BDE6370207

Energy_Measurement_20031 Proficloud Bad Pyrmont EMPRO

381151BC-0B1C-D3DC-CDAF-54D718E130A2

Energy_Measurement_20032 Energy Bad Pyrmont EMPRO

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Quick Links

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INSPIRING INNOVATIONS

Proficloud.io - Time Series Data

Device Template -

UUID: 8c7a15ea-a939-48d4-a272-872ef472752b

Health

Action needed

Status Message

Memory usage above 90%

Log Messages

Time	con_logs.con_LogLevel	con_logs.con_LogMessage	con_logs.con_LogTags
2020-03-20 07:11:47	1.00	message	tag
2020-03-20 07:10:47	1.00	message	tag
2020-03-20 07:10:17	1.00	message	tag
2020-03-20 07:09:47	1.00	message	tag
2020-03-20 07:09:17	1.00	message	tag
2020-03-20 07:08:46	1.00	message	tag

Metrics

connectivity

1.25

Automatic Generated Dashboard



INSPIRING INNOVATIONS

Proficloud.io - Device Management Service I LOG



Device Management Service

Device Overview



Device Management Service

ADD DEVICE

Search

Time Series Data Service

🔔 ☁️ **PxCE Test Device 0001** Proficloud Bad Pyrmont AXC F 2152

9DCD8539-E824-431E-89BE-6994DD31C526

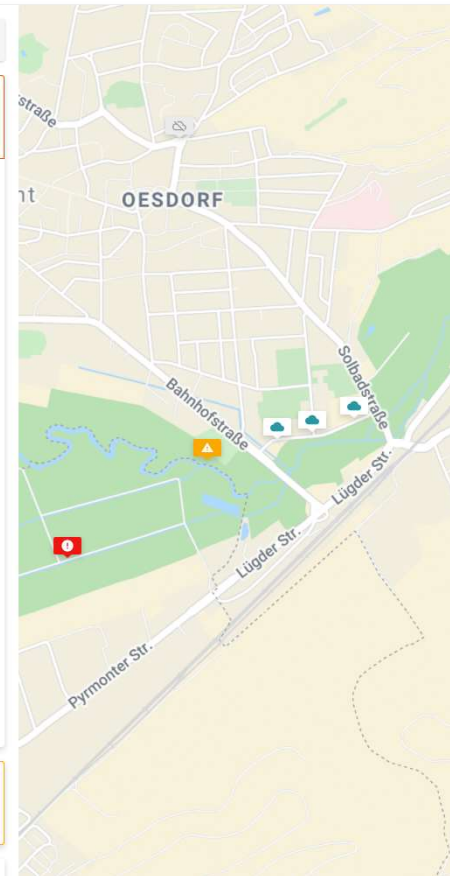
HEALTH INFORMATION SERVICES **LOG** FIRMWARE UPDATE

Search 2019/04/01 - 2020/02/19 ADD ENTRY

Timestamp	Log level	Tag	Log
2020/07/01 09:25:42	3	AxioControl	Temperature of the AxioControl is to high
2020/07/01 09:26:31	3	AxiolineBus	No Axioline I/O modules found
2020/07/01 09:26:39	4	AxiolineBus	Malfunction in AxiolineBus
2020/07/01 09:26:40	2	AxiolineBus	Init AxiolineBus
2020/07/01 09:26:55	2	AxiolineBus	Reset successfully completed
2019/05/25 12:39:12	1	User.submitted.entry	The main method the unions used to effect change was strike action. Many strikes were painful events for both sides, the unions and the management. In Britain, the Combination Act 1799 forbade workers to form any kind of trade union until its repeal in 1824. Even after this, unions were still severely restricted. One British newspaper in 1834 described unions as „the most dangerous institutions that were ever permitted to take root, under shelter of law, in any country...“

⚠️ ☁️ **PxCE Test Device 0002** Proficloud Virtual AXC F 2152

FA3379AE-01A0-6686-EA30-C8BDE6370207



INSPIRING INNOVATIONS

Proficloud.io - Device Management Service I UPDATE



Device Management Service

Device Overview



Device Management Service

ADD DEVICE

Search

Time Series Data Service

PxCE Test Device 0001 Proficloud Bad Pyrmont AXC F 2152

9DCD8539-E824-431E-89BE-6994DD31C526

HEALTH INFORMATION SERVICES LOG [FIRMWARE UPDATE](#)

Firmware version

2020.3

New firmware available

2020.6

START FIRMWARE UPDATE

PxCE Test Device 0002 Proficloud Virtual AXC F 2152

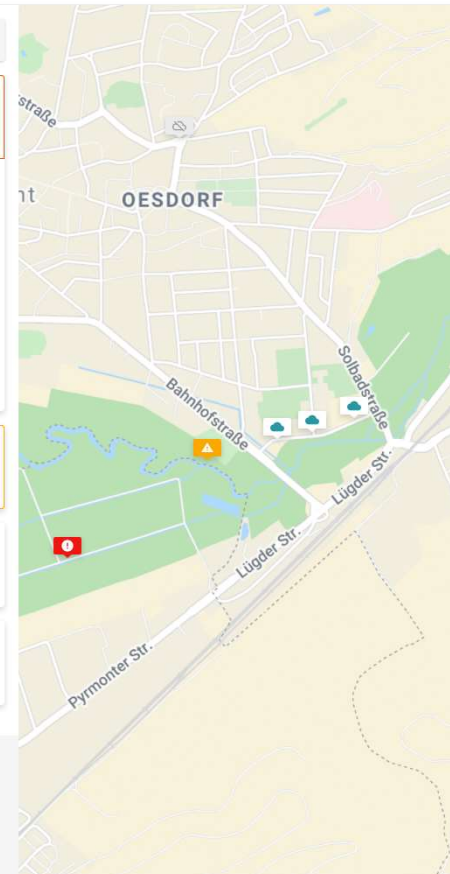
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Energy_Measurement_20031 Proficloud Bad Pyrmont EMPRO

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Energy_Measurement_20032 Energy Bad Pyrmont EMPRO

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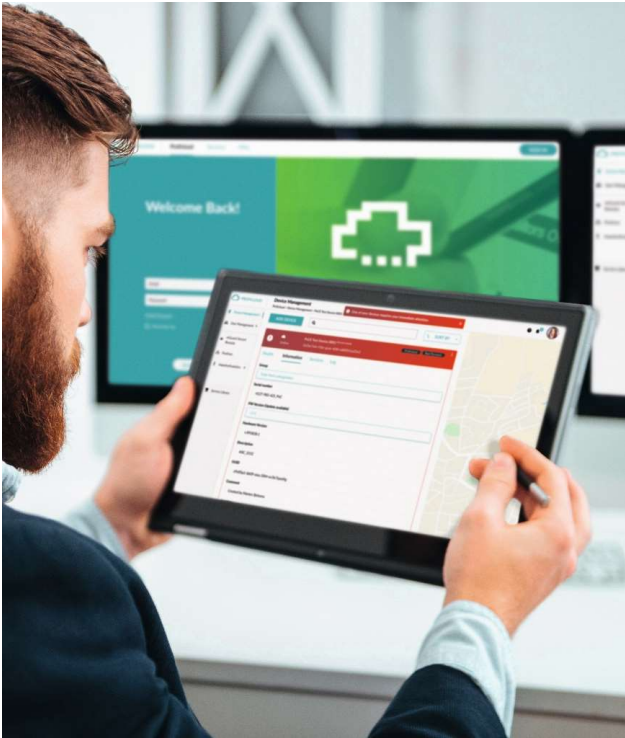
Quick Links

Imprint & Data Privacy

INSPIRING INNOVATIONS

Smart Services@Phoenix Contact

Agenda



About Us



IoT-Plattform Proficloud

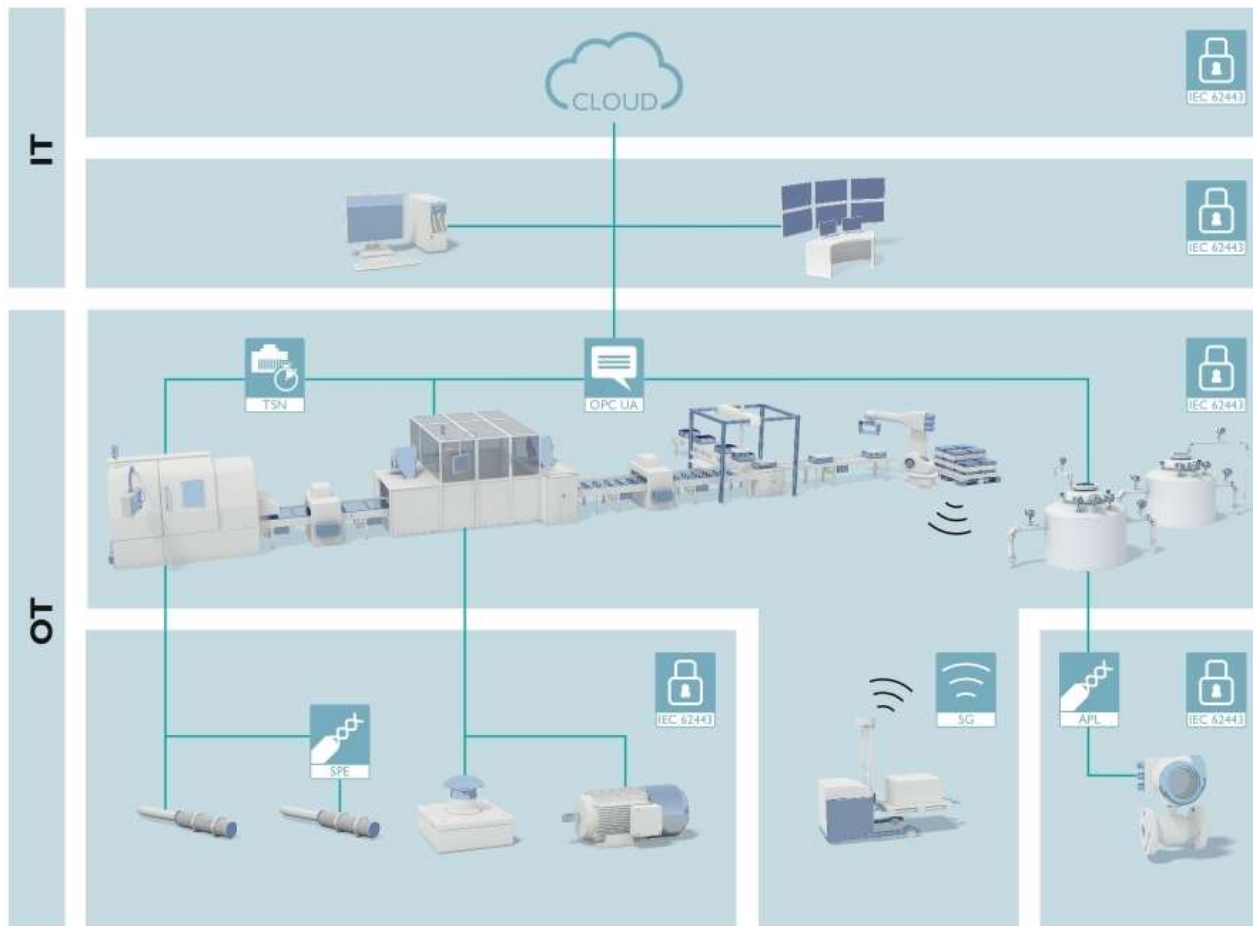


Smart Services for Smart Devices



Applications

From the sensor to the cloud



Added Value

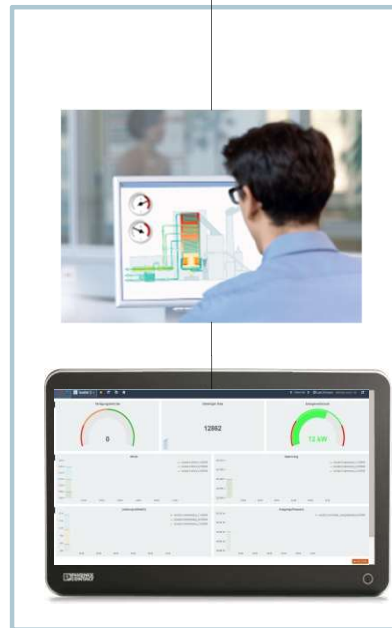
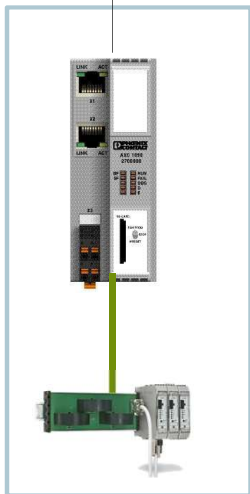
- IEC-62443
- OPC UA
- TSN
- SPE | APL
- 5G



INSPIRING INNOVATIONS

Proficloud.io enables state of the art Smart Services

Applications - Energy data monitoring and analytics



Target

Optimization energy consumption of injection molding machines
Detection of wear due to higher current consumption

Proficloud.io How to Connect?



PROFICLOUD

(MQTT, HTTPS, ...)

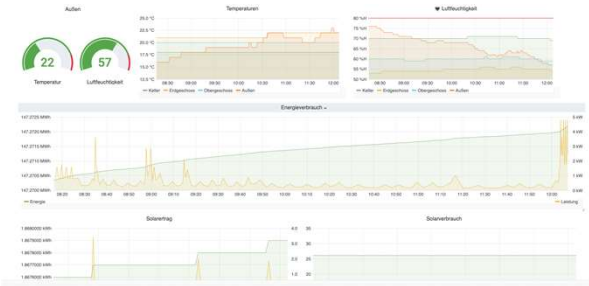


PLCnext

(Modbus/OPC UA)



Olymel - Cornwall Ontario



PROFICLOUD

Pike - Proficloud enabler




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Proficloud.io enables state of the art Smart Services

Applications - ewima


Die EWIMA-Hubs




Hub Warendorf
Im Entsorgungszentrum Ennigerloh werden dezentrale Energieerzeugung und die Prozesse zur Abfallverarbeitung miteinander verknüpft.



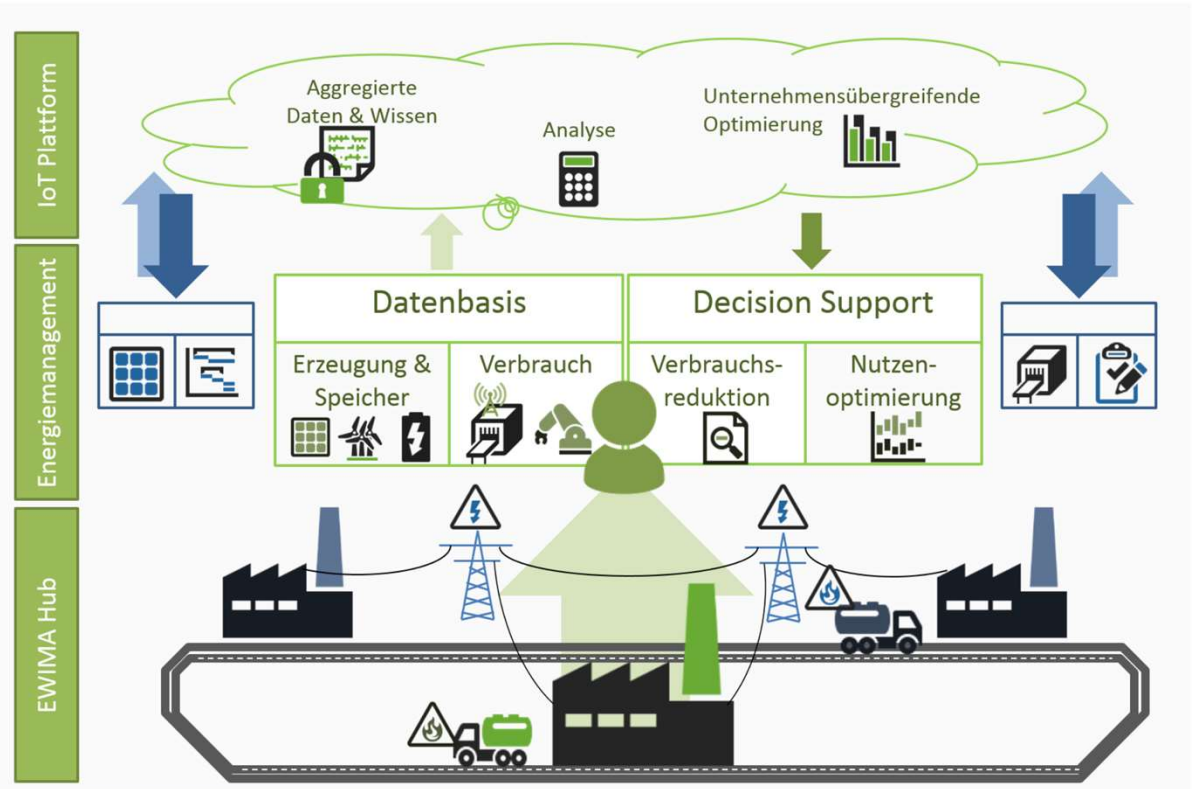
Hub Gütersloh
Im Umfeld der... fluktuierenderer... freistehenden P...



Hub Düren
Als Verbund von Nachbarunternehmen sollen bei DTG und Polyfoam Konzepte für das unternehmensübergreifende Energiemanagement realisiert werden.



Hub Aachen
In den Innovati... entsteht ein De... Veranschaulich...



Proficloud.io enables state of the art Smart Services

Applications - Predictive maintenance



Benefits:

- Reduction of critical downtimes
- Avoid unplanned service costs
- Increase productivity
- Reduction of the cost of spare parts provision

Data analysis

Correlation between operation, configuration and setting of the production plant and the downtime.

Determination of the factors leading to a standstill. Derivation of algorithms, with which also short disturbances can be predicted.



Smart Services@Phoenix Contact
Thank You!

Webinar IMA 2020

Mayor información



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