
PLCnext Technology
Designed by PHOENIX CONTACT
PLCnext Control for
Edge Computing

EDGE Computing

Agenda

- What is Edge computing ?
- Benefits of Edge computing
- Edge-PC 15x2
- Functions and Features EPC 1502
- Aplications

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What is Edge computing ?

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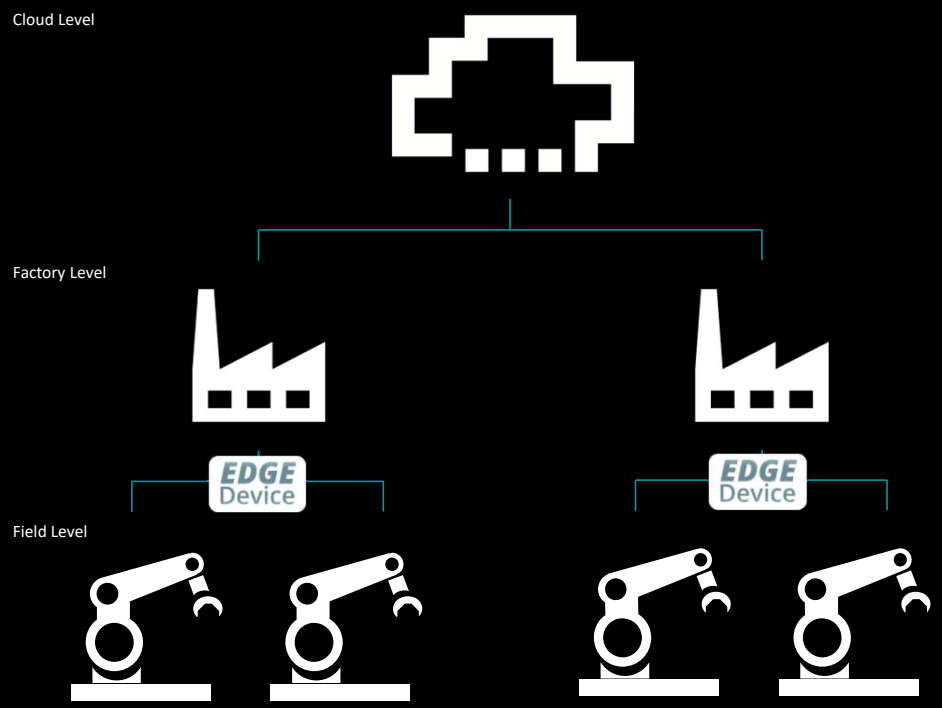
Edge-PC 15x2

What is Edge Computing?

- Cloud computing has revolutionised how people store and use their data, but…
- Latency, bandwidth, security or a lack of offline access can be problematic
- To solve this problem, users need robust, secure and intelligent on-premise infrastructure for edge computing
- When data is physically located closer to the user who connect to it, information can be shared quickly, securely and without latency

>>Edge Computing is the practice of capturing, storing, processing and analyzing data near the client, where the data is generated.

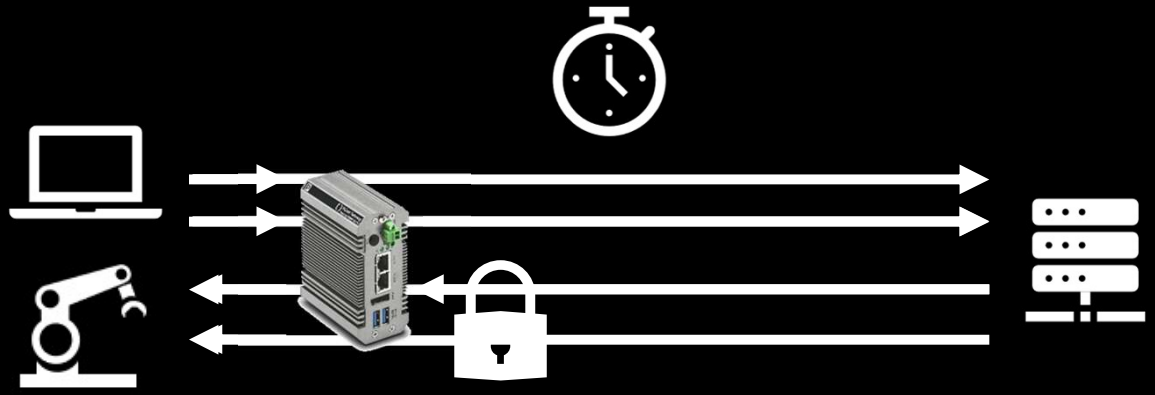


Edge-PC 15x2

Benefits of Edge Computing

For IoT use cases, connecting thousands of devices and datapoints directly to the cloud is often not feasible due to costs, privacy, and network issues.

- Network latency
- Data privacy and security
- Network load reduction
- Computational efficiency
- Reduced cloud costs
- Autonomy



Edge-PC 15x2

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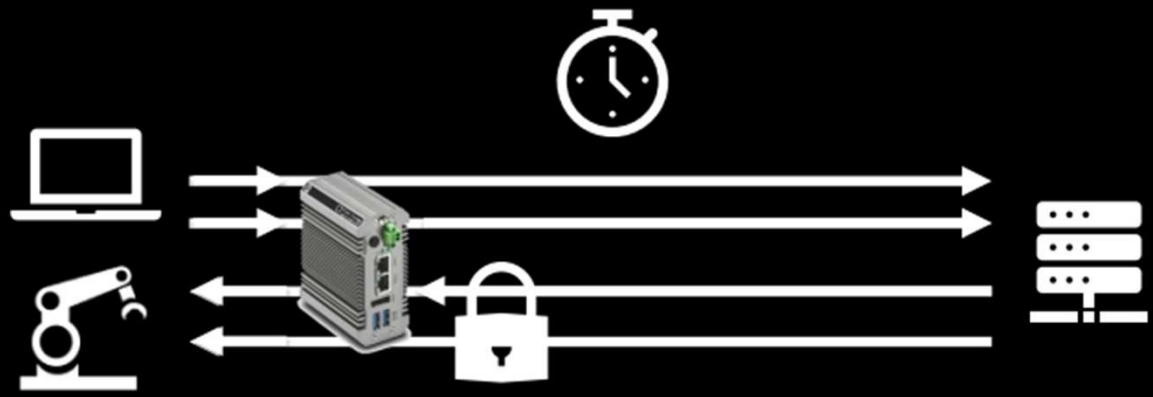
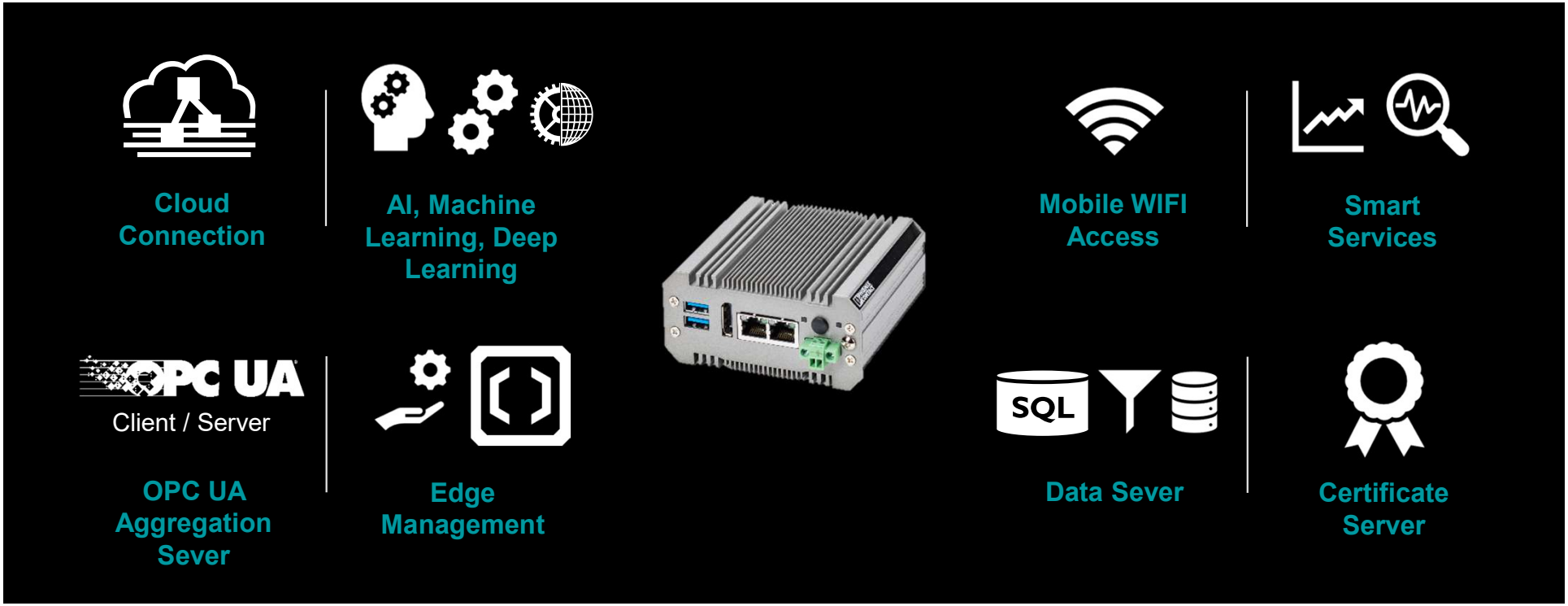


PLCnext Ecosystem – PLCnext Control

Edge functions within PLCnext Control



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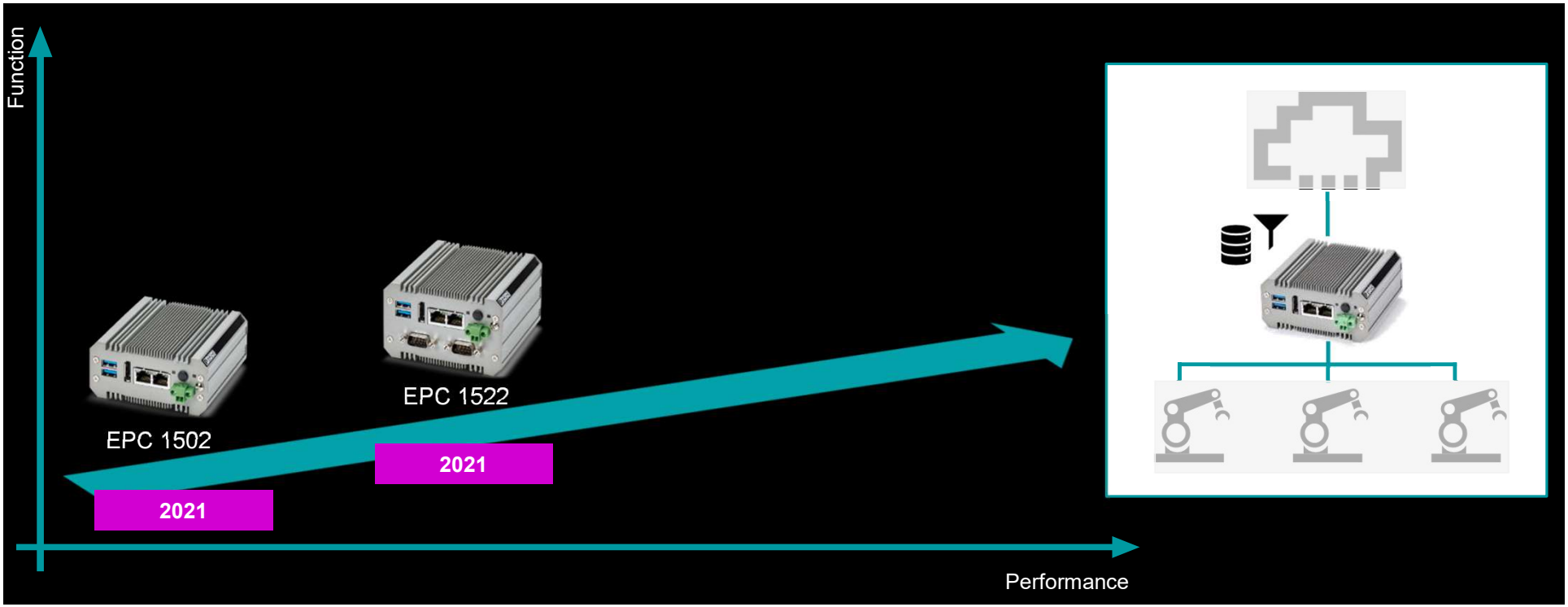
PLCnext Control for Edge Computing



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Edge-PC 15x2

Product Features – EPC 1502

Core

Intel Celeron N3350 (Dual Core)

RAM

2 GB RAM

Temperature

0°C-50°C

Storage

32 GB eMMC

Approvals

UL, CE

Features

PLCnext RT Edge Functions

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Edge-PC 15x2

Product Features – EPC 1522

Core

Intel Celeron N3350 (Dual Core)

RAM

4 GB RAM

Temperature

0°C-50°C

Storage

32 GB eMMC + 128 GB m.2 SSD

Approvals

UL, CE

Features

PLCnext RT
Edge Functions
+Serial Interface

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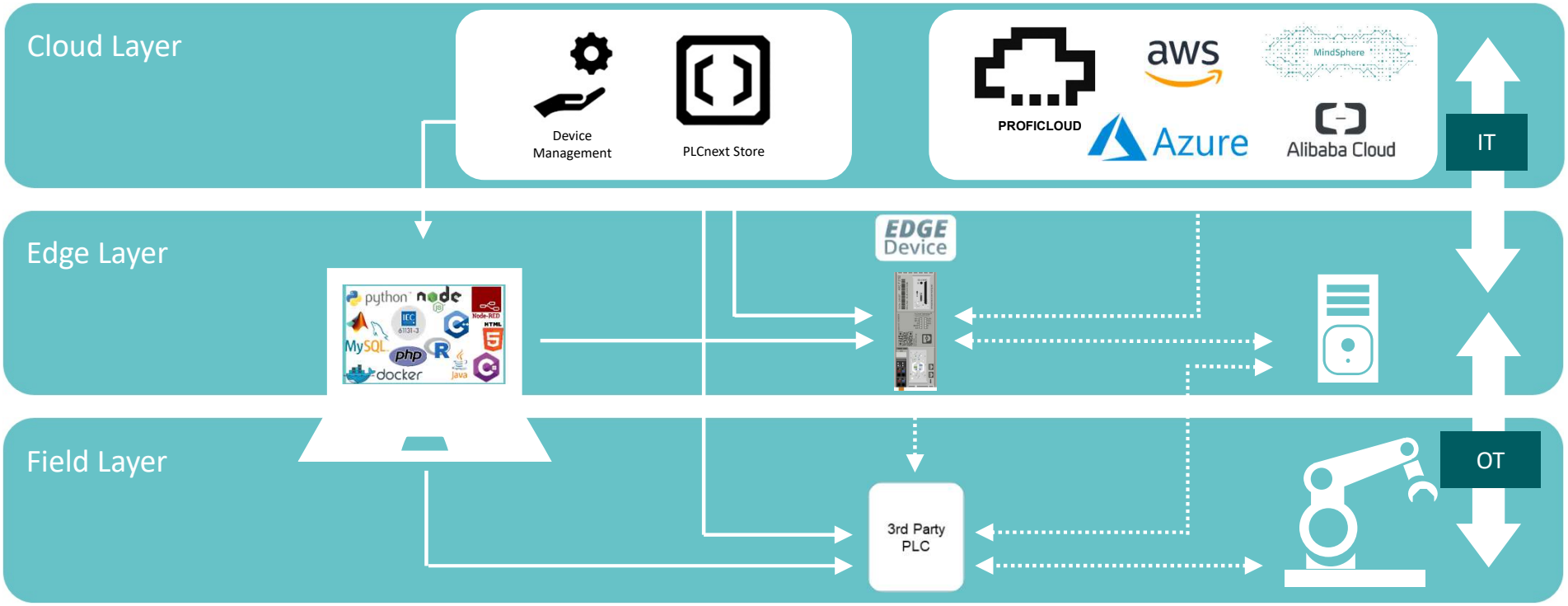
Arquitecture

Edge Computing



PLCnext Control

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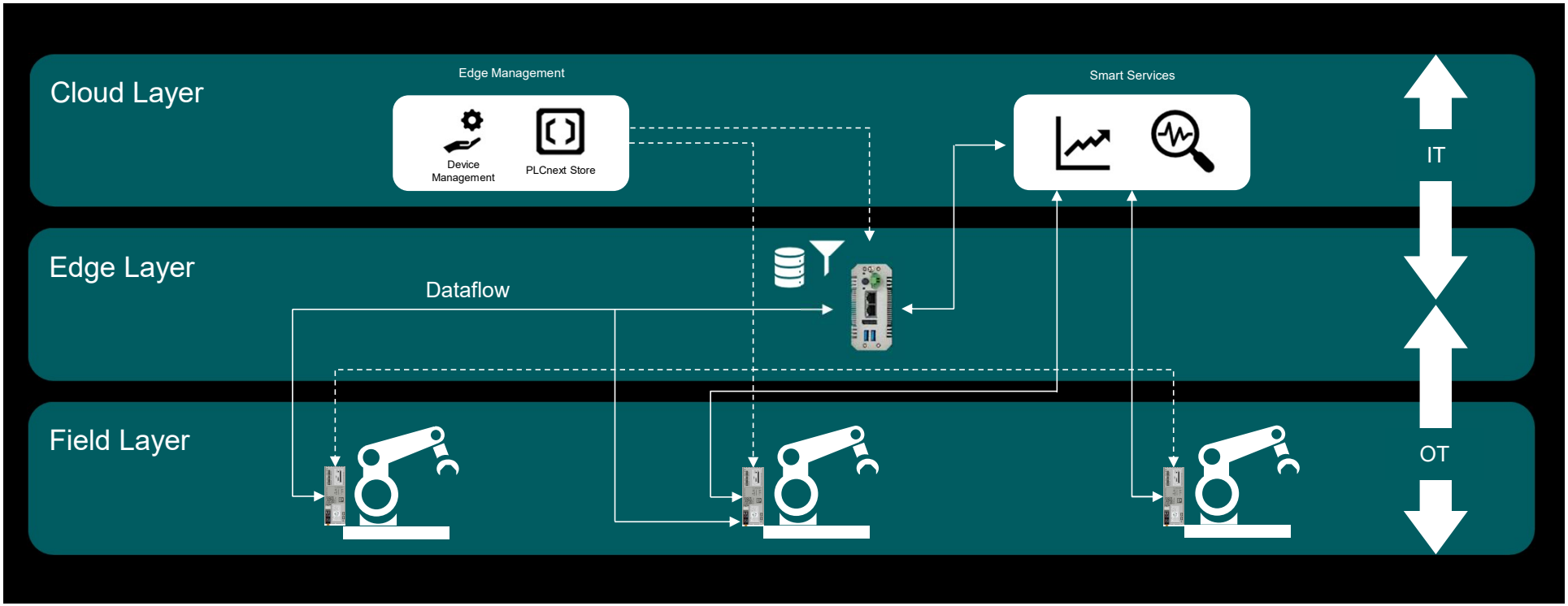
PLCnext Ecosystem – PLCnext Control

Definition



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Edge EPC 15x2

>>Collecting and (pre-)processing data locally to reduce the bandwidth load on the network while at the same time ensuring faster processing and thus lower delay times

- Factory automation (focus)
- Mechanical engineering
- Infrastructure
- Oil and Gas
- Wind Parks
- Machine Building

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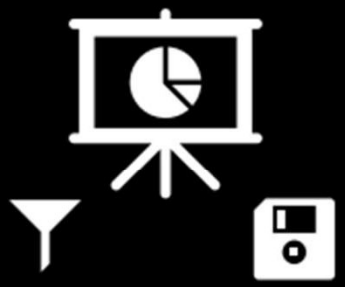
Edge-PC 15x2

Edge-PC 15x2 Usecase

The EPC combines OT- and IT-Layer

Data collection from sensors, actuators and PLCs.
Usage of typical protocols like OPC UA, Profinet, Modbus TCP & RTU and much more.



Data storage, processing and dashboards.
A wide range of rules and statistics can be used with Influx DB. Visualization is supported with Influx DB Chronograf.

Sending data to superordinated- and Cloudsystems.
Integrated cloud connection and support of a wide range of communication e.g. via Node Red

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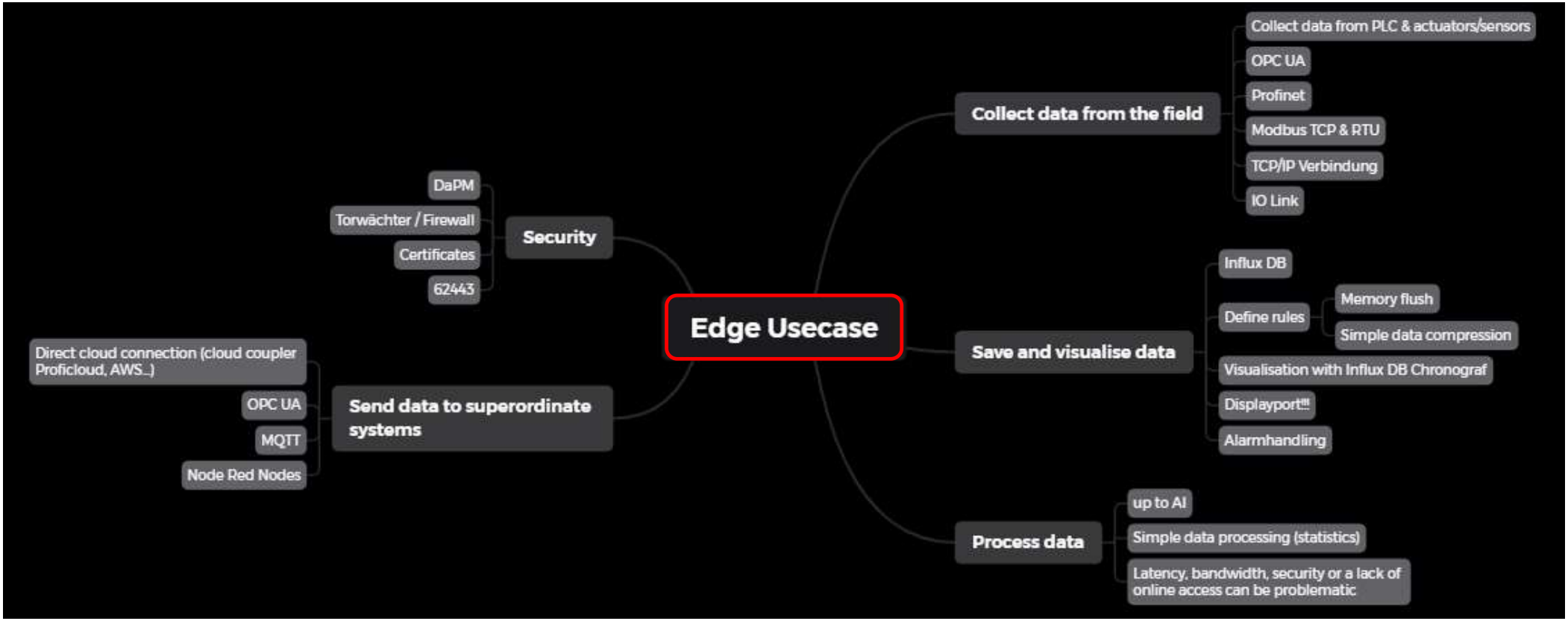
Edge Usecase



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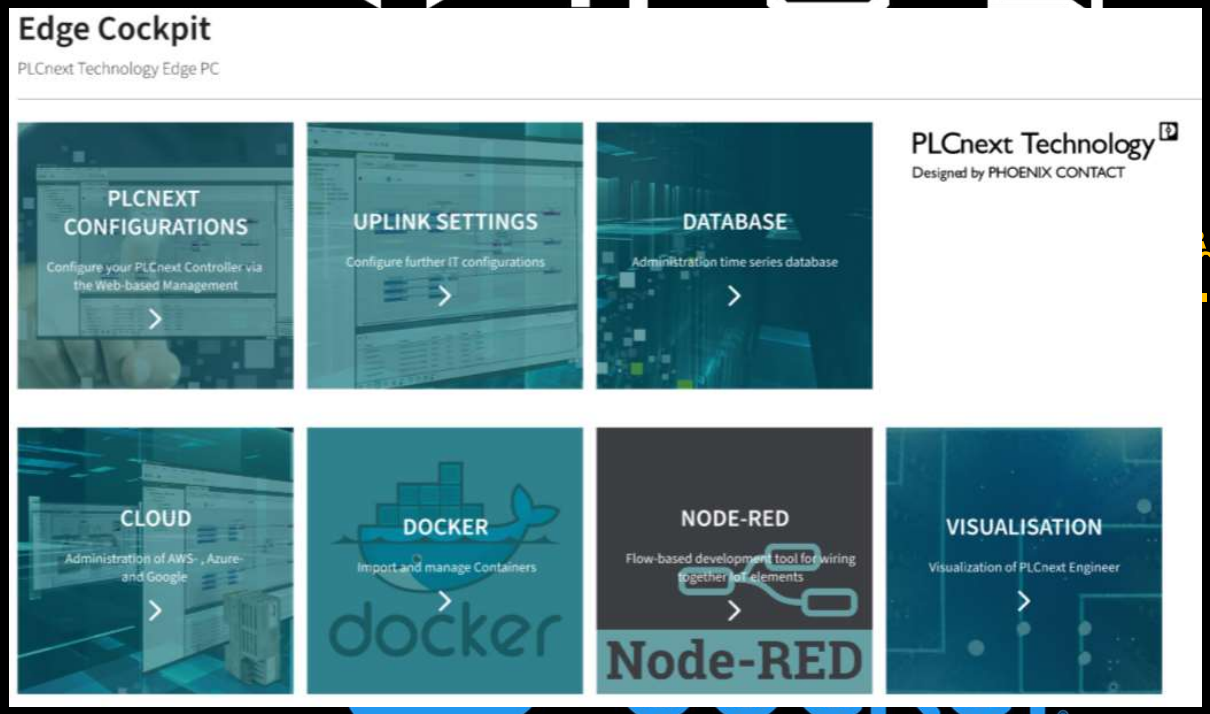
Edge-PC 15x2

EPC Feature Set

- PLCnext fully integrated
- Node-RED preinstalled
- Time-Series database preinstalled
- Docker and Portainer via PLCnext Store
- Easy cloud connection and certification
  - PROFICLOUD
  - Amazon Web Services
  - Microsoft Azure
  - Google Cloud

✓ Easily accessible via User-Interfaces
  - ✓ No Expertise needed
  - ✓ No command prompts needed
  - ✓ Consistent graphical programming



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Edge-PC 15x2

Hands On – Live

- >> Edge Cockpit
- >> Node-RED
- >> Influx Database + Chronograf
- >> Portainer

What is Edge computing

Edge computing is the practice of **capturing**, **storing** **processing** and **analyzing** data near the client where the data is generated and then **communicate** to different systems for other functions.

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El Futuro de la Computación Edge

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