API capabilities and demo

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Ericsson Private 5G
Integration into the Enterprise

- EP5G is built to support existing IT & OT practices

- Provide IT centric management and configuration options

- Expose APIs for automation and integration IT & OT processes

The enterprise digitalization

- Enterprises are building digitalization platforms to enable and accelerate business case implementations

- The platforms are API driven

- Use-cases and process are automated by stitching the functionalities of the platform together

- The platforms typically stretches both cloud and on-prem data centers

- Connectivity is an important but small part of that platform
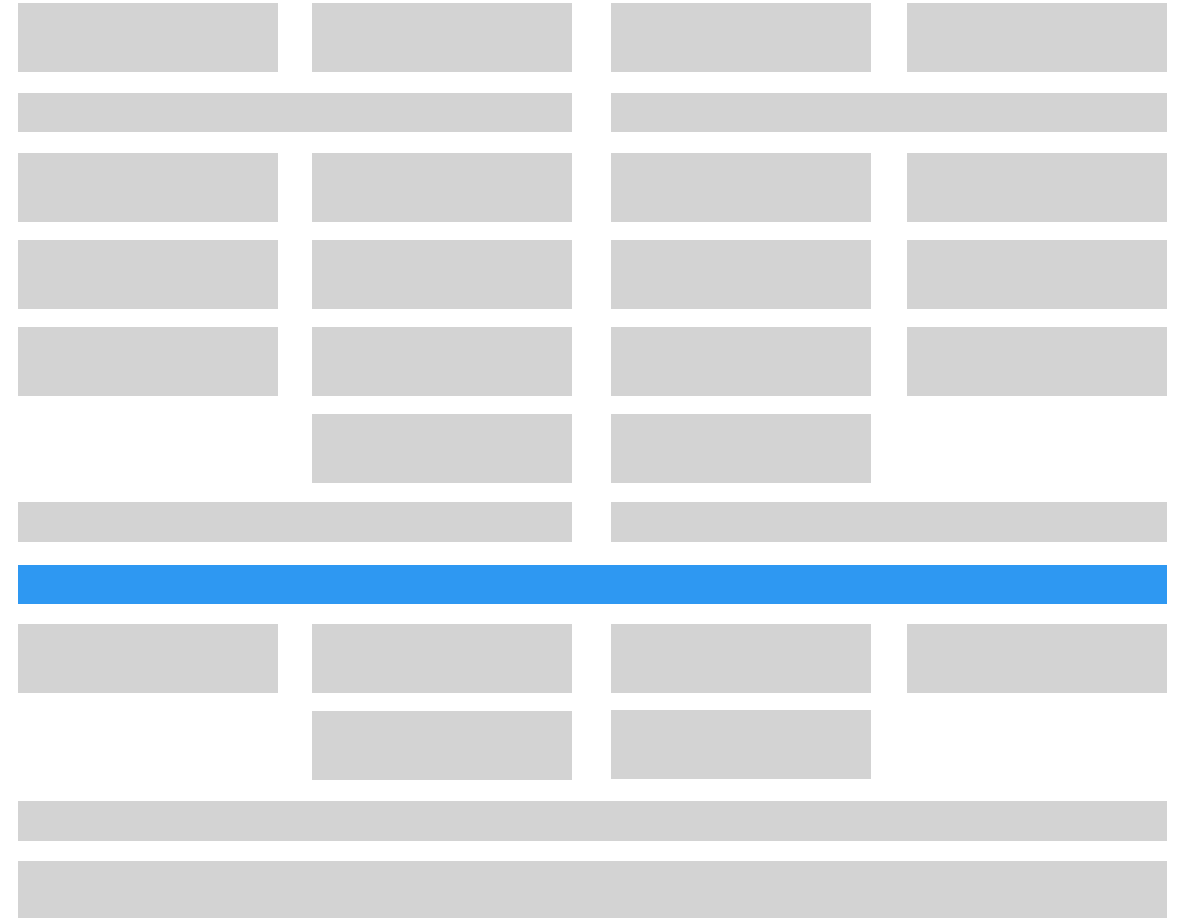
Our ecosystem partnerships

Devices and hardware

Machinery OEMs and companies are providing chipsets, modules, gateways, sensors and IT infrastructure that enable cellular connectivity

Software and applications

Application developers, independent software vendors (ISVs) and hyperscale cloud providers developing and selling offerings that reside in any of the IT layers of the enterprise

Professional services

System integrators, business advisors and test houses with offerings and services for installing and running a network
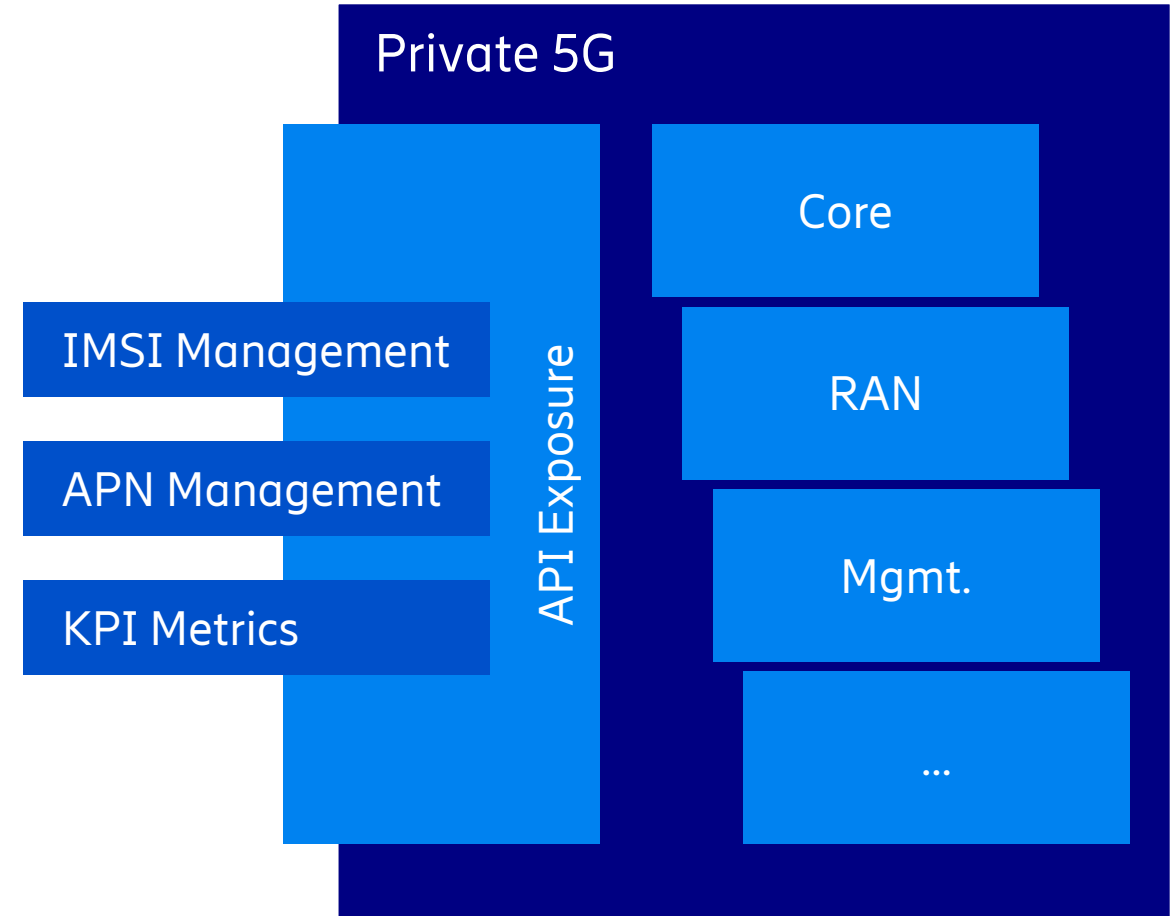
EP5G 1.0 API Functionality

IMSI Management

- CRUD
- Write SIM

APN Management

- CRUD
- QoS
- Network segmentation (IP subnet + vLANs)

KPI Metrics

- System performance & load

Private 5G

IMSI Management

APN Management

KPI Metrics

API Exposure

Core

RAN

Mgmt.

...

EP5G Provisioning API

- Allows for bulk and individual IMSI provisioning

- Highly performant, provision 100+ IMSIs per call in seconds

- Access to on-prem SIM-writer if attached to Network Controller

- Same provisioning function for LTE & 5G

IMSI API Functions:

IMSI

- List IMSIs
- Update IMSI
- Create IMSI
- Get next IMSI
- Show IMSI
- Delete IMSI
- Show IMSI data usage
- IMSI-IMEI Binding

SIM

- Show SIM card
- Write SIM card

EP5G APN/DNN API

- Manage DNN/APNs

- Define IP subnet per DNN/APN

- Set QoS (QCI) per DNN/APN

- Assisting functions to avoid IP subnet and address overlaps

APN API Functions:

APN

- List APNs

- Update APN (incl. QoS setting)

- Create APN (incl. QoS setting)

- Get next CIDR

- Check overlap

- Show APN

- Delete APN

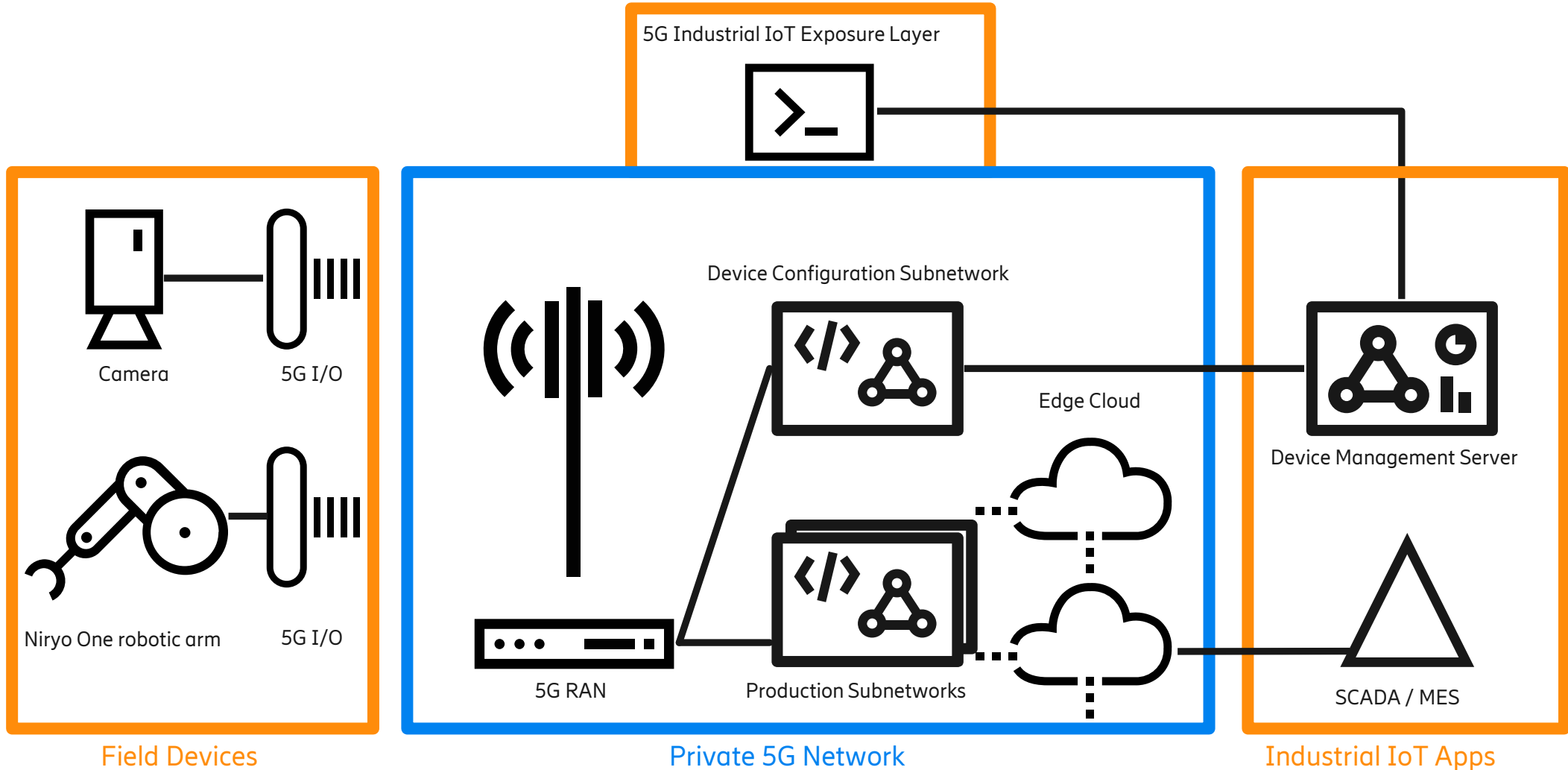- Get next IP

✕

Authorize

Authentication

To authenticate calls to the API, an API Key is needed. This can be requested from the system administrator of Ericsson Private 5G. The API Key needs to be presented as the HTTP header X-Api-Key in each request. The base URL, organization ID, and site ID of the targeted system is also needed, to correctly build the complete request URL. All required access details (key, URL, organization ID & site ID) can be generated by the system administrator through the Ericsson Private
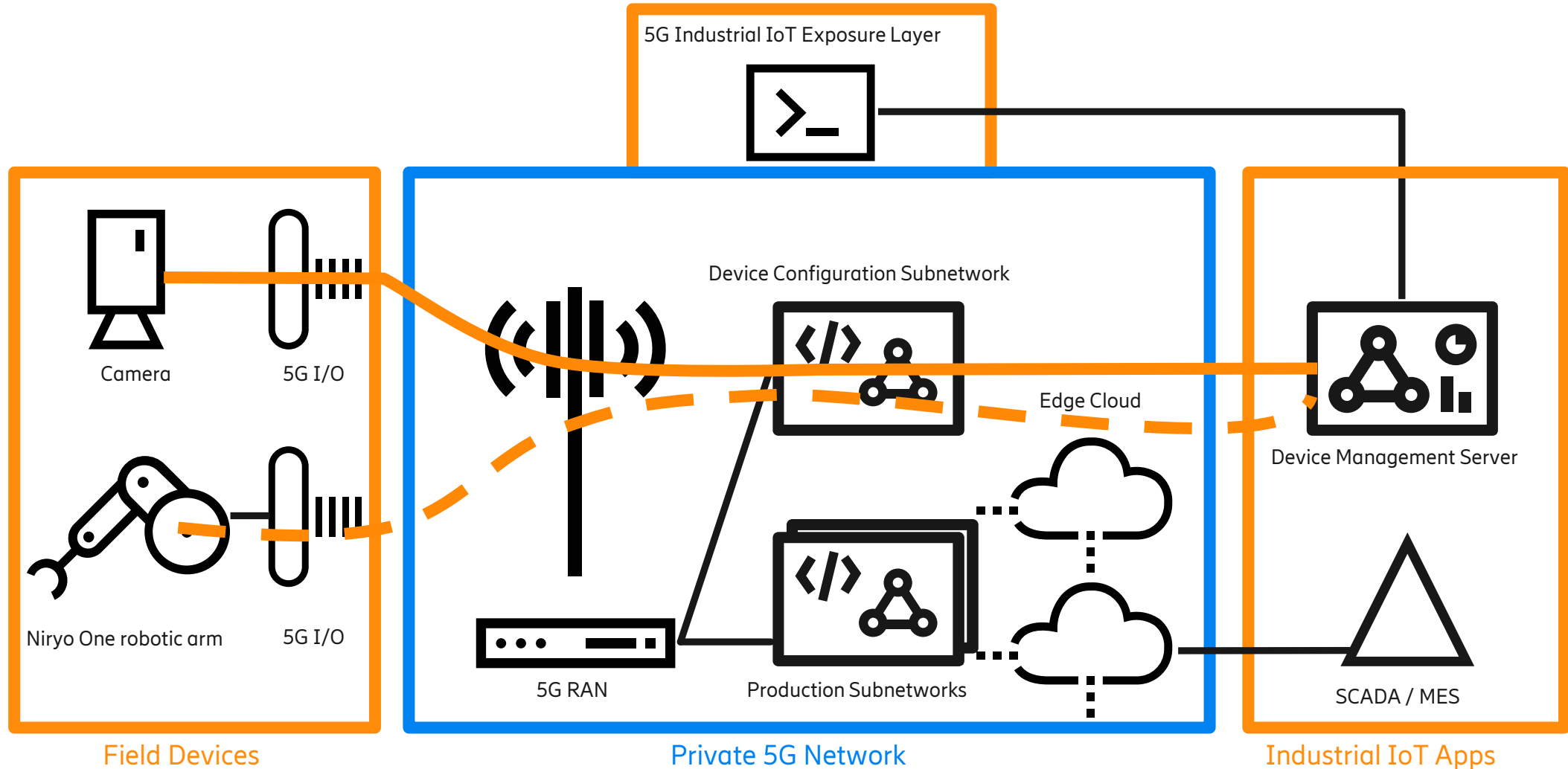
Javascript Example:

```javascript
const orgId = 'org1';
const siteId = 'site1';
const key = 'ABCD1234';
const url = 'https://eu.private5g.ericsson.net/public/v2';

fetch(`${url}/organization/${orgId}/site/${siteId}/epc/imsi`, {
  method: 'GET',
  headers: { 'X-Api-Key': key }
}).then(response => response.json())
```

Demo Setup

5G Industrial IoT Exposure Layer

Device Configuration Subnetwork

Edge Cloud

Device Management Server

5G RAN

Production Subnetworks

SCADA / MES

Camera

5G I/O

Niryo One robotic arm

5G I/O

Field Devices

Private 5G Network

Industrial IoT Apps

Demo Setup

Demo Setup

Field Devices

- Camera
- 5G I/O
- Niryo One robotic arm
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Private 5G Network

- 5G Industrial IoT Exposure Layer
- Device Configuration Subnetwork
- Edge Cloud
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- Production Subnetworks

Industrial IoT Apps

- Device Management Server
- SCADA / MES