IMPACT for IoT

Release 18

Nokia IMPACT for IoT provides mobile operators with the opportunity to connect with the mobile applications & analytics community with a distinctive set of enabling features. Nokia IMPACT provides a suite of carrier-grade monetizable capabilities for device management, data collection and network capability exposure for all types of networks. These networks include licensed and unlicensed spectrum, as well as IP and non-IP access.

The emergence of new IoT network types with ultra lightweight devices and battery lives measured in years is an exciting time for mobile operators. Although mobile operators are coming under pressure from multiple cloud-based providers, mobile operators have a distinctive asset with their mobile network. The Nokia IMPACT for IoT platform provides a set of capabilities enabling mobile operators to connect with the IoT application & analytics developer community with services only they can provide.

Features

• Data collection optimized for low power, wide area networks
• Device management proven at scales from hundreds to millions of devices
• Landmark network exposure proven in broad scale
• Integrated embedded SIM manager
• Billing mechanism for monetization
• Cloud native architecture

Benefits

• Easily provide application access to normalized data stream
• Remotely manage billions of unmanned devices
• Provide applications with solutions to problems created by IoT networks
• Remotely manage billions of unmanned embedded SIMs
• Increase revenue opportunities in line with growth in IoT
• Deploy on Public and Private Clouds

Technical specifications

Protocols

• OMA LWM2M
• OMA DM
• TR-069
• IP and non-IP variants of MQTT
Figure 1. IMPACT Comprehensive Architecture for Cellular Low Power - Support Mobile Operators at Scale

Access types
- IP agnostic
- 3GPP non-IP
- Unlicensed LoRaWAN™
- Integrated 3GPP SCEF

Extensibility
- High performance interface for applications
- Management APIs
- Protocol APIs proven with protocols, such as Mbus and Xirgo
- Single sign-on with SAML 2.0
- REST and JSON format

Deployment options
- OpenStack
- CloudBand
- VMWare

Business logic
- Full lifecycle device management
- Award winning firmware upgrade
- Publish/subscribe data collection
- Enterprise-grade user interface
- Fault management graphical interface
- Remote gateway management

Charging
- 3GPP format billing record
- Secure file transfer

Security
- Pre-shared key credentials
- Certificate authentication
- Encryption of sensitive data
- Password policy
- Authentication framework
- Role-based authorization

Operations & Maintenance
- User interface for O&M
- APIs for key tasks
- SNMP for trap management
- Key performance indicators

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From the enabling infrastructure for 5G and the Internet of Things, to emerging applications in digital health, we are shaping the future of technology to transform the human experience. networks.nokia.com

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