


INNOVATING NETWORK SERVICES AND RESOURCES

5G
PRODUCTS

i2i POLICY MANAGER

PCF/PCRF

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 **i2i Systems**
innovation to integration

About i2i Systems

i2i Systems is an international information technology company that specializes in developing innovative ideas and solutions. With its highly experienced team in the Telecommunications industry it offers a diverse variety of products in Telco OSS/BSS domains, as well as 5G network solutions.

i2i Systems delivers Next Generation Converged Revenue Management solutions enabling CSPs to unlock new business models, mitigate competition, reduce costs, and quickly monetize new use cases. This is being achieved through systems that are fully convergent, cloud-native, API-first, interoperable, low-code / no-code and modular. The offerings are highly scalable and support subscriber bases ranging from tens of thousands to tens of millions, harmoniously. i2i Systems improves its experience and skills by adapting new technologies and investing in research and development to provide best quality, efficient and visionary products to its customers. In accordance with its disruptive vision, i2i Systems further invests in 5G core-network, offering an end-to-end integrated cloud-based BSS and Network solution for optimizing and converging Service Providers IT and Network landscape thus increasing efficiency and enabling new revenue streams.

Customers - Telecom (CSP)



Partners



i2i POLICY MANAGER (COMBINED PCF/PCRF)

MAKES NETWORK SERVICES AND RESOURCES INNOVATIVE

i2i Policy Manager makes operators meet traffic growth challenges, optimize usage of network resources efficiently and introduce innovative network services while maintaining their positive experience.

i2i Policy Manager is a 3GPP Release 16 compliant Policy and Charging Control (PCC) suite for mobile and fixed broadband networks. It supports the following main features:

- Real-time management of subscribers, applications, and network resources based on service provider-configured business rules
- Compliant with 3GPP Release 16 version
- Combined and seamless support for 2G, 3G, 4G, 5G NSA, 5G SA Mobile and Fixed Broadband Networks
- Support for Physical, Virtual and Container deployments
- Support for VM-based cloud infrastructure based on ETSI NFV architecture
- Integrated with EMS/NMS systems
- Integrated with DevOps workflows, supporting CI/CD
- Supports multiple deployment options such as PLMN level, slice shared and slice specific
- Modular, flexible and extendible policy design (data models, triggers, conditions and actions) via user friendly i2i Policy Builder and rapid deployment with high performance
- Support for all PCC interfaces such as DIAMETER (Gx, Rx, Sy etc.) and 5G Service Based Interfaces (SBI) (N7, N15, N5, N28, N36, etc.) with strong network interface compatibility
- Home-routed & Local Breakout Roaming

Even though it is a combined policy manager, it is possible to deploy PCF and PCRF entirely independently.



i2i Policy Manager Features

i2i Policy Manager is located in 2G/3G/4G/5G NSA/5G SA as illustrated in the diagram below:

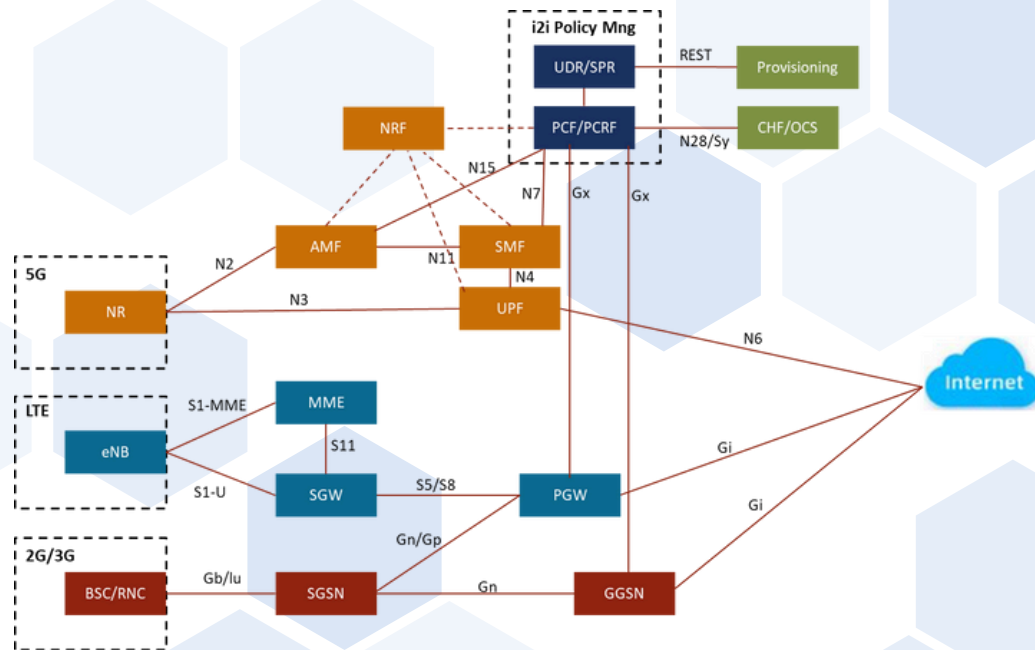



Figure 1 - i2i Policy Manager in 2G, 3G, 4G, 5G NSA, 5G SA

i2i Policy Manager supports many features including but not limited to the following:

- Session and IP-CAN management policy services over N7 and Gx such as:
 - Provisioning control of policy decisions related to QoS and bandwidth management
 - Provisioning control of charging characteristics, gating, service flow detection for session management services
 - Application detection and control
 - Spending limit based policy control over N28 and Sy
 - Location based policy control
 - Usage based policy control
 - Time based policy control
 - Personalized policy services
 - Presence Reporting Area (PRA) Support
- Access management services such as RAT/Frequency Selection Priority and Service Area Restrictions over N15
- UE policy services such as transfer of UE route selection policies (URSP) and access network discovery and selection policies to UE
- Multi-PCEF support with online session binding
- Installation/modification/removal of predefined and dynamic PCC rules

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- Gating control, charging-related information support, integration with AF over Rx and N5
 - Policy management for IMS and AF Services
 - IMS emergency calls support
 - Multimedia priority services
 - Network Location (NetLoc)
 - Custom AVPs support
 - Overload control handling
 - SMS and Email notification services
 - Event based data reporting

Some example use cases that can be easily configured by the operator using i2i Policy Manager are listed below. Apart from the listed use cases, the operator can imagine, design and deploy many additional innovative use cases based on their real time network, location, subscriber data and time, etc. parameters provided by self and peer network functions such as SMF, AMF, PGW, GGSN, AF, BNG and CHF/OCS:

- Time of day based plans (daily, weekly, etc.)
- Tiered service plans (gold, silver etc.)
- Application based plans (gaming etc.)
- Location based service access
- Customer loyalty programs
- Parental control
- Zero rating and/or high quality social media access
- QoS and speed control
- Shared data plans
- AF services such as VoLTE, VoNR and VoWiFi
- Sponsored data offers
- Freemium (try and buy etc.)
- Fair usage plans
- Happy hour plans
- Allowed applications and/or destinations

Technology & Performance

i2i Policy Manager is fully compliant to ETSI NFV architecture as illustrated below and deployed on a virtualized infrastructure (such as Openstack, VMware) as a VNF, that provides a high available, distributed, redundant, stateless and scalable architecture by enabling addition or removal of i2i Policy Manager instances within the infrastructure.

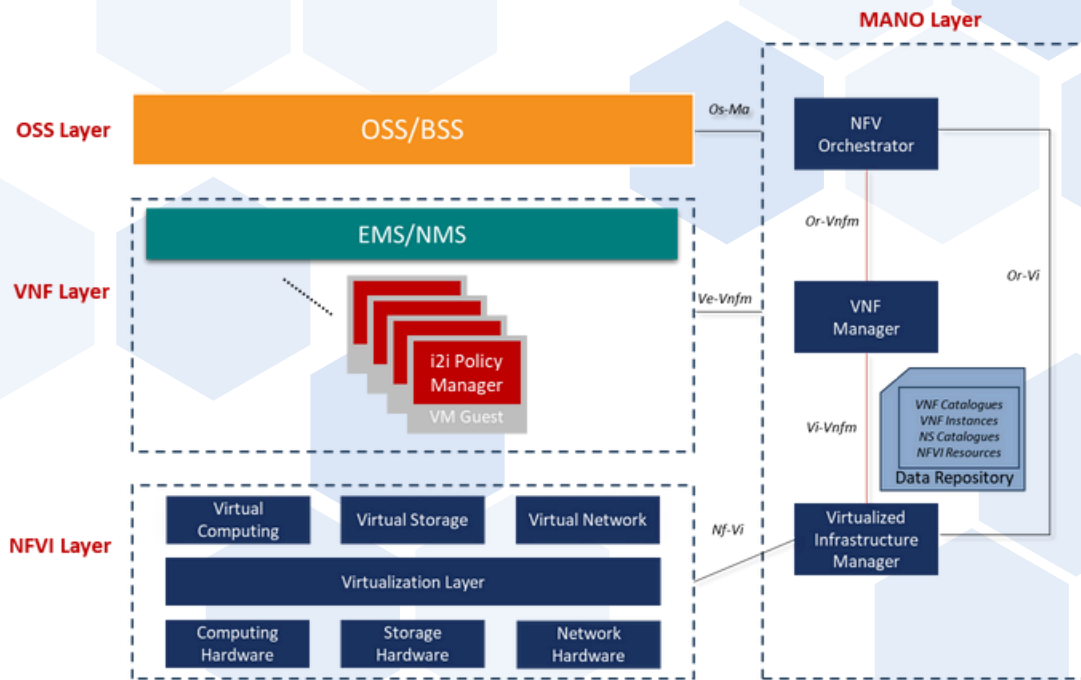


Figure 2 - i2i Policy Manager in ETSI NFV Architecture

i2i Policy Manager integrates with a variety of common services for data collection, analysis and visualization services for operational aspects such as event based elastic logs, metrics/counters, alarms, featured CLI commands and subscriber traces.

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