i2i Systems
5G
MCPTT

i2i Systems
innovation to integration

i2i MCPTT

ADRESSING CRITICAL COMMUNICATION NEEDS OF GOVERNMENTS AND INDUSTRIES

Together with its Core Network and IMS products, i2i System offers its MCPTT (Mission Critical Push To Talk) solution to address both business and mission-critical use cases by combining its power of 20+ years of experience in Telecom industry with the cutting edge technologies and frameworks.
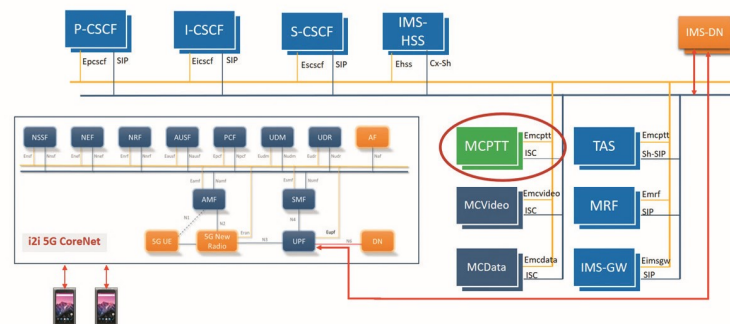
i2i MCPTT enables mobile network operators and partners to target growth opportunities in many industries from public safety to private enterprise. With MCPTT, governments are better able to safeguard society and save lives in times of crisis. For mobile network operators, this solution enables them to win new business by catering to critical communication needs of governments and industries. The MCPTT Service is intended to support communication between several users (a group call), where each user has the ability to gain access to the permission to talk in an arbitrated manner.

Design Principles

i2i MCPTT is fully compliant with 3GPP Release 13.

The technical architecture is based on the following contemporary design principles:

- Signalling Control Plane and Media Plane Splitting
- Functional Decomposition of MC Service Architecture
- Support of User Authentication and Authorization
- Support of Roaming
- Support of Affiliation and De-affiliation to MC Service Groups
- Interconnect Support
- Cloud-native & Heterogeneous Deployment
- Seamless Scaling via MANO
- Supports creating virtual machine based VNF and containerized VNF using Kubernetes
- Shared infrastructure models allowing easy MVNO deployments

i2i MCPTT Features

i2i MCPTT supports the following main functionalities standardized within 3GPP Release 13:

- User authentication and service authorization
- Configuration
- Affiliation and de-affiliation
- Group calls on-network (within one system or multiple systems, pre-arranged or chat model, late entry, broadcast group calls, emergency group calls, imminent peril group calls, emergency alerts)
- Private calls on-network (automatic or manual commencement modes, emergency private calls)
- MCPTT security
- Encryption (media and control signalling)
- Simultaneous sessions for call
- Dynamic group management (group regrouping)
- Floor control in on-network (within one system or across systems)
- Pre-established sessions
- Resource management (unicast, multicast, modification, shared priority)
- Location configuration, reporting and triggering

Technology & Performance

i2i MCPTT NFs are deployed on a virtualized infrastructure, which provides an Operating System-independent, distributed, redundant and scalable architecture by enabling addition or removal of NF instances within an NF set. The NF set consists of individual and functionally self-sufficient NF instances that may be distributed to different locations. For providing scalability, new instances of NFs can be added easily to or removed from the NF set. Consequently, NFs behave as static entities independently and work as one single dynamic entity as a whole.

In order to achieve 3GPP performance objectives, in-memory databases and caching mechanism along with asynchronous and non-blocking messaging are being used between the components within an NF and between the NFs.

i2i MCPTT supports performance metrics, logs, alarms, and statistics by issuing periodic or on demand counters which can then be used by the EMS (Element Management System) for KPI measurements and reporting purposes.
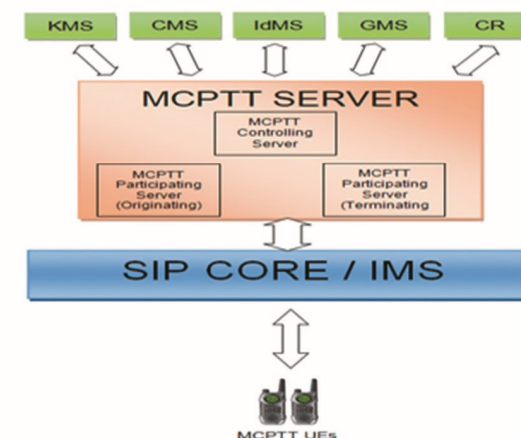
Contact Experts

Please do not hesitate to contact us for any information you may deem necessary for your needs.