

MindBricks ICE SDK For Connected Home

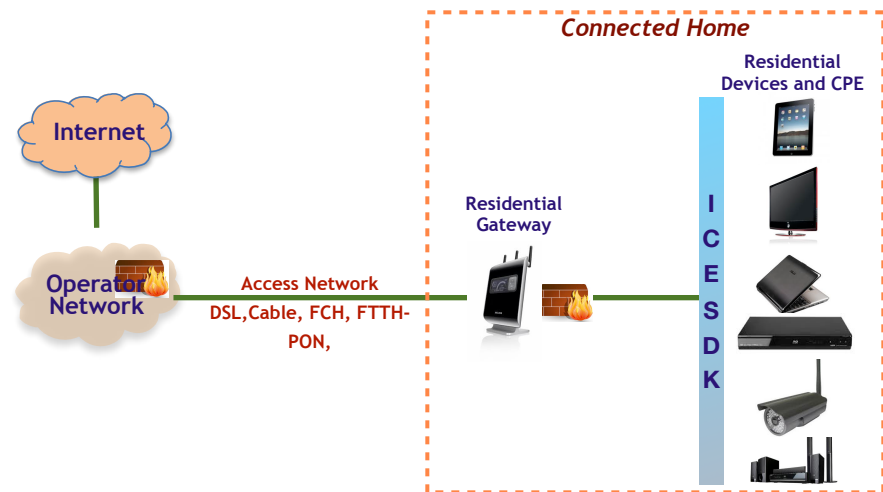
MindBricks ICE SDK for Connected Home is a comprehensive NAT traversal software development kit (SDK) based on the Interactive Connectivity Establishment (ICE) specification developed by the IETF's MMUSIC working group, which has been designed and developed especially to cater to the connected residential devices. This SDK provides the most comprehensive implementation of the latest STUN, TURN and ICE specifications.

NAT and firewall traversal is an important component to facilitate communications involving devices on private home network installations which are often located behind NAT and firewalls. The widespread adoption and deployment of NAT and firewalls by the industry has been a hindrance to the adoption and deployment of the packet based application like VoIP and Unified Communications.

The MindBricks ICE SDK for Connected Home provides NAT traversal solution for packet based applications based on Voice over Internet Protocol (VoIP), Conferencing, Instant Messaging, desktop/application sharing and peer-to-peer communications.

The MindBricks ICE for Connected Home SDK can be used in applications based on SIP, IMS, RTSP and MEGACO/H.248 protocols.

VoIP, Instance Messaging, P2P Conferencing, Streaming, Desktop / Application Sharing



Applications

ICE can help traverse the NATs for a wide array of packet based applications such as:

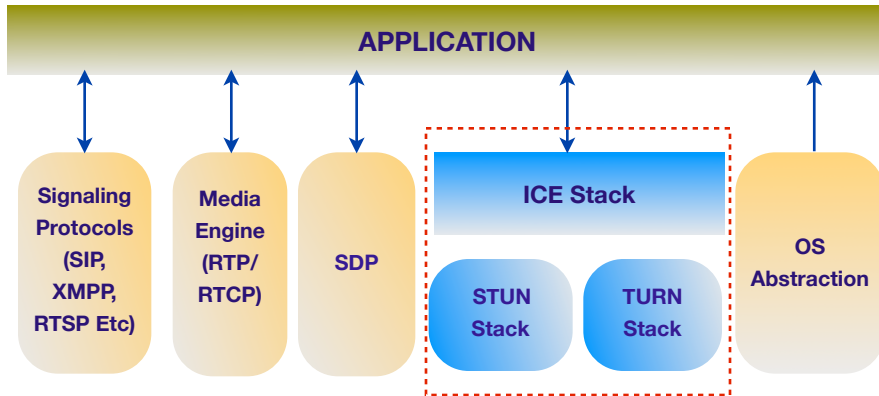
- Audio and Video multimedia (SIP/IMS) applications and soft clients
- Peer to Peer applications
- Instant messaging applications
- Conferencing applications
- Desktop sharing and collaboration applications

Features

- Support for latest ICE, STUN and TURN specifications
- Support for both ICE Full and ICE Lite modes
- Modular and can be easily integrated with any VoIP/SIP/IMS/RTP, streaming and messaging client
- Platform independent
- Support for both IPv4 and IPv6
- Support for dual-stack and multi-homed devices
- Multiple media stream support
- Low footprint and high performance code

Architecture

MindBricks ICE for Connected Home SDK has been architected in a layered manner with each layer having distinct interface and APIs which makes these layers highly re-usable.



The interface to the ICE stack is via API function calls. The ICE stack internally does not make use of or spawn any threads and does not block on any operation. Further, the OS related functionalities like timers and sending and receiving of STUN messages on sockets has been abstracted out to the application which makes the ICE stack to be easily ported to any platform in quick time.

Key Benefits

- Simple and well defined API for rapid application development and integration with 3rd party signaling (such as SIP, IMS, XMPP, RTSP etc) and media stacks as well as other packet based applications
- Comprehensive implementation of the latest IETF standards STUN, TURN and ICE
- Platform Independent code (easily ported to different platforms)
- Highly modular architecture which enables easier customizations of the ICE stack to suit the requirements
- Flexible business model and licensing options

Specifications and Compliance

- Interactive Connectivity Establishment (ICE): A Protocol for Network Address Translator (NAT) Traversal for Offer/Answer Protocols (RFC 5245)
- Session Traversal Utilities for NAT (STUN): RFC5389
- Traversal Using Relays around NAT (TURN): Relay Extensions to STUN (RFC 5766)
- Default Address Selection for Internet Protocol version 6 (IPv6) (RFC 3484)
- Cable Labs PacketCable 2.0 NAT and Firewall Traversal Technical Report.
(<http://www.cablelabs.com/specifications>)

About MindBricks

MindBricks is an engineering solutions and professional services company, offering excellence and expertise in the design, development and deployment for Internet-based electronics and communication devices incorporating connectivity, communication, entertainment and information technologies. We help customers effectively manage complex development and integration tasks while concurrently addressing your immediate product development challenges and ensuring your continued strategic success. Combined with our own products and extensive experience in the areas of product development, professional services, project management, quality process, and customer support, we help customers meet business objectives for quality, productivity, cost and time to market.