I3 Forum

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Session Border Controllers

**SBC Functions:**

- Security
- Interworking (H.323, IWF, SIP-I, SIP)
- Inter-Operability (multi-vendor support)
- IP-IP Switch
  - Policy Engine
  - Routing
  - Billing
Session Border Controllers – Connecting Core & Peers

- Access Home Network
- S-CSCF / Session Server
- I-CSCF / Registrar
- SIP Interface
- Profiles Profiler Routing Security Session
- P-CSCF
- SIP Interface
- Profiles Profiler Routing Security Session
- IBCF
- SIP Interface
- SIP Interface
- SIP Interface
- SIP Interface
- SIP Interface
- SIP Interface
- H.323 Interface
- Carrier C
- Carrier B
- Carrier A
- Access/Public Network
- Public Network
- Home Network
- C4 Home Network
- C4 Home Network
- C4 Home Network
Security Goals

- Protect VoIP elements and infrastructure
- Ensure quality service availability
- Prevent theft of bandwidth & service
- Provide authentication, integrity and confidentiality
- Fraud detection, Lawful Interception, spam, etc.
Security Threats

- **Denial of Service**
  - Flooding with packets or messages to cause resource exhaustion
  - Malicious packets or messages to cause crashes
  - Session teardown, session black holing

- **Theft**
  - Service theft
  - Bandwidth theft
  - Business information (network topology)

- **Eavesdropping**
  - Unauthorized traffic capture
  - Session hijacking, alteration

- **QoS abuse**
  - Misusing/over using bandwidth
  - QoS degradation

- **Others**
  - Billing Fraud
  - Unauthorized access
  - Impersonation
Dialogic® BorderNet™ Session Border Controllers

**TRANSFORM**
Solves real world challenges in transforming networks to all-IP and delivering multimedia services

**CONNECT**
Connects wired and wireless service provider and enterprise networks cost effectively and without compromising on QoS

**SECURE**
Secures networks and customers to maintain a high level of user experience

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**Business Services**
- BorderNet 500 ESBC

**Access**
- BorderNet 2020 IMG

**Peering**
- BorderNet 3000 SBC
- BorderNet 4000 SBC
Highest Performance SBC in 1 RU

- Purpose Built SBC with the best of breed architecture
- One platform scales up (32Ks) and down (250s) @ 600 CAPS
- Rapid Deployment and Management through friendly Web UI
- Wireshark based integrated Tracing
- Flexible & GUI driven Header manipulation Profiler
- Patent Pending & Unique Secure Transparency
Secure Transparency

A forward looking view:
- know the entire SIP message and its characteristics
- Trust Levels of the peers
- Operators’ policies for deciding transparency
- Hide SIP protocol nuances from Operators
- SIP message Requests & Responses securely transparent
Beyond Border Functions

- **SIP Session via SBC between a Core and Peer Entity**
- **Transaction Services do not require SBCs but message transformations are satisfied by the SBCs’ Interworking/Protocol Fixing logic**
  - Here the SBC is not a border function but a point of normalization and content manipulation
Miercom Performance Verified Award

Miercom Awards Performance Verified Certification to the Dialogic® BorderNet™ 4000 Session Border Controller

“The Dialogic BorderNet 4000 SBC delivered impressive performance and proved impervious to attempts to compromise its performance with attack traffic.”