Session Control Applications for Enterprises
Driven by Strong Secular Growth Trends...

- The adoption of SIP trunking
- The explosion of wireless and opt-in communications
- The emergence of OTT service providers
- Video for real time communications
- The emergence of rich communications applications and services
Unified service evolves
- any device, any one, any time

Text  Voice  Data  Video  Presence + IM
Acme Packet Session Delivery Network Architecture

- **Application Session Controller (ASC)**
  - Integrates business applications with IP communication environments
- **Interactive Session Recorder (ISR)**
  - Session recording for compliance tightly coupled with SBC
- **SIP Trunk Xpress & Federation Xpress**
  - Simplified SIP trunking deployment & business-to-business UC federation
Agenda

• Acme Packet Introduction and contacts
• Enterprise SBC (E-SBC) Overview
  – Why are Enterprise Session Border Controllers (E-SBCs) important?
  – How do E-SBCs make Enterprise UC deployments easier, quicker and more robust?
• Interactive Session Recorder (ISR) Overview
  – Low-cost, simplified call recording for compliance
• Application Session Controller (ASC) Overview
  – Flexible, low-cost Communication Enablement of Business Processes
• Summary and getting more information
Why Acme Packet?

Leadership and expertise
- 60% market share, 10,000+ systems shipped, 32 of Fortune 100, 370+ enterprise customers, 91 of top 100 carriers

Clear Vision
- Pioneer and originator of the SBC category

Focus
- Ten years of session control expertise

Continuous Investment
- Strong, stable finances
- Publicly traded, NASDAQ: APKT
What's an E-SBC and why should you care?
Challenges in migrating to SIP

- **Security**
  - SIP based attacks threaten business productivity

- **Interoperability**
  - SIP is many standards - not all vendor implementations are the same

- **Reliability**
  - Ensure high quality user experience

- **Compliance**
  - Increasing regulation (recording)
Total Addressable Market

\[ \text{TAM} = A + B \]
Total Addressable Market

\[ \text{TAM} = A + B \]
Acme Packet delivers strong security

- Robust protection for IP borders ensures availability of communications services and applications
  - Industry-leading protection from session-layer attacks
- Strong privacy features protect end-to-end communications integrity
  - Strong protection while delivering real-time QoS
Acme Packet SBCs complement firewall security

- Firewalls are not designed for real-time IP communications
  - Impact service quality (Introduce jitter and latency)
  - Cannot scale to handle many 1000s of real-time sessions
  - Cannot provide carrier class availability (no call loss of failover)

- Firewalls cannot:
  - Prevent SIP-specific overload conditions and malicious attacks
  - Open / close RTP media ports in sync with SIP signaling
  - Track session state and provide uninterrupted service
  - Perform interworking or security on encrypted sessions

<table>
<thead>
<tr>
<th>Session-Layer Security</th>
<th>Firewall</th>
<th>SBC</th>
</tr>
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<tbody>
<tr>
<td>SIP DoS/DDoS prevention</td>
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<td>Dynamic access control</td>
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<tr>
<td>Encryption</td>
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</table>
Acme Packet E-SBCs deliver trusted 1\textsuperscript{st} class IP communications

- **Strong security**
  - Protects IP communication network borders
  - Privacy

- **Easy interoperability**
  - SIP interoperability
  - Protocol interworking

- **Assured reliability**
  - Quality user experience
  - Enables business continuity

- **Compliance**
  - Session replication for recording

Acme Packet
Why should you care?

• E-SBCs solve real problems for the customer, VAR and Service Provider
  – Faster, easier deployment and time to revenue / service usability

• Most medium / large enterprises are embracing the solution
  – Finance, Healthcare, Petrochemical, Government, IT Services…

• They are rapidly becoming included in most IP telephony & UC vendor reference architectures
  – Avaya, SEN & Cisco include SBCs in their enterprise IP telephony & UC reference architecture - as do many Service Providers
  – Acme Packet SBCs are qualified for use in MSFT OCS/Lync architectures
How an enterprise SBC helps with SIP trunk security

• Although many service provider SIP trunks are delivered over private IP networks instead of public IP WANs, security issues can still arise
• Most enterprise security officers will apply the “Defence in Depth” model to the SIP trunk IP flow
  – Just as they do for other IP flows like email and web applications
• The enterprise SBC acts as a Back-to-Back-User Agent (B2BUA) for all SIP signaling and media traffic
  – Features include dynamic port control, full SIP firewall, and DDOS protection
Acme Packet solves interoperability problems

- Multivendor interoperability between the broadest range of PBX and UC platforms and Service Provider networks
- Complements Vendor and Service Provider certification programs
  - Deals with complex or new call flows
- Interoperability features simplify deployment and protect investments
  - Configurable SIP header manipulation rules (HMR) to interwork between SIP implementations
  - SIP and H.323 protocol interworking
  - Media transcoding and DTMF interworking
  - Signaling transport and media encryption interworking
E-SBC Applications

- SIP trunking
- Enterprise-wide IP communications
- IP contact centre
- Hosted IP communications services
- Remote Worker
SIP Trunking

Target customers: Enterprises consolidating datacentres

SIP Trunking Provides:

- Lower telecom costs
- Consolidate trunks
- Centralize infrastructure
- On-net calling (end-to-end IP)
- Foundation for UC & Federation
- Business continuity

SBC Provides:

- Session Level Security at network edge
- Interworking between Enterprise PBX and SIP Trunk provider
- QoS measurement and control
- Resilience
- Session Recording

Target customers: Enterprises consolidating datacentres

Example diagram:

- Enterprise
  - PBX/UC
  - SBC
  - SIP trunk
  - IP
  - PSTN
  - Other enterprises
  - Hosted services
  - OTT services
Total Addressable Market

\[ \text{TAM} = A + B \]
Rich Interactive Video Applications

- Business Benefits of video
  – Increased productivity
  – Faster decisions
  – Cost reductions

- SBC Provides
  – High-capacity SIP-H.323 session interworking
  – Video infrastructure security
  – Near and far-end NAT/FW traversal
  – Bandwidth-based admission controls
SEN Open Scape Video

SIP Access

Public Site

Internet

ACME 3800

CSLM-Core

Sniffer PC
192.168.25.120

Tandberg MXP
Tandberg C
Polycom HDX
LifeSize

Private Site

Polycom RMX

Tandberg MXP
Tandberg C
Polycom HDX
LifeSize

Open Scape Voice
SEN Architecture and applications

Main Data Centre (Geographically Separated)

Users
Centralized Applications
OSV

OSV Centralized
Applications
Users

SIP trunking

OpenScape Branch (Proxy mode)
Optional GW
PSTN

NAT+FW

OpenScape Branch (SBC mode)
Optional GW
PSTN

Main Data Centre (Geographically Separated)

Users
Centralized Applications
OSV

SBC

WAN

Internet

SIP trunking

Service Provider

Service Provider
Avaya Aura™ SIP Reference Architecture

**Application**
- Avaya Aura™ Session Manager

**System Manager**
- Application Platform

**Connection**
- Media Servers
- Avaya one-X® endpoints
- 3rd Party PBXs
- IP Office, BCM, or SCS

**Access**
- PSTN trunking providers, hosted services, federated partners
- SIP Trunks
- SBC
- Avaya Aura SBC or Acme Packet SBC
- SIP Internet
- Remote workers via Internet

- Avaya CM or CS1000
Some enterprises that have already invested in SBCs may wish to utilize their enterprise SBC to support Lync Server & OCS SIP Trunking.

- Mediation Server connects to ITSP network via an enterprise SBC
- SBC in the DMZ may be owned by the enterprise or deployed and managed by the ITSP as part of a managed network service

This is a Microsoft & Acme Packet supported deployment model if the ITSP’s SIP Trunking service has been qualified via UCOIP

UCOIP details: [http://technet.microsoft.com/UCOIP](http://technet.microsoft.com/UCOIP)
Unified Communications Open Interoperability Program – Lync Server

Find out more about the Microsoft Unified Communications Open Interoperability Program for enterprise telephony services and infrastructure, including finding qualified SIP Trunking Services, E911 Service Providers, Survivable Branch Appliances, SIP-PSTN gateways, and IP-PBXs.

This page details infrastructure and services qualified with Lync Server 2010. For information on Office Communications Server 2007 and Office Communications Server 2007 R2, please see Unified Communications Open Interoperability Program for Office Communications Server.

Overview

This qualification program for enterprise telephony services and infrastructure ensures that customers have seamless experiences with setup, support, and use of qualified telephony infrastructure and services with Microsoft’s unified communications software including Lync Server and Exchange Server.

Only products that meet rigorous and extensive testing requirements and conform to the specifications and test plans will receive qualification.

While the specifications are based on industry standards, this program also defines:

- Specific requirements for interoperability with Lync Server & Exchange Server Voice Mail
- Testing requirements for qualifying interoperability with Lync Server & Exchange Server Voice Mail
- Installation, set-up and configuration requirements via a Quick Start Guide
- Release Notes with any known issues
- Documented support process between Microsoft and the vendor
- Enterprise-class standards for audio quality, reliability, and scalability

Additional Resources

- Lync Server 2010 Protocol Workloads Poster
- Lync Server Network Roadmap
- Deploying Enterprise Voice Documentation
- Planning for Enterprise Voice Documentation
- Lync Server Discussion Forums
- NextHop

Interested in Joining?
Product Range and Features
## Acme Packet Net-Net Product Family

### Features
- **Security**
- **Revenue & cost optimization**
- **Multi-protocol**
- **SLA assurance**
- **Regulatory compliance**
- **High availability**
- **Service reach maximization**

### Products
- **Net-Net 9200**
- **Net-Net 4500**
- **Net-Net 3800**
- **Net-Net OS (OEMSoftware Only)**

### Embedded GUI

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Net-Net 9200</th>
<th>Net-Net 4500</th>
<th>Net-Net 3800</th>
<th>Net-Net OS (OEMSoftware Only)</th>
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Interactive Session Recorder (ISR)
Low cost, simplified call recording for compliance
Introducing Net-Net Interactive Session Recorder (ISR)

- Affordable Session Recording
  - 50% of the license cost of other vendors
  - Per session pricing
- Flexible Deployment
  - Build broader recording applications
  - Easy Web Service APIs (CTI, IVR, Session applications)
  - Service Provider features (Multi-tenancy, Remote Archival)
  - Software only running on industry standard hardware
- Session Recording simplified…
Application Session Controller (ASC)
Flexible, low cost Communication Enablement of Business Processes
What is the Application Session Controller (ASC)?

- Software platform for integrating business apps with IP communications
- Add voice, video, chat and presence to Web-based business apps & processes
  - Click-to-talk, click-to-chat
  - Voice drop, voice blast
  - Automatic outbound notifications
  - Communication policy enforcement
- Shields developers from underlying IP communications network complexities
Conclusion
New solutions extend Acme Packet value to enterprises beyond border control

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  - Integrates business applications with IP communication environments
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