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Oracle Communications Acme Packet 4900

Acme Packet 4900 is Oracle's next generation mid-range communications platform, combining outstanding flexibility, efficiency, and functionality in a compact one rack unit (1RU) form factor. As a key component of Oracle's market-leading network session delivery and control infrastructure platform family, the Acme Packet 4900 meets all of the functionality, scalability, availability, and manageability requirements of service providers and large enterprises.

Overview

Acme Packet 4900 supports Oracle Communications products in mid-tier service provider and larger enterprise IP real-time communications deployments. Its unique hardware design is purpose-built to control complex, high volume signalling and media traffic at network borders, and includes 1 GbE or 10 GbE network connectivity and integrated transcoding acceleration.

Acme Packet 4900 also features carrier-grade high availability (HA) ensuring nonstop operation and survivability in business-critical environments.

Capabilities

Acme Packet 4900 session border controller (SBC) features and capabilities

FEATURE	CAPABILITIES
Security	• Granular access control • IP address and SIP signaling concealment • Layer three through five topology hiding and signaling overload controls • IP telephony spam protection • Stateful deep packet inspection • Signaling and media encryption
Interoperability	• SIP message normalization • Response code translation • Session Description Protocol (SDP) and Dual Tone Multi-Frequency (DTMF) manipulation • Number and uniform resource identifier (URI) manipulation • Signaling message header manipulation • Protocol interworking: Transmission Control Protocol (TCP), User Datagram Protocol (UDP), Stream Control Transmission Protocol (SCTP) • Encryption interworking: Transport Layer Security (TLS), Mutual TLS, Secure Real-time Transport Protocol (SRTP) • Network address translation (NAT) and firewall traversal • IP address translation: private/public • Transcoding • Session routing based on Microsoft Active Directory query • Microsoft Teams Direct Routing • Message Session Relay Protocol (MSRP)

Versatile, mid-range communications platform

Applications

• Medium to large service provider SBC – for access and interconnect

• Large enterprise IP real-time communications deployments

Key features

• Turn-key, 1RU form factor supporting up to 40,000 media sessions and 500,000 registered devices

• Combination of 1 GbE and 10 GbE I/O in a single system

• Hardware-accelerated transcoding for optimal performance

• Per session QoS measurements

• Redundant HA configurations

• Operates same SBC software as all other Acme Packet platforms

Key benefits

• Revenue optimization through diverse product configurations

• Maximum reliability

• Scalable to limit capital expenditures and reduce operational expenditures

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Reliability	• Standby SIP registrar with caching for remote site survivability • Stateful signaling and media failover • Quality of service (QoS) marking, virtual local area network (VLAN) mapping, access control • Registration storm avoidance • Call rate limit enforcement • Trunk load balancing • Stateful session routing • QoS-based routing
Regulatory Compliance	• Session prioritization for emergency services • Internet Engineering Task Force (IETF) standard SIP Recording (SIPREC) interface • Call detail records (CDRs) with local or remote storage via RADIUS
Cost Management	• Least cost routing • Codec Negotiation
Management	• Browser-based GUI (Oracle Enterprise Session Border Controller only) • SIP monitoring and tracing tool • SNMP, Syslog, REST, SFTP, RADIUS interfaces

System capacity, performance, and availability

Acme Packet 4900 supports up to 40,000 sessions, offers high availability (HA) operation for nonstop service, and supports quality of service (QoS) measurement and hardware-assisted transcoding.

Acme Packet 4900 capacity, performance, and availability[1]

CAPABILITY	DESCRIPTION
Media session capacity	• Up to 40,000 simultaneous anchored media sessions • Up to 12,000 SIPREC sessions • Up to 20,000 MSRP sessions
Subscriber capacity	• Up to 500,000 registered subscribers (UDP/TCP) • Up to 250,000 TLS subscribers
SRTP capacity	• Up to 16,000 encrypted call legs
Transcoding capacity	• Up to 6,500 transcoded sessions
Two-level encryption acceleration hardware	• IPsec tunnel and TLS session setup, IPsec and SRTP traffic encryption/decryption
High availability configuration	• Active/standby systems (1-to-1 redundancy) with check-pointing of signaling, media, and configuration state for no loss of service

[1] Performance and capacity numbers vary by signaling protocol, call flow, codec, configuration, and feature usage.

Performance and capacity based on Oracle Communications Session Border Controller S-Cz9.3 software release.

Supported configurations

Acme Packet 4900 operates Oracle's Acme Packet Operating Software (Acme Packet OS) to deliver flexible product configuration and deployment options. The below table describes the Oracle product configurations supported by Acme Packet 4900.

Acme Packet 4900 supported configurations

PRODUCT	DESCRIPTION
Oracle Communications Session Border Controller	Session border controller (SBC) integrating controls for real-time communications signaling and media traffic
Oracle Enterprise Session Border Controller	Securely Connects Enterprise VoIP and UC systems to SIP Trunking and Wide Area Network Services.

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Hardware

Acme Packet 4900 is a 1RU rack-mountable system. Acme Packet 4900 delivers optimum levels of session processing, capacity and system throughput to a wide variety of services and applications in mid-sized service provider, enterprise, government, and contact center applications.

Acme Packet 4900 includes two 10 GbE and four 1 GbE interfaces for signaling, media, and data traffic. The system supports Small Form-Factor Pluggable (SFP) transceivers for 1 GbE interfaces and Enhanced Small Form-Factor Pluggable (SFP+) transceivers for 10 GbE interfaces to accommodate both fiber optic and twisted pair copper cabling options.

To enable secure communications without compromising end user or subscriber quality of experience (QoE), the Acme Packet 4900 system accommodates encryption for Internet Protocol Security (IPsec) and Secure Real-Time Transport Protocol (SRTP) encryption of media traffic, and high-volume Transport Layer Security (TLS) or IPsec key negotiation for services or applications that require encrypted signaling.

The Acme Packet 4900 system also accommodates up to 8 Digital Signaling Processing (DSP) modules for audio transcoding of up to 6,500 simultaneous sessions. DSP modules can be populated incrementally for "pay-as-you-grow" scalability.

The Acme Packet 4900 platform monitors and measures each media flow through the system, calculating quality scores (such as Mean Opinion Score) and aggregating the information into data for transmission to external reporting or accounting systems. Onboard QoS monitoring and measurement is also utilized for real-time functions such as QoS-based routing and load balancing, also without compromising end user or subscriber QoE.

Acme Packet 4900 detailed specifications

The table below describes the detailed physical properties, power specifications, and regulatory compliance of the Acme Packet 4900 platform.

Detailed specifications

PHYSICAL PROPERTIES	SPECIFICATION
Chassis	• 1 RU, rackmount in four-post cabinet or two-post center mount • Four 1Gbps Ethernet interfaces (SFP) or two 10 Gpbs Ethernet interfaces (SFP+) for signaling and media • Two 10/100/1000 Mb/sec interfaces with RJ-45 for HA • One 10/100/1000 Mb/sec interface with RJ-45 for management • One RS-232 serial console interface with RJ-45 connector

Transcoding	• Support for up to 8 DSP-based transcoding modules per system
	• Supported codecs:
	  o Wireline – G.711 10, G.711 20, G.722, G.723.1, G.726, G.729A/B, iLBC, Opus, SILK
	  o Wireless – AMR-NB, AMR-WB, GSM-FR, EVRC, EVRC-B
	• T.38 fax interworking

Dimensions (not including mounting hardware)	• Height: 4.37 cm (1.72 in.) • Width: 43.43 cm (17.10 in.) • Depth: 51.80 cm (20.40 in.)

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Weight	• 9.99 kg (22.0 lbs)
Temperature	• Operating: 32°F to 104°F, 0°C to +40°C • Storage: -4°F to 149°F, -20°C to +65°C
Relative humidity	• 10% to 85%, noncondensing
Airflow	• 104 CFM (max) front to back
Power Dissipation	• 220W typical, 340W maximum

POWER	SPECIFICATION
Power supply	• Dual power supplies: Redundant, load sharing, 800W maximum
AC power option	• Voltage: Auto-ranging 100 AC to 240 AC wide input with power factor correction • Frequency: 50/60 Hz • Current: 4.2A x 2 rating
DC power option	• Voltage: -48 DC (+/-10%) nominal in North America (maximum range: -40 DC to -72 DC) • Current: 25A x 2 rating • Cable: 10 AWG recommended minimum, with at least three conductors rated for at least 140°F (60°C)

REGULATORY	DETAILS
Certifications [1,2] Compliance Model Number: LCMN1AD	• NRTL TUV (US/Canada) • CE (European Union) • ANATEL (Brazil) • TEC (India) • BSMI (Taiwan) • EAC (Russia, Belarus, Kazahkstan) • KCC (South Korea) • RCM (Australia / New Zealand) • VCCI (Japan) • iCASA (South Africa)
Safety [2]	• EN 62368-1 • IEC 60950-1, IEC 62368-1 CB scheme with all country differences • UL 62368-1 • CSA 22.2 No. 62368-1
EMC Emissions Standards [2]	• ICES-003 Class A • EN 55032 Class A • ETSI EN 300 386 for Telecommunications Centers and for Other Than Telecommunications Centers • VCCI Class A limits • KN32 Class A • CNS 13438 Class A • 47CFR15 Subpart B (FCC) Class A • CISPR32 Class A • AS/NZS CISPR32 Class A
EMC Immunity Standards [2]	• EN55035 • EN61000-3-2 • EN61000-3-3 • ETSI EN 300 386 for Telecommunications Centers and for Other Than Telecommunications Centers
Other [2]	• 2014/35/EU Low Voltage Directive • 2014/30/EU EMC Directive • 2011/65/EU RoHS Directive • 2012/19/EU WEEE Directive

[1] Other country regulations/certifications may apply

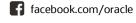[2] All standards and certifications referenced are to the latest official version. For additional detail, please contact your sales representative

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