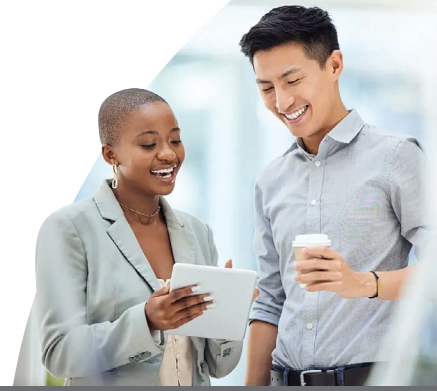




# SBC CNe

## Session Border Controller Cloud Native Edition (SBC CNe)

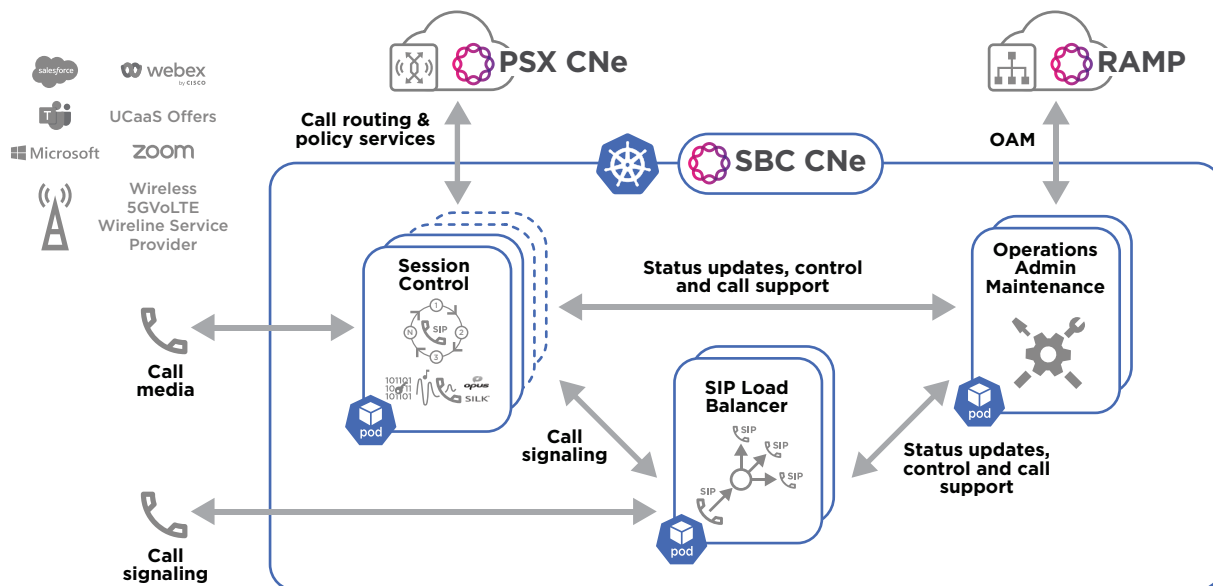


Ribbon's Session Border Controller Cloud Native Edition (SBC CNe) is an industry-leading SBC, enabling and securing real-time communications for public, private, and hybrid clouds. Architected from the ground up using CNCF cloud native design and implementation principles (containers, service meshes, microservices, immutable infrastructure, and declarative APIs), the SBC CNe delivers scalable real-time communication services that are simultaneously resilient, manageable, and observable.

The SBC CNe capitalizes on Ribbon's 20+ years securing carrier networks. The SBC CNe is ideal for Mobile Network Operators trying to leverage their cloud-native deployments for 4G/5G. It can be deployed in public, private, and hybrid clouds, enabling high impact changes frequently and predictably. Simple yet scalable, agile and elegant, the SBC CNe makes it easy for customers to secure cloud-based mobile, SIP and Unified Communications (UC)/Contact Center (CC) services.

### Ribbon's SBC CNe Key Operations Features:

- Container microservices orchestrated by out of the box Kubernetes for cloud infrastructure abstraction, horizontal autoscaling, microservices redundancy, high availability & automated software upgrades.
- M:N redundant Session Control (SC) pods deliver SIP call processing, media mediation, and supplementary services.
- SIP Load Balancer (SLB) pods to balance call traffic and achieve IP address concentration.
- In-memory database (not shown in image) to support call availability and survivability.
- Redundant OAM pods support call admission, management, horizontal pod autoscalar (HPA) out/in services, networking, licensing & other management functions.
- Open Telemetry-based observability framework for monitoring metrics and logs, and interfacing with open source/3rd party tools such as Prometheus and EFK (Elasticsearch, Fluentd, Kibana).
- Delivers P-CSCF services for IMS deployments.
- Call routing and policy services from Ribbon's Policy & Routing Server Cloud Native edition (PSX CNe).
- Full integration with modern CI/CD pipeline tools and GitOps operations to support end-to-end automation.
- Management & analytics from Ribbon Application Management Platform (RAMP).



## Signaling

- Back-to-back user agent
- SIP, SIP-I/SIP-T
- SIP protocol normalization/protocol repair, SIP
- Message Manipulation (SMM)
- NAT/NAPT on signaling
- SIP Surrogate Registration

## Protocol

- IPv4, IPv6, IPv4/IPv6 interworking
- SSH, SFTP
- SNMP, RESTCONF
- HTTP/HTTPS
- RTP/RTCP
- UDP, TCP
- DNS, ENUM
- NTP per RFC-1708

## Routing/Policy


- Cloud native PSX CNe delivers centralized routing & policy
- Leading digit routing, international routing, URI based routing
- Digit/parameter manipulation
- E911 support, priority call handling
- Call forking
- ETSI 3GPP/IMS, PacketCable Lawful Intercept

## Media Services

- Transcoding G.711, G.722, G.722.1, G.723, G.726, G.729A/B, AMR-NB, AMR-WB, EVRCB0, EVRC0, iLBC, Opus, T.38, SILK, EVS, Linear16, T.140 Text over IP
- Wireline, wireless, clear channel codec and fax pass-through
- VAD, Silence Suppression, Dynamic Jitter Buffer, DTMF
- Tone Relay/ RFC2833/RFC4733 interworking
- NAT/NAPT on media
- DTMF Trigger Detection and Notification
- Tones & announcements
- Local Ring Back Tone (LRBT) support
- RTP inactivity monitoring
- Video codec pass-through: H.265, H.264 AVC, H.264 SVC, H.263+, H.263, H.261 and VP8, VP9
- Support up to 4 simultaneous SIPREC recordings per session

## About Ribbon

Ribbon Communications (Nasdaq: RBBN) delivers communications software, IP and optical networking solutions to service providers, enterprises and critical infrastructure sectors globally. We engage deeply with our customers, helping them modernize their networks for improved competitive positioning and business outcomes in today's smart, always-on and data-hungry world. Our innovative, end-to-end solutions portfolio delivers unparalleled scale, performance, and agility, including core to edge software-centric solutions, cloud-native offers, leading-edge security and analytics tools, along with IP and optical networking solutions for 5G. We maintain a keen focus on our commitments to Environmental, Social and Governance (ESG) matters, offering an annual Sustainability Report to our stakeholders. To learn more about Ribbon, please visit [ribbon.com](https://www.ribbon.com).

**Contact Us**  Contact us to learn more about Ribbon solutions.

## Mobile Network Deployments

- P-CSCF
- AGW
- ATCF
- ATGW
- E-CSCF
- EATF
- IBCF

## Management Capabilities

- Graphical-based wizards for ease of configuration
- Kubernetes lifecycle management
- Secure embedded web-based management GUI
- Ribbon CLI, SSH
- Centralized management using cloud native Ribbon Application Management Platform (RAMP)
- SNMP V2/V3 status and statistics
- Local logging of events, alarms, traps, and call traces
- Ribbon DSI Level 0 support for storing CDRs, RADIUS accounting records
- Live Software Update (LSWU)
- Flexible subscription licensing model for elastic scaling
- Automated upgrades

## Capacity

- 150,000 concurrent calls per instance

## Security

- Session aware firewall, topology hiding
- Line rate DoS/ DDoS and rogue RTP protection
- Line rate malformed packet protection
- TLS 1.3 for signaling encryption
- Secure RTP/RTCP for media encryption
- IPsec Support

## Quality of Service (QoS)

- Bandwidth management
- Call Admission Control (CAC) per trunk group
- Per-call statistics
- TOS/COS packet marking

## Software Platforms

- Kubernetes 1.23 or above