Orchid Link

Software SBC
Enterprise edition

Scalable, high quality
real-time enterprise communication in the cloud

Powering your virtual **UCaaS solution**

Cataleya's virtualised software SBC is tailored to meet today's UCaaS requirements, which are largely run as cloud applications to serve small, medium and large enterprises' communication and collaboration needs.

Security and reliability, coupled with simple and rapid scalability, are key to enabling dynamic growth, without the need for large upfront investments. Cataleya's license subscription model lets your cost base mirror your revenue model. Network licensing, instead of node licensing, drives optimised subscription utilisation levels to the utmost, hence reducing the overall operating costs.

In addition, Orchid Link's multi-tenancy feature gives you the ability to host several clients as their own individual partition on one virtual instance. Your customers can therefore view their system and its performance, including real-time QoS and fraud analytics, independently.

KEY FEATURES

Architecture, Performance & Scalability

- Optimized "Fastpath" packet processing
- Distributed control and media plane architecture
- Dynamic scaling
- Service and context aware traffic management ensure high SLAs

Operations & Orchestration

- Cataleya central operations manager
- Multi-tenancy features
- Integration with cloud infrastructure management solutions
- API & Northbound interfaces
- Network wide licensing

Service & Revenue Assurance

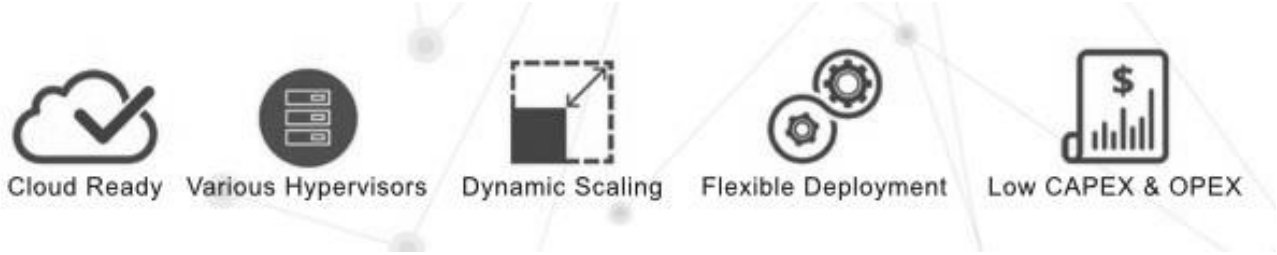
- Real-time analytics/QoS session steering
- Big Data network & service analytics
- SLA management
- Intuitive diagnostic tools
- Fraud & anomalies management
- Integrated Business Intelligence (BI)

Deployment Flexibility

- Commodity hardware 'Bare Metal' SBC platform as a Service (PaaS)
- Virtualized SBC 'Virtual Network Function (VNF)' as a service (VaaS)
- Network Partition as a Service (iNaaS)

What it can do for you:

Cataleya was able to migrate all unique features from the hardware based award winning Orchid One to its fully NFV based enterprise version, **Orchid Link**. No matter if you run it on dedicated servers or host it in the cloud, Carrier grade performance and scalability remains. Offload your operation efforts and allow our Auto-Scaling and Auto-Healing functions to monitor and take the necessary actions to keep your voice and video services running flawlessly.



PRODUCT SPECIFICATIONS

Protocol Support	SIP, SIP-I, SIP-T IPv4, IPv6, IPSEC TCP, UDP, TLS, RTP, RTCP, SRTP, DNS, SNMP, SSH, sFTP Diameter
Policy, Routing and Service Core	• Policy based rules engine – intelligent decision tree • Exhaustive parameters analysis and manipulations – Digits, URI, SIP IEs • Protocol parameter based call routing • Custom and derived parameter based routing • Multi-tiered routing engine • Support for directories/route lists • Real-time QoS based routing • LCR based routing • Interface with external SIP 3xx redirection servers • XML RPC authentication based interop • Pre-paid billing systems integration either through Diameter, JSON or REST API
Media Capabilities	• Media NAT • RTP in-activity detection, RTCP report • Media anti-trombone • Fax G.711/T.38 • Media timestamp capability for FAS fraud case detection and 1 way/2 way/no audio call scenario detection

Security and Privacy	• Intelligent dynamic blacklist, black and gray list trust levels • Service aware firewall, IPv4/v6 standard ACL support • SIP signaling and media NAPT – topology hiding • Line rate DoS/DDoS prevention at L3/L4 layers • Policing and monitoring of flows • TLS • IPSEC for signaling encryption and Mobile authentication, IKE, IKE2 and MobIKE support • Secure RTP (SRTP)/RTCP for media encryption • DTLS support for WebRTC media encryption • DTLS to SRTP interoperability
Management System	• Alarms – standard and user defined • SNMP based trap generation • Intuitive configuration management • Web based near real-time analytics and reports • Real-time call tracing (signaling and media) and monitoring • Role-based user access • Software upgrades and version management • NTP support • Backup and restore

PRODUCT SPECIFICATIONS (cont'd)

Billing	• CDR/MDR generation with standard and custom – fields for calls and media related information • XML based CDR field selection, ordering and format • Selection to comply with the back end – billing mediation system • Over 300 columns of call and network quality evaluation for each call – highly customizable
System Capacity/ Scale	**KVM with SR-IOV** • Up to 9,000 concurrent SIP sessions per instance • Up to 100 SIP sessions per second per instance • Up to 9,000 RTP/RTCP media flows • Up to 9,000 TLS SIP sessions per instance • Up to 3,000 SRTP sessions per instance • Up to 64,000 registrations per instance • Up to 2,000 registrations per second per instance **VMWare** • Up to 5,000 concurrent SIP sessions per instance • Up to 100 SIP sessions per second per instance • Up to 5,000 RTP/RTCP media flows • Up to 5,000 TLS SIP sessions per instance • Up to 2,000 SRTP sessions per instance • Up to 64,000 registrations per instance • Up to 1,500 registrations per second per instance
Total Visibility Package	• Near real-time and trending visibility into Media QoE • R-factor, MOS scores – one way and two way paths • Periodic and on-demand MOS score calculations • Security threats and mitigation reports – near real-time and trending • System and application performance • Network traffic in and out – packet types, rates, counts • Session KPIs – ITU and I3 • SLA monitoring – near real-time and trending, accepted • SLAs and current SLA adherence levels • Big Data based analytics for prediction models • Business intelligence tools built-in for business/ operational insights
L2/L3 Support	• VLAN, COS/TOS/DSCP, policy based routing • Overlapping IP address over VLANs • Classification and queuing at H/W level • VLAN tagging • Hierarchical QoS policing and metering at flow, VLAN and carrier group level • Ethernet bonding • BW management at end -point and carrier level

HARDWARE REQUIREMENTS

Orchid Air Node (+ same requirement for HA instance)	• Minimum 8 x vCPUs • Minimum 32GB RAM DDR3 • Minimum 200GB storage • 1 x Management IP interface (this is the interface that interacts with the CMS) • 2 x Traffic interfaces (1 for Public and 1 for Private)
Orchid Air CMS	• Minimum 4 x vCPUs • Minimum 32GB RAM DDR3 • Minimum 500GB storage • 1 x Management IP interface (this is the GUI Access interface)
Hypervisors	• R720/R730 type of Dell servers or similar specifications (x86 Xeon (or later) based servers) • Minimum 2.2GHz • RAID10 or RAID1 is highly recommended • Recommended Intel NIC cards supported (for e.g. 1G 82576, 10G 82599) (with SR-IOV support) • Refer to Intel product specifications for other NIC cards **KVM** • Red Hat 7.2 with virtualization packages **VMware** • ESXi 6.X (vSphere 6.X)
BIOS	• Enable Intel VT-D (virtualization technology) • Enable SR-IOV support (recommended)
Orchestration Layer Support	• Openstack for KVM • vCenter for VMware • Cloudify (TOSCA)

For more information, contact us at **info@cataleya.com**

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cataleya

Redefining flexibility