# Oracle® Cloud Native Session Border Controller

## Release Notes

Release 1.25.1
G37119-01
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Oracle Cloud Native Session Border Controller Release Notes, Release 1.25.1

G37119-01

# Contents

# About this document

The Oracle Cloud Native Session Border Controller (Cloud Native SBC) is designed to increase security when deploying Voice over IP (VoIP) or Unified Communications (UC) solutions. Properly configured, Cloud Native SBC helps protect IT assets, safeguard confidential information, and mitigate risks—all while ensuring the high service levels which users expect from the corporate phone system and the public telephone network.

This document provides information about new features in the Cloud Native SBC.

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## Revision History

This section provides a revision history for this document.

| Date | Description |
|---|---|
| September 2025 | Initial Release |

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# Introduction

*Oracle Cloud Native Session Border Controller Release Notes* provides following information:

- Overviews of the new features
- Information about common services
- Supported NICs and drivers
- Known issues
- Documentation Set

## Cloud Native SBC Components

The following section explains the components of the Cloud Native SBC.

The Cloud Native SBC is a containerized network function that provides network functions in the voice network. It consists of several components called the Cloud Native SBC Network Function Components(CNFCs) as below.

1. Cloud Native SBC Operator
2. Cloud Native SBC Application
3. Cloud Native SBC Console
4. Cloud Native SBC Automated Test Suite
5. Cloud Native SBC Toolset

## Cloud Native SBC Operator

The Cloud Native SBC Operator manages the automated networking for call processing microservices. It assigns the network interfaces and manages the virtual IP addresses for the Cloud Native SBC applications. The Cloud Native SBC Operator uses Kubernetes custom resources to manage the life cycle of these applications that require secondary VNICs for handling SIP and media traffic.

## Cloud Native SBC Console

The Cloud Native SBC Console performs the identity and access management and provides a GUI to manage the Cloud Native SBC configurations.

## Cloud Native SBC Automated Test Suite

The Cloud Native SBC Automated Test Suite is an optional tool to run test cases on various Cloud Native SBC features such as SIP, Media, Routing and many more. You can perform continuous deployment and test a release once it is deployed using this tool.

# Toolset

The Cloud Native SBC toolset consists of the Data Collector that gathers troubleshooting data from the Cloud Native SBC applications. You can attach this data to a service request when requesting assistance from Oracle Support. The toolset also consists of the Core dump manager that is used to transfer the core dumps from the Cloud Native SBC clusters to an external SFTP server.

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# Technical Specifications

Following are the Cloud Native SBC technical specifications.

## RedHat Specifications and Services

Following are the prerequisites for the RedHat platform. This list contains the mandatory services for the Cloud Native SBC.

**Table 2-1 Prerequisites**

| Software Package | Version/Release | Description |
|---|---|---|
| Red Hat OpenStack Platform | 17.1 or later | Cloud computing platform where the Cloud Native SBC is deployed. |
| Red Hat Openshift Container Platform | 4.16.8 or later | Container platform where the Cloud Native SBC is deployed. |
| Red Hat Enterprise Linux | 9.2 or later | Operating system for the Cloud Native SBC. |
| Kubernetes | v1.29.7 or later | Container orchestration platform for the Cloud Native SBC. |
| Prometheus or Thanos | As per platform | Collects and stores the Cloud Native SBC metrics. |
| Alert Manager | As per platform | Manages and monitors the Cloud Native SBC alerts generated by Prometheus monitoring system. |
| Grafana | As per platform | It is used to view the pre-configured Cloud Native SBC dashboards. |
| Logging Stack (EFK or LokiStack) | As per platform | Log visualization dashboard for the Cloud Native SBC logs. |
| NFS CSI Provisioner | As per platform | To enable the dynamic provisioning of RWX volume |
| Jaeger | As per platform | Distributed tracing platform for the Cloud Native SBC call traces. |
| cert-manager | As per platform | Used for automated TLS certificates via Certificate Authority, etc. |
| Core-dump management | As per platform | Manages core dump files. **Note -** The Cloud Native SBC toolset includes a core dump manager, designed to handle Cloud Native SBC core dump files, especially on platforms without built-in solutions for core dump management. |
| Openshift Router and Nginx | As per platform | It is used for Ingress management and external route handling. |

**Table 2-1 (Cont.) Prerequisites**

| Software Package | Version/Release | Description |
|---|---|---|
| Helm | As per platform | Used to deploy the Cloud Native SBC. |
| OpenShift Data Foundation Storage | As per platform | It is used to manage shared storage for the Cloud Native SBC. |

# Supported NICs and Drivers

In private virtual infrastructures, Cloud Native SBC supports the following interface input-output modes, ethernet controller, drivers, and traffic type based on input-output modes.

### Supported Interface Input-Output Modes for Private Virtual Infrastructures

- Para-virtualized
- SR-IOV

### Supported Ethernet Controller, Driver, and Traffic Type based on Input-Output Modes

The following table lists supported Ethernet Controllers (chipset families) and their supported driver that ORACLE supports for the Cloud Native SBC deployments. Reference the host hardware specifications, where you run your hypervisor, to learn the Ethernet controller in use.

> **Note**
>
> The Cloud Native SBC does not support media interfaces when media interfaces of different NIC models are attached to the same pod(Signaling/Media/Transcode Engine) in a SR-IOV network mode.

### Supported Virtual Network Interfaces and Drivers for Paravirtualization

For paravirtualization network mode, the following vNIC types are supported. You can use any make/model NIC card on the host as long as the hypervisor presents it to the virtual machine as one of these vNIC types.

**Table 2-2 Virtual Network Interface**

| Virtual Network Interface | DPDK Driver | Interface |
|---|---|---|
| KVM (PV) | virtio | Media Interface |

### Supported Ethernet Controllers and Drivers for SR-IOV

For accelerated media/signaling using SR-IOV mode use the following card types.

**Table 2-3 Ethernet Controller**

| Ethernet Controller | Driver | SR-IOV |
|---|---|---|
| Intel X710 / XL710 / XXV710 | iavf | Media Interface |

# Supported Codec Types

The following table lists the supported codecs, bit rates, RTP payload type, default ptime, and supported ptimes.

| Codec | Supported Bit Rate (kbps) | RTP Payload Type | Default Ptime (ms) | Supported Ptime (ms) |
|---|---|---|---|---|
| G.711 PCMU | 64 | 0 | 20 | 10, 20, 30, 40, 50, 60 |
| G.711 PCMA | 64 | 8 | 20 | 10, 20, 30, 40, 50, 60 |
| G.722 | 48, 56, 64 | 9 | 20 | 20, 40 |
| G.723.1 | 5.3, 6.3 | 4 | 30 | 30, 60 |
| iLBC | 13.33 | 96-127 | 30 | 20, 30, 40, 60 |
| | 15.2 | 96-127 | 20 | 20, 30, 40, 60 |
| G.729/A/B | 8 | 18 | 20 | 10, 20, 30, 40, 50, 60 |
| AMR | 4.75, 5.15, 5.90, 6.70, 7.40, 7.95, 10.2, 12.2 | 96-127 | 20 | 20, 40, 60 |
| AMR-WB (G.722.2) | 6.6, 8.85, 12.65, 14.25, 15.85, 18.25, 19.85, 23.05, 23.85 | 96-127 | 20 | 20, 40, 60 |
| G.726 | 16,24,32,40 | 2,96-127 | 20 | 10,20,30,40,50 |
| EVS | 5.9 to 128 | 96 - 127 | 20 | 20,40,60 |

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# Known Issues

The following topics list the known issues for the Cloud Native SBC. Oracle updates this document to distribute issue status changes. Check the latest revision of this document to stay informed about these issues.

## Bug Severity

The Cloud Native SBC adopts the following four general definitions for bug severity

- Severity 1 - Critical/Complete loss of service.
- Severity 2 - Significant/Major/Severe loss of service.
- Severity 3 - Standard/Minor/Minimal loss of service.
- Severity 4 - Minimal/Informational/Minor error/No loss of service/Cosmetic.

## Known Issues

Review the known issues before using the Cloud Native SBC. ORACLE is aware of these known issues and may resolve these in future releases. Refer the workarounds if available to handle the known issue and review this section periodically for updates.

**Table 3-1 Known Issues**

| ID | Description | Severity | Found In |
|---|---|---|---|
| Internal bug | Deployment of Signaling, Media or Transcode Engine as a part of the Cloud Native SBC application package fails. The pod fails to reach the **Ready** state and displays an error in the vNIC injection job pod.<br>`ERROR: Interface name not found for mac address xx:xx:xx:xx:xx:xx`<br>**Workaround:** Run this command to delete the Cloud Native SBC Application pod that failed to reach **Ready** state.<br>`kubectl delete pod <CNSBC application failed pod name> - n <namespace>`<br><namespace> is the Cloud Native SBC application namespace. | 2 | • 25.1.0 |
| Internal bug | In the Cloud Native SBC GUI, under **sip-manipulation > cfg-order**, the **Move Up** or **Move Down** option to re-order the manipulation rule does not appear on the first mouse click. This option is available under the **action** column, represented by a horizontal ellipsis icon. **Workaround:** Click the **actions** icon(represented by the horizontal ellipsis icon) twice to view the **Move Up** or **Move Down** option. | 3 | • 25.1.0 |
| Internal bug | Reviewing configurations changes for access-control element is not supported in Cloud Native SBC GUI. | 3 | • 25.1.0 |

**Table 3-1 (Cont.) Known Issues**

| ID | Description | Severity | Found In |
|---|---|---|---|
| Internal bug | After a failover occurs in a high-availability (HA) setup, existing Denial of Service (DoS) entries for the previously active Signaling Engine do not reflect in the newly active Signaling Engine. | 3 | • 25.1.0 |
| Internal bug | Traces are not generated when the following conditions are met in sip-adv-log-trace element.<br>• match-type is request-type<br>• match procedure is exact-match or regex-match<br>• match-value is any one of these - REGISTER, ACK, BYE, CANCEL, PRACK, OPTION, INFO, SUBSCRIBE, NOTIFY, REFER, UPDATE, MESSAGE, PUBLISH.<br>The traces are generated only when the match-value is INVITE. | 3 | • 25.1.0 |
| Internal bug | Advanced logs are not generated when the following conditions are met in sip-adv-log-trace element.<br>• match-type is request-type<br>• match procedure is exact-match or regex-match<br>• match-value is any one of these - ACK, BYE, CANCEL, PRACK, INFO, REFER | 3 | • 25.1.0 |
| Internal bug | The Cloud Native SBC does not support sending STIR requests to an STI server located on a routed external network. | 2 | • 25.1.0 |

**Table 3-1 (Cont.) Known Issues**

| ID | Description | Severity | Found In |
|---|---|---|---|
| Internal bug | While the Transcode Engine processes moderate volume of media traffic in para-virtualized mode, intermittent DPWD crashes may occur. This could result in a minimal call impact. | 2 | • 25.1.0 |

# Caveats

Review the caveats before using the Cloud Native SBC. These caveats talk about the Cloud Native SBC's unexpected behavior as per design. ORACLE is aware of these caveats that do not have a workaround. Review this section periodically for updates.

### Transcoding Caveats

Software-based transcoding on the Cloud Native SBC is only supported on servers with INTEL CPUs.

### CPU Resource Configuration Unavailable in Cloud Native SBC Console Database

The Cloud Native SBC Console database does not support CPU resource configuration.

### Console Core URL

If you update the **coreStaticIpAddress** parameter in the Console values YAML file and upgrade the Console, then manually update the IP address of the Console Core in the home URL for your client **sbc** from the IAM's UI(Clients page).

### Large Configuration Limitation

It is advisable to operate within a limit of 50,000 configuration objects and attributes to ensure optimal performance and minimize the risk of service degradation. This number can vary depending on the mix of various configuration element types. For large configurations, it is recommended to save and activate configuration during times of low traffic. Future updates are road mapped to further enhance performance and will allow for higher configuration limits.

It is also recommended to configure a minimum of 3 minutes for both **clientTimeout** and **serverTimeout** when setting up timeouts in load balancer during platform preparation.

For more information on the factors that influence the activation of configurations, refer to the Oracle Cloud Native Session Border Controller GUI Guide.

# 4 Documentation Set

The Oracle Cloud Native Session Border Controller documentation set includes the following:

**Table 4-1 Documentation Set**

| Document Name | Document Description |
|---|---|
| *Oracle Cloud Native Session Border Controller Release Notes* | Contains information about the current documentation set release, including new features and technical specifications. |
| *Oracle Cloud Native Session Border Controller Platform Preparation Guide OpenShift* | Contains information about preparing your RedHat OpenShift platform for installing the Cloud Native SBC. |
| *Oracle Cloud Native Session Border Controller Installation Guide* | Contains information about the prerequisites, customizations required and steps on how to install, uninstall, rollback, upgrade and maintain the Cloud Native SBC. |
| *Oracle Cloud Native Session Border Controller Operator Guide* | Contains information about the components of the Cloud Native SBC Operator and how to troubleshoot the Operator. |
| *Oracle Cloud Native Session Border Controller Application REST API Guide* | Contains a list of all REST endpoints in the Cloud Native SBC API and how to configure the system using those endpoints. |
| *Oracle Cloud Native Session Border Controller IAM REST API Guide* | Contains a list of all REST endpoints in the Identity Access Management API and how to manage access tokens using those endpoints. |
| *Oracle Cloud Native Session Border Controller GUI Guide* | Contains information about how to configure the Cloud Native SBC using the GUI. |
| *Oracle Cloud Native Session Border Controller User Guide* | Contains information about the Cloud Native SBC's distributed architecture and its various components along with the various features. |
| *Oracle Cloud Native Session Border Controller Console Guide* | Contains information about the various components of the Cloud Native SBC Console, how to access it and the roles available to manage the Cloud Native SBC configurations. |
| *Oracle Cloud Native Session Border Controller Automated Test Suite Guide* | Contains information about how to install and use the Automated Test Suite. |
| *Oracle Cloud Native Session Border Controller Transcoding Guide* | Contains information about the transcoding architecture, supported code types, transcoding configurations and many more. |
| *Oracle Cloud Native Session Border Controller Observability Guide* | Contains information about the Cloud Native SBC metrics, alerts and Grafana dashboards. |
| *Oracle Cloud Native Session Border Controller Header Manipulation Rules Guide* | Contains information about the Cloud Native SBC's SIP manipulation language called Header Manipulation Rules (HMR). |
| *Oracle Cloud Native Session Border Controller Disaster Recovery Guide* | Contains information on how to recover the Cloud Native SBC during various disaster scenarios. |

**Table 4-1 (Cont.) Documentation Set**

| Document Name | Document Description |
|---|---|
| *Oracle Cloud Native Session Border Controller Security Guide* | Contains information about the security best practices required for deploying and operating the Cloud Native SBC securely in a cloud native environment. |
| *Oracle Cloud Native Session Border Controller License Document* | License document for the Cloud Native SBC. |
| *Oracle Communications Cloud Native Session Border Controller X123 Guide* | Contains information on how the Cloud Native SBC implements standards-based X1/X2/X3 lawful intercept (LI) in VoIP and VoLTE networks. |