

Oracle® Communications

Cloud Native Core, Service Communication Proxy Network Impact Report



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Contents

1	Introduction	
1.1	Compatibility Matrix	1
1.2	Common Services Load Lineup	1
1.3	Software Requirements	2
1.4	Orchestration	2
1.5	Resource Requirements	3
2	SCP Features	
3	Supported Upgrade and Rollback Paths	
4	Configuration	
4.1	Helm	1
4.2	REST API	2
4.3	CNC Console	3
5	Observability	
5.1	Metrics	1
5.2	Alerts	1
5.3	Key Performance Indicators	2

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Acronyms

The following table lists the acronyms and the terminologies used in the document.

Table Acronyms

Acronym	Description
3GPP	3rd Generation Partnership Project
API	Application Program Interface
ASM	Aspen Service Mesh
ATS	Oracle Communications Cloud Native Core, Automated Test Suite
CLI	Command Line Interface
CNC Console	Oracle Communications Cloud Native Configuration Console
DNS	Domain Name System
FQDN	Fully Qualified Domain Name
HTTP	Hypertext Transfer Protocol
HTTPS	Hypertext Transfer Protocol Secure
K8s	Kubernetes
NF	Network Function
NRF	Oracle Communications Cloud Native Core, Network Repository Function
CNE	Oracle Communications Cloud Native Core, Cloud Native Environment
OSO	Operations Services Overlay
OCCM	Oracle Communications Cloud Native Core, Certificate Management
PLMN	Public Land Mobile Network
REST	Representational State Transfer
SBI	Service Based Interface
SCP	Oracle Communications Cloud Native Core, Service Communication Proxy
SCPC	Service Communication Proxy Control
SRV	Service Record
TPS	Transaction Per Second
URI	Uniform Resource Identifier

What's New in This Guide

This section introduces the documentation updates for release 24.3.x.

Release 24.3.0 - G11932-01, October 2024

- Updated the following sections:
 - [Compatibility Matrix](#)
 - [Common Services Load Lineup](#)
 - [Orchestration](#)
 - [SCP Features](#)
 - [Supported Upgrade and Rollback Paths](#)
 - [Helm](#)
 - [REST API](#)
 - [CNC Console](#)
 - [Metrics](#)
 - [Alerts](#)

1

Introduction

The purpose of this document is to highlight the changes made in Oracle Communications Cloud Native Core, Service Communication Proxy (SCP) from release 24.2.x to release 24.3.0. These changes may have an impact on the customer network operations and must be considered by the customer while planning the deployment.

1.1 Compatibility Matrix

This section lists the versions of added or updated components in release 24.3.x. To know the list of all the supported versions, see *Oracle Communications Cloud Native Core Release Notes*.

Release 24.3.0

The following table lists the versions of added or updated components in this release:

Table 1-1 Compatibility Matrix

Component	Compatible Versions
ATS	24.3.x
CNC Console	24.3.x
cnDBTier	24.3.x, 24.2.x, 24.1.x
CNE	24.3.x, 24.2.x, 24.1.x
OCCM	24.3.x
OCI Adaptor	24.3.x
OSO	24.3.x, 24.2.x, 24.1.x

1.2 Common Services Load Lineup

This section lists the versions of added or updated common services in release 24.3.x. To know the list of all the supported versions, see *Oracle Communications Cloud Native Core Release Notes*.

Release 24.3.0

The following table lists the versions of added or updated common services in this release:

Table 1-2 Common Services Load Lineup

Common Service	Version
ASM Configuration Chart	24.3.0
ATS Framework	24.3.1
Debug-tool	24.3.1
Helm Test	24.3.2
Mediation	24.3.1

1.3 Software Requirements

This section lists the added or updated software required to install SCP release 24.3.x. For more information about software requirements, see *Oracle Communications Cloud Native Core, Service Communication Proxy Installation, Upgrade, and Fault Recovery Guide*.

Release 24.3.0

The following table lists the versions of added or updated software required to install this release:

Table 1-3 Software Requirements

Software	Version
Helm	3.15.2
Kubernetes	1.30.x, 1.29.x, 1.28.x

The following table lists the versions of the additional software along with the usage:

Table 1-4 Additional Software

Software	Version	Purpose
Jaeger	1.60.0	Tracing
Kyverno	1.12.5	Logging
Prometheus	2.52.0	Metrics and Alerts

1.4 Orchestration

This section provides information about orchestration changes in release 24.3.x.

Release 24.3.0

The following table provides information about orchestration changes in this release:

Table 1-5 Orchestration

Orchestration Changes	Status	Notes
Support for in-service upgrade	Yes	For information about upgrade and rollback, see Supported Upgrade and Rollback Paths .
Changes in the <code>custom_values.yaml</code> file	Yes	Some of the Helm parameters are added and updated with new values. For more information, see Helm .
Changes in the resource information for the <code>custom_values.yaml</code> file	No	No change in the resource requirements.
Changes in the CSAR package	No	No change in the CSAR package.
Changes in Role-Based Access Control (RBAC) policy	No	No new RBAC policies are added.
Changes in Life Cycle Management (LCM) Operations	NA	No LCM operations are added.

Table 1-5 (Cont.) Orchestration

Orchestration Changes	Status	Notes
Helm Test Support	Yes	SCP supports Helm Test. For more information, see the "Performing Helm Test" section in <i>Oracle Communications Cloud Native Core, Service Communication Proxy Installation, Upgrade, and Fault Recovery Guide</i> .

1.5 Resource Requirements

This section lists the added or updated resource requirements in release 24.3.x. For more information about resource requirements, see *Oracle Communications Cloud Native Core, Service Communication Proxy Installation, Upgrade, and Fault Recovery Guide*.

Release 24.3.0

There is no change in the resource requirements in this release.

2

SCP Features

This chapter lists the added or updated features in release 24.3.x. For more information about the features, see *Oracle Communications Cloud Native Core, Service Communication Proxy User Guide*.

Release 24.3.0

Service Communication Proxy includes the following features or enhancements:

- **SCP Response Timeout Extension:** With this enhancement, SCP allows users to extend the maximum response timeout to 50 seconds. This improvement provides configuration options to support response timeouts for NFs that require more time to serve a request. For more information, see the "SCP Response Timeout Extension" section in *Oracle Communications Cloud Native Core, Service Communication Proxy User Guide*.
- **Verbose Logging for SCP:** This enhancement introduces verbose logging specifically for the SCPC-Audit microservice within the control plane. For more information, see the "Verbose Logging for SCP" section in *Oracle Communications Cloud Native Core, Service Communication Proxy User Guide*.
- **Log Enhancement for 5G SBI Error Responses Generated by SCP:** SCP has enhanced the error logs by including information, such as sender details, subscriber ID, error status code, error title, error details, and error cause. These details, along with the problem details, identify the cause of the error responses generated by SCP. For more information, see the "Log Enhancement for 5G SBI Error Responses Generated by SCP" section in *Oracle Communications Cloud Native Core, Service Communication Proxy User Guide*.
- **Message Feed Enhancements:** The hop-by-hop-id metadata is enhanced to use different formats to identify request-response pairs. For more information, see the "Message Feed Enhancements" section in *Oracle Communications Cloud Native Core, Service Communication Proxy User Guide*.

ATS Features

SCP ATS includes the following features or enhancements:

For more information about the features, see *Oracle Communications Cloud Native Core, Automated Test Suite Guide*.

- **ATS Custom Abort:** This feature allows users to gracefully abort the ongoing build directly from the user interface. For more information see the "ATS Custom Abort" section in *Oracle Communications Cloud Native Core, Automated Test Suite Guide*.
- **ATS Health Check:** This feature allows you to evaluate the health of the ATS deployment by conducting several checks after installation to ensure that all components are functioning. For more information see the "ATS Health Check" section in *Oracle Communications Cloud Native Core, Automated Test Suite Guide*.

3

Supported Upgrade and Rollback Paths

This chapter lists the supported upgrade and rollback paths in release 24.3.x. For more information about upgrade and rollback, see *Oracle Communications Cloud Native Core, Service Communication Proxy Installation, Upgrade, and Fault Recovery Guide*.

Release 24.3.0

The following table lists the supported upgrade paths in this release:

Table 3-1 Supported Upgrade Paths

Source Release	Target Release
24.1.x	24.3.0
24.2.x	24.3.0

Upgrade Impact

Removed the following ciphers from `ddSslConfiguration.cipherSuitesTlsV1_2`, `sbiProxySslConfigurations.client[0].cipherSuitesTlsV1_3`, and `sbiProxySslConfigurations.server.cipherSuitesTlsV1_2` Helm parameters in the "Global Parameters" section in *Oracle Communications Cloud Native Core, Service Communication Proxy Installation, Upgrade, and Fault Recovery Guide*:

- TLS_DHE_RSA_WITH_AES_256_GCM_SHA384
- TLS_DHE_RSA_WITH_AES_128_GCM_SHA256

The following table lists the supported rollback paths in this release:

Table 3-2 Supported Rollback Paths

Source Release	Target Release
24.3.0	24.2.x
24.3.0	24.1.x

Rollback Impact

There is no rollback impact in this release.

4

Configuration

This chapter lists the configuration changes in release 24.3.x.

4.1 Helm

This section lists the Helm parameter changes in release 24.3.x. For more information about the Helm parameters, see *Oracle Communications Cloud Native Core, Service Communication Proxy Installation, Upgrade, and Fault Recovery Guide*.

Release 24.3.0

The following are the Helm parameters changes in this release:

- Removed the following ciphers from `ddSslConfiguration.cipherSuitesTlsV1_2`, `sbiProxySslConfigurations.client[0].cipherSuitesTlsV1_3`, and `sbiProxySslConfigurations.server.cipherSuitesTlsV1_2` Helm parameters in the "Global parameters" section:
 - `TLS_DHE_RSA_WITH_AES_256_GCM_SHA384`
 - `TLS_DHE_RSA_WITH_AES_128_GCM_SHA256`

Note

If you are using the above mentioned ciphers and upgrading to SCP 24.3.0, you must replace these ciphers with the supported ciphers.

- Added the following Helm parameters in the "Global parameters" section as part of the Support for TLS feature:
 - `tlsSessionResumptionDisabled` to disable TLS session resumption
 - `clientDisabledExtensions` to disable extensions in HTTPS communication with the client
 - `serverDisabledExtensions` to disable extensions in HTTPS communication with the server
 - `clientAllowedSignatureSchemes` to list the allowed signature schemes for the client in HTTPS communication
 - `serverAllowedSignatureSchemes` to list the allowed signature schemes for the server in HTTPS communication
 - `allowedNamedGroups` to list the allowed named groups in HTTPS communication
- Updated the following parameters in the "SCP-Worker Parameters" section:
 - Updated the default value of `scp-worker.tracingenable` from "true" to "false".
 - Updated the default sampling rate of `scp-worker.traceSampling` from "0.1" to "0.001".
- Updated the following parameters in the "SCP-Mediation Parameters" section:

- Updated the default value of `scp-mediation.jaegerTracingEnabled` from "true" to "false".
- Updated the default sampling rate of `scp-mediation.otel.jaeger.probablisticSamplingRate` from "0.5" to "0.001".

4.2 REST API

This section lists the REST API changes in release 24.3.x. For more information about the REST APIs, see *Oracle Communications Cloud Native Core, Service Communication Proxy REST Specification Guide*.

Release 24.3.0

The following are the REST API changes in this release:

- Updated the "Configuring SCP Features" section with `additional_logging` and `log_subscriber_info` parameters as part of the Log Enhancement for 5G SBI Error Responses Generated by SCP feature.
- Added information about log rate impact based on the log levels in the "Configuring Dynamic Logging" section.
- Updated the Trace log level for the SCPC-Audit microservice in the "Configuring Dynamic Logging" section as part of the Verbose Logging for SCP feature.
- Updated the response timeout value range for the following parameters in the "Configuring Routing Options" section as part of the SCP Response Timeout Extension feature:
 - `responseTimeout`
 - `nextHopSCP.responseTimeout`
 - `nextHopSEPP.responseTimeout`
- Updated the default values for the following parameters related to cases where the host's FQDN is not found in the "Configuring Routing Options" and "Routing Config Set" sections:
 - `exceptionErrorResponses`
 - `nextHopSCP.exceptions`
 - `nextHopSEPP.exceptions`
- Updated the description of the `egress_host_preference` parameter description in the "Configuring SCP Features" section for better clarity.
- Updated the "Configuring Dynamic Logging" section with the default value for the rate, which specifies the average number of logs allowed per second.
- Added the "Configuring TLS Version and Ciphers" section as part of the Support for TLS feature to provide information on configuring TLS versions and ciphers.
- Removed the following deprecated parameters from the "Configuring System Options" section:
 - `cbEnabled`
 - `http2MaxRequests`
 - `OutlierDetection`

4.3 CNC Console

This section lists the CNC Console changes in release 24.3.x. For more information about the CNC Console configurations, see *Oracle Communications Cloud Native Core, Service Communication Proxy User Guide*.

Release 24.3.0

The following are the CNC Console changes in this release:

- Added a procedure to enable additional logging and subscriber ID for error logs in the "Configuring the Log Enhancement Feature" section.
- Added a note in the Configuring Global Options section that the "scpc-audit" microservice supports the TRACE log level.
- Removed the **HTTP2 Max Requests** field from the "Configuring the Default TTL Value" section.

5

Observability

This chapter lists the observability changes in release 24.3.x.

5.1 Metrics

This section lists the added or updated metrics in release 24.3.x. For more information about metrics, see *Oracle Communications Cloud Native Core, Service Communication Proxy User Guide*.

Release 24.3.0

The following metrics are added or updated in this release:

- Updated the `ocscp_upstream_service_time` dimension of the `ocscp_metric_upstream_service_time_total` metric in the "Metric" section as part of the SCP Response Timeout Extension feature.

5.2 Alerts

This section lists the added or updated alerts in release 24.3.x. For more information about alerts, see *Oracle Communications Cloud Native Core, Service Communication Proxy User Guide*.

Release 24.3.0

The following alerts are added or updated in this release:

- Updated the description and summary of the "SCPHighResponseTimeFromProducer" alert in the "Alert" section as part of the SCP Response Timeout Extension feature.
- Added the following alerts as part of the Overload Control Based on the Overload Control Information Header feature:
 - `ScpSelfOCIThresholdAboveWarn`
 - `ScpSelfOCIThresholdAboveMinor`
 - `ScpSelfOCIThresholdAboveMajor`
 - `ScpSelfOCIThresholdAboveCritical`
- Updated the expression for the following "Alert" section:
 - `ScpWorkerPodCpuUtilizationAboveMinorThreshold`
 - `ScpWorkerPodCpuUtilizationAboveMajorThreshold`
 - `ScpWorkerPodCpuUtilizationAboveCriticalThreshold`
- Updated the summary for the following "Alert" section:
 - `SCPProducerOverloadThrottled`
 - `SCPProducerOverloadAlternateRouted`
 - `SCPGlobalEgressRLRemoteParticipantWithDuplicateNFInstanceId`

5.3 Key Performance Indicators

This section lists the added or updated KPIs in release 24.3.x. For more information about KPIs, see *Oracle Communications Cloud Native Core, Service Communication Proxy User Guide*.

Release 24.3.0

There are no new KPIs introduced in this release.