Oracle® Communications
Network Analytics Data Director Inbound Protocols for Non-Oracle NFs

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Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

Access to Oracle Support

Oracle customer access to and use of Oracle support services will be pursuant to the terms and conditions specified in their Oracle order for the applicable services.

Diversity and Inclusion

Oracle is fully committed to diversity and inclusion. Oracle respects and values having a diverse workforce that increases thought leadership and innovation. As part of our initiative to build a more inclusive culture that positively impacts our employees, customers, and partners, we are working to remove insensitive terms from our products and documentation. We are also mindful of the necessity to maintain compatibility with our customers' existing technologies and the need to ensure continuity of service as Oracle's offerings and industry standards evolve. Because of these technical constraints, our effort to remove insensitive terms is ongoing and will take time and external cooperation.

Conventions

The following text conventions are used in this document:

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

My Oracle Support (MOS)

My Oracle Support (https://support.oracle.com) is your initial point of contact for all product support and training needs. A representative at Customer Access Support can assist you with My Oracle Support registration.

Call the Customer Access Support main number at 1-800-223-1711 (toll-free in the US), or call the Oracle Support hotline for your local country from the list at http://www.oracle.com/us/support/contact/index.html. When calling, make the selections in the sequence shown below on the Support telephone menu:

- For Technical issues such as creating a new Service Request (SR), select **1**.

- For Non-technical issues such as registration or assistance with My Oracle Support, select **2**.

- For Hardware, Networking and Solaris Operating System Support, select **3**.

You are connected to a live agent who can assist you with My Oracle Support registration and opening a support ticket.

My Oracle Support is available 24 hours a day, 7 days a week, 365 days a year.

Acronyms

The following table provides information about the acronyms and the terminology used in the document:

Table   Acronyms

Acronym	Full Form
NF	Network Function
NFs	Network Functions
DD	Data Director
HTTP2	Hypertext Transfer Protocol Version 2
5GSBI	5G Service-Based Interface
OCNADD	Oracle Communications Network Analytics Data Director
FQDN	Fully Qualified Domain Name
IP	Internet Protocol
POST	HTTP POST Method
3GPP	3rd Generation Partnership Project
SBI	Service-Based Interface

What's New in This Guide

This section introduces the documentation updates for Release *25.1.1xx* in *Oracle Communications Network Analytics Data Director Inbound Protocols for Non-Oracle NFs*.

Release 25.1.100 - G35938-01, June 2025

This is the initial release of this document.

1

Introduction

This document explains the inbound protocols for non-Oracle NFs with Oracle Communications Network Analytics Data Director (OCNADD).

1.1 References

For more information on OCNADD, see the following documents:

- *Oracle Communications Network Analytics Data Director User Guide*
- *Oracle Communications Network Analytics Data Director Troubleshooting Guide*
- *Oracle Communications Network Analytics Data Director Installation, Upgrade, and Fault Recovery Guide*
- *Oracle Communications Cloud Native Environment Installation, Upgrade, and Fault Recovery Guide*
- *Oracle Communications Cloud Native Core cnDBTier Installation,Upgrade, and Fault Recovery Guide*
- *Oracle Communications Cloud Native Configuration Console Installation, Upgrade, and Fault Recovery Guide*
- *Oracle Communications Network Analytics Suite Security Guide*
- *Oracle Communications Network Analytics Data Director Benchmarking Guide*
- *Oracle Communications Network Analytics Data Director Outbound Interface Specification Guide*

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Inbound Protocols for Non-Oracle NFs

Data Director currently supports HTTP2 Ingress Feed type, over which it received the 5GSBI messages and metadata added by the Non-Oracle NFs.

Non-Oracle NFs should be sending mirrored copy of actual HTTP2 request or response message (HTTP Header + Body) in the body of HTTP2 messages using POST method. The metadata fields from Non-Oracle NFs can be present either in "MESSAGE_HEADER" or "MESSAGE_BODY".

2.1 Data Transformation & Metadata Mapping

The message transformation functionality will allow data conversion and mapping from Non-Oracle NF to Oracle NF data which will be consumed by DD internal services for data processing. The conversion framework will provide capabilities to map the following metadata fields with OCNADD for processing.

The metadata fields from Non-Oracle NFs can be present either in "MESSAGE_HEADER" (as custom headers) or "MESSAGE_BODY". Based on the value of the parameter "metadataLocation" while creating configuration, the ingress adapter will take the attributes and perform the transformation of these fields to the Oracle Data Director format. If metadata is present in message body, then additional fields are required to be configured.

Metadata Mapping

Table 2-1   Metadata Mapping

Oracle Attribute Name	Ingress Attribute Name	Presence	Static Value (Default)	Description
correlation-id	<Ingress-attribute-name>	M	NA	Correlation id is mandatory to correlate all mirrored request and response messages of a transaction. If custom correlation id is not provided DD will attempt to retrieve this from 3gpp-Sbi-Correlation-Info header if available. It must be present in either of the two attributes.
timestamp	<Ingress-attribute-name>	M	NA	This property defines the timestamp of the request when it is initiated.

Table 2-1　(Cont.) Metadata Mapping

Oracle Attribute Name	Ingress Attribute Name	Presence	Static Value (Default)	Description
message-direction	<Ingress Attribute name(list)>	M	NA	It consists of both the messages direction (ingress or egress) and the message type (Request or Response). The non-Oracle feeds may send messages direction and message type in different custom headers. Oracle ingress adapter will combine both and map it to the supported OracleNfFeedDto.
consumer-fqdn	<Ingress Attribute name>	O	NA	The consumer fqdn will be mapped with the received value of configured ingress attribute name in custom headers. If the value is not present, then it will be skipped.
consumer-id	<Ingress Attribute name>	O	NA	The consumer id will be mapped with the received value of configured ingress attribute name in custom headers. If the value is not present, then it will be skipped.
hop-by-hop-id	<Ingress Attribute name>	O	NA	The hop by hop id will be mapped with the received value of configured ingress attribute name in custom headers. If the value is not present, then it will be skipped.
producer-fqdn	<Ingress Attribute name>	O	NA	The producer fqdn will be mapped with the received value of configured ingress attribute name in custom headers. If the value is not present, then it will be skipped.
producer-id	<Ingress Attribute name>	O	NA	The producer id will be mapped with the received value of configured ingress attribute name in custom headers. If the value is not present, then it will be skipped.

Table 2-1   (Cont.) Metadata Mapping

Oracle Attribute Name	Ingress Attribute Name	Presence	Static Value (Default)	Description
reroute-cause	<Ingress Attribute name>	O	NA	The reroute cause will be mapped with the received value of configured ingress attribute name in custom headers. If the value is not present, then it will be skipped.
feed-source-nf-type	<Ingress Attribute name>, Use feed-source Host Address mapping	M	<default-nf-type>	The "*nf type*" for OracleNfFeedDto will be mapped from the ingress attribute name which is provided during feed creation. However, if attribute name is not present in the custom headers, then feed-source host IP address will be taken from "custom-forward-for" or "x-forwarded-for" header if present and a look up will be performed from feed source host address mapping to get the nf-type. If the x-forwarded-for header is not present then Source IP of the request will be used. If the source IP is not present in the feed source host address map, then default value will be used for mapping. However, it is recommended to use default value when only one NF is producing data.

Table 2-1   (Cont.) Metadata Mapping

Oracle Attribute Name	Ingress Attribute Name	Presence	Static Value (Default)	Description
feed-source-nf-instance-id	<Ingress Attribute name>, Use feed-source Host Address mapping	C	<default-nf-instance-id>	The "*nf instance id*" for OracleNfFeedDto will be mapped from the ingress attribute name which is provided during feed creation. However, if attribute name is not present in the custom headers, then feed-source host IP address will be taken from "custom-forward-for" or "x-forwarded-for" header if present and a look up will be performed from feed source host address mapping to get the nf-instance-id. If the x-forwarded-for header is not present then Source IP of the request will be used. If the source IP is not present in the feed source host address map, then default value will be used for mapping. However, it is recommended to use default value when only one NF is producing data.
feed-source-nf-fqdn	<Ingress Attribute name>, Use feed-source Host Address mapping	C	<default-nf-fqdn>	The "*nf instance fqdn"* for OracleNfFeedDto will be mapped from the ingress attribute name which is provided during feed creation. However, if attribute name is not present in the custom headers, then feed-source host IP address will be taken from "custom-forward-for" or "x-forwarded-for" header if present and a look up will be performed from feed source host address mapping to get the nf-fqdn. If the x-forwarded-for header is not present then Source IP of the request will be used. If the source IP is not present in the feed source host address map, then default value will be used for mapping. However, it is recommended to use default value when only one NF is producing data.

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Table 2-1   (Cont.) Metadata Mapping

Oracle Attribute Name	Ingress Attribute Name	Presence	Static Value (Default)	Description
feed-source-nf-pod-instance-id	<Ingress Attribute name>	O	<default-nf-pod-instance-id>	The "*nf pod instance id*" for OracleNfFeedDto will be mapped from the ingress attribute name which is provided during feed creation. However, if attribute name is not present in the custom headers, then default value will be used for mapping. It is recommended to use default value when only one NF is producing data.

2.2 Ingress Message Format for Non-Oracle NFs

The following diagram explains the format of the Ingress messages for non-Oracle network functions (NFs).