



AMF Metrics Reference

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AMF AUSF Service Statistics Category

n12_service_stats

Description: AMF Ausf service stats

Sample Query:

```
n12_service_stats(message_type=\"NausfUeAuthReq\",status=\"success\",reason=\"AUTHENTICATION_SUCCESS\",slice_data=\"2-33333\")
```

Labels:

- Label: `message_type`

Label Description: The message type associated with an AUSF service.

Example: NausfUeAuthReq, NausfUeAuthRsp, NausfUe5gAkaCnfReq, NausfUe5gAkaCnfRsp

- Label: `status`

Label Description: Overall status

Example: success, failures, attempted

- Label: `reason`

Label Description: The reason associated with an AUSF service.

Example: Suspend, Suspend for Async, Unable to retrieve msg from rsp, Supi mismatch, Internal Error, Sync Failed Mac Failure, Auth Challenge Failed, Auth Cfm Failed, Sync Failed Exceeded, Timeout, Others, No Security Context from Peer, Peer Provided Sec Context Failed, NgKsi Already In Use, Scheduled ipc action in background, Unable to retrieve identity rsp, Unable to get Supi, AUTHENTICATION_SUCCESS, AUTHENTICATION_REJECTED, AV_GENERATION_PROBLEM, CONTEXT_NOT_FOUND, INVALID_HN_PUBLIC_KEY_IDENTIFIER, INVALID_SCHEME_OUTPUT, NETWORK_FAILURE, SERVING_NETWORK_NOT_AUTHORIZED, UNSUPPORTED_PROTECTION_SCHEME, UPSTREAM_SERVER_ERROR, USER_NOT_FOUND, Unable to get rsp

- Label: `slice_data`

Label Description: Slice data.

Example: 2-333333

AMF Debug Proto Map Statistics Category

amf_debug_proto_map_stats

Description: Debug statistics.

Sample Query:

```
amf_debug_proto_map_stats(msg_type=\"N2UeRadioCapabilityCheckRsp\",action=\"dropped\",reason=\"connection_not_found\")
```

Labels:

- Label: `msg_type`

Label Description: Message type.

Example: N2UeRadioCapabilityCheckRsp, N2InitialContextSetupRsp

- Label: `action`

Label Description: Action

Example: dropped

- Label: `reason`

Label Description: Reason

Example: connection_not_found

AMF Disconnect Statistics Category

amf_disconnect_stats

Description: AMF Disconnect statistics counters.

Sample Query: `amf_disconnect_stats{reason=\"disc_ue_init_dereg\"}`

Labels:

- Label: `reason`

Label Description: The reason associated with call disconnect.

Example: `disc_ue_init_dereg`, `disc_nw_init_dereg`, `Ausf_AuthReject`, `Ausf_DropPeerMsg`

AMF EBI Assign Failures Category

amf_ebi_assign_failures

Description: EBI Assign failure statistics.

Sample Query:

```
amf_ebi_assign_failures{message_type=\"amf_ebi_rejected_no_n26\",status=\"success\",reason=\"Unable to get rsp\",slice_data=\"2-333333\"}
```

Labels:

- Label: `message_type`

Label Description: The message type associated with an EBI service.

Example: `amf_ebi_rejected_no_n26`, `amf_ebi_fail_pdu_session_id`, `amf_ebi_fail_bearers_not_found`

- Label: `status`

Label Description: Overall status.

Example: success, failures

- Label: `reason`

Label Description: The reason associated with an EBI.

Example: Unable to get rsp, Unable to retrieve msg from rsp, Unknown Subscriber, Internal Error, Msg Timeout

- Label: `slice_data`

Label Description: Slice data

Example: 2-333333

AMF Initial Context Setup Statistics Category

ics_service_stats

Description: Initial Context Setup statistics.

Sample Query:

```
ics_service_stats(message_type=\"N2InitialContextSetupReq\",status=\"success\",reason=\"Success\",slice_data=\"2-333333\")
```

Labels:

- Label: `message_type`

Label Description: The message type associated with an ICSR service.

Example: N2InitialContextSetupReq, N2InitialContextSetupRsp, N2InitialContextSetupFailure

- Label: `status`

Label Description: Overall status.

Example: success, failures

- Label: `reason`

Label Description: The reason associated with an ICSR.

Example: Suspend, Suspend for Async, Unable to get rsp, Unable to retrieve msg from rsp, Internal Error, Success

- Label: `slice_data`

Label Description: Slice data.

Example: 2-333333

AMF Metrics NGAP Message Total Category

amf_ngap_message_total

Description: Total number of NGAP messages.

Sample Query:

```
amf_ngap_message_total(message_direction=\"inbound\",message_type=\"N2NGSetupRsp\")
```

Labels:

- Label: `message_direction`

Label Description: Message direction.

Example: outbound, inbound

- Label: `message_type`

Label Description: Message type.

Example: N2RanConfigUpdateFailure, N2AmfConfigUpdate, N2DownlinkNASTransport, N2NGSetupFailure, N2NGSetupRsp, N2ErrorIndication, N2UeContextReleaseCommand, N2InitialContextSetupReq, N2PduSessResouceModifyReq, N2RanConfigUpdateAck, Paging, N2PduSessResouceSetupReq, N2PathSwitchReqAckMsg, N2PathSwitchReqFailureMsg, N2DLRanStatuTransfer, N2HandoverRequest, N2HandoverCommand, N2HandoverCancelAck, N2HandoverPreparationFailure, N2NGResetAck, N2UeRadioCapabilityCheckReq, NonUeN2WriteReplaceWarningReq, N2HandoverRequired, N2HandoverCancel, N2UeContextReleaseRequest, N2HandoverFailure, N2AmfConfigUpdateTimeout, N2NGSetupReq, N2InitialUeMessage, N2UplinkNASTransport, N2PduSessResourceSetupRsp, N2PduSessResourceReleaseRsp, N2PduSessResourceModifyRsp, N2ErrorIndication, N2UeContextReleaseComplete, N2InitialContextSetupRsp, N2InitialContextSetupFail, N2AmfConfigUpdateAck, N2AmfConfigUpdateFailure, N2RanConfigUpdate, N2PathSwitchReqMsg, N2HandoverRequestAck, N2HandoverNotify, N2UeRadioCapabilityInfoInd, N2UeRadioCapabilityCheckRsp, N2UplinkRanStatusTransfer, NonUeN2WriteReplaceWarningRsp, NonUeN2PWSCancelWarningRsp, NonUeN2PWSFailureIndication, NonUeN2PWSRestartIndication, N2NGReset

AMF NAS ASN Decode ERR Statistics Category

`nas_asn_decode_error_stats`

Description: NAS ASN Decoding errors.

Sample Query:

```
nas_asn_decode_error_stats{message_type=\"N1RegistrationRequest\",asn_failures=\"\"}
```

Labels:

- Label: `message_type`

Label Description: Message type.

Example: N1RegistrationRequest, N1RegistrationComplete, N1UINasTransport, N1DeRegistrationRequestUeOrigDereg, N1DeRegistrationAcceptUeTermDereg, N1ServiceRequest, N1AuthenticationResponse, N1SecurityModeComplete, N1SecurityModeReject, N1AuthenticationFailure, N1IdentityResponse, N1ConfigurationUpdateComplete

- Label: `asn_failures`

Label Description: Failure reason

Example: CauseProtocolTransferSyntaxError

AMF NAS ASN Encode ERR Statistics Category

nas_asn_encode_error_stats

Description: NAS ASN Encoding errors.

Sample Query:

```
nas_asn_encode_error_stats(message_type=\"N1AuthenticationRequest\",asn_failures=\"\")
```

Labels:

- Label: `message_type`

Label Description: Message type.

Example: N1AuthenticationRequest, N1AuthenticationResult, N1AuthenticationReject, N1RegistrationAccept, N1RegistrationReject, N1DINasTransport, N1DeRegistrationAcceptUeOrigDereg, N1DeRegistrationRequestUeTermDereg, N1ServiceAccept, N1ServiceReject, N1ConfigurationUpdateCommand, N1IdentityRequest, N1Notification, N1SecurityModeCommand

AMF NAS Integrity Failure Category

IntegrityCheckFailure

Description: Integrity failures.

Sample Query: `IntegrityCheckFailure(message_type=\"N1IdentityResponse\")`

Labels:

- Label: `message_type`

Label Description: Message type.

Example: Unsupported_N1_Msg, N1DeRegistrationAcceptUeTermDereg, N1DeRegistrationRequestUeOrigDereg, N1IdentityResponse

AMF NGAP ASN Decode ERR Statistics Category

ngap_asn_decode_error_stats

Description: NGAP ASN Decoding errors.

Sample Query:

```
ngap_asn_decode_error_stats(message_type=\"N2NGSetupReq\",asn_failures=\"CauseProtocolTransferSyntaxError\")
```

Labels:

- Label: `message_type`

Label Description: NGAP message type.

Example: N2NGSetupReq, N2InitialUeMessage, N2UplinkNASTransport, N2PduSessResourceSetupRsp, N2PduSessResourceReleaseRsp, N2PduSessResourceModifyRsp, N2UeContextReleaseRequest, N2UeContextReleaseRequest, N2ErrorIndication, N2UeContextReleaseComplete, N2InitialContextSetupRsp, N2AmfConfigUpdateAck, N2AmfConfigUpdateFailure, N2RanConfigUpdate, N2PathSwitchReqMsg, N2HandoverRequired, N2HandoverRequestAck, N2HandoverNotify, N2UeRadioCapabilityInfoInd, N2UeRadioCapabilityCheckRsp, N2UplinkRanStatusTransfer, NonUeN2WriteReplaceWarningRsp, NonUeN2PWSFailureIndication, NonUeN2PWSRestartIndication, N2NGReset, N2HandoverCancel

- Label: `asn_failures`

Label Description: Failure reason.

Example: CauseProtocolTransferSyntaxError

AMF NGAP ASN Encode ERR Statistics Category

`ngap_asn_encode_error_stats`

Description: NGAP ASN Encoding errors

Sample Query: `ngap_asn_encode_error_stats{message_type="NgSetupResponse",asn_failures=""}`

Labels:

- Label: `message_type`

Label Description: NGAP message type.

Example: RanConfigUpdateFailure, DINasTransport, NgSetupFail, NgSetupResponse, UeErrorIndication, UeCtxReleaseCommand, InitialContextSetupRequest, PduSessModifyRequest, PduSessReleaseCommand, RanConfigUpdateAck, Paging, PduSessResourceSetupRequest, PathSwitchRequestAck, PathSwitchRequestFailure, DownlinkRanStatusTransfer, HandoverRequest, HandoverCommand, HandoverCancelAck, HandoverPreparationFailure, NGResetAcknowledge, UeCapabilityCheckReq, NgAmfConfigurationUpdate

AMF NGAP DL Message Statistics Category

`ngap_dl_msg_stats`

Description: AMF NGAP DL message statistics.

Sample Query:

`ngap_dl_msg_stats{message_type="N2HandoverCancelAck",status="success",reason="",slice_data="2-333333"}`

Labels:

- Label: `message_type`

Label Description: The message type associated with the NGAP DL message.

Example: N2HandoverCancelAck, N2HandoverRequest, N2HandoverCommand, N2HandoverPreparationFailure

- Label: `status`

Label Description: Overall status.

Example: success, failures

- Label: `reason`

Label Description: The reason associated with the NGAP DL message.

Example: Unable to get rsp, Unable to retrieve msg from rsp, Unknown Subscriber, Internal Error, Msg Timeout, Peer Info Not Available, Req Not Accepted, Sub IMSI Not Received, PGW FQDN Not Received, Mandatory IE Missing, Invalid Input, No Bearer Context, No Linked EBI, SM Context Failed for PDU, S1 mode Not Supported, SM Context PDU failed without N2smInfo, SM Context data received from SMF is NIL, N1 mode Not Supported

- Label: `slice_data`

Label Description: Slice data.

Example: 2-333333

AMF NGAP UL Message Statistics Category

`ngap_ul_msg_stats`

Description: AMF NGAP UL message statistics.

Sample Query:

```
ngap_ul_msg_stats{message_type="N2HandoverFailure",status="success",reason="",slice_data="2-333333"}
```

Labels:

- Label: `message_type`

Label Description: The message type associated with the NGAP UL message.

Example: N2HandoverFailure, N2HandoverRequest, N2HandoverRequestAck, N2HandoverNotify, N2HandoverRequired, N2HandoverCancel

- Label: `status`

Label Description: Overall status.

Example: success, failures

- Label: `reason`

Label Description: The reason associated with the NGAP UL message.

Example: Unable to get rsp, Unable to retrieve msg from rsp, Unknown Subscriber, Internal Error, Msg Timeout, Peer Info Not Available, Req Not Accepted, Sub IMSI Not Received, PGW FQDN Not Received, Mandatory IE Missing, Invalid Input, No Bearer Context, No Linked EBI, SM Context Failed for PDU, S1 mode Not Supported, SM Context PDU failed without N2smInfo, SM Context data received from SMF is NIL, N1 mode Not Supported

- Label: `slice_data`

Label Description: Slice data.

Example: 2-333333

AMF NAS Message Total Category

amf_nas_message_total

Description: The number of NAS messages received or sent.

Sample Query:

```
amf_nas_message_total{message_direction!="inbound",message_type="Paging_Trigger_N1N2_Msg_Xfer",slice_data="2-333333"}
```

Labels:

- Label: `message_direction`

Label Description: The event type associated with the NAS message.

Example: inbound, outbound

- Label: `slice_data`

Label Description: Slice data.

Example: 2-333333

- Label: `message_type`

Label Description: The message type associated with the NAS message.

Example: Paging_Trigger_N1N2_Msg_Xfer, N1DeRegReq_UeOriginatingDereg, N1DeRegReq_UeOriginatingDereg_NormalDereg, N1RegComplete, N1RegComplete, N1RegRequest, N1RegRequest_IdentityType_SUCI, N1RegRequest_RegType_INITIAL_REGISTRATION, N1ServiceReq, N1ServiceReq_Idle, N1ServiceReq_SIGNALLING, N1ServiceReq_WithPdu, PduEstablishmentReq, PduModifyReq_NwInitiated, N1DINasTransport, N1RegistrationAccept, N1ServiceAcc, N1UINasTransport, Paging, Paging_Stage_1, Paging_TriggerType_5qi

AMF PCF Service Statistics Category

n15_service_stats

Description: AMF PCF service statistics.

Sample Query:

```
n15_service_stats{message_type="NpcfAmPolicyControlCreateReq",status="success",reason="Unable to get rsp",slice_data="2-333333"}
```

Labels:

- Label: `message_type`

Label Description: The message type associated with a PCF service.

Example: NpcfAmPolicyControlCreateReq, NpcfAmPolicyControlCreateRsp, NpcfAmPolicyControlDeleteReq, NpcfAmPolicyControlDeleteRsp

- Label: `status`

Label Description: Overall status.

Example: success, failures

- Label: `reason`

Label Description: The reason associated with a PCF service.

Example: Suspend, Suspend for Async, Unable to get rsp, Unable to retrieve msg from rsp, Failure in PCF Response,Others, Internal Error

- Label: `slice_data`

Label Description: Slice data.

Example: 2-333333

AMF Procedure Seconds Category

amf_procedure_seconds

Description: Total number of seconds taken to complete the procedure.

Sample Query: `amf_procedure_seconds{proc_type="UE Registration",status="success",proc_status="",slice_data="2-333333"}`

Labels:

- Label: `proc_type`

Label Description: The procedure type associated with a call flow.

Example: UE Registration, UE DeRegistration, Pdu Create, Pdu N1N2, Pdu N2Rs, Pdu N1Rsp, Pdu Mod, UE Context Release, Pdu Notify, EBI, Paging, Service Request, Context Transfer, Context Transfer Upd, Xn Handover, N2 Handover Src, Handover to EPC, UeRadioCapInfoInd, NGRreset, N2 Handover Tgt, Handover From EPC, UeCfgUpdate, Domain Selection Info, Amf Redirection

- Label: `status`

Label Description: The overall status of procedure.

Example: success, failures, attempted

- Label: `proc_status`

Label Description: The current status of procedure.

Example: ProcStatusComplete

- Label: `slice_data`

Label Description: Slice data.

Example: 2-333333

AMF Procedure Total Category

amf_procedure_total

Description: Total number of procedure executed counter.

Sample Query: `amf_procedure_total{proc_type=\"UE Registration\", status=\"success\", proc_status=\"\", slice_data=\"2-333333\"}`

Labels:

- Label: `proc_type`

Label Description: The procedure type associated with a call flow.

Example: UE Registration, UE DeRegistration, Pdu Create, Pdu N1N2, Pdu N2Rsp, Pdu N1Rsp, Pdu Mod, UE Context Release, Pdu Notify, EBI, Paging, Service Request, Context Transfer, Context Transfer Upd, Xn Handover, N2 Handover Src, Handover to EPC, UeRadioCapInfoInd, NGRreset, N2 Handover Tgt, Handover From EPC, UeCfgUpdate, Domain Selection Info, Amf Redirection

- Label: `status`

Label Description: The overall status of procedure.

Example: success, failures, attempted

- Label: `proc_status`

Label Description: The current status of procedure.

Example: ProcStatusComplete

- Label: `slice_data`

Label Description: Slice data.

Example: 2-333333

AMF Retransmission Statistics Category

retransmission_stats

Description: Number of retransmissions.

Sample Query: `retransmission_stats{msg_type=\"Paging\", status=\"success\"}`

Labels:

- Label: `msg_type`

Label Description: Message type.

Example: Paging, N1AuthenticationRequest, N1AuthenticationResult, N1AuthenticationReject, N1RegistrationAccept, N1RegistrationReject, N1DINas Transport, N1DeRegistrationAcceptUeOrigDereg, N1DeRegistrationRequestUeTermDereg, N1ServiceAccept, N1ServiceReject,

N1ConfigurationUpdateCommand, N1IdentityRequest, N1Notification, N1SecurityModeCommand, N2MsgNgapDL,MsgNgap

- Label: `status`

Label Description: Overall status.

Example: success, failures, max_retry_exceeded

AMF Session Statistics Category

amf_session_stats

Description: AMF Session statistics counters.

Sample Query: `amf_session_stats{status=\"attempted\"}`

Labels:

- Label: `ueType`

Label Description: Type of the UE associated with the request.

Example: homer, roamer, unknown

- Label: `status`

Label Description: UE session status indicated at AMF.

Example: attempted, success, setup

AMF SMF Service Statistics Category

n11_service_stats

Description: AMF SMF service statistics.

Sample Query:

```
n11_service_stats{message_type=\"N11SMContextUpdateReq\",status=\"success\",reason=\"Unable to get rsp\",slice_data=\"2-333333\"}
```

Labels:

- Label: `message_type`

Label Description: The message type associated with SMF service.

Example: N11SMContextUpdateReq, N11SMContextUpdateRsp, N11SMContextRetrieveRsp, N11SMContextRetrieveReq, N11SMContextCreateReq, N11SMContextCreateRsp

- Label: `status`

Label Description: Overall status.

Example: success, failures

- Label: `reason`

Label Description: The reason associated with SMF service.

Example: Unable to get rsp, Unable to retrieve msg from rsp, Unknown Subscriber, Internal Error, Msg Timeout, Peer Info Not Available, Req Not Accepted, Sub IMSI Not Received, PGW FQDN Not Received, Mandatory IE Missing, Invalid Input, No Bearer Context, No Linked EBI, SM Context Failed for PDU, S1 mode Not Supported, SM Context PDU failed without N2smInfo, SM Context data received from SMF is NIL, N1 mode Not Supported

- Label: `slice_data`

Label Description: Slice data.

Example: 2-333333

AMF UDM Service Statistics Category

`n8_service_stats`

Description: AMF UDM service statistics.

Sample Query:

```
n8_service_stats(message_type="NudmSdmDataReq",status="success",reason="INVALID_GUAMI",slice_data="2-333333")
```

Labels:

- Label: `message_type`

Label Description: The message type associated with the UDM service.

Example: NudmSdmDataReq, NUdmUecmDeregisterNotificationRequest, NUdmUecmDeregisterNotificationResponse, NudmSdmUnSubscriptionReq, NudmSdmUnSubscriptionRsp, NudmPscsfRestorationReq, NudmPscsfRestorationRsp, NudmUecmRegistrationReq, NudmUecmRegistrationRsp, NudmSdmDataReq, NudmSdmDataRsp, NudmSdmSubscriptionReq, NudmSdmSubscriptionRsp

- Label: `status`

Label Description: Overall status.

Example: success, failures

- Label: `reason`

Label Description: The reason associated with the UDM service.

Example: Suspend, Suspend for Async, Unable to get rsp, Unable to retrieve msg from rsp, Others, Internal Error, Missing Supi, Failure from Udm, SUBSCRIPTION_WITHDRAWN, UE_INITIAL_REGISTRATION, CONTEXT_NOT_FOUND, DATA_NOT_FOUND, UNSUPPORTED_RESOURCE_URI, USER_NOT_FOUND, ACCESS_NOT_ALLOWED, INVALID_GUAMI, NO_PS_SUBSCRIPTION, RAT_NOT_ALLOWED, ROAMING_NOT_ALLOWED, UNKNOWN_5GS_SUBSCRIPTION, UNPROCESSABLE_REQUEST

- Label: `slice_data`

Label Description: Slice data.

Example: 2-333333

AMF UE Service Statistics Category

n1_service_stats

Description: AMF UE service statistics.

Sample Query:

```
n1_service_stats{message_type="IdentityResponse",status="success",reason="key
Mismatch",slice_data="2-333333"}
```

Labels:

- Label: `message_type`

Label Description: The message type associated with an UE service.

Example: IdentityResponse, N1SecurityModeComplete, N1AuthenticationRsp, N1SecurityModeCommand, N1AuthenticationReq, N1AuthFail_SyncFailure, N1AuthenticationReject, N1AuthFail_MacFailure, IdentityRequest_Imei, IdentityRequest_Suci, N1DeRegAccept_UeTerminatedDereg, N1UeConfigurationUpdCmd

- Label: `status`

Label Description: Overall status.

Example: success, failures, attempted

- Label: `reason`

Label Description: The reason associated with an UE service.

Example: Suspend, Suspend for Async, Unable to get rsp, Unable to retrieve msg from rsp, Supi mismatch, Internal Error, Sync Failed, Timeout, Others, No Security Context from Peer, Peer Provided Sec Context Failed, NgKsi Already In Use, Scheduled ipc action in background, Unable to retrieve identity rsp, Unable to get Supi, key Mismatch

- Label: `slice_data`

Label Description: Slice data.

Example: 2-333333

ASN Failure Mandatory IE Missing Category

asn_failures_mandatory_ie_missing

Description: Mandatory missing IEs.

Sample Query:

```
asn_failures_mandatory_ie_missing{missing_ie="MessageId",message_type="WriteReplaceWarningRequest"}
```

Labels:

- Label: `missing_ie`

Label Description: Missing IE.

Example: MessageId, SerialNumber, GlobalRANNodeID, RANNodeName, SupportedTAList, RanUeNgapId, NasPdu, UserLocationInformation, Cause, ResetType

- Label: `message_type`

Label Description: Message type.

Example: WriteReplaceWarningRequest, NgSetupRequest, RanConfigUpdate, InitialUeMessage, UINasTransport, NgapReset

Discover Messages Time Statistics Category

`nf_discover_total_time`

Description: Discover Messages total time statistics.

Sample Query: `nf_discover_total_time{nf_type=\"amf\", host=\"http://10.105.227.109:8082/nnrf-nfm/v1\", result=\"timeouOrRPCError\"}`

Labels:

- Label: `nf_type`

Label Description: Network function type.

Example: nrf, udm, amf, pcf, ausf, smf

- Label: `host`

Label Description: Endpoint address.

Example: `http://10.105.227.109:8082/nnrf-nfm/v1`

- Label: `result`

Label Description: Result of discover message.

Example: 200, 201, 204, success, timeout_rpc_error, response_parse_failure

Discover Messages Statistics Category

`nf_discover_messages_total`

Description: Discover Messages statistics.

Sample Query: `nf_discover_messages_total{nf_type=\"amf\", host=\"http://10.105.227.109:8082/nnrf-nfm/v1\", result=\"timeouOrRPCError\"}`

Labels:

- Label: `nf_type`

Label Description: Network function type.

Example: nrf, udm, amf, pcf, ausf, smf

- Label: `host`

Label Description: Endpoint address.

Example: `http://10.105.227.109:8082/nnrf-nfm/v1`

- Label: `result`

Label Description: Result of discover message.

Example: 200, 201, 204, success, timeout_rpc_error, response_parse_failure

Marshal Failures Category

`marshal_failures`

Description: Total number of Marshal error statistics.

Sample Query: `marshal_failures{message_type="\SmfSmContextDelete"}`

Labels:

- Label: `message_type`

Label Description: The message type associated with Marshal failure statistics.

Example: `AusfAuthenticationCfm, AusfAuthenticationReq, UdmDeRegistrationReq, UdmRegistrationReq, UdmSubscriptionReq, UdmUnSubscriptionReq, PcfAmfPolicyControlCreate, PcfAmfPolicyControlDelete, SmfSmContextCreate, SmfSmContextDelete, SmfSmContextUpdate, AmfCommCreateUeContext, AmfCommN1N2MessageTransfer`

N26 Service Statistics Category

`n26_service_stats`

Description: AMF N26 statistics.

Sample Query:

`n26_service_stats{message_type="GTPCRxIdentificationRequest",status="success",reason="N1 mode Not Supported",slice_data="2-33333"}`

Labels:

- Label: `message_type`

Label Description: The message type associated with the N26 service.

Example: `GTPCRxIdentificationRequest, GTPCTxIdentificationRequest, GTPCRxContextRequest, GTPCRxContextResponse, GTPCRxContextAck, GTPCTxContextAck, GTPCRxFwdRelocCmpNotf, GTPCTxFwdRelocCmpNotf, GTPCRxRelocCancelReq, GTPCTxRelocCancelRsp, GTPCTxFwdRelocResponse`

- Label: `status`

Label Description: Overall status.

Example: success, failures

- Label: `reason`

Label Description: The reason associated with the N26 service.

Example: Unable to get rsp, Unable to retrieve msg from rsp, Unknown Subscriber, Internal Error, Msg Timeout, Peer Info Not Available, Req Not Accepted, Sub IMSI Not Received, PGW FQDN Not Received, Mandatory IE Missing, Invalid Input, No Bearer Context, No Linked EBI, SM Context Failed for PDU, S1 mode Not Supported, SM Context PDU failed without N2smInfo, SM Context data received from SMF is NIL, N1 mode Not Supported

- Label: `slice_data`

Label Description: Slice data.

Example: 2-333333

NF Endpoint Selections Category

`nf_endpoint_selections_total`

Description: NF Endpoint selection statistics.

Sample Query: `nf_endpoint_selections_total{message_type="\SmfSmContextDelete", nf_type="\ausf", host="http://10.105.227.109:8082/nrf-nfm/v1", req="initial"}`

Labels:

- Label: `message_type`

Label Description: The message type associated with the failure statistics.

Example: AusfAuthenticationCfm, AusfAuthenticationReq, UdmDeRegistrationReq, UdmRegistrationReq, UdmSubscriptionReq, UdmUnSubscriptionReq, PcfAmfPolicyControlCreate, PcfAmfPolicyControlDelete, SmfSmContextCreate, SmfSmContextDelete, SmfSmContextUpdate, AmfCommCreateUeContext, AmfCommN1N2MessageTransfer

- Label: `nf_type`

Label Description: Network function type.

Example: nrf, udm, amf, pcf, ausf, smf

- Label: `host`

Label Description: Endpoint address.

Example: `http://10.105.227.109:8082/nrf-nfm/v1`

- Label: `req`

Label Description: Request type.

Example: initial, fallback,

NF Failure Handling Statistics Category

`nf_failure_handling_stats_total`

Description: NF failure handling statistics

Sample Query:

```
nf_failure_handling_stats_total{message_type="\SmfSmContextDelete",nf_type="\SMF",
host="http://10.105.227.109:8082/nrf-nfm/v1", req="initial", response="202",
status="final"}
```

Labels:

- Label: `message_type`

Label Description: The message type associated with the failure statistics.

Example: `AusfAuthenticationCfm`, `AusfAuthenticationReq`, `UdmDeRegistrationReq`, `UdmRegistrationReq`, `UdmSubscriptionReq`, `UdmUnSubscriptionReq`, `PcfAmfPolicyControlCreate`, `PcfAmfPolicyControlDelete`, `SmfSmContextCreate`, `SmfSmContextDelete`, `SmfSmContextUpdate`, `AmfCommCreateUeContext`, `AmfCommN1N2MessageTransfer`

- Label: `nf_type`

Label Description: Network function type.

Example: `nrf`, `udm`, `amf`, `pcf`, `ausf`, `smf`

- Label: `host`

Label Description: Endpoint address.

Example: `http://10.105.227.109:8082/nrf-nfm/v1`

- Label: `req`

Label Description: Request type.

Example: `initial`, `fallback`,

- Label: `response`

Label Description: Response from the server.

Example: `200`, `201`, `204`, `timeout_rpc_error`,

- Label: `status`

Label Description: Status from the server.

Example: `retry`, `final`

NF Management Message Time Statistics Category

`nf_management_total_time`

Description: NF management messages total time taken.

Sample Query: `nf_management_total_time{host=\"http://10.105.227.109:8082/nrf-nfm/v1\", direction=\"outbound\", message_type=\"registration\", result=\"timeouOrRPCError\" }`

Labels:

- Label: `host`

Label Description: Endpoint address.

Example: `http://10.105.227.109:8082/nrf-nfm/v1`

- Label: `direction`

Label Description: Direction indicates about the message going out or coming in.

Example: `inbound, outbound`

- Label: `message_type`

Label Description: Type of Message.

Example: `registration, heartbeat, subscription, notification`

- Label: `result`

Label Description: Result of discover message.

Example: `200, 201, 204, success, timeout_rpc_error, response_parse_failure, request_parse_failure, invalid_notify_event, invalid_nf_instance_uri, internal_error`

NF Management Messages Statistics Category

`nf_management_stats_total`

Description: NF management messages statistics.

Sample Query: `nf_management_stats_total{host=\"http://10.105.227.109:8082/nrf-nfm/v1\", direction=\"outbound\", message_type=\"registration\", result=\"timeouOrRPCError\" }`

Labels:

- Label: `host`

Label Description: Endpoint address.

Example: `http://10.105.227.109:8082/nrf-nfm/v1`

- Label: `direction`

Label Description: Direction indicates about the message going out or coming in.

Example: `inbound, outbound`

- Label: `message_type`

Label Description: Type of Message

Example: `registration, heartbeat, subscription, notification`

- Label: `result`

Label Description: Result of discover message.

Example: 200, 201, 204, success, timeout_rpc_error, response_parse_failure

NRF Discovery Category

nf_discover_events_total

Description: NF Discover statistics.

Sample Query: `nf_discover_events_total{nf_type="pcf", response_type="local"}`

Labels:

- Label: `nf_type`

Label Description: Network function type.

Example: nrf, udm, amf, pcf, ausf, smf

- Label: `response_type`

Label Description: Discovery response selected from

Example: local, cache, expired-cache

Unmarshal Failures Category

unmarshal_failures

Description: Total number of Unmarshal error statistics.

Sample Query: `unmarshal_failures{message_type="\SmfSmContextDelete"}`

Labels:

- Label: `message_type`

Label Description: The message type associated with Unmarshal failure statistics.

Example: AusfAuthenticationCfm, AusfAuthenticationReq, UdmDeRegistrationReq, UdmRegistrationReq, UdmSubscriptionReq, UdmUnSubscriptionReq, PcfAmfPolicyControlCreate, PcfAmfPolicyControlDelete, SmfSmContextCreate, SmfSmContextDelete, SmfSmContextUpdate, AmfCommCreateUeContext, AmfCommN1N2MessageTransfer