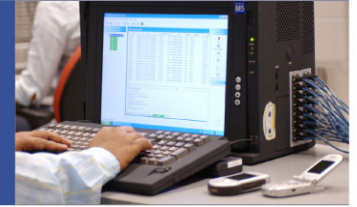


NetHawk M5 Call & Session Analysis and Statistics parameters and KPIs

NetHawk
M5



List of parameters and KPIs in NetHawk M5 2.3 > 13 February 2009

Call & Session Analysis parameters

Common

- > Latest GsmL3 Msg
- > Latest Msg Time
- > MO-MT
- > Transaction Type
- > Latest CAP Msg
- > Latest Inap Msg
- > Latest ISUP Msg
- > Latest Map Msg
- > Latest SIP Msg
- > Service Type
- > Latest BSSAP+ message
- > Latest message Time
- > Latest message Time (BSSAP+)
- > Transaction type (Gs)
- > Accept reject Indicator
- > Anchor ASN GW ID
- > Anchor PC ID
- > Anchor PC Relocation Destination
- > Anchor PC Relocation Request Response
- > AsnCtrl-CsnCtrl Tr Id
- > Authenticator ID
- > Available Radio Resource DL
- > Available Radio Resource UL
- > BS ID
- > BS ID (Serving)
- > BS ID (Target)
- > Care of Address
- > Destination IP Address and Mask
- > DHCP Ready Address
- > DHCP Server Address
- > Direction
- > Exit Idle Mode Operation Indication
- > Failure Indication
- > HA IP Address
- > Header MS ID
- > HO Confirm Type
- > HO Type
- > Home Address
- > Location Update Status
- > Location Update Success Failure Indication
- > LU Result Indicator
- > MS ID
- > MS Mobility Mode
- > Network Exit Indicator
- > Old Anchor PC ID
- > Paging cause
- > Paging Control ID
- > Paging Group ID
- > Protocol
- > R3 Operation Status
- > Registration Type

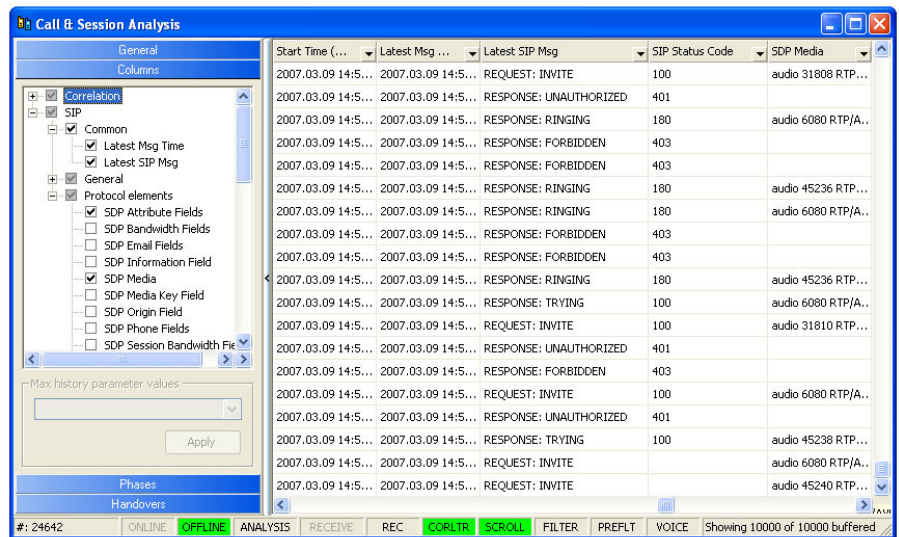


Figure 1: Selecting columns to be shown in Call & Session Analysis.

- > Relocation Success Indication
- > Reserve Action
- > Reservation Result
- > RRMReporting Characteristic
- > Source IP Address and Mask
- > SF ID
- > Total Slots DL
- > Total Slots UL

Details

- > ISUP Original Called Number
- > SCCP Called Party (INAP)
- > SCCP Calling Party (INAP)
- > Cell Id
- > L3 MM Reject Cause
- > Paged Cell
- > SCCP Called Party
- > SCCP Calling Party
- > SCCP Connected
- > SCCP DLR DL
- > SCCP DLR UL
- > SCCP Duration
- > Cause
- > Original Called Party
- > SCCP DPC
- > SCCP OPC
- > TCAP TID DL
- > TCAP TID UL
- > Roaming Number
- > Detach Type

- > HSDCH
- > L3 GMM Cause
- > L3 SM Cause
- > RA Update Type
- > Attach Time
- > RA Time
- > Radio Cause
- > Traffic Class
- > Information Transfer Capabilities
- > L3 MM Reject Cause Code
- > L3 RR Cause
- > LA Update Type
- > Channel needed
- > IMSI Detach from GPRS service type
- > IMSI Detach from non-GPRS service type
- > Information Requested
- > MM Information
- > Mobile station state
- > SGSN number
- > Update Type
- > VLR number
- > SMS TP Failure

Key info

- > Service Key

General

- > Duration
- > End Time
- > Handovers
- > Linked Tr Id
- > Parent Tr Id
- > Phase
- > Setup Duration
- > Start Time
- > Status
- > Transaction Group
- > Transaction Id
- > First IP Packet sent
- > Latest IP Packet sent
- > Handover status
- > Correlated Status
- > Transaction End
- > Transaction Start

SMS

- > SMS Destination Address
- > SMS Originating Address
- > SMS-CP Cause
- > SMS-RP Cause
- > SMS-TP Failure Cause
- > SMS-TP Status

PDP

- > Connection Type
- > Connection Type Str
- > IP Address 1
- > IP Address 2
- > IP DL Data Amount
- > IP UL Data Amount
- > APN
- > Mobile IP Address
- > NSAPI
- > Received Guaranteed Bitrate Downlink
- > Received Guaranteed Bitrate Uplink
- > Received Max Bitrate Downlink
- > Received Max Bitrate Uplink
- > Received Peak throughput
- > Received QoS
- > Requested Guaranteed Bitrate Downlink
- > Requested Guaranteed Bitrate Uplink
- > Requested Max Bitrate Downlink
- > Requested Max Bitrate Uplink
- > Requested Peak throughput
- > Requested QoS
- > IP Connection Type
- > IP Peer IP Address
- > SM Transaction Id
- > GTP TEID DL
- > GTP TEID UL

CS call

- > Called Party Number
- > Calling Party Number
- > A ISUP Cause
- > B ISUP Cause
- > ISUP DPC-IAM
- > ISUP OPC-IAM
- > L3 CC Cause
- > L3 CC Cause Code
- > UserPlane CID
- > UserPlane VPI-VCI
- > UserPlane IP Address DL
- > UserPlane IP Address UL
- > UserPlane UDP Port DL
- > UserPlane UDP Port UL

Location info

- > LAC
- > MCC
- > MNC
- > RAC
- > CI
- > SGSN Nr
- > CN-Id
- > SAC
- > AP Location
- > Geographical Location

NAS info

- > Attach Time
- > Authentication
- > Detach Time
- > EMM Cause
- > ESM Cause
- > Latest NAS Msg
- > Latest NAS Msg Time
- > NAS Security Algorithms
- > PDN Access Point
- > PDN Address
- > PDN Connection Setup Time
- > PDN Connection Type

S1-AP info

- > Handover Type
- > Latest S1-AP Msg
- > Latest S1-AP Msg Time
- > NAS Cause
- > Paging Cause
- > Protocol Cause
- > Radio Network Layer Cause
- > S1-AP Miscellaneous Cause
- > Transport Layer Address
- > Transport Layer Cause

Network IDs

- > Cell Id (LTE S1)
- > GTP-TEID (LTE S1)
- > LAC (LTE S1)
- > MCC (LTE S1)
- > MNC (LTE S1)
- > TAC (LTE S1)

MS-UE IDs

- > IMEI
- > IMEISV
- > IMSI
- > TMSI-PTMSI
- > MSISDN
- > LMSI
- > Foreign TLLI
- > Local TLLI
- > Random TLLI
- > MS Radio Identity
- > TMSI Status
- > TLLI

QoS

- > Allocation and Retention Priority
- > Guaranteed Bit Rate Downlink
- > Guaranteed Bit Rate Uplink
- > Maximum Bit Rate Downlink
- > Maximum Bit Rate Uplink
- > Mean Throughput
- > Peak Throughput
- > QoS Class Identifier
- > Residual BER
- > Transfer Delay

UE IDs

- > eNB UE S1AP ID
- > IMSI
- > MME UE S1AP ID
- > SAE Bearer ID
- > UE Paging ID

GUTI

- > GUTI ID
- > MME Code
- > MME Group ID
- > M-TMSI

Protocol elements

- > BSSMAP RR Cause
- > SCCP Cause
- > Speech Codec
- > Called Party BCD Number
- > Event Type
- > Location Number
- > Msc Address
- > Party To Charge
- > Redirecting Indication
- > Redirecting Party Id
- > Redirecting Reason
- > Application Protocol
- > Care-of Address
- > Code
- > Code Text
- > Encapsulation
- > Home Address
- > Home Agent
- > IP DL Packet Count
- > IP UL Packet Count
- > IP version
- > MN-NAI
- > Port 1

- > Port 1 Service
- > Port 2
- > Port 2 Service
- > Reverse Tunneling requested
- > Type of Service Delay
- > Type of Service Precedence
- > Type of Service Reliability
- > Type of Service Throughput
- > PPS IMSI
- > PPS Operation Name
- > PPS Result
- > CIC\Circuit ID\TS
- > CICInfo
- > Isup Cause
- > Isup Cause Text
- > SDP Attribute Fields
- > SDP Bandwidth Fields
- > SDP Email Fields
- > SDP Information Field
- > SDP Media
- > SDP Media Key Field
- > SDP Origin Field
- > SDP Phone Fields
- > SDP Session Bandwidth Fields
- > SDP Session Key Field
- > SDP Session Name Field
- > SDP Uri Field
- > SIP Call ID
- > SIP Contact
- > SIP Content Type
- > SIP Error 400
- > SIP Error 400 Code
- > SIP Error 500
- > SIP Error 500 Code
- > SIP Error 600
- > SIP Error 600 Code
- > SIP Error Info
- > SIP From
- > SIP In Reply To
- > SIP Max Forward
- > SIP Priority
- > SIP Priority To
- > SIP Require
- > SIP Route
- > SIP Server
- > SIP Status Code
- > SIP Subject
- > SIP Supported
- > SIP To
- > SIP UnSupported
- > SIP Via
- > SIP Warning
- > CRNC Communication Con.
- > C-RNTI
- > NodeB Communication Con.
- > RRC Cause Code
- > RRC Cause Text
- > RRC Connection Id
- > RRC State
- > UL Scrambling Code
- > U-RNTI
- > Alternative GGSN Address for Control Plane
- > Alternative GGSN Address for User Traffic
- > Alternative SGSN Address for Control Plane
- > Alternative SGSN Address for User Traffic
- > DL Tunnel Endpoint Identifier Control Plane
- > DL Tunnel Endpoint Identifier Data I
- > Extension Header Type
- > GGSN address for Control Plane
- > GGSN address for User Traffic
- > Gtp Cause
- > Gtp End User Address
- > Linked NSAPI
- > New SGSN Address for Control Plane
- > SGSN address for Control Plane
- > SGSN address for User Traffic
- > Tunnel Endpoint Identifier Data II
- > UL Tunnel Endpoint Identifier Control Plane
- > UL Tunnel Endpoint Identifier Data I
- > Ack Nack Description
- > Btsm Activation Type
- > Btsm Channel Description
- > Btsm Channel Number
- > Btsm Handover Reference
- > Btsm Request Reference
- > Coding Scheme
- > Downlink TFI
- > Downlink TFI Assignment
- > EGPRS Ack Nack Description
- > Global Downlink TFI
- > Global UPpink TFI
- > L3 RR Channel Description
- > L3 RR Channel Description 2
- > L3 RR Channel Description 2V3
- > L3 RR Handover Reference
- > L3 RR Request Reference
- > TFI Value
- > Uplink TFI
- > Uplink TFI Assignment
- > Frequency Parameters
- > GSL Cell Number
- > GSL Cell State
- > GSL Channel Number
- > GSL Channel State
- > GSL Request Reference
- > Binding Id
- > GlobalRNC ID
- > Ranap Cause
- > Ranap Cause Code
- > Gs Cause
- > Reject Cause
- > Channel mode
- > Multi-rate configuration
- > Payload type
- > Requested DL user data rate
- > Requested Qos
- > Requested UL userdata rate
- > Sample Size
- > UMA BAND
- > Alcap Channel Identifier
- > Alcap DSAID
- > Alcap ESEA
- > Alcap NSEA
- > Alcap OSAID
- > Alcap path Identifier
- > Alcap SUGAR
- > BICC CIC
- > BICC IWF ADDRESS
- > Latest Megaco Msg
- > Megaco Context ID
- > Megaco IP Address
- > Megaco Port Number
- > Megaco Termination ID
- > Megaco Transaction ID
- > ISUP Redirecting Number
- > ISUP Redirection Information
- > Application ID
- > End To End
- > FLAG
- > Hop By Hop
- > User Name

UMA RR RLC Details

- > 3G Cell Identity
- > AP Service Name
- > Establishment Cause
- > GERAN Cell Identity
- > Radio Identity
- > RR Cause
- > TURA
- > UMA RLC Latest Msg Name
- > UMA RR Latest Msg Name
- > URLLC Status Cause
- > URLLC TC Activation Cause
- > URLLC TC Deactivation Cause
- > URR Discovery Reject Cause
- > URR Register Reject Cause

UNC IDs

- > IP Address for GPRS data
- > RTCP UDP Port
- > RTP UDP Port
- > UDP Port for GPRS data
- > UMA Cell Description
- > UNC FQDN
- > UNC IP Address
- > UNC SGW FQDN
- > UNC SGW IP Address
- > UNC TCP port

Call & Session Statistics KPIs**IMSI Attach**

- > IMSIAttachSuccessRate
- > IMSIAttachFailureRate
- > IMSIAttached
- > IMSIAttachFailed

GPRS Attach

- > GPRSAttachSuccessRate
- > GPRSAttachFailureRate
- > GPRSAttached
- > GPRSAttachFailed

Call Setup

- > MOCallSetups
- > MOCallSetupFailed
- > MOCallSetupSuccessRate
- > MOCallSetupFailureRate
- > MTCallSetups
- > MTCallSetupFailed
- > MTCallSetupSuccessRate
- > MTCallSetupFailureRate
- > IsupCallSetups
- > IsupCallSetupFailed
- > IsupCallSetupSuccessRate
- > IsupCallSetupFailureRate

Call

- > Voice Call
- > VoiceCallSuccessRate
- > VoiceCallDropRate
- > DroppedVoiceCalls
- > SuccessfulVoiceCalls
- > Data Call
- > DataCallSuccessRate
- > DataCallDropRate
- > SuccessfulDataCalls
- > DroppedDataCalls

Emergency Call

- > EmergencyCallSetup
- > Paging
- > PagingCount

SMS

- > SMSSuccessRate
- > SMSFailureRate
- > SMSDelivered
- > SMSFailed

LA Update

- > LAUpdateSuccessRate
- > LAUpdateFailureRate
- > LAUpdated
- > LAUpdateFailed

RA Update

- > RAUpdateSuccessRate
- > RAUpdateFailureRate
- > RAUpdated
- > RAUpdateFailed

PDP Context

- > PDPActivationSuccessRate
- > PDPActivationFailureRate
- > PDPContextActivated
- > PDPContextActivationFailed
- > PDPContextDeactivated
- > SuccessfulsupVoiceCalls

MAP

- > MAPSessionSetup
- > SuccessfulMAPSession
- > MAPSessionAborted
- > MAPSessionSuccessRate
- > MAPSessionFailureRate
- > MAPSMSDelivered
- > MAPSMSFailed
- > MAPSMSSuccessRate
- > MAPSMSFailureRate
- > MAPLAUpdated
- > MAPLAUpdateFailed
- > MAPLAUpdateSuccessRate
- > MAPLAUpdateFailureRate
- > MAPRAUpdated
- > MAPRAUpdateFailed
- > MAPRAUpdateSuccessRate
- > MAPRAUpdateFailureRate

SIP

- > SuccessfulSIPSession
- > SIPSessionFailed
- > SIPSessionSuccessRate
- > SIPSessionFailureRate
- > SuccessfulSIPRegistrations
- > FailedSIPRegistrations
- > SIPRegistrationSuccessRate
- > SIPRegistrationFailureRate
- > SIPClientError
- > SIPServerError
- > SIPGlobalFailure
- > SIPClientAndServerError
- > SIPAllFailures
- > InvitePerformanceFailureRatio
- > SIPNER
- > SIPASR

WiMAX

- > MSPreAttachments
- > MSPreAttachmentFailed
- > MSPreAttachmentSuccessRate
- > MSPreAttachmentFailureRate
- > MSAAttach
- > MSAAttachFailed
- > MSAAttachSuccessRate
- > MSAAttachFailureRate
- > HOPreparations
- > HOPreparationFailed
- > HOPreparationSuccessRate
- > HOPreparationFailureRate
- > HOActivations
- > HOActivationFailed
- > HOActivationSuccessRate
- > HOActivationFailureRate
- > LocationUpdates
- > LocationUpdateFailed
- > LocationUpdateSuccessRate
- > LocationUpdateFailureRate

Pagings

- > PagingsFailed
- > PagingSuccessRate
- > PagingFailureRate
- > DataPathHO
- > DataPathHOFailed
- > DataPathHOSuccessRate
- > DataPathHOFailureRate
- > Relocations
- > RelocationFailed
- > RelocationSuccessRate
- > RelocationFailureRate

CAP

- > CSCallInitiation
- > PSCallInitiation
- > SMSInitiation
- > CSCallRelease
- > PSCallRelease
- > SMSRelease
- > CAPOperations
- > FailedCAPOperations
- > CAPSuccessRate
- > CAPFailureRate