

show gtpp

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show gtpp accounting servers

Table 1: show gtpp accounting servers Command Output Descriptions

Field	Description
Context Name	The name of the system context in which the CGF is configured.
Primary Accounting server address	The IP address of the CGF.
port	The TCP port over which GTPP messaging is performed.
priority	The configured priority of the CGF.
State	The status of the CGF as Active or Inactive.
Group	The GTPP server group name in which this server is configured.

show gtpp counters all

Table 2: show gtpp counters all Command Output Descriptions

Field	Description
Outstanding GCDRs	The current total number of G-CDRs sent to the CGF(s) for which no response was received.
Possibly Duplicate Outstanding GCDRs	The total number of G-CDRs sent to the CGF(s) with a packet transfer command of "Send Possibly Duplicated Data Record Packet"
Archived GCDRs	The current total number of G-CDRs achieved by CGF. **Note** This counter is only present if the **all** keyword is used.
GCDRs buffered with AAAPROXY	The current total number of G-CDRs buffered by the system's AAA Proxy tasks. **Note** This counter is only present if the **all** keyword is used.
GCDRs buffered with AAAMGR	The current total number of G-CDRs buffered by the system's AAA Manager tasks. **Note** This counter is only present if the **all** keyword is used.
Outstanding eGCDRs	The current total number of eG-CDRs sent to the CGF(s) for which no response was received.
Possibly Duplicate Outstanding eGCDRs	The total number of eG-CDRs sent to the CGF(s) with a packet transfer command of "Send Possibly Duplicated Data Record Packet"
Archived eGCDRs	The current total number of eG-CDRs achieved by CGF. **Note** This counter is only present if the **all** keyword is used.
eGCDRs buffered with AAAPROXY	The current total number of eG-CDRs buffered by the system's AAA Proxy tasks. **Note** This counter is only present if the **all** keyword is used.
eGCDRs buffered with AAAMGR	The current total number of eG-CDRs buffered by the system's AAA Manager tasks. **Note** This counter is only present if the **all** keyword is used.
Outstanding MCDRs	The current total number of M-CDRs sent to the CGF(s) for which no response was received.
Possibly Duplicate Outstanding MCDRs	The total number of M-CDRs sent to the CGF(s) with a packet transfer command of "Send Possibly Duplicated Data Record Packet"

Field	Description
Archived MCDRs	The current total number of M-CDRs achieved by CGF. **Note** This counter is only present if the **all** keyword is used.
MCDRs buffered with AAAPROXY	The current total number of M-CDRs buffered by the system's AAA Proxy tasks. **Note** This counter is only present if the **all** keyword is used.
MCDRs buffered with AAAMGR	The current total number of M-CDRs buffered by the system's AAA Manager tasks. **Note** This counter is only present if the **all** keyword is used.
Outstanding PGWGCDRs	The current total number of PGW G-CDRs sent to the CGF(s) for which no response was received.
Possibly Duplicate Outstanding PGWGCDRs	The total number of PGW G-CDRs sent to the CGF(s) with a packet transfer command of "Send Possibly Duplicated Data Record Packet"
Archived PGWGCDRs	The current total number of PGW G-CDRs achieved by CGF. **Note** This counter is only present if the **all** keyword is used.
PGWGCDRs buffered with AAAPROXY	The current total number of PGW G-CDRs buffered by the system's AAA Proxy tasks. **Note** This counter is only present if the **all** keyword is used.
PGWGCDRs buffered with AAAMGR	The current total number of PGW G-CDRs buffered by the system's AAA Manager tasks. **Note** This counter is only present if the **all** keyword is used.
Outstanding SCDRs	The current total number of S-CDRs sent to the CGF(s) for which no response was received.
Possibly Duplicate Outstanding SCDRs	The total number of S-CDRs sent to the CGF(s) with a packet transfer command of "Send Possibly Duplicated Data Record Packet"
Archived SCDRs	The current total number of S-CDRs achieved by CGF. **Note** This counter is only present if the **all** keyword is used.
SCDRs buffered with AAAPROXY	The current total number of S-CDRs buffered by the system's AAA Proxy tasks. **Note** This counter is only present if the **all** keyword is used.
SCDRs buffered with AAAMGR	The current total number of S-CDRs buffered by the system's AAA Manager tasks. **Note** This counter is only present if the **all** keyword is used.

Field	Description
Outstanding S-SMO-CDRs	The current total number of S-SMO-CDRs sent to the CGF(s) for which no response was received.
Possibly Duplicate Outstanding S-SMO-CDRs	The total number of S-SMO-CDRs sent to the CGF(s) with a packet transfer command of "Send Possibly Duplicated Data Record Packet"
Archived S-SMO-CDRs	The current total number of S-SMO-CDRs achieved by CGF. **Note** This counter is only present if the **all** keyword is used.
S-SMO-CDRs buffered with AAAPROXY	The current total number of S-SMO-CDRs buffered by the system's AAA Proxy tasks. **Note** This counter is only present if the **all** keyword is used.
S-SMO-CDRs buffered with AAAMGR	The current total number of S-SMO-CDRs buffered by the system's AAA Manager tasks. **Note** This counter is only present if the **all** keyword is used.
Outstanding S-SMT-CDRs	The current total number of S-SMT-CDRs sent to the CGF(s) for which no response was received.
Possibly Duplicate Outstanding S-SMT-CDRs	The total number of S-SMT-CDRs sent to the CGF(s) with a packet transfer command of "Send Possibly Duplicated Data Record Packet"
Archived S-SMT-CDRs	The current total number of S-SMT-CDRs achieved by CGF. **Note** This counter is only present if the **all** keyword is used.
S-SMT-CDRs buffered with AAAPROXY	The current total number of S-SMT-CDRs buffered by the system's AAA Proxy tasks. **Note** This counter is only present if the **all** keyword is used.
S-SMT-CDRs buffered with AAAMGR	The current total number of S-SMT-CDRs buffered by the system's AAA Manager tasks. **Note** This counter is only present if the **all** keyword is used.
Outstanding LCS-MT-CDRs	The current total number of LCS-MT-CDRs sent to the CGF(s) for which no response was received.
Possibly Duplicate Outstanding LCS-MT-CDRs	The total number of LCS-MT-CDRs sent to the CGF(s) with a packet transfer command of "Send Possibly Duplicated Data Record Packet"
Archived LCS-MT-CDRs	The current total number of LCS-MT-CDRs achieved by CGF. **Note** This counter is only present if the **all** keyword is used.
LCS-MT-CDRs buffered with AAAPROXY	The current total number of LCS-MT-CDRs buffered by the system's AAA Proxy tasks. **Note** This counter is only present if the **all** keyword is used.

Field	Description
LCS-MT-CDRs buffered with AAAMGR	The current total number of LCS-MT-CDRs buffered by the system's AAA Manager tasks. **Note** This counter is only present if the **all** keyword is used.
Outstanding LCS-MO-CDRs	The current total number of LCS-MO-CDRs sent to the CGF(s) for which no response was received.
Possibly Duplicate Outstanding LCS-MO-CDRs	The total number of LCS-MO-CDRs sent to the CGF(s) with a packet transfer command of "Send Possibly Duplicated Data Record Packet"
Archived LCS-MO-CDRs	The current total number of LCS-MO-CDRs achieved by CGF. **Note** This counter is only present if the **all** keyword is used.
LCS-MO-CDRs buffered with AAAPROXY	The current total number of LCS-MO-CDRs buffered by the system's AAA Proxy tasks. **Note** This counter is only present if the **all** keyword is used.
LCS-MO-CDRs buffered with AAAMGR	The current total number of LCS-MO-CDRs buffered by the system's AAA Manager tasks. **Note** This counter is only present if the **all** keyword is used.
Outstanding GMBH CDRs	The current total number of GMBH CDRs sent to the CGF(s) for which no response was received.
Possibly Duplicate Outstanding GMBH CDRs	The total number of GMBH CDRs sent to the CGF(s) with a packet transfer command of "Send Possibly Duplicated Data Record Packet"
Archived GMBH CDRs	The current total number of GMBH CDRs achieved by CGF. **Note** This counter is only present if the **all** keyword is used.
GMBH CDRs buffered with AAAPROXY	The current total number of GMBH CDRs buffered by the system's AAA Proxy tasks. **Note** This counter is only present if the **all** keyword is used.
GMBH CDRs buffered with AAAMGR	The current total number of GMBH CDRs buffered by the system's AAA Manager tasks. **Note** This counter is only present if the **all** keyword is used.
Outstanding SGW CDRs	The current total number of S-GW CDRs sent to the CGF(s) for which no response was received.
Possibly Duplicate Outstanding SGW CDRs	The total number of S-GW CDRs sent to the CGF(s) with a packet transfer command of "Send Possibly Duplicated Data Record Packet"

Field	Description
Archived SGW CDRs	The current total number of S-GW CDRs achieved by CGF. **Note** This counter is only present if the **all** keyword is used.
SGW CDRs buffered with AAAPROXY	The current total number of S-GW CDRs buffered by the system's AAA Proxy tasks. **Note** This counter is only present if the **all** keyword is used.
SGW CDRs buffered with AAAMGR	The current total number of S-GW CDRs buffered by the system's AAA Manager tasks. **Note** This counter is only present if the **all** keyword is used.
WLAN CDRs buffered with AAAPROXY	The current total number of WLAN CDRs buffered by the system's AAA Proxy tasks. **Note** This counter is only present if the **all** keyword is used.
WLAN CDRs buffered with AAAMGR	The current total number of WLAN CDRs buffered by the system's AAA Manager tasks. **Note** This counter is only present if the **all** keyword is used.
Outstanding ePDG CDRs	The current total number of ePDG CDRs sent to the CGF(s) for which no response was received.
Possibly Duplicate Outstanding ePDG CDRs	The total number of ePDG CDRs sent to the CGF(s) with a packet transfer command of "Send Possibly Duplicated Data Record Packet"
Archived ePDG CDRs	The current total number of ePDG CDRs achieved by CGF. **Note** This counter is only present if the **all** keyword is used.
ePDG CDRs buffered with AAAPROXY	The current total number of ePDG CDRs buffered by the system's AAA Proxy tasks. **Note** This counter is only present if the **all** keyword is used.
ePDG CDRs buffered with AAAMGR	The current total number of ePDG CDRs buffered by the system's AAA Manager tasks. **Note** This counter is only present if the **all** keyword is used.
Outstanding SMBMS CDRs	The current total number of SMBMS CDRs sent to the CGF(s) for which no response was received.
Possibly Duplicate Outstanding SMBMS CDRs	The total number of SMBMS CDRs sent to the CGF(s) with a packet transfer command of "Send Possibly Duplicated Data Record Packet"
Archived SMBMS CDRs	The current total number of SMBMS CDRs achieved by CGF. **Note** This counter is only present if the **all** keyword is used.

Field	Description
SMBMS CDRs buffered with AAAPROXY	The current total number of SMBMS CDRs buffered by the system's AAA Proxy tasks. **Note** This counter is only present if the **all** keyword is used.
SMBMS CDRs buffered with AAAMGR	The current total number of SMBMS CDRs buffered by the system's AAA Manager tasks. **Note** This counter is only present if the **all** keyword is used.

show gtpp group

The output of this command is enhanced to display the following fields

Table 3: show gtpp group Command Output Descriptions

Field	Description
Group name	The GTPP server group name.
Context	The context name of the configured GTPP group.
CDR timeout	Indicates the configured timeout duration in seconds for CDRs.
CDR max-retries	Indicates the configured maximum retries for CDR.
ECHO timeout	Indicates the configured timeout duration in seconds for ECHO message.
ECHO max-retries	Indicates the configured maximum retries for ECHO message.
Dead time	Indicates the dead time for specific GTPP group.
Detect-dead-server consecutive-failures	Indicates the total consecutive failure of dead server detection probe.
Dead-server-suppress-cdrs	Indicates whether suppression of CDRs is enabled or not when a dead server is detected.
Duplicate-hold-time minutes	Configured time in minutes to hold duplicate CDRs.
Redirection allowed	Indicates whether redirection is allowed or not.
Source-port-validation	Indicates whether source port validation is enabled or not.
Charging-agent address	Indicates the IP address of configured charging agent.
Charging-agent port	Indicates the port number of configured charging agent.
Suppress zero-volume CDRs	Indicates if the suppression of zero byte data count CDRs is enabled or not.
Max CDR size	Indicates the maximum CDR size allowed in bytes.

Field	Description
Max CDRs in msg	Indicates the maximum CDRs allowed in a message.
Max CDRs wait-time	Indicates the maximum wait/live time allowed for CDRs.
Dictionary	Indicates the applicable GTPP dictionary for CDR encoding.
Data-req start seq-num	Indicates the starting sequence number of data request message.
start-file-seq-num	Indicates the starting file sequence number during chassis load/reload. It will be active only for recovery failure case.
recover-file-seq-num	Indicates whether recovery of file seq num is needed during chassis reload.
Storage Server	This group indicates the storage server information if CDR storage mode is remote. This counter is applicable for the ASR 5000 only.
Mode	Indicates the mode of the CDR storage. Possible modes are: • Local: CDRs stored on local HDD on SMC card. • Remote: CDRs stored on remote GSS server. This counter is applicable for the ASR 5000 only.
Storage-server address	Indicates the configured GTPP storage server IP address.
Storage-server port	Indicates the port number of configured GTPP storage server.
Storage-server timeout	indicates the timeout in seconds configured for GTPP storage server.
Storage-server max-retries	Indicates the maximum retries configured for the GSS messages.
Local Storage	This group indicates the storage server information, if CDR storage mode is local. This counter group is applicable for the ASR 5000 only.
Last-MS-Timezone	Indicates the "Last MS-Timezone" in the CDR field.
last-uli	Indicates the "Last ULI" in the CDR field.
AAAmgr Wait Time	Indicates the time in seconds that AAAmgr has to wait trying to accumulate 255 CDRs.
File Transfer Mode	Indicates whether Push method is provisioned to send local CDR files to a remote host.
Push via Local Context	Specifies whether local context was used to reach remote server with Push method.
File rotation volume-limit	Indicates the volume of CDR file in MB after which CDR file rotation will happen. This counter group is applicable for the ASR 5000 only.
File rotation CDR-count	Indicates the number of CDRs to include in a CDR file after which CDR file rotation will happen. This counter group is applicable for the ASR 5000 only.
File rotation time-interval	Indicates the time duration in seconds after after which CDR file rotation will happen. This counter group is applicable for the ASR 5000 only.

Field	Description
Force File rotation by time-interval	Indicates whether force file rotation is enabled or not. If this is enabled it forces the system for file-rotation at specified interval even if there are no CDRs generated.
File compression	Indicates the whether file compression is configured or not on CDR files. This counter group is applicable for the ASR 5000 only.
File format	Indicates the format name of file to store CDRs in specified format in CDR file. This counter group is applicable for the ASR 5000 only.
Purge-processed-files	Indicates the configuration of purge interval duration of processed files. This is an optional setting and can be configured with **purge-interval** *purge_dur* keyword with **gtpp storage-server local file purge-processed-files** command in GTPP Group Configuration Mode.
Attributes	
APN present	Indicates whether or not the "APN" attribute is present in the CDR.
PDP type present	Indicates whether or not the "PDP Type" attribute is present in the CDR.
PDP address present	Indicates whether or not the optional field "PDP Address" is present in the CDR.
Dynamic flag present	Indicates whether or not the "Dynamic Flag" attribute is present in the CDR.
Diagnostics present	Indicates whether or not the "Diagnostics" attribute is present in the CDR.
Node ID present	Indicates whether or not the "Node ID" attribute is present in the CDR.
Charging-Char sel mode present	Indicates whether or not the "Charging Characteristic Selection Mode" attribute is present.
MSISDN present	Indicates whether or not the MSISDN attribute is present.
IMEI present	Indicates whether or not the IMEI attribute is present.
RAT present	Indicates whether or not the RAT attribute is present.
MS-Timezone present	Indicates whether or not the "MS-Timezone" attribute is present in the CDR.
User Location Information present	Indicates whether or not the "User Location Information" attribute is present in the CDR.
TWAN User Location Information present	Indicates whether or not the "TWAN User Location Information" attribute is present in the CDR.
List of service Data present	Indicates whether or not the optional field "List of Service Data" is present in the CDR.
Served MNAI present	Indicates whether or not the optional field "Served MNAI" is present in the CDR.
PGW PLMN-ID present	Indicates whether or not the optional field "PGW PLMN-ID" is present in the CDR.
Start-Time present	Indicates whether or not the optional field "Start-Time" is present in the CDR.
Stop-Time present	Indicates whether or not the optional field "Stop-Time" is present in the CDR.

Field	Description
PDN connection ID present	Indicates whether or not the optional field "PDN Connection ID" is present in the CDR.
Served PDP PDN address extension present	Indicates whether or not the optional field "Served-pdp-pdn-address-extension" is present in the CDR.
SGSN-Change present	Indicates whether or not the optional field "SGSN Change" is present in the CDR.
Duration in milliseconds	Indicates the configured duration in milliseconds.
PLMN-id present	Indicates whether or not the public land mobile network identifier attribute is present in the CDR.
PLMN-id unknown-use	Indicates whether a public land mobile network identifier which is of unknown use is present in the CDR.
Local-rec-seq-num present	Indicates whether or not the local record sequence number attribute is present.
Node-id suffix	Indicates whether or not the server node id attribute is present in the CDR.
APN-AMBR	Indicates whether or not the optional field "apn-ambr" is present in the CDR.
Furnish-charging-information present	Indicates whether or not the optional field "PSFurnishChargingInformation" is present in the CDR.
Cell-plmn-id	Indicates whether cell public land mobile network identifier attribute is present or not.
Camel-Info	Indicates whether or not the "CAMEL" specific fields are present in the S-CDR, M-CDR, S-SMO-CDR and S-SMT-CDR.
Sms	Indicates the SMS attribute information.
Recording entity	Indicates whether or not the SMS recording entity is present in the attribute.
Service centre	Indicates whether or not the SMS service center information is present in the attribute.
Destination number	Indicates whether the destination number for SMS is present in the attribute.
Record extensions:	Indicates the information for record extensions.
Rat	Indicates whether radio access type information is present in record extension attributes or not.
qos max-length	Displays the QoS max-length configured value. If this field is not configured, "None" will be displayed.
Packet count present	Indicates if including packet count is enabled in G-CDR.
Triggers	
Volume-limit	Indicates the status of configured volume limit trigger. Possible status are: • Enabled • Disabled

Field	Description
Time-limit	Indicates the status of configured time limit trigger. Possible status are: • Enabled • Disabled
Tariff-time-change	Indicates the status of configured trigger for tariff time change. Possible status are: • Enabled • Disabled
Serving-Node-change-limit	Indicates the status of configured trigger for SGSN change limit. Possible status are: • Enabled • Disabled
Intra-SGSN-group-change	Indicates the status of configured trigger for intra-SGSN group change. Possible status are: • Enabled • Disabled
Inter-plmn-sgsn-change	Indicates the status of configured trigger for SGSN change between PLMN. Possible status are: • Enabled • Disabled
Egcdr-max-losdv-limit	Indicates the status of configured trigger for maximum list of service data volume (LoSDV) limit for eG-CDRs. Possible status are: • Enabled • Disabled
Qos-change	Indicates the status of configured trigger for QoS change. Possible status are: • Enabled • Disabled
RAT-change	Indicates the status of configured trigger for RAT change. Possible status are: • Enabled • Disabled
on RAT-change generate	Indicates whether to generate CDRs for RAT change.

Field	Description
ULI-Change	Indicates the status of configured trigger for ULI change. Possible status are: • Enabled • Disabled
MS-timezone-change	Indicates the status of configured trigger for change in time zone of MS. Possible status are: • Enabled • Disabled
Routing-area-update	Indicates the status of configured trigger for update in routing area. Possible status are: • Enabled • Disabled
Presv-mode-state-change	Enables/disables preservation-mode-change trigger. Possible status are: • Enabled • Disabled
Direct-tunnel	Indicates the status of configured trigger for direct tunnel. Possible status are: • Enabled • Disabled
Cell-update	Enables cell-update trigger for S-CDR (if the dictionary specified in the gtpp group supports the cell update. This trigger is available only for 2G. Currently "custom18" supports cell update trigger. Possible status are: • Enabled • Disabled
PLMN-id-change	Enables plmn-id-change trigger for SGSN CDRs provided, if the dictionary specified in the gtpp group supports the plmn-id-change. Possible status are: • Enabled • Disabled
Mbms config	Specifies the MBMS configuration information.
Buckets	Indicates the total number of data buckets configured for MBMS service.
Interval	Indicates the interval duration configured for MBMS service.
Volume	Indicates the data volume configured for MBMS service.

Field	Description
Tarif:	Specifies the tariff configuration for MBMS service.
Time1	Indicates the tariff configuration for time slot 1 in MBMS service.
Time2	Indicates the tariff configuration for time slot 2 in MBMS service.
Time3	Indicates the tariff configuration for time slot 3 in MBMS service.
Time4	Indicates the tariff configuration for time slot 4 in MBMS service.
EGCDR	Specifies the configuration for eG-CDRs.
Lotdv-max-containers	Indicates the maximum number of containers configured for list of traffic data volume (LoTDV) for eG-CDRs.
Losdv-max-containers	Indicates the maximum number of containers configured for list of service data volume (LoSDV) for eG-CDRs.
Service-idle-timeout	Indicates the idle timeout duration configured in seconds for service for eG-CDRs.
Rulebase-max-length	Indicates the maximum character length of charging rulebase name in LOSDV, if configured to a non-zero value.
Service-interval	Indicates whether interval duration configured in seconds to retry for eG-CDRs.
Service-uplink	Indicates the total bytes uplinked for service in eG-CDRs.
Service-downlink	Indicates the total bytes downlinked for service in eG-CDRs.
Service-total	Indicates the total bytes in traffic (uplinked+ downlinked) for service in eG-CDRs.
Closing-cause-unique	Indicates whether any unique closing cause set for eG-CDR closing.
Include-all-losdvs	Indicates whether eG-CDR configured to include all LoSDV.
Delete-service-thresholds	Indicates the configured threshold in eG-CDR to delete the service.
Secondary RAT records present	Specifies whether the Secondary RAT record is present or not. The available options are: • no • yes
Limit-secondary-rat-usage	Specifies a limit for Secondary RAT usage report.

show gtpp statistics

Table 4: show gtpp statistics Command Output Descriptions

Field	Description
Accumulated Statistics	
Start Collection Req	Total number of Start Collection requests.
Normal Release Req	Total number of Normal Release requests.
Management Intervention Req	Total number of Management Intervention requests.
Abnormal Release Req	Total number of Abnormal Release requests.
Time Limit Req	Total number of Time Limit requests.
Volume Limit Req	Total number of Volume Limit requests.
SGSN Change Req	Total number of SGSN Change requests.
Maximum Change Condition Req	Total number of Maximum Change Condition requests.
RAT Change Req	Total number of RAT Change requests.
MS Time Zone Change Req	Total number of MS Time Zone Change requests.
List of Down Stream Node Change	List of down-stream node change.
Intra SGSN Intersystem Change Req	Total number of Intra SGSN Intersystem Change requests.
FOCS/ODB ACL Violation Req	Indicates the total number of FOCS enabled sessions closed due to ACL rule violation recieved for FOCS and/or ODB.
Inactivity Timeout (FOCS enabled):	Indicates the total number of FOCS enabled sessions closed due to inactivity timeout.
SGW Relocation	Indicates the total number of S-GW to SGSN relocations.
Total G-CDR transmission	Total number of G-CDR transmissions.
Total eG-CDR transmission	This indicates the total number of eG-CDRs transmitted to the mediation system.
Total PGW-CDR transmission	This indicates the total number of PGW-CDRs transmitted to the mediation system.
Total S-CDR transmission	Total number of S-CDR transmissions.
Total M-CDR transmission	Total number of M-CDR transmissions.
Total S-SMO-CDR transmission	Total number of S-SMO-CDR transmissions.
Total S-SMT-CDR transmission	Total number of S-SMT-CDR transmissions.
Total LCS-MT-CDR transmission	Total number of LCS-MT-CDR transmissions.

Field	Description
Total LCS-MO-CDR transmission	Total number of LCS-MO-CDR transmissions.
Total G-MB-CDR transmission	Total number of G-MB-CDR transmissions.
Total SGW-CDR transmission	Total number of SGW-CDR transmissions.
Total ePDG-CDR transmission	Total number of ePDG-CDR transmissions.
Total WLAN-CDR transmission	Total number of WLAN-CDR transmissions.
Total G-CDR retransmission	Total number of G-CDR retransmissions.
Total eG-CDR retransmission	This indicates the total number of eG-CDRs re-transmitted to the mediation system. This will happen whenever SGSN/GGSN is not getting the response from the mediation server in a stipulated period of time.
Total PGW-CDR retransmission	This indicates the total number of PGW-CDRs re-transmitted to the mediation system. This will happen whenever PGW/SGW is not getting the response from the mediation server in a stipulated period of time.
Total S-CDR retransmission	Total number of S-CDR retransmissions.
Total M-CDR retransmission	Total number of M-CDR retransmissions.
Total S-SMO-CDR retransmission	Total number of S-SMO-CDR retransmissions.
Total S-SMT-CDR retransmission	Total number of S-SMT-CDR retransmissions.
Total LCS-MT-CDR retransmission	Total number of LCS-MT-CDR retransmissions.
Total LCS-MO-CDR retransmission	Total number of LCS-MO-CDR retransmissions.
Total SGW-CDR retransmission	Total number of SGW-CDR retransmissions.
Total ePDG-CDR retransmission	Total number of ePDG-CDR retransmissions.
Total WLAN-CDR retransmission	Total number of WLAN-CDR retransmissions.
Total G-MB-CDR retransmission	Total number of G-MB-CDR retransmissions.
Total G-CDR accepted	Total number of G-CDR accepted.
Total eG-CDR accepted	This indicates the total number of eG-CDRs successfully sent to the mediation server for which the SGSN/GGSN received the ACCEPT response.
Total PGW-CDR accepted	This indicates the total number of PGW-CDRs successfully sent to the mediation server for which the PGW/SGW received the ACCEPT response.
Total S-CDR accepted	Total number of S-CDR accepted.
Total M-CDR accepted	Total number of M-CDR accepted.
Total S-SMO-CDR accepted	Total number of S-SMO-CDR accepted.

Field	Description
Total S-SMT-CDR accepted	Total number of S-SMT-CDR accepted.
Total LCS-MT-CDR accepted	Total number of LCS-MT-CDR accepted.
Total LCS-MO-CDR accepted	Total number of LCS-MO-CDR accepted.
Total G-MB-CDR accepted	Total number of G-MB-CDR accepted.
Total SGW-CDR accepted	Total number of SGW-CDR accepted.
Total ePDG-CDR accepted	Total number of ePDG-CDR accepted.
Total WLAN-CDR accepted	Total number of WLAN-CDR accepted.
Total G-CDR transmission failures	Total number of G-CDR transmission failures.
Total eG-CDR transmission failures	This indicates the total number of eG-CDRs successfully sent to the mediation server for which the SGSN/GGSN received the FAIL response.
Total PGW-CDR retransmission	This indicates the total number of PGW-CDRs successfully sent to the mediation server for which the PGW/SGW received the FAIL response.
Total S-CDR transmission failures	Total number of S-CDR transmission failures.
Total M-CDR transmission failures	Total number of M-CDR transmission failures.
Total S-SMO-CDR transmission failures	Total number of S-SMO-CDR transmission failures.
Total S-SMT-CDR transmission failures	Total number of S-SMT-CDR transmission failures.
Total LCS-MT-CDR transmission failures	Total number of LCS-MT-CDR transmission failures.
Total LCS-MO-CDR transmission failures	Total number of LCS-MO-CDR transmission failures.
Total G-MB-CDR transmission failures	Total number of G-MB-CDR transmission failures.
Total SGW-CDR transmission failures	Total number of SGW-CDR transmission failures.
Total ePDG-CDR transmission failures	Total number of ePDG-CDR transmission failures.
Total WLAN-CDR transmission failures	Total number of WLAN-CDR transmissions failures.
G-CDR transmission failure percent	G-CDR transmission failure percentage.
eG-CDR transmission failures percent	Total percentage of transmitted eG-CDRs failed on peer node.
PGW-CDR transmission failures percent	Total percentage of transmitted PGW-CDRs failed on peer node.
S-CDR transmission failure percent	S-CDR transmission failure percentage.

Field	Description
M-CDR transmission failure percent	M-CDR transmission failure percentage.
S-SMO-CDR transmission failure percent	S-SMO-CDR transmission failure percentage.
S-SMT-CDR transmission failure percent	S-SMT-CDR transmission failure percentage.
LCS-MT-CDR transmission failure percent	LCS-MT-CDR transmission failure percentage.
LCS-MO-CDR transmission failure percent	LCS-MO-CDR transmission failure percentage.
G-MB-CDR transmission failure percent	G-MB-CDR transmission failure percentage.
SGW-CDR transmission failure percent	SGW-CDR transmission failure percentage.
ePDG-CDR transmission failure percent	ePDG-CDR transmission failure percentage.
WLAN-CDR transmission failure percent	WLAN-CDR transmission failure percentage.
CDRs purged by dead-server suppress-cdrs	Total number of CDRs purged in all GTPP server groups configured on system when **gtpp dead-server suppress-cdrs** command is enabled.
Charging Characteristics Statistics	
Hot	The charging characteristic setting.
Normal	The charging characteristic setting.
Prepaid	The charging characteristic setting.
Flat	The charging characteristic setting.
Unknown	The charging characteristic setting.
CGF Specific Statistics	
Data Record Transfer Requests Sent When the primary CGF goes down, all outstanding requests with the primary CGF are marked as Possibly Duplicate and sent to the secondary CGF. This is because of the uncertainty as to whether the primary CGF processed the requests or not. So the seq-numbers (for primary CGF) for these requests are stored. When the primary CGF comes back again, an Empty DRT with the stored seq-numbers is sent to the primary CGF. The CGF can reply either REQ_ALREADY_FULFILLED (primary CGF processed the request. Cancel request is sent to the secondary CGF to delete the request) or REQUEST_ACCEPTED (primary CGF has not got this request before. Release request is sent to secondary to store the request).	
Send	Total number of DRT requests sent.

Field	Description
Possibly Duplicate	Total number of possibly duplicate DRT requests sent.
Cancel	Total number of cancel DRT requests sent.
Release	Total number of release DRT requests sent.
Empty	Total number of empty DRT requests sent.
Data Record Transfer Requests Retried	
Send	Total number of DRT request retried.
Possibly Duplicate	Total number of DRT requests marked possibly duplicate retried.
Cancel	Total number of cancel DRT requests retried.
Release	Total number of release DRT requests retried.
Empty	Total number of empty DRT requests retried.
Data Record Transfer Requests Success	
Send	Total number of DRT requests sent successfully.
Possibly Duplicate	Total number of DRT requests marked possibly duplicate sent successfully.
Cancel	Total number of canceled DRT requests sent successfully.
Release	Total number of release DRT requests sent successfully.
Empty	Total number of empty DRT requests sent successfully.
Data Record Transfer Response Cause	
Accepted	Total number of DRT response messages with cause as "accepted".
Not Fulfilled	Total number of DRT response messages with cause as "not fulfilled".
Already Fulfilled	Total number of DRT response messages with cause as "already fulfilled".
Dup Already Fulfilled	Total number of DRT response messages with cause as "duplicate already fulfilled".
Invalid Msg Format	Total number of DRT response messages with cause as "invalid message format".
Mandatory IE Missing	Total number of DRT response messages with cause as "mandatory IE missing".
Service not supported	Total number of DRT response messages with cause as 'service not supported".
Version not supported	Total number of DRT response messages with cause as "version not supported".
Mandatory IE incorrect	Total number of DRT response messages with cause as "mandatory IE incorrect".
Optional IE incorrect	Total number of DRT response messages with cause as "optional IE incorrect".
No Resources	Total number of DRT response messages with cause as "no resources".

Field	Description
System Failure	Total number of DRT response messages with cause as "system failure".
CDR Decode Error	Total number of DRT response messages with cause as "CDR decode error".
Seq No incorrect	Total number of DRT response messages with cause as "sequence number incorrect".
Unknown Cause	Total number of DRT response messages with unknown cause.
GTPP Echo Messages	
Echo Req Sent	Total number of echo request messages sent.
Echo Req Rcvd	Total number of echo request messages received.
Echo Rsp Rcvd	Total number of echo response messages received.
Echo Rsp Sent	Total number of echo response messages sent.
Redirection Req/Rsp Messages	
Redirection Req Rcvd	Total number of redirection request messages received.
Redirection Rsp Sent	Total number of redirection response messages sent.
Redirection Request Cause	
Trans Buffer full	Total number of redirection requests with cause code as "transmit buffers are full".
Recv Buffer Full	Total number of redirection requests with cause code as "receive buffers are full".
Other Node Down	Total number of redirection requests with cause code as "other node is about to go down.
Self Node down	Total number of redirection requests with cause code as "this node is about to go down".
System Failure	Total number of redirection requests with cause code as "system failure".
Redirection Response Cause	
Accepted	Total number of redirection responses with cause code as "accepted".
Service Not Supported	Total number of redirection responses with cause code as "service not supported".
System Failure	Total number of redirection responses with cause code as "system failure".
Mandatory IE Incorrect	Total number of redirection responses with cause code as "mandatory IE incorrect".
Mandatory IE Missing	Total number of redirection responses with cause code as "mandatory IE missing".
Optional IE incorrect	Total number of redirection responses with cause code as "optional IE incorrect".
Invalid Msg Format	Total number of redirection responses with cause code as "invalid message format".
Version Not Supported	Total number of redirection responses with cause code as "version not supported".

Field	Description
No Resources	Total number of redirection responses with cause code as "no resources".
Node Alive Req/Rsp Messages	
Node Alive Req Rcvd	Total number of node alive request messages received.
Node Alive Req Sent	Total number of node alive request messages sent.
Node Alive Rsp Sent	Total number of node alive response messages sent.
Node Alive Rsp Rcvd	Total number of node alive response messages received.
Invalid messages received	
Invalid Sequence Number	Total number of messages with invalid sequence number received.
Unknown CGF	Total number of messages received with unknown CGF.
Unknown Msg type	Total number of messages received with unknown message type.
Round Trip Time	
Last DRT Round Trip Time	Time taken for the last DRT round trip.
Average DRT Round Trip Time	Average time taken for DRT round trip.

show gtpp statistics group

The output of this CLI command displays the following parameter.

Field	Description
Total PGW-CDR exceed size limit	Displays the total number of CDRs that exceeded size limit in P-GW.

show gtpp statistics cgf-address

Table 5: show gtpp statistics cgf-address Command Output Descriptions

Field	Description
Accumulated Statistics	
Start Collection Req	The total number of accounting start requests generated. **NOTE:** These requests are not sent to CGF. The requests are just a system record that accounting for a session has started and in future releases may be required to be sent to CGF.

Field	Description
Normal Release Req	The total number of requests generated because of normal PDP context deletion (i.e. PDP context deletion initiated by SGSN or GGSN).
Management Intervention Req	The total number of requests generated because of management intervention (request due to O&M reasons, e.g. clear subscribers all)
Abnormal Release Req	The total number of requests generated because of abnormal termination of session (e.g. Session Manager failure results in abnormal release of PDP contexts active for that Session Manager.
Time Limit Req	The number of interim requests generated because of the time limit being reached. The time limit is configured using the **cc profile** command in the GGSN service configuration mode.
Volume Limit Req	The number of interim requests generated because of volume limit being reached. The volume limit is configured using **cc profile** command in the GGSN service configuration mode.
SGSN Change Req	The number of interim requests generated because of the number of inter SGSN switch-overs reaching the configured limit or because of an SGSN switchover resulting in a new RAI (Routing Area Identity). The maximum number of SGSN changes is configured using the **cc profile** command in the GGSN service configuration mode.
Maximum Change Condition Req	The number of interim requests generated because of the "List of traffic Volume" Containers reaching the configured limit. This value is configured using the **cc profile** command in the GGSN service configuration mode.
Total G-CDR transmission	The total number of GTPP Requests sent to the CGF. **NOTE:** This counter does not include requests re-transmitted to the CGF.
Total G-CDR retransmission	The total number of GTPP Requests retransmitted to the CGF. **NOTE:** This counter does not include the requests that were originally transmitted to the CGF.
Total G-CDR accepted	The total number of G-CDRs accepted by the CGF.
Total G-CDR transmission failures	The total number of GTPP Requests that were not responded to by CGFs. **NOTE:** This statistic is not displayed if the cgf_address optional keyword is used.
G-CDR transmission failure percent	The failure percentage of DRT requests. This is calculated as (Total G-CDR Trans failures/(Total GCDR Trans Failures + Total G-CDR accepted) *100).
Total LCS-MT-CDR transmission	The total number of GTPP Requests sent to the CGF. **NOTE:** This counter does not include requests re-transmitted to the CGF.
Total LCS-MT-CDR retransmission	The total number of GTPP Requests retransmitted to the CGF. **NOTE:** This counter does not include the requests that were originally transmitted to the CGF.
Total LCS-MT-CDR accepted	The total number of LCS-MT-CDRs accepted by the CGF.

Field	Description
Total LCS-MT-CDR transmission failures	The total number of GTPP Requests that were not responded to by CGFs. **NOTE:** This statistic is not displayed if the cgf_address optional keyword is used.
LCS-MT-CDR transmission failure percent	The failure percentage of DRT requests. This is calculated as (Total LCS-MT-CDR Trans failures/(Total LCS-MT-CDR Trans Failures + Total LCS-MT-CDR accepted) *100).
Total LCS-MO-CDR transmission	The total number of GTPP Requests sent to the CGF. **NOTE:** This counter does not include requests re-transmitted to the CGF.
Total LCS-MO-CDR retransmission	The total number of GTPP Requests retransmitted to the CGF. **NOTE:** This counter does not include the requests that were originally transmitted to the CGF.
Total LCS-MO-CDR accepted	The total number of LCS-MO-CDRs accepted by the CGF.
Total LCS-MO-CDR transmission failures	The total number of GTPP Requests that were not responded to by CGFs. **NOTE:** This statistic is not displayed if the cgf_address optional keyword is used.
LCS-MO-CDR transmission failure percent	The failure percentage of DRT requests. This is calculated as (Total LCS-MO-CDR Trans failures/(Total LCS-MO-CDR Trans Failures + Total LCS-MO-CDR accepted) *100).
Charging Characteristics Statistics	
Hot	The number of times that PDP Context Requests were processed with a charging characteristic profile index value of "1", representing "hot" billing.
Normal	The number of times that PDP Context Requests were processed with a charging characteristic profile index value of "8", representing "normal" billing.
Prepaid	The number of times that PDP Context Requests were processed with a charging characteristic profile index value of "4", representing "prepaid billing.
Flat	The number of times that PDP Context Requests were processed with a charging characteristic profile index value of "2", representing "flat-rate" billing.
Unknown	The number of times that PDP Context Requests were processed with an unknown charging characteristic profile index value.
CGF Specific Statistics	
Data Record Transfer Requests Sent	
Send	The total number of "Data Record Transfer Requests" sent with the Packet transfer command "Send Data Record Packet". **NOTE:** This counter counts "Send Data Record Packet" with length more than 0.
Possibly Duplicate	The total number of "Data Record Transfer Requests" sent with the Packet transfer command "Send possibly duplicated Data Record Packet".

Field	Description
Cancel	The total number of "Data Record Transfer Requests" sent with the Packet transfer command "Cancel Data Record Packet".
Release	The total number of "Data Record Transfer Requests" sent with the Packet transfer command "Release Data Record Packet".
Empty	The total number of "Data Record Transfer Requests" sent with the Packet transfer command "Send Data Record Packet". **NOTE:** This counter counts "Send Data Record Packet" with length equal to 0.
Data Record Transfer Requests Retried	
Send	The total number of re-transmitted "Data Record Transfer Requests" sent with the Packet transfer command "Send Data Record Packet". **NOTE:** This counter counts "Send Data Record Packet" with length more than 0.
Possibly Duplicate	The total number of re-transmitted "Data Record Transfer Requests" sent with the Packet transfer command "Send possibly duplicated Data Record Packet".
Cancel	The total number of re-transmitted "Data Record Transfer Requests" sent with the Packet transfer command "Cancel Data Record Packet".
Release	The total number of re-transmitted "Data Record Transfer Requests" sent with the Packet transfer command "Release Data Record Packet".
Empty	The total number of re-transmitted "Data Record Transfer Requests" sent with the Packet transfer command "Send Data Record Packet". **NOTE:** This counter counts "Send Data Record Packet" with length equal to 0.
Data Record Transfer Requests Success	
Send	The total number of "Data Record Transfer Requests" sent with the Packet transfer command "Send Data Record Packet" for which a response from the CGF was received. **NOTE:** This counter counts "Send Data Record Packet" with length more than 0.
Possibly Duplicate	The total number of "Data Record Transfer Requests" sent with the Packet transfer command "Send possibly duplicated Data Record Packet" for which a response from the CGF was received.
Cancel	The total number of "Data Record Transfer Requests" sent with the Packet transfer command "Cancel Data Record Packet" for which a response from the CGF was received.
Release	The total number of "Data Record Transfer Requests" sent with the Packet transfer command "Release Data Record Packet" for which a response from the CGF was received.
Empty	The total number of "Data Record Transfer Requests" sent with the Packet transfer command "Send Data Record Packet" for which a response from the CGF was received. **NOTE:** This counter counts "Send Data Record Packet" with length equal to 0.
Data Record Transfer Response Cause	

Field	Description
Accepted	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 128 (80H, Request accepted).
Not Fulfilled	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 255 (FFH, Request not fulfilled).
Already Fulfilled	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 253 (FDH, Request already fulfilled).
Dup Already Fulfilled	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 252 (FCH, Request related to possibly duplicated packets already fulfilled).
Invalid Msg Format	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 193 (C1H, Invalid message format).
Mandatory IE Missing	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 202 (CAH, Mandatory IE missing).
Service not supported	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 200 (C8H, Service not supported).
Version not supported	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 198 (C6, Version not supported).
Mandatory IE incorrect	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 201 (C9H, Mandatory IE incorrect).
Optional IE incorrect	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 203 (CBH, Optional IE incorrect).
No Resources	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 199 (C7H, No resources available).
System Failure	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 204 (CCH, System failure).
CDR Decode Error	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 177. The cause value "CDR decoding error" is primarily intended to inform the CDR generating node that the receiving node can not decode the CDR.
Seq No incorrect	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 254.
Unknown Cause	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code which is other than mentioned above.
GTPP Echo Messages	
Echo Req Sent	The total number of Echo Request messages transmitted to the CGF.
Echo Req Rcvd	The total number of Echo Request messages received from the CGF.

Field	Description
Echo Rsp Rcvd	The total number of Echo Response messages received from the CGF.
Echo Rsp Sent	The total number of Echo Response messages transmitted to the CGF.
Redirection Req/Rsp Messages	
Redirection Req Rcvd	The total number of Redirection Request messages received from the CGF.
Redirection Rsp Sent	The total number of Redirection Response messages transmitted to the CGF.
Redirection Request Cause	
Trans Buffer full	The total number of Redirection Request messages received from the CGF(s) containing a cause information element of 60 (3CH, The transmit buffers are becoming full).
Recv Buffer Full	The total number of Redirection Request messages received from the CGF(s) containing a cause information element of 61 (3DH, The receive buffers are becoming full).
Other Node Down	The total number of Redirection Request messages received from the CGF(s) containing a cause information element of 62 (3EH, Another node is about to go down).
Self Node down	The total number of Redirection Request messages received from the CGF(s) containing a cause information element of 63 (3FH, This node is about to go down).
System Failure	The total number of Redirection Request messages received from the CGF(s) containing a cause information element of 59 (3BH, System failure).
Redirection Response Cause	
Accepted	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 128 (80H, Request accepted).
Service Not Supported	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 200 (C8H, Service not supported).
System Failure	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 204 (CCH, System failure).
Mandatory IE Incorrect	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 201 (C9H, Mandatory IE incorrect).
Mandatory IE Missing	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 202 (CAH, Mandatory IE missing).
Optional IE incorrect	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 203 (CBH, Optional IE incorrect).
Invalid Msg Format	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 193 (C1H, Invalid message format).
Version Not Supported	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 198 (C6H, Version not supported).

Field	Description
No Resources	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 199 (C7H, No resources available).
Node Alive Req/Rsp Messages	
Node Alive Req Rcvd	The total number of Node Alive Request messages received.
Node Alive Rsp Sent	The total number of Node Alive Response messages transmitted.
Node Alive Req Sent	The total number of Node Alive Request messages sent.
Node Alive Rsp Rcvd	The total number of Node Alive Response messages received.
Invalid messages received	
Invalid Sequence Number	The total number of requests received from a pre-configured CGF, with sequence number that is not in the system's buffers.
Round Trip Time	This section shows average latency on Ga/Gz interface per CGF.
Last DRT Round Trip Time	Total time taken in milliseconds for round trip of previous data record transfer message.
Average DRT Round Trip Time	Average time taken in milliseconds for round trip of all data record transfer messages.

show gtpp group name default

Table 6: show configuration access-link

Field	Description
TAC Always present	Displays "Yes" or "No" to indicate whether TAC is always present in the ULI field of the PGW-CDR.
Last User Location Information present	Displays "Yes" or "No" to indicate Last User Location Information.

show gtpp storage-server statistics

Table 7: show gtpp storage-server statistics Command Output Descriptions

Field	Description
Store Requests (GTPP Requests)	
Sent	The total number of GTPP Requests Messages sent by AAAProxy to GSS for storage. Each GTPP Request corresponds to one Store request to GSS. Therefore, each store request may contain one or more GCDR.

Field	Description
Retried	The total number of GTPP Requests Messages re-sent by AAAProxy to GSS for storage.
Success	The total number of GTPP Requests Messages successfully sent by AAAProxy to GSS for storage.
Failed	The total number of GTPP Requests Messages that failed to be sent by AAAProxy to GSS for storage.
Store Requests (GCDRs)	
Sent	The total number of G-CDRs in the GTPP Requests sent for "store".
Retried	The total number of G-CDRs in the GTPP Requests re-sent for "store".
Success	The total number of G-CDRs in the GTPP Requests successfully sent for "store".
Failed	The total number of G-CDRs in the GTPP Requests that failed to be sent for "store".
Store Requests (MCDRs)	
Sent	The total number of M-CDRs in the GTPP Requests sent for "store".
Retried	The total number of M-CDRs in the GTPP Requests re-sent for "store".
Success	The total number of M-CDRs in the GTPP Requests successfully sent for "store".
Failed	The total number of M-CDRs in the GTPP Requests that failed to be sent for "store".
Store Requests (SCDRs)	
Sent	The total number of S-CDRs in the GTPP Requests sent for "store".
Retried	The total number of S-CDRs in the GTPP Requests re-sent for "store".
Success	The total number of S-CDRs in the GTPP Requests successfully sent for "store".
Failed	The total number of S-CDRs in the GTPP Requests that failed to be sent for "store".
Store Requests (S-SMO-CDRs)	
Sent	The total number of S-SMO-CDRs in the GTPP Requests sent for "store".
Retried	The total number of S-SMO-CDRs in the GTPP Requests re-sent for "store".
Success	The total number of S-SMO-CDRs in the GTPP Requests successfully sent for "store".
Failed	The total number of S-SMO-CDRs in the GTPP Requests that failed to be sent for "store".
Store Requests (S-SMT-CDRs)	
Sent	The total number of S-SMT-CDRs in the GTPP Requests sent for "store".
Retried	The total number of S-SMT-CDRs in the GTPP Requests re-sent for "store".
Success	The total number of S-SMT-CDRs in the GTPP Requests successfully sent for "store".

Field	Description
Failed	The total number of S-SMT-CDRs in the GTPP Requests that failed to be sent for "store".
Store Requests (LCS-MT-CDRs)	
Sent	The total number of LCS-MT-CDRs in the GTPP Requests sent for "store".
Retried	The total number of LCS-MT-CDRs in the GTPP Requests re-sent for "store".
Success	The total number of LCS-MT-CDRs in the GTPP Requests successfully sent for "store".
Failed	The total number of LCS-MT-CDRs in the GTPP Requests that failed to be sent for "store".
Store Requests (LCS-MO-CDRs)	
Sent	The total number of LCS-MO-CDRs in the GTPP Requests sent for "store".
Retried	The total number of LCS-MO-CDRs in the GTPP Requests re-sent for "store".
Success	The total number of LCS-MO-CDRs in the GTPP Requests successfully sent for "store".
Failed	The total number of LCS-MO-CDRs in the GTPP Requests that failed to be sent for "store".
Store Requests(GMBMSCDRs)	
Sent	The total number of GMBMS CDRs in the GTPP Requests sent for "store".
Retried	The total number of GMBMS CDRs in the GTPP Requests re-sent for "store".
Success	The total number of GMBMS CDRs in the GTPP Requests successfully sent for "store".
Failed	The total number of GMBMS CDRs in the GTPP Requests that failed to be sent for "store".
Store Requests(SMBMSCDRs)	
Sent	The total number of SMBMS CDRs in the GTPP Requests sent for "store".
Retried	The total number of SMBMS CDRs in the GTPP Requests re-sent for "store".
Success	The total number of SMBMS CDRs in the GTPP Requests successfully sent for "store".
Failed	The total number of SMBMS CDRs in the GTPP Requests that failed to be sent for "store".
Store Requests (SGWCDRs)	
Sent	The total number of S-GW CDRs in the GTPP Requests sent for "store".
Retried	The total number of S-GW CDRs in the GTPP Requests re-sent for "store".
Success	The total number of S-GW CDRs in the GTPP Requests successfully sent for "store".
Failed	The total number of S-GW CDRs in the GTPP Requests that failed to be sent for "store".

Field	Description
Store Requests (WLANCDRs)	
Sent	The total number of WLAN CDRs in the GTPP Requests sent for "store".
Retried	The total number of WLAN CDRs in the GTPP Requests re-sent for "store".
Success	The total number of WLAN CDRs in the GTPP Requests successfully sent for "store".
Failed	The total number of WLAN CDRs in the GTPP Requests that failed to be sent for "store".
AAAProxy Recover Requests	
Sent	The total number of AAA Proxy Recover Requests sent by the AAA Proxy to the GSS. These requests are sent when the AAA Proxy is restarted after an outage.
Retried	The total number of AAA Proxy Recover Requests re-sent by the AAA Proxy to the GSS.
Success	The total number of AAA Proxy Recover Requests successfully sent by the AAA Proxy to the GSS.
Failed	The total number of AAA Proxy Recover Requests that failed to be sent by the AAA Proxy to the GSS.
Get Next Requests	
Sent	The total number of Get Next requests sent by the AAA Proxy to the GSS. The AAA Proxy maintains a limited buffer. When the buffer gets filled because of a delay in the CGF response, the AAA proxy starts sending the request to the GSS. To get these requests from the GSS, the AAA Proxy sends Get Next Requests to the GSS.
Retried	The total number of Get Next requests re-sent by the AAA Proxy to the GSS.
Success	The total number of Get Next requests successfully sent by the AAA Proxy to the GSS.
Failed	The total number of Get Next requests that failed to be sent by the AAA Proxy to the GSS.
Update CGF Requests	
Sent	The total number of requests sent by the AAA Proxy to the GSS to indicate a change in the status of the CGFs (i.e. from up to down or vice versa).
Retried	The total number of requests re-sent by the AAA Proxy to the GSS to indicate a change in the status of the CGFs
Success	The total number of requests successfully sent by the AAA Proxy to the GSS to indicate a change in the status of the CGFs
Failed	The total number of requests that failed to be sent by the AAA Proxy to the GSS to indicate a change in the status of the CGFs
AAAMgr Recover Requests	

Field	Description
Sent	The total number of AAAMGR Recovery Requests sent by the system to the GSS. These requests are sent when a AAA Mgr software task is restarted after an outage.
Retried	The total number of AAAMGR Recovery Requests re-sent by the system to the GSS.
Success	The total number of AAAMGR Recovery Requests successfully sent by the system to the GSS.
Failed	The total number of AAAMGR Recovery Requests that failed to be sent by the system to the GSS.
Clear DataBase Requests	
Sent	The total number of Clear Database Requests sent by the AAA Proxy to the GSS. These requests are sent after the AAA Proxy discovers that the GSS has come up again after a period of dormancy (i.e. the GSS moves from "down" to "up" state) so as to bring the GSS in sync with the state that the AAA Proxy is in.
Retried	The total number of Clear Database Requests re-sent by the AAA Proxy to the GSS.
Success	The total number of Clear Database Requests successfully sent by the AAA Proxy to the GSS.
Failed	The total number of Clear Database Requests that failed to be sent by the AAA Proxy to the GSS.
GCDR Purge Requests	
Received	The total number of G-CDR Purge Request messages received by the storage server. This request is sent by the GSS notifying the AAA Proxy of the purging of GTPP Requests due to buffer overflow.
Responded	The total number of responses sent from the AAA Proxy to the GSS in response to "purge Requests".
Generated File Requests	
Received	The total number of Generate File Request messages received by the storage server. This request is sent by the GSS notifying the AAA Proxy of the generation of unAcked files. The GTPP Requests purged by the GSS as a result of buffer overflow are moved to a file. This request indicates the completion of the moving of purged G-CDRs to the file.
Responded	The total number of responses sent by the AAA Proxy to the GSS for the "Generated File Requests" received.
Notification Received	
Outstanding GCDRs	The total number of notification for outstanding G-CDRs.
Responded	The total number notifications received and responded for outstanding G-CDRs.
Outstanding GCDRs cleared	The total number of notification for cleared outstanding G-CDRs.

Field	Description
Responded	The total number notifications received and responded for clearing outstanding G-CDRs.
CPU Usage Overlimit	The total number of notification received for CPU usage overlimit.
Responded	The total number notifications received and responded for CPU usage overlimit.
CPU Usage Normal	The total number of notification received for normal usage of CPU.
Responded	The total number of notification received and responded for normal usage of CPU.
Disk Usage Overlimit	The total number of notification received for disk usage overlimit.
Responded	The total number notifications received and responded for disk usage overlimit.
Disk Usage Normal	The total number of notification received for disk usage is in normal limit.
Responded	The total number notifications received and responded for disk usage in normal limit.
Cluster State Change	The total number of notification received for change in Cluster node status.
Responded	The total number notifications received and responded for change in Cluster node status.
Cluster Switchover	The total number of notification received for Cluster node switchover.
Responded	The total number notifications received and responded for Cluster node switchover.
Cluster Disk Path Failure	The total number of notification received for failure in Cluster disk path failure.
Responded	The total number notifications received and responded for failure in Cluster disk path failure.
Cluster Disk Path Normal	The total number of notification received for change in Cluster disk path from failure to normal.
Responded	The total number notifications received and responded for change in Cluster disk path from failure to normal.
Cluster Interconnect Failure	The total number of notification received for failure of interconnection between Cluster nodes.
Responded	The total number notifications received and responded for failure of interconnection between Cluster nodes.
Cluster Interconnect Normal	The total number of notification received for change in interconnection between Cluster nodes from failure to normal.
Responded	The total number notifications received and responded for change in interconnection between Cluster nodes from failure to normal.
Cluster Interface Failure	The total number of notification received for failure of interface of Cluster node.
Responded	The total number notifications received and responded for failure of Cluster node interface.

Field	Description
Cluster Interface Normal	The total number of notification received for change in status of Cluster node interface from failure to normal.
Responded	The total number notifications received and responded for change in status of Cluster node interface from failure to normal.
Cluster Memory Low	The total number of notification received for low memory at Cluster node.
Responded	The total number notifications received and responded for low memory at Cluster node.
Cluster Memory Normal	The total number of notification received for change in status of low memory to normal memory at Cluster node.
Responded	The total number notifications received and responded for change in status of low memory to normal memory at Cluster node.
Storage Server Counter Requests	
Sent	The total number of times the AAA Proxy sent "Storage Server Counter" requests to the GSS. This request is sent when "show gtpp storage-server counter" CLI is executed.
Failed	The total number of times that the AAA Proxy failed to be send "Storage Server Counter" requests to the GSS.
Success	The total number of times the AAA Proxy successfully sent "Storage Server Counter" requests to the GSS.
Storage Server Status Requests	
Sent	The total number of times the AAA Proxy sent "Storage Server Status" requests to the GSS. This request is sent when "show gtpp storage-server status" CLI is executed.
Failed	The total number of times that the AAA Proxy failed to be send "Storage Server Status" requests to the GSS.
Success	The total number of times the AAA Proxy successfully sent "Storage Server Status" requests to the GSS.
Fetch Requests	
Sent	The total number of "Fetch Requests" sent by the AAA Proxy to the GSS. This request is sent to discover the status of a particular GTPP Request (i.e. if it has been successfully stored but not sent to CGF, or if it is successfully stored and sent to CGF, or if it has not been received by GSS at all).
Retried	The total number of "Fetch Requests" re-sent by the AAA Proxy to the GSS.
Success	The total number of "Fetch Requests" successfully sent by the AAA Proxy to the GSS.
Failed	The total number of "Fetch Requests" that failed to be sent by the AAA Proxy to the GSS.
Echo Requests	

Field	Description
Sent	The total number of Echo requests sent by the AAA Proxy to the GSS.
Success	The total number of Echo requests successfully sent by the AAA Proxy to the GSS.
Commit Requests	
Sent	The total number of "commit requests" sent by the AAA Proxy to the GSS. This request is sent as a result of executing the "gtpp force-save" Exec mode command.
Success	The total number of "commit requests" successfully sent by the AAA Proxy to the GSS.
Update Requests	
Sent	The total number of requests sent by the AAA Proxy to the GSS to indicate the success of a request from the CGF.
Invalid Request	
Received	The total number of invalid requests sent by the GSS to the AAA Proxy (i.e. when a GSS is reconfigured, all the requests from the old GSS are marked as invalid).
Message Statistics	
Total Req Sent	The total number of requests sent to GSS.
Total Store Req Sent	The total number of requests sent to GSS to store G-CDRs.
Total Rsp Rcvd	The total number of requests responded to GSS.
Total Store Req Sent	The total number of requests to store G-CDRs responded.
Total Notif Msg Rcvd	The total number of notification messages received.
Total Notif Rsp Sent	The total number of notification messages responded.
Total Req Sent Failure	The total number of requests failed during sent.
Invalid Socket State	The total number of requests failed during sent due to invalid socket state.
MED/Socket Tx Failure	The total number of requests failed during sent due to Tx failure of mediation or socket.
Store Response Time Statistics	Statistical information of response time for STORE messages.
Get Next Response Time Statistics	Statistical information of response time of GET NEXT messages.
GCDR distribution in DRT Messages	Distribution of G-CDRs in Data Request Transfer (DRT) messages.

show gtpp storage-server counters

Table 8: show gtpp storage-server counters Command Output Descriptions

Field	Description
Archived GTPP Requests	The total number of GTPP Requests archived with the GSS that have been responded to by the CGF.
Archived Unack GTPP Requests	The total number of GTPP Requests archived with the GSS that have not yet been responded to by the CGF.
Archived GCDRs	The total number of G-CDRs archived in "Acknowledged GTPPRequests".
Archived Unack GCDRs	The total number of G-CDRs archived in "Unacknowledged GTPP Requests".

show gtpp storage-server local file counters

Table 9: show gtpp storage-server local file counters Command Output Descriptions

Field	Description
GTPP Req pending write	The total number of pending GTPP requests to write files to the hard disk..
GTPP Req pending response	The total number responses sent to GTPP requests.
File related counters	
Current file CDR count	The total number of files compressed.
Files pending sync	The number of files that were not able to be compressed.
Compr files pending sync	The number of files waiting to be synced.
Compression in progress	The number of files being compressed.

show gtpp storage-server local file statistics

Table 10: show gtpp storage-server local file statistics Command Output Descriptions

Field	Description
Total CDR written	The total number of GTPP CDR files written to the hard disk.
Total File Rotations	The total number of file rotation processes completed.
File Rotation Type	

Field	Description
CDR-Count-limit	The total number of CDR files that have been rotated.
Time-limit	Identifies the time limit for file rotation..
Forced (0 CDRs)	Identifies the total number of zero-cdr files created at the local storage due to enabling of "force-file-rotation" trigger.
Others	Total number of file rotations happened due to triggers not listed in this table when for local CDR files.
File Compression	
Compression Success	The total number of files compressed.
Compression Failures	The number of files that were not able to be compressed.

show gtpp storage-server status

Table 11: show gtpp storage server status Command Output Descriptions

Field	Description
Configuration	
Execution Mode	Execution mode of the G-CDRs.
File Format	Specifies the file format used for CDRs.
Max GCDRs per filet	Maximum number of G-CDRs per file.
Notification Type	Type of notification.
Poll Interval (min)	Poll interval in Minutes.
Resource Monitor	
Outstanding GCDRs File Period (min)	Outstanding G-CDRs file period in minutes.
CPU Usage(%)	CPU usage in percentage.
Available Disk Gss Datafile Path (GB)	Threshold value for available disk size for path or partition on GSS node where CDR files are generated and stored by GSS Filegen application. Example: /sharedgss
Available Disk Gss Install Path (GB)	Threshold value for available disk size for path or partition on GSS node where basic components of GSS like bin directory, config files, postgres bin directory and local log files are present. Example: /gss

Field	Description
Available Disk Gss Database Path (GB)	Threshold value for available disk size for path or partition on GSS node where postgres database is installed. Example: /sharedpostgres **Note** It is possible that gss and postgres are installed on only one partition, i.e. sharedgss.
Available Memory (MB)	Available memory at a given time.
Resource Monitor Status	
Outstanding GCDRs File Period (min)	Number of outstanding G-CDR files during a given period of time (in minutes).
State	State of the G-CDR collection.
CPU Usage (%)	CPU usage in percentage.
State	State of the CPU.
Available Disk Gss Datafile Path (GB) State	Measured or current value for disk size for path or partition on GSS node where CDR files are generated and stored by GSS Filegen application. Example: /sharedgss If Measured or current value for disk size (GB) falls below configured limit (Threshold value), then Alarm is generated.
Available Disk Gss Install Path (GB) State	Measured or current value for disk size for path or partition on GSS node where basic components of gss like bin directory, config files and postgres bin directory and local log files are present. Example : /gss If Measured or current value for disk size (GB) falls below configured limit (Threshold value), then Alarm is generated.
Available Disk Gss Database Path (GB) State	Measured or current value for available disk size for path or partition on GSS node where postgres database is installed. Example: /sharedpostgres If Measured or current value for disk size (GB) falls below configured limit (Threshold value), then Alarm is generated.
Available Memory (MB)	Amount of memory available for additional G-CDR files.
State:	Condition of the available memory.
Cluster Status	
Cluster Name	Name of the gss cluster.
Online Cluster Node	Name of cluster node(s) that are online at the status collection time.

Field	Description
Cluster Node List	Name(s) of the node(s) included in the cluster.

show gtpp storage-server streaming file statistics

Table 12: show gtpp storage-server streaming file statistics Command Output Descriptions

Field	Description
Total CDR written	Total number of streaming CDRs written into the RAM-Disk when gtpp storage-server "streaming" mode was enabled.
Total CDR sent to remote	Total number of streaming CDRs sent to CGF from the HDD once the CGF/GTPP is up.
Total Files Failed	During streaming if the CDR file is corrupted, the file will not stream to CGF and renamed to ***.fail**. This counters indicates the total number of such failed files.
Total File Rotations	Total number of file rotations based on File Size, CDR count, time-limit when "streaming" mode was enabled. The file rotation triggers are configurable in GTPP Group Configuration mode.
File Rotation Type	
File-Size-limit	Total number of file rotations happened due to "File-Size-limit" trigger when "streaming" mode was enabled.
CDR-Count-limit	Total number of file rotations happened due to "CDR-Count-limit" trigger when "streaming" mode was enabled.
Time-limit	Total number of file rotations happened due to "Time-limit" trigger when "streaming" mode was enabled.
Forced (0 CDRs)	Identifies the total number of zero-cdr files created at the local storage due to enabling of "force-file-rotation" trigger.
Others	Total number of file rotations happened due to triggers not listed in this table when "streaming" mode was enabled.
Automatic File Transfer Statistics	
Total Gtpp-Groups transferred	Total number of GTPP groups for which file transfer was initiated.
Total Files transferred	Total number of files that are transferred.
File Transfer Status	Indicates the file transfer status i.e. Transfer Not initiated, Transfer Success, Transfer Stopped.
Total file transfer initiated count	Total number of times the file transfer was initiated.
Total file transfer stopped count	Total number of times the file transfer was stopped.

show gtpp storage-server streaming file statistics verbose

Table 13: show gtpp storage-server streaming file statistics verbose Command Output Descriptions

Field	Description
Accumulated Statistics:	
Total CDR written	Total number of streaming CDRs written into the RAM-Disk when gtpp storage-server "streaming" mode was enabled.
Total CDR sent to remote	Total number of streaming CDRs sent to CGF from the HDD once the CGF/GTPP is up.
Total CDR accepted	Total number of CDRs that are acknowledged by CGF (successfully streamed by the ASR 5000).
Total CDR req already fulfilled	Total number of CDR requests that are already acknowledged by CGF. **NOTE:** When streaming is in progress from a file, the AAA proxy may fail. When the AAA proxy is recovered, requests will not be sent from files that are acknowledged by CGF. Instead, the counter is incremented.
Total Files sent to remote	Total number of CDR files sent to GTPP Storage Sever and acknowledged by CGF. **NOTE:** When streaming is in progress from a file, the AAA proxy may fail. When the AAA proxy is recovered, requests will not be sent from files that are acknowledged by CGF. Instead, the counter is incremented.
Total Files Failed	During streaming if the CDR file is corrupted, the file will not stream to CGF and renamed to ***.fail**. This counters indicates the total number of such failed files.
Total File Rotations	Total number of file rotations based on File Size, CDR count, time-limit when "streaming" mode was enabled. The file rotation triggers are configurable in GTPP Group Configuration mode.
File Rotation Type	
File-Size-limit	Total number of file rotations happened due to "File-Size-limit" trigger when "streaming" mode was enabled.
CDR-Count-limit	Total number of file rotations happened due to "CDR-Count-limit" trigger when "streaming" mode was enabled.
Time-limit	Total number of file rotations happened due to "Time-limit" trigger when "streaming" mode was enabled.
Forced (0 CDRs)	Identifies the total number of zero-cdr files created at the local storage due to enabling of "force-file-rotation" trigger.
Others	Total number of file rotations happened due to triggers not listed in this table when "streaming" mode was enabled.
CDR distribution in DRT Messages	

Field	Description
0:	Total number of Data Request Transfer (DRT) requests sent with no CDRs.
1:	Total number of Data Request Transfer (DRT) requests sent with one CDR.
2..5:	Total number of Data Request Transfer (DRT) requests sent where each request contains CDRs from 2 to 5.
6..10:	Total number of Data Request Transfer (DRT) requests sent where each request contains CDRs from 6 to 10.
11..15:	Total number of Data Request Transfer (DRT) requests sent where each request contains CDRs from 11 to 15.
16..20:	Total number of Data Request Transfer (DRT) requests sent where each request contains CDRs from 16 to 20.
21..40:	Total number of Data Request Transfer (DRT) requests sent where each request contains CDRs from 21 to 40.
41..60:	Total number of Data Request Transfer (DRT) requests sent where each request contains CDRs from 41 to 60.
61..80:	Total number of Data Request Transfer (DRT) requests sent where each request contains CDRs from 61 to 80.
81..100:	Total number of Data Request Transfer (DRT) requests sent where each request contains CDRs from 81 to 100.
101..150:	Total number of Data Request Transfer (DRT) requests sent where each request contains CDRs from 101 to 150.
151..200:	Total number of Data Request Transfer (DRT) requests sent where each request contains CDRs from 151 to 200.
201..254:	Total number of Data Request Transfer (DRT) requests sent where each request contains CDRs from 201 to 254.
255:	Total number of Data Request Transfer (DRT) requests sent where each request contains 255 CDRs.

show gtpp storage-server streaming file counters all

Table 14: show gtpp storage-server streaming file counters all Command Output Descriptions

Field	Description
GTPP Req pending write	Total number of CDR request queued up and not yet stored in RAM-Disk when "streaming" mode was enabled.

Field	Description
GTPP Req pending response	Total number of GTPP request yet to send acknowledgement to the AAAMgr after storing the CDRs successfully in RAM-Disk when "streaming" mode was enabled.
File related counters	
Current file CDR count	Total number of CDRs stored in RAM-disk file which is not yet synced to the HDD when "streaming" mode was enabled.
Files pending sync	Total number of files waiting for the sync response from HDD when "streaming" mode was enabled.
Current Pending CDRs in HDD	Total number of CDRs written into the hard-disk (Indicates the CDR count of rotated files) when "streaming" mode was enabled.
Current Pending Files in HDD	Total number of files stored in hard-disk when "streaming" mode was enabled.