Bulk Statistics Changes Quick Reference

This chapter identifies bulk statistics changes added to, modified for, or deprecated from the StarOS 21.25 software release.

Important For more information regarding bulk statistics identified in this section, see the latest version of the *BulkstatStatistics_document.xls* spreadsheet supplied with the release.

Bulk statistics changes for 21.25 include:

New Bulk Statistics

APN Schema

The following bulkstatistics are added in the APN schema as part of the DNS client KPI enhancement feature:

Bulkstats	Description
dns-nf-pcscf-total-queries-sent	Count of the total query for DNS.
dns-nf-pcscf-success-queries	Count of total successful queries from the DNS server.
dns-nf-pcscf-success-positive-cache-queries	Count of total queries from the DNS cache.
dns-nf-pcscf-domain-not-found	Query count when FQDN queried is not available in the DNS server config file.
dns-nf-pcscf-query-timeouts	Query count when the DNS server is not reachable.
dns-nf-pcscf-socket-errors	Query count when the DNS server encountered socket error.
dns-nf-pcscf-unable-to-connect	Unsuccessful query count when not able to connect to the DNS server.

Bulkstats	Description
dns-nf-pcscf-cache-corrupted	Unsuccessful query count due to cache corruption.
dns-nf-pcscf-other_failures	Count for failures other than listed here.

ECS Schema

The following bulkstatistics are added in the ECS schema as part of the VPP metrics feature:

Variables	Description
TCP	
tcp-vpp-flows-cur	Indicates the current number of flows through VPP for TCP analyzer.
tcp-vpp-flows	Indicates the total number of flows through VPP for TCP analyzer.
tcp-vpp-pkts	The total number of IP packets through VPP for TCP analyzer.
tcp-ipv4-vpp-dwnlk-pkts	Indicates the total number of IP packets detected in downlink direction in IPv4 traffic through VPP for TCP analyzer.
tcp-ipv4-vpp-uplk-pkts	Indicates the total number of IP packets detected in uplink direction in IPv4 traffic through VPP for TCP analyzer.
tcp-ipv4-vpp-dwnlk-bytes	Indicates the total number of IP bytes detected in downlink direction in IPv4 traffic through VPP for TCP analyzer.
tcp-ipv4-vpp-uplk-bytes	Indicates the total number of IP bytes detected in uplink direction in IPv4 traffic through VPP for TCP analyzer.
tcp-ipv6-vpp-dwnlk-pkts	Indicates the total number of IP packets detected in downlink direction in IPv6 traffic through VPP for TCP analyzer.
tcp-ipv6-vpp-uplk-pkts	Indicates the total number of IP packets detected in uplink direction in IPv6 traffic through VPP for TCP analyzer.
tcp-ipv6-vpp-dwnlk-bytes	Indicates the total number of IP bytes detected in downlink direction in IPv6 traffic through VPP for TCP analyzer.
tcp-ipv6-vpp-uplk-bytes	Indicates the total number of IP bytes detected in uplink direction in IPv6 traffic through VPP for TCP analyzer.
UDP	

Variables	Description
udp-vpp-flows-cur	Indicates the current number of flows through VPP for UDP analyzer.
udp-vpp-flows	Indicates the total number of flows through VPP for UDP analyzer.
udp-vpp-pkts	Indicates the total number of IP packets through VPP for UDP analyzer.
udp-ipv4-vpp-dwnlk-pkts	Indicates the total number of IPv4 packets detected in downlink direction through VPP for UDP analyzer.
udp-ipv4-vpp-uplk-pkts	Indicates the total number of IPv4 packets detected in uplink direction through VPP for UDP analyzer.
udp-ipv4-vpp-dwnlk-bytes	Indicates the total number of IPv4 bytes detected in downlink direction through VPP for UDP analyzer.
udp-ipv4-vpp-uplk-bytes	Indicates the total number of IPv4 bytes detected in uplink direction through VPP for UDP analyzer.
udp-ipv6-vpp-dwnlk-pkts	Indicates the total number of IPv6 packets detected in downlink direction through VPP for UDP analyzer.
udp-ipv6-vpp-uplk-pkts	Indicates the total number of IPv6 packets detected in uplink direction through VPP for UDP analyzer.
udp-ipv6-vpp-dwnlk-bytes	Indicates the total number of IPv6 bytes detected in downlink direction through VPP for UDP analyzer.
udp-ipv6-vpp-uplk-bytes	Indicates the total number of IPv6 bytes detected in uplink direction through VPP for UDP analyzer.
HTTP	
http-vpp-flows-cur	Indicates the current number of flows through VPP for HTTP analyzer.
http-vpp-flows	Indicates the total number of flows through VPP for HTTP analyzer.
http-vpp-pkts	Indicates the total number of IP packets through VPP for HTTP analyzer.
http-ipv4-vpp-dwnlk-pkts	Indicates the total number of IPv4 packets detected in downlink direction through VPP for HTTP analyzer.
http-ipv4-vpp-uplk-pkts	Indicates the total number of IPv4 packets detected in uplink direction through VPP for HTTP analyzer.
http-ipv4-vpp-dwnlk-bytes	Indicates the total number of IPv4 bytes detected in downlink direction through VPP for HTTP analyzer.
http-ipv4-vpp-uplk-bytes	Indicates the total number of IPv4 bytes detected in uplink direction through VPP for HTTP analyzer.

Variables	Description
http-ipv6-vpp-dwnlk-pkts	Indicates the total number of IPv6 packets detected in downlink direction through VPP for HTTP analyzer.
http-ipv6-vpp-uplk-pkts	Indicates the total number of IPv6 packets detected in uplink direction through VPP for HTTP analyzer.
http-ipv6-vpp-dwnlk-bytes	Indicates the total number of IPv6 bytes detected in downlink direction through VPP for HTTP analyzer.
http-ipv6-vpp-uplk-bytes	Indicates the total number of IPv6 bytes detected in uplink direction through VPP for HTTP analyzer.
Secure-HTTP	
https-vpp-flows-cur	Indicates the current number of flows through VPP for HTTPS analyzer.
https-vpp-flows	Indicates the total number of flows through VPP for HTTPS analyzer.
https-vpp-pkts	Indicates the total number of IP packets through VPP for HTTPS analyzer.
https-ipv4-vpp-dwnlk-pkts	Indicates the total number of IPv4 packets detected in downlink direction through VPP for HTTPS analyzer.
https-ipv4-vpp-uplk-pkts	Indicates the total number of IPv4 packets detected in uplink direction through VPP for HTTPS analyzer.
https-ipv4-vpp-dwnlk-bytes	Indicates the total number of IPv4 bytes detected in downlink direction through VPP for HTTPS analyzer.
https-ipv4-vpp-uplk-bytes	Indicates the total number of IPv4 bytes detected in uplink direction through VPP for HTTPS analyzer.
https-ipv6-vpp-dwnlk-pkts	Indicates the total number of IPv6 packets detected in downlink direction through VPP for HTTPS analyzer.
https-ipv6-vpp-uplk-pkts	Indicates the total number of IPv6 packets detected in uplink direction through VPP for HTTPS analyzer.
https-ipv6-vpp-dwnlk-bytes	Indicates the total number of IPv6 bytes detected in downlink direction through VPP for HTTPS analyzer.
https-ipv6-vpp-uplk-bytes	Indicates the total number of IPv6 bytes detected in uplink direction through VPP for HTTPS analyzer.
P2P	
p2p-vpp-flows-cur	Indicates the current number of flows through VPP for P2P analyzer.
p2p-vpp-flows	Indicates the total number of flows through VPP for P2P analyzer.

Variables	Description
p2p-vpp-pkts	Indicates the total number of IP packets through VPP for p2p analyzer.
p2p-ipv4-vpp-dwnlk-pkts	Indicates the total number of IPv4 packets detected in downlink direction through VPP for P2P analyzer.
p2p-ipv4-vpp-uplk-pkts	Indicates the total number of IPv4 packets detected in uplink direction through VPP for P2P analyzer.
p2p-ipv4-vpp-dwnlk-bytes	Indicates the total number of IPv4 bytes detected in downlink direction through VPP for P2P analyzer.
p2p-ipv4-vpp-uplk-bytes	Indicates the total number of IPv4 bytes detected in uplink direction through VPP for P2P analyzer.
p2p-ipv6-vpp-dwnlk-pkts	Indicates the total number of IPv6 packets detected in downlink direction through VPP for P2P analyzer.
p2p-ipv6-vpp-uplk-pkts	Indicates the total number of IPv6 packets detected in uplink direction through VPP for P2P analyzer.
p2p-ipv6-vpp-dwnlk-bytes	Indicates the total number of IPv6 bytes detected in downlink direction through VPP for P2P analyzer.
p2p-ipv6-vpp-uplk-bytes	Indicates the total number of IPv6 bytes detected in uplink direction through VPP for P2P analyzer.

ePDG Schema

The following bulkstatistics are added in the ePDG schema as part of the LTE to Wi-Fi Success Rate feature:

Table 1: Bulk Statistics Variables in the ePDG Schema

Variables	Description
vpnname	The name of the VPN associated with the interface.
vpnid	The identification number of the context configured on the system that is currently facilitating the ePDG service. VPN ID is an internal reference number.
servname	The name of the ePDG service for which these statistics are being displayed.
servid	The identification number of the ePDG service for which these statistics are displayed. Service ID is an internal reference number.
ho-disc-remote	The total number of disconnected sessions remotely before connect during LTE to Wi-Fi handoff.
ho-disc-admin	The total number of sessions disconnected by Administrator during LTE to Wi-Fi handoff.
ho-disc-idle-timeout	The total number of sessions disconnected due to idle timeout during LTE to Wi-Fi handoff.

Variables	Description
ho-disc-abs-timeout	The total number of sessions disconnected due to absolute timeout during LTE to Wi-Fi handoff.
ho-disc-longdur-timeout	The total number of sessions disconnected due to long duration timeout during LTE to Wi-Fi handoff.
ho-disc-sesssetup-timeout	The total number of sessions disconnected due to session setup timeout during LTE to Wi-Fi handoff.
ho-disc-noresource	The total number of sessions disconnected due to non availability of resources during LTE to Wi-Fi handoff
ho-disc-authfail	The total number of sessions disconnected due to authorization failure during LTE to Wi-Fi handoff.
ho-disc-flowadd-failure	The total number of sessions disconnected due to flow add failure during LTE to Wi-Fi handoff.
ho-disc-invalid-dest	The total number of sessions disconnected due to invalid destination during LTE to Wi-Fi handoff.
ho-disc-srcaddr-violation	The total number of sessions disconnected due to source address violation during LTE to Wi-Fi handoff.
ho-disc-dupreq	The total number of sessions disconnected due to duplicate request during LTE to Wi-Fi handoff.
ho-disc-addrassign-failure	The total number of sessions disconnected due to address assignment failure during LTE to Wi-Fi handoff.
ho-disc-misc	The total number of sessions disconnected due to miscellaneous reasons during LTE to Wi-Fi handoff.
ho-disc-mip-reg-timeout	The total MIP registration timeout during LTE to Wi-Fi handoff.
ho-disc-invalid-apn	The number of sessions disconnected because an ePDG rejected the incoming new call due to an APN syntax error (invalid length).
ho-disc-icsr-delete	The number of times that a session got deleted on the standby ICSR chassis when a call clear trigger is received from the active chassis or the call is removed for re-establishment when a full checkpoint was received.
ho-disc-invalid-qci	The total number of sessions disconnected due to invalid QCI received from the AAA server during LTE to Wi-Fi handoff.
ho-disc-ue-redirected	The total number of sessions disconnected due to UE redirection during LTE to Wi-Fi handoff.
ho-disc-roaming-mandatory	The total number of sessions disconnected due to DNS failure when roaming is mandatory during LTE to Wi-Fi handoff.
ho-disc-ho-disc-invalid-imei	The total number of sessions disconnected due to invalid IMEI received from UE during LTE to Wi-Fi handoff.
ho-disc-gtpc-abort-sess-cmd	The total number of disconnected sessions due to GTP control plane path failure during LTE to Wi-Fi handoff.

Variables	Description
ho-disc-gtpu-abort-sess-cmd	The total number of disconnected sessions due to GTP user plane path failure during LTE to Wi-Fi handoff.
ho-disc-gtpu-error-indication	The total number of disconnected sessions due to error indication message on GTP user plane during LTE to Wi-Fi handoff.
ho-disc-pgw-not-reachable	The total number of disconnected sessions due to P-GW during LTE to Wi-Fi handoff.
ho-disc-reject-from-pgw	The total number of disconnected sessions due to P-GW rejecting the Create Session Request during LTE to Wi-Fi handoff.
ho-disc-s2b-access-denied	The total number of sessions disconnected due to S2B cause codes mapped to private IKEv2 notify payload type access denied during LTE to Wi-Fi handoff.
ho-disc-s2b-network-failure	The total the number of sessions disconnected due to S2B cause codes mapped to private IKEv2 notify payload type network failure during LTE to Wi-Fi handoff.
ho-disc-s2b-msg-failure	The total number of sessions disconnected due to S2B cause codes mapped to private IKEv2 notify payload type message failure during LTE to Wi-Fi handoff.
ho-disc-s2b-rat-disallowed	The total number of sessions disconnected due to S2B cause code rat disallowed during LTE to Wi-Fi handoff.
ho-disc-s2b-context-not-found	The total number of sessions disconnected due GTPv2 cause code "Context Not Found" during LTE to Wi-Fi handoff.
ho-disc-epdg-pcscf-restoration	The total number of sessions disconnected due to P-GW triggered reactivation request for P-CSCF restoration during LTE to Wi-Fi handoff.
ho-disc-dns-server-not-reachable	The total number of disconnected sessions due to DNS server not reachable during LTE to Wi-Fi handoff.
ho-disc-dns-no-resource-records	The total number of disconnected sessions when no valid record is fetched from the DNS server during LTE to Wi-Fi handoff.
ho-disc-dns-no-matching-server	The total number of disconnected sessions when the fetched service parameters from DNS record doesn't match the configured protocol (GTP or PMIPv6) during LTE to Wi-Fi handoff.
ho-disc-aaa-server-not-reachable	The total number of disconnected sessions due to the AAA server being unreachable from ePDG during LTE to Wi-Fi handoff.
ho-disc-aaa-invalid-aaa-attribute	The total number of disconnected sessions due to authentication failure at AAA server and invalid attributes received in Diameter messages from the AAA server during LTE to Wi-Fi handoff.
ho-disc-aaa-apn-validation-failed	The total number of disconnected sessions due to APN mismatch at SWu and SWm interfaces during LTE to Wi-Fi handoff.
ho-disc-aaa-admin	Indicates the AAA Admin disconnect during LTE to Wi-Fi handoff.

Variables	Description
ho-disc-aaa-invalid-pdn-type	The total number of disconnected sessions due to mismatch over PDN type between UE and AAA server during LTE to Wi-Fi handoff.
ho-disc-aaa-non-uicc-auth-failed	The total number of non-UICC disconnected sessions due to AAA server during LTE to Wi-Fi handoff.
ho-disc-aaa-network-too-busy	The total number of sessions disconnected due to network busy during LTE to Wi-Fi handoff.
ho-disc-aaa-network-failure	The total number of sessions disconnected due to network failure during LTE to Wi-Fi handoff .
ho-disc-aaa-roaming-not-allowed	The total number of sessions disconnected due to roaming not allowed during LTE to Wi-Fi handoff.
ho-disc-aaa-rat-disallowed	The total number of sessions disconnected due to result code or experimental result code returned by Diameter during LTE to Wi-Fi handoff.
ho-disc-aaa-no-subscription	The total number of sessions disconnected due to non subscription of AAA during LTE to Wi-Fi handoff.
ho-disc-aaa-operator-policy	The total number of disconnected sessions due to lack of suitable operator policy configuration during LTE to Wi-Fi handoff.
ho-disc-aaa-no-non-3gpp-subscript	The total number of sessions disconnected due to AAA cause codes mapped to 3GPP IKEv2 private notify payload error type "#9000 No Non 3gpp Subscription" during LTE to Wi-Fi handoff.
ho-disc-aaa-user-unknown	The total number of sessions disconnected due to AAA cause codes mapped to 3GPP IKEv2 private notify payload error type "#9001 User Unknown" during LTE to Wi-Fi handoff.
ho-disc-aaa-illegal-equipment	The total number of sessions disconnected due to AAA cause codes mapped to 3GPP IKEv2 private notify error payload type "#9006 Illegal ME" during LTE to Wi-Fi handoff.
ho-disc-pgwselectfail-handoff	The total number of disconnected sessions due to P-GW selection failure during LTE to Wi-Fi handoff.
suppress-intr-roaming-ho-active	Indicates the current number of active ePDG sessions for which international roaming handoff attempts succeeded.

MME Schema

The following bulkstatistics are added in the MME schema as part of the N26 Interface Support feature:

Counters	Description
mme-decor-ue-usage-type-src-peer-amf	Displays the the number of MME subscriber sessions, where UE usage type was obtained from peer AMF as part of handover.
n1-mode-atttach-req	Displays the total number of Attach Requests received with N1 mode supported.

Counters	Description
n1-mode-tau-req	Displays the total number of TAU Requests received with N1 mode supported.
n1-mode-dns-pgw-selection-smf	Displays the total number of times P-GW selection procedures were performed with locally configured P-GW address, without considering the N1 Mode network capability.
n1-mode-dns-pgw-selection-nr	Displays the number of times P-GW DNS selection procedures are performed with DNS RR including the NR network capability.
n1-mode-dns-pgw-selection-common	Displays the number of times P-GW DNS selection procedures are performed with DNS RR excluding the N1 Mode network capability.
n1-mode-dns-pgw-selection-local	Displays the total number of times P-GW selection procedures were performed with locally configured P-GW address, without considering the N1 Mode network capability.

Modified Bulk Statistics

None in this release.

Deprecated Bulk Statistics

None in this release.