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List of metrics

All metrics are exported through a single `/metrics` endpoint in Prometheus text format. The name follows the rules of Prometheus: `epdg_<group>_<name>[_unit]`, the Counter type has the suffix `_total`, Histogram is the suffix `_seconds/_bytes`.

1. Config (2)

Name	Type	Appointment
<code>epdg_config_status</code>	Gauge	Component configuration status (0=error, 1=ok)
<code>epdg_config_reload_total</code>	Counter	Configuration download counter (success/failure)

2. Network (1)

Name	Type	Appointment
<code>epdg_network_connection_status</code>	Gauge	TCP/UDP connection status to a node (0=down, 1=up) — applies to PGW (S2b), AAA (SWm), HSS (SWx)

3. IKEv2 SWu (3)

Name	Type	Appointment
<code>epdg_ikev2_messages_total</code>	Counter	IKEv2 Message Counter (IKE_SA_INIT / IKE_AUTH / CREATE_CHILD_SA / INFORMATIONAL)
<code>epdg_ikev2_request_duration_seconds</code>	Histogram	IKEv2 response time
<code>epdg_ikev2_errors_total</code>	Counter	IKEv2 errors (NO_PROPOSAL_CHOSEN, AUTHENTICATION_FAILED, INVALID_SYNTAX, etc.)

4. GTPv2-C S2b (4)

Name	Type	Appointment
<code>epdg_gtp_messages_total</code>	Counter	GTPv2-C (Create/Modify/Delete Session, Echo)
<code>epdg_gtp_request_duration_seconds</code>	Histogram	Waiting time request → reply
<code>epdg_gtp_errors_total</code>	Counter	GTP-C error by Cause Code
<code>epdg_gtp_retransmissions_total</code>	Counter	Redirecting GTP-C requests

5. GTP-U data plane (3)

Name	Type	Appointment
<code>epdg_gtpu_packets_total</code>	Counter	Packages via GTP-U tunnel (uplink/downlink)
<code>epdg_gtpu_bytes_total</code>	Counter	Bytes through GTP-U tunnel
<code>epdg_gtpu_errors_total</code>	Counter	Tunneling errors (TEID mismatch, decap fail)

6. Diameter SWm/SWx/S6b (5)

Name	Type	Appointment
epdg_diameter_messages_total	Counter	DER/DEA (SWm), MAR/MAA (SWx), AAR/AAA (S6b), STR/STA
epdg_diameter_request_duration_seconds	Histogram	Waiting time request → reply by Diameter
epdg_diameter_errors_total	Counter	Errors by Experimental-Result-Code
epdg_diameter_watchdog_status	Gauge	DWR/DWA watchdog status to node (0=timeout, 1=ok)
epdg_diameter_connection_status	Gauge	Diameter connection status to node (0=disconnected, 1=connected)

7. Service KPI (4)

Name	Type	Appointment
epdg_service_attach_total	Counter	Attempts to connect (success/failure) via APN
epdg_service_attach_duration_seconds	Histogram	Duration of connection (IKE_SA_INIT → session ready)
epdg_service_availability	Gauge	Accessibility flag (0=down, 1=up)
epdg_service_uptime_seconds	Gauge	Service availability time

8. Session State (4)

Name	Type	Appointment
epdg_session_ike_sa_total	Gauge	Active IKE SA
epdg_session_child_sa_total	Gauge	Active Child SA (IPSec tunnels)
epdg_session_gtp_sessions_total	Gauge	Active GTP-C sessions on S2b
epdg_session_subscribers_total	Gauge	Unique subscribers (UE connected)

9. Application (3)

Name	Type	Appointment
epdg_app_threads_total	Gauge	Total number of work streams
epdg_app_memory_bytes	Gauge	Process memory by type
epdg_app_log_messages_total	Counter	Log messages by level (debug/info/warn/error/fatal)

10. System (4)

Name	Type	Appointment
epdg_system_cpu_usage_percent	Gauge	Download CPU
epdg_system_memory_bytes	Gauge	System memory
epdg_system_disk_bytes	Gauge	Disk space
epdg_system_open_fds	Gauge	Open file descriptions

Types of metrics (reminder)

Type	Appointment
Counter	Monotonically growing counter (messages, errors, reboots)
Gauge	Current value (active sessions, memory, status)
Histogram	Distribution of values with automatic slices over intervals (duration, lifetime)