UNIVERSAL DATA INTEGRATION LAYER (UDIL) – CHECKLIST FOR MEPCO TENDER NO 128/20

UDIL Checklist No: 91029081
UDIL Reference No: 91029040

Prepared by: Power Information Technology Company (PITC),
406, WAPDA House, Lahore
Ministry of Energy (MoE), Power Division, Govt. of Pakistan
Tel. +92(42)99202666 | Fax +92(42)99202047-48

www.pitc.com.pk

Note: This UDIL checklist is applicable only for MEPCO Tender No 128/20

Power Information Technology Company پاور انفارمیشن ٹیکنالوجی کمپنی

TEST DETAILS	
READ REQUESTS – *TABULAR / API Based (PARAMETERS)*	
INSTANTANEOUS DATA	SECTION : 3.1.1 (UDIL) * Instantaneous data shall be updated upon every connection (Twice a day any time).
BILLING DATA	SECTION : 3.1.2 (UDIL) Only *_*_neg_* fields are optional and absolute values may be mapped on *_*_pos_* fields where applicable. * Billing data will be saved at 9:00 A.M and 9:00 P.M. daily and communicated upon connection which is twice a day any time.
MONTHLY BILLING DATA	SECTION : 3.1.3 (UDIL) Only *_*_neg_* fields are optional and absolute values may be mapped on *_*_pos_* fields where applicable. * Monthly billing data will be saved on every MDI reset date and time programmed at the time of device creation.
LOAD PROFILE DATA	SECTION : 3.1.4 (UDIL) **Channel1(energy profile):**msn, global_device_id, meter_datetime, channel_id, interval, active_energy_pos_t1, active_energy_pos_t2, active_energy_pos_tl, reactive_energy_pos_t1, reactive_energy_pos_t2, reactive_energy_pos_tl, aggregate_active_pwr_pos, aggregate_reactive_pwr_pos, mdc_read_datetime, db_datetime **Channel2 (grid profile):** msn, global_device_id, meter_datetime, channel_id, interval, frequency, average_pf, current_phase_a, current_phase_b, current_phase_c, voltage_phase_a, voltage_phase_b, voltage_phase_c, mdc_read_datetime, db_datetime * Energy and Grid profiles will be saved every 15 minutes @ 00, 15, 30, 45 and absolute values may be mapped on *_*_pos_* fields where applicable
EVENTS	SECTION : 3.1.5 (UDIL) **Events as per DDS and UDIL:** MDI reset (101), Parameterization (102), Power fail start (111), Power fail end (112), Phase failure (113), Over Voltage (114), Under Voltage (115), Demand over load (116), Active Reverse Energy (117), Reverse Polarity (118) **Additional Events and Respective Codes:** Time Synchronization (201), Contactor On (202), Contactor Off (203), Door Open (206), Battery Low (207), Memory Failure (208), Meter Tamper (209)<u>optional</u>, Optical Port Login (301), Login with Management Role (302)<u>optional</u>, Sanction Load Control Programmed (303), Load Shedding Schedule Programmed (304), IP Port Programmed (305) *Events/Alarms will be fetched upon every connection or communication with MDC server *Events as per DDS shall be buffered in meter whereas rest of the events may be buffered in either meter or MDC driver software. However, for non-DDS events, which are buffered at MDC, must be authenticated.

	Events to be configured as 'Major Alarms' : Battery low (207), Contactor Off (203), Door Open (206), Active Reverse energy (117) * Major events will be reported immediately upon their occurrence * Reverse energy start and end threshold (27 Watt) and ignorance time will be 3 minutes.
METER VISUALS	SECTION : 3.1.6 (UDIL) msn, global_device_id, last_command, last_command_datetime, last_command_resp, last_command_resp_datetime, aggregate_active_pwr_pos, aggregate_active_pwr_pos_datetime, aggregate_reactive_pwr_pos, aggregate_reactive_pwr_pos_datetime, current_phase_a, current_phase_b, current_phase_c, voltage_phase_a, voltage_phase_b, voltage_phase_c, frequency, average_pf, last_communication_datetime, last_signal_strength, power_status, power_status_datetime, dvtm_datetime, dvtm_meter_clock, mtst_datetime, mtst_meter_activation_status, auxr_datetime, auxr_status, lsch_datetime lsch_start_datetime, lsch_end_datetime, lsch_load_shedding_slabs, sanc_datetime, sanc_load_limit, sanc_maximum_retries, sanc_retry_interval, sanc_threshold_duration, sanc_retry_clear_interval, mtst_datetime, mtst_meter_activation_status, mdi_reset_date, mdi_reset_time, dmdt_datetime, dmdt_communication_mode, dmdt_bidirectional_device, dmdt_communication_type, dmdt_communication_interval, dmdt_phase, dmdt_meter_type * Following columns will be updated twice a day @ 09.00 A.M. and 09.00P.M. : aggregate_active_pwr_pos, aggregate_active_pwr_pos_datetime, aggregate_reactive_pwr_pos, aggregate_reactive_pwr_pos_datetime, last_communication_datetime, last_signal_strength, frequency, power_status, power_status_datetime, current_phase_a, current_phase_b, current_phase_c, voltage_phase_a, voltage_phase_b, voltage_phase_c * Remaining columns will be updated upon change and absolute values may be mapped on *_*_pos_* fields where applicable
DEVICE COMMUNICATION HISTORY	SECTION : 3.1.7 (UDIL)
Data Storage Duration (METER/UDIL)	Data in UDIL will be stored for 180 days; however, in meter the data storage duration will be as per DDS.

TEST DETAILS

WRITE REQUESTS – *COMMANDS*

AUTHORIZATION SERVICE	SECTION : 3.2.1 (UDIL)
AUX RELAY OPERATIONS	SECTION : 3.4.1 (UDIL)
TIME SYNCHRONIZATION	SECTION : 3.4.2 (UDIL)
SANCTIONED LOAD CONTROL	SECTION : 3.4.3 (UDIL)

LOAD SHEDDING SCHEDULING	SECTION : 3.4.4 (UDIL)
DEVICE CREATION	SECTION : 3.4.6 (UDIL)
UPDATE METER STATUS	SECTION : 3.4.11 (UDIL)
UPDATE DEVICE META DATA	SECTION : 3.4.12 (UDIL)
ON-DEMAND REQUESTS – *API BASED*	
ON_DEMAND_DATA_READ	SECTION : 3.5.1 (UDIL) 'INST', 'BILL', 'MBIL', 'LPRO', 'EVNT'
ON_DEMAND_PARAMETER_READ	SECTION : 3.5.2 (UDIL) 'AUXR', 'DVTM', 'SANC', 'LSCH', 'MTST', 'DMDT'
TRANSACTION STATUS	SECTION : 3.5.3 (UDIL)
TRANSACTION CANCEL	SECTION : 3.5.4 (UDIL)